



Innovative Healthcare and
Biomedical Technologies in the AI era

第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

大會手冊

日期 / 2026/3/21-22

地點 / 國防醫學大學

台灣分子生物影像學會 | 台灣生物化學及分子生物學學會 | 中華民國細胞及分子生物學學會 | 中華民國臨床生化學會

台灣毒物學學會 | 中國生理學會 | 台灣藥理學會 | 中華民國解剖學學會 | 中華民國免疫學會



生物醫學聯合學術年會

The 40th Joint Annual Conference of Biomedical Science (JACBS 2026)



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大會會長的話

Chairman Welcome Note

尊敬的國內外貴賓、專家學者、醫療與產業先進、與青年學子們 大家好：

歡迎蒞臨第 40 屆生物醫學聯合學術年會(Joint Annual Conference of Biomedical Science, JACBS)，首先，我謹代表九大學會，向大家獻上最真摯的感謝與歡迎。

四十年來，生物醫學學術年會持續匯聚產、官、學界的智慧與熱誠，深耕生物醫學領域。今年適逢擴大慶祝之際，本學會與八大學會攜手舉辦聯合會議，共同彰顯跨領域協作的力量與未來可期的創新能量，也懷著感恩、驕傲與期待，迎接這個具有里程碑意義的盛會。

此外我們特別要向國防醫學大學表達誠摯的謝意，這些年來多次提供場地支持，本屆大會有幸一同慶祝國防醫學大學邁入新的里程碑，我們深感榮幸，能在此地續寫學術交流與人才培育的篇章。

本屆大會主題為「生醫與電子的世紀對話」，我們很榮幸邀請到兩位跨界領袖：中央研究院 翁啟惠院士與旺宏電子 吳敏求董事長擔任主講嘉賓。透過翁院士在生物醫學研究的深厚見解與吳董事長在電子與半導體產業的前瞻視野，我們期待激盪出更多有助臨床轉譯、醫療器材創新與智慧醫療系統發展的跨領域想法。大會內容涵蓋分子生物影像、生物化學、細胞與分子生物學、臨床生化、毒理學、生理學、藥理學、解剖學與免疫學等領域。這種跨學會、跨專業的合作，不僅僅是單純的資源整合，更是一種知識的交融與科學的對話。因為我們深知，現今許多重大的醫學挑戰，如癌症、神經退化疾病、免疫失調與代謝疾病，都無法依靠單一學科的力量解決，而需要來自不同專業的合作與共同創新。

大會期間除專題演講外，亦安排多場分組論壇、研究論文發表與海報交流，並備有工作坊與產學媒合平台，期望為年輕研究者提供展示與學習的舞台，促成合作與人才交流。誠摯邀請各位專家、學者、產業夥伴與學生積極參與討論、分享成果、交換想法，並把握每一個認識新朋友、啟發新思路的機會。

展望未來，我們必須思考台灣在全球生物醫學發展中的角色，攜手邁向下一個充滿挑戰與機會的四十年。祝福第 40 屆生物醫學聯合學術年會圓滿成功、交流豐碩，並為生醫與電子的未來合作種下更多可能，也祝福所有與會者在這幾天的交流中收穫滿滿、啟發無限！

台灣分子生物影像學會
理事長 楊邦宏





第40屆生物醫學聯合學術年會

大會籌備委員會

Organizing Committee

學會名稱	理事長	秘書長
台灣分子生物影像學會	楊邦宏	吳駿一
台灣生物化學及分子生物學學會	王育民	林士鳴
中華民國細胞及分子生物學學會	羅世皓	黃麗蓉
中華民國臨床生化學會	徐慧貞	饒梓明
台灣毒物學學會	王應然	夏興國
中國生理學會	李昆澤	林雅婷
台灣藥理學會	林建煌	許銘仁
中華民國解剖學學會	郭余民	王仰高
中華民國免疫學會	葉國偉	蘇冠文

會議地點

Conference Venue

國防醫學大學

114 台北市內湖區民權東路六段 161 號





第40屆生物醫學聯合學術年會

交通資訊

Transportation Information

► 3/21(六)、3/22 (日) 接駁車時刻表 (昆陽捷運站 - 國防醫學大學)

接駁車僅於公告時段行駛，其餘時段不提供接駁服務，每班車次人滿即發車。

上午接駁

行駛方向： 昆陽捷運站 → 國防醫學大學

接駁時段： 08:00-10:30

下午接駁

行駛方向： 國防醫學大學 → 昆陽捷運站

接駁時段： 15:30-17:30

上午班次	
昆陽捷運站《只進不出》	
1	07:30
2	08:00
3	08:30
4	09:00
5	09:30
6	10:00
7	10:30

下午班次	
國防醫學大學《只出不進》	
1	15:30
2	16:00
3	16:30
4	17:00
5	17:30

► 大眾交通工具 (搭乘公車)

國防醫學大學周邊公車：

民權幹線(原紅 32)、藍 36、284 直、617、645、903

於「國防醫學大學(網球中心)」下車，步行約 5 分鐘

三軍總醫院周邊公車：

市民小巴 10、小 3、藍 20、藍 27、棕 9、214、256、278、284、551、617、630、645、652、903

請於「國防醫學中心」下車，步行約 10 分鐘

進入三軍總醫院公車：

市民小巴 10、藍 20、藍 27、紅 29、0 東、28、278、284、521、551、617、645

請於「三總內湖站」下車 (繞駛時間為 08:00-21:30)

► 自行開車

行經中山高速公路，內湖成功路交流道出口下，往內湖方向往北走，直行至民權東路與成功路交叉口後，右轉約 500 公尺左側至國防醫學大學大門。

► 停車相關事宜

國防醫學大學校內停車位有限，並採小時計費 (40 元/小時)，為避免停車不便，建議與會人員優先使用大會接駁車或大眾交通工具。

為維持校園交通秩序，請勿占用校內專屬停車位。

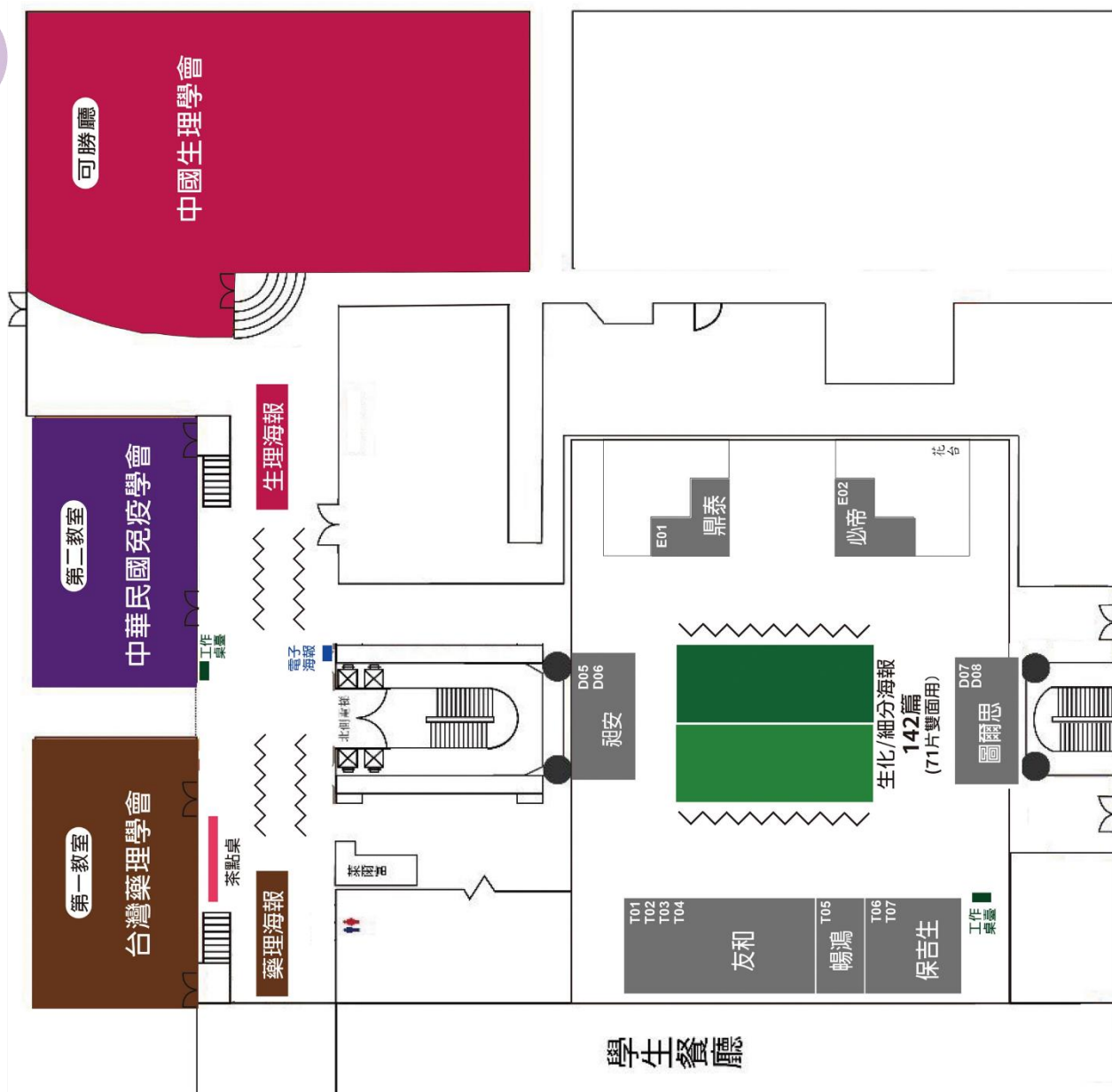


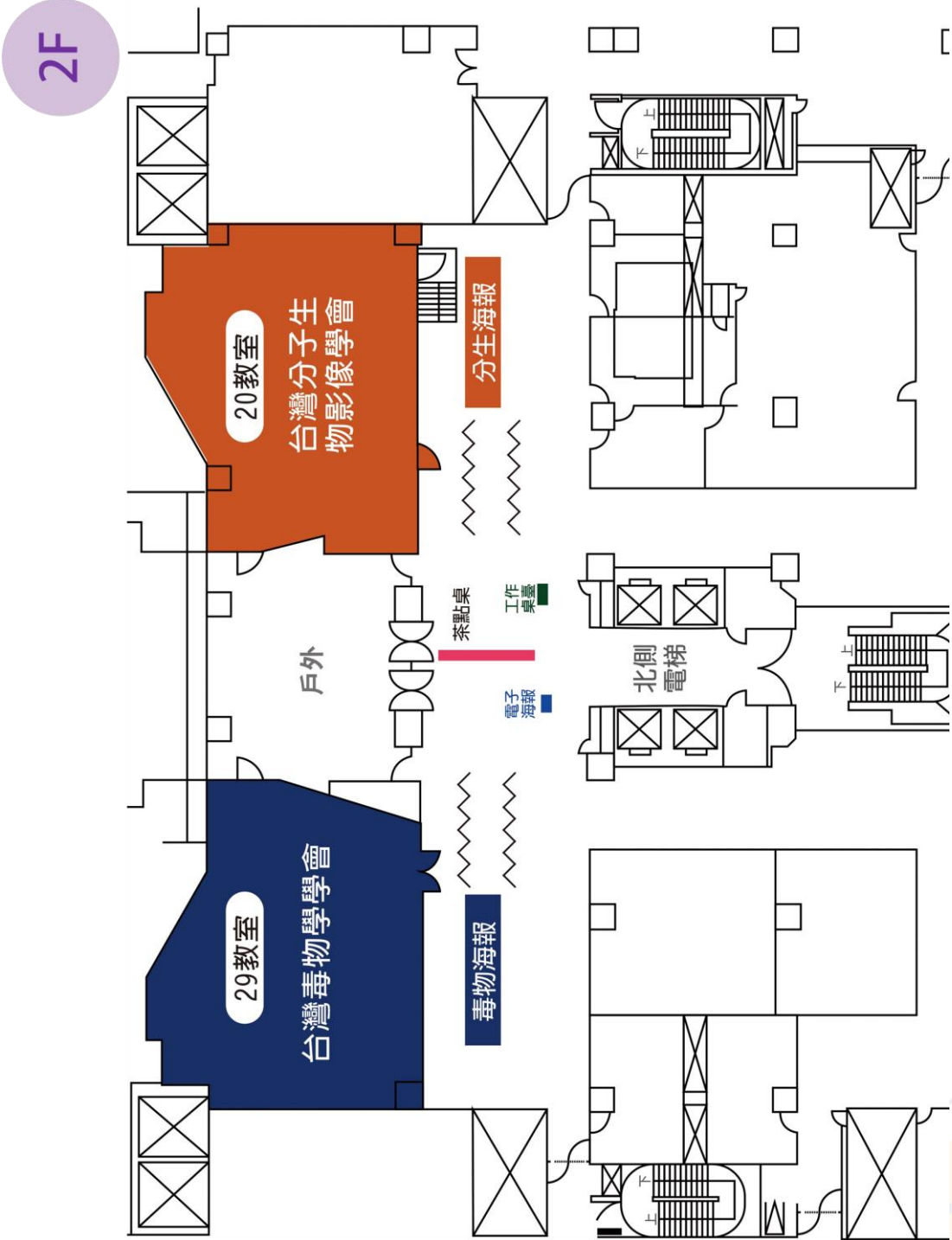
第40屆生物醫學聯合學術年會

會場平面圖

Venue Floor Plan

1F

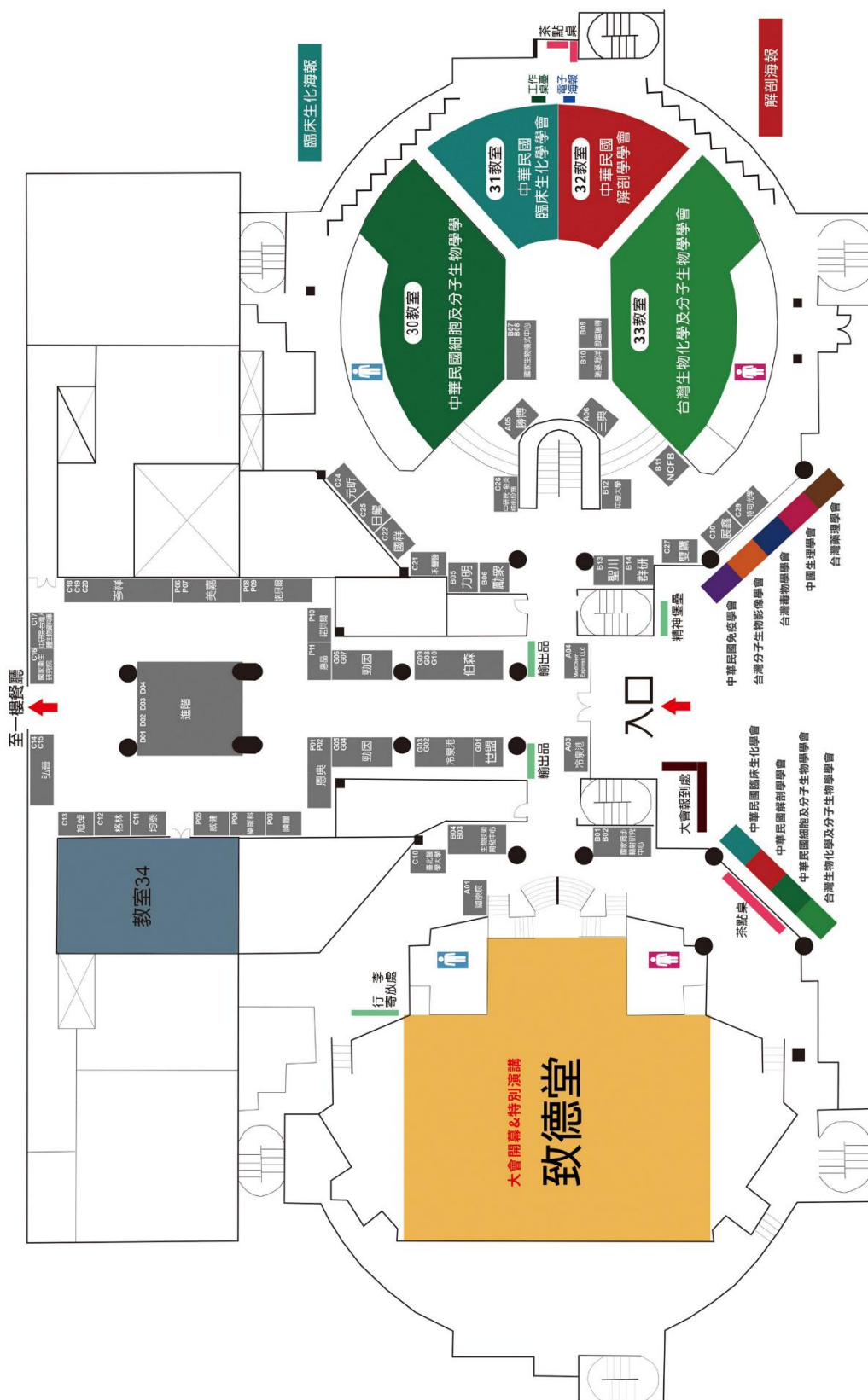




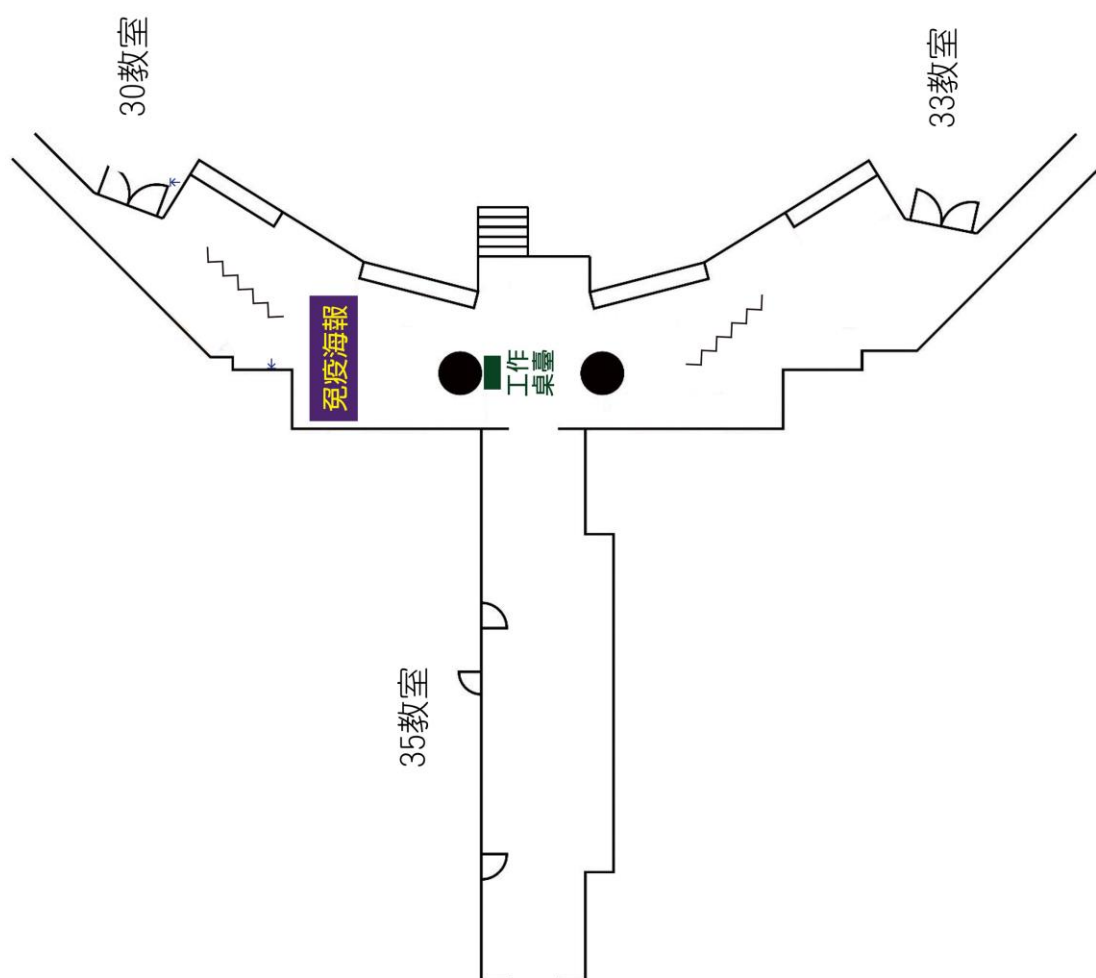


第40屆生物醫學聯合學術年會

3F



3F夾層





第40屆生物醫學聯合學術年會

大會會議與專題演講

Conference Information and Plenary Lectures

內容	時間	地點
大會開幕式	115 年 3 月 21 日 10:20~10:40	3F 致德堂
大會特別演講	115 年 3 月 21 日 10:40~12:00	
大會專題演講 (分生學會與國原院合辦專場)	115 年 3 月 21 日 13:00~17:00	
陳炯霖轉譯醫學講座特別演講	115 年 3 月 22 日 10:40~12:00	

學會特別演講及會員大會時間表

Keynote Speeches and General Assembly Schedule by Society

學會名稱	特別演講時間	會員大會時間	地點
台灣分子生物影像學會		115 年 3 月 22 日 16:00~16:40	2 樓 20 教室
台灣生物化學及分子生物學學會	115 年 3 月 21 日 14:10~15:10	115 年 3 月 22 日 15:20~15:40	3 樓 33 教室
中華民國細胞及分子生物學學會	115 年 3 月 21 日 09:20~10:20		3 樓 30 教室
	115 年 3 月 22 日 09:20~10:20		
中華民國臨床生化學會	115 年 3 月 21 日 13:30~14:20	115 年 3 月 21 日 09:30~10:00	3 樓 31 教室
台灣毒物學學會	115 年 3 月 21 日 09:20~10:20	115 年 3 月 21 日 16:20~17:20	2 樓 29 教室
	115 年 3 月 22 日 09:30~10:30		
中國生理學會	115 年 3 月 21 日 13:00~15:00	115 年 3 月 22 日 11:20~11:40	1 樓 可勝廳
台灣藥理學會	115 年 3 月 21 日 14:00~15:00	115 年 3 月 21 日 15:30~16:30	1 樓 第一教室
中華民國解剖學學會	115 年 3 月 21 日 14:30~15:30	115 年 3 月 21 日 13:30~14:30	3 樓 32 教室
中華民國免疫學會	115 年 3 月 21 日 09:20~10:20		3 樓 30 教室



第40屆生物醫學聯合學術年會

大會議程

Conference Program

2026/3/21 (星期六)

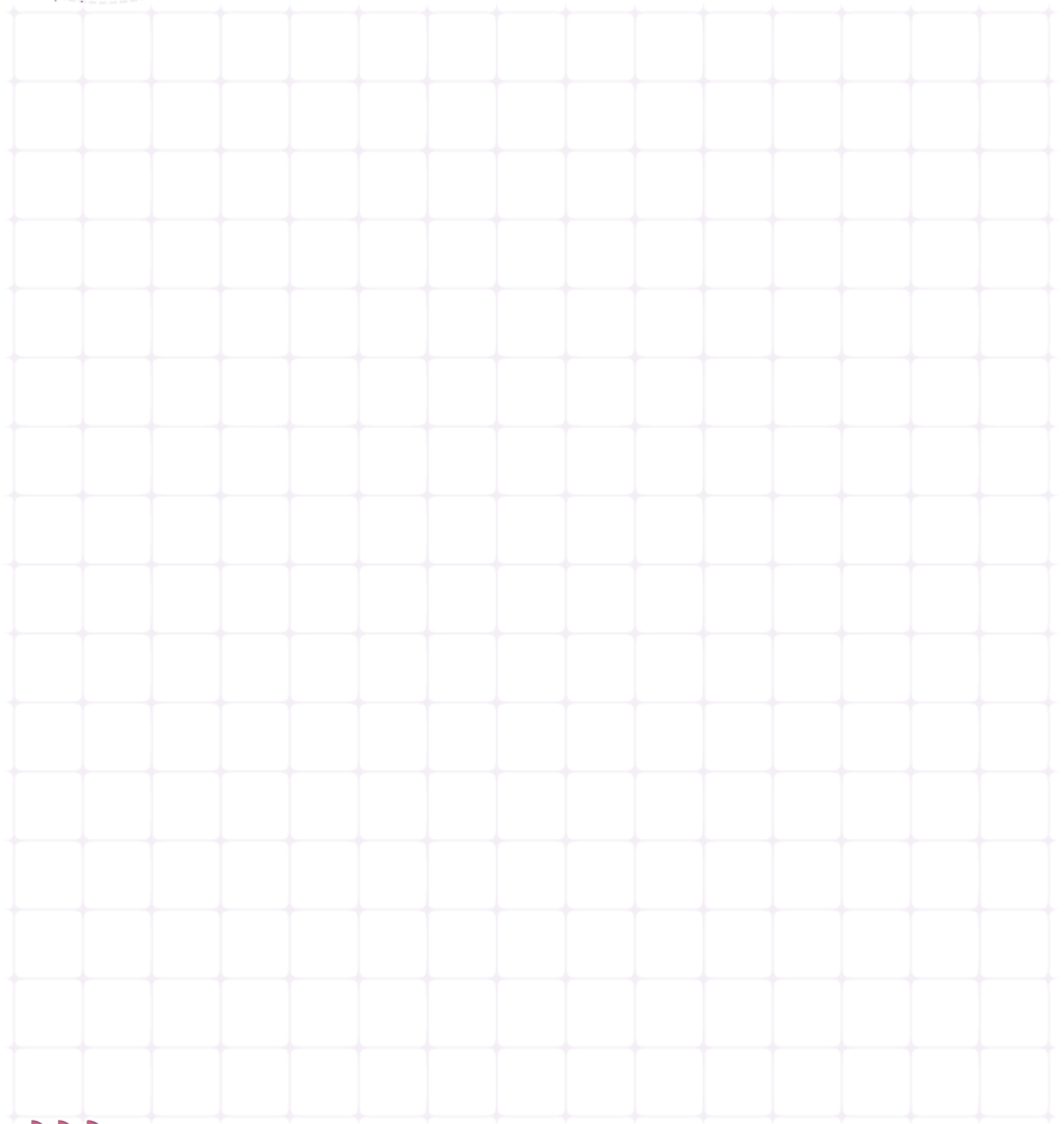
樓層	一樓			二樓		三樓						
學會	藥理學會	免疫學會	生理學會	分生學會	毒物學會	細分學會	臨床生化	解剖學會	生化學會	大會議程	科研專場	
會議室	第一教室	第二教室	可勝廳	20 教室	29 教室	30 教室	31 教室	32 教室	33 教室	致德堂	34 教室	
09:00-09:20	8:40-10:20	大會報到						9:00-10:20 壁報論文 競賽	大會報到			
09:20-09:30	研究生論文獎 決選演講	9:20-10:20 開幕式及特別 演講 (免疫與細分合辦 _30 教室)	9:20-10:20 報到	9:20-10:20 報到	9:20-10:20 學會特邀 演講 (Keynote Lecture)	9:20-10:20 開幕式及特別 演講 (免疫與細分合辦 _30 教室)	9:30-10:00 會員大會					
09:30-10:00												
10:00-10:20												
	10:20-10:40 大會開幕式+40 週年回顧影片 (致德堂)											
10:20-10:40												
	10:40-12:00 大會特別演講 (致德堂)											
10:40-12:00												
12:00-13:00	12:00-14:00 【一般論文 海報展示 I】	午餐 (學生餐廳)			12:00-13:00 壁報展示 (競賽)	午餐	12:00-13:30 臨床生化 學會壁報 論文競賽	12:00-13:30 解剖學會 午餐	午餐 (學生餐廳)			
13:00-13:20	李天德壁報 論文競賽		13:00-15:00 學會 特別演講	13:00-15:00 【專題研討會】 AI 驅動 分子影像 • 開啟肝臟 精準診療 新紀元 研討會 (分生與國原院 合辦專場_致德堂)	13:00-15:00 【專題研討會】 毒理學安全 評估新方法論 的應用 Application of new approach methodologies for safety assessment in toxicology		13:30-14:20 學會 特別演講	13:30-14:30 會員大會	14:00-14:10 生化學會 開幕式	13:00-15:00 【專題研討會】 AI 驅動 分子影像 • 開啟肝臟 精準診療 新紀元 研討會 (分生與國原院 合辦專場_致德堂)	13:00-13:30 【科研演講 1】 進階生技	
13:20-13:30		13:20-15:00 專題演講 I (免疫與細分合辦 _30 教室)				13:20-15:00 專題演講 I (免疫與細分合辦 _30 教室)					13:30-14:00 【科研演講 2】 昶安科技	
13:30-13:40												
13:40-14:00												
14:00-14:10	14:00-15:00 學會 特別演講							14:30-15:30 解剖學會 專題演講	14:00-14:10 生化學會 開幕式	14:00-14:30 【科研演講 3】 財桂生物公司		
14:10-14:30									14:10-15:10 Keynote Presentation			
14:30-15:00									14:30-15:00 【科研演講 4】 弘晉公司			
15:00-15:20	茶點時間							15:30-15:50 休息	15:30-17:00 【Invited Speaker Session-1】 RNA Integrity Control and Therapeutic Applications	茶點時間		
15:20-15:30		15:20-17:00 免疫學會 海報競賽	15:20-17:20 口頭&壁報 論文競賽	13:00-15:00 【專題研討會】 AI 驅動 分子影像 • 開啟肝臟 精準診療 新紀元 研討會 (分生與國原院 合辦專場_致德堂)	15:20-16:20 學會口頭 論文競賽	15:20-17:00 細分學會 壁報論文 競賽	14:20-16:40 學會 專題演講			15:10-15:30 休息	13:00-15:00 【專題研討會】 AI 驅動 分子影像 • 開啟肝臟 精準診療 新紀元 研討會 (分生與國原院 合辦專場_致德堂)	15:20-15:50 【科研演講 5】 特司光學
15:30-15:50	15:30-16:30 台灣藥理學會 會員大會暨 學術研究 獎項頒獎									15:50-16:20 【科研演講 5】 國家同步輻射 研究中心		
15:50-16:00												
16:00-16:10												
16:10-16:20												
16:20-16:30					16:20-17:20 台灣毒物學 學會 第 11 屆第 5 次 會員大會		16:40-18:00 學會壁報論文 競賽頒獎 (永信李天德醫藥 基金會壁報論文獎)					
16:30-16:40												
16:40-17:00												
17:00-17:20												
17:20-18:00												
18:00-												

2026/3/22 (星期日)

樓層	一樓			二樓		三樓				
學會	藥理學會	免疫學會	生理學會	分生學會	毒物學會	細分學會	臨床生化	解剖學會	生化學會	
會議室	第一教室	第二教室	可勝廳	20 教室	29 教室	30 教室	31 教室	32 教室	33 教室	
09:00-09:20	9:00-10:30 【學會學術演講一】	9:00-10:20 免疫學會 口頭論文 競賽	9:00-11:20 學會 百年活動	9:00-10:20 海報論文 競賽	9:30-10:30 學會特邀 演講 (Keynote Lecture)		9:00-10:30 學會 口頭論文 競賽暨頒獎	9:00-10:30 【研討會 I】 Nanomedicine	8:30-9:15 壁報論文 展示	
09:20-09:30	The New Frontier of Exosome-Based Therapy Extracellular Vesicles (EVs) as Messengers and Therapeutics					細分學會 特別演講				9:15-10:30 壁報論文 競賽
09:30-10:20										
10:20-10:40										
	茶點時間			茶點時間						
10:40-11:00	10:40-12:00 陳炯霖轉譯醫學 講座特別演講 (致德堂)			10:40-11:20 專題演講 I	10:40-12:00 陳炯霖轉譯醫學講座特別演講 (致德堂)					
11:00-11:20				11:00-12:00 【一般論文 海報展示 II】						11:20-11:40 會員大會
11:20-11:40				11:40-13:00 學會午宴	午餐(學生餐廳)					
11:40-12:00	午餐(學生餐廳)									
12:00-12:30	12:30-13:30 【一般論文 海報展示 III】		13:00-15:00 新進學者 專題演講	13:00-13:40 專題演講 III	13:00-15:00 【專題研討會】 環境中的污染物 對科學、政策與 健康的影響 Contaminants in the Environment: Science, Policy, and Health Implications				15:30-17:00 【Invited Speaker Session-2】 AI-Driven Innovations in Drug Discovery and Therapeutic Development	
13:00-13:30	13:30-15:00 【學會學術 演講二】 AI's Role in Next- Generation Drug Discovery and Personalized Medicine	13:30-15:00 專題演講 II (免疫與細分合辦 _30 教室)		13:40-16:00 口頭論文 發表競賽		13:30-15:00 專題演講 II (免疫與細分合辦 _30 教室)		13:30-15:00 【研討會 II】 新進老師 研究分享		
13:30-13:40										
13:40-15:00										
15:00-15:20	茶點時間									
15:20-15:40		15:20-16:00 國科會研究 計畫申請 (免疫與細分合辦 _30 教室)	15:20-16:20 口頭及壁報 論文競賽 頒獎典禮	13:40-16:00 口頭論文 發表競賽	15:20-16:40 閉幕式暨 論文競賽 頒獎典禮	15:20-16:00 國科會研究 計畫申請 (免疫與細分合辦 _30 教室)		15:20-16:00 口頭論文 報告競賽 得獎人演講	15:20-15:40 會員大會	
15:40-16:00								15:40-16:00 生化學會 頒獎暨閉幕式		
16:00-16:20		16:00-16:30 免疫學會 閉幕式暨 口頭/海報競賽 頒獎典禮	16:20-17:20 理監事選舉 開票		16:00-16:40 分生學會 會員大會 及頒獎			16:00-16:40 細分學會 閉幕式及 頒獎典禮		
16:20-16:30										
16:30-17:20										



第40屆生物醫學聯合學術年會





第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

大會特別演講 Plenary Lectures



第40屆生物醫學聯合學術年會



Plenary Speaker

翁啟惠

Chi-Huey Wong

Current Position

- Scripps Family Chair Professor, Department of Chemistry, The Scripps Research Institute, California, USA
- Distinguished Research Fellow, Genomics Research Center, Academia Sinica, Taiwan

Education / Training

- B.S. and M.S. in Chemistry, National Taiwan University
- Ph.D. in Chemistry, Massachusetts Institute of Technology (MIT)

Research Interests

- Development of new methods and tools for the synthesis and study of complex carbohydrates and glycoproteins, with particular emphasis on those associated with human diseases.

Leadership and Service

- Head, Frontier Research Program on Glycotechnology, RIKEN, Japan (1991–1999)
- Board Member, U.S. National Research Council (2000–2003)
- Scientific Advisor, Max Planck Institute, Germany (2000–2008)
- President, Academia Sinica, Taiwan (2006–2016)
- Chief Science Advisor to the Taiwan Government (2006–2015)
- Member, RIKEN Council, Japan (2010–2016)
- President, Institute of Biotechnology and Medicine Industry (IBMS)
- Member, Science and Technology Advisory Board, Executive Yuan, Taiwan

Decoding Protein Glycosylation for Better Vaccine and Antibody Development

翁啟惠
Chi-Huey Wong

Glycosylation is an important biological process for modulating the structure and function of proteins, cells, and many other biological molecules. However, this process has not been well understood due to the lack of tools and methods available for the study of biological glycosylation. Decoding the structure and function of glycans and glycoproteins will help us understand the role of post-translational glycosylation with molecular precision and provide new opportunities for developing better glycoprotein medicines. Over the years, we have been actively involved in the development of new tools and methods, notably the chemoenzymatic and AI-assisted programmable methods, for making and studying complex glycans and glycoproteins, and investigating the impact of glycosylation on protein folding, viral infection, cancer progression, and immune responses. This lecture highlights the advanced glycosylation methods developed in our laboratory that have been used to drive new discoveries in glycobiology and accelerate the translation of new discoveries into innovative developments. Representative examples include practical and expedient synthesis of oligosaccharides and glycoproteins, development of glycan microarrays, low-sugar universal vaccines against viral pathogens and monoclonal antibodies with Fc-glycosylation optimized for target killing. It is hoped that advances in glycosylation methodology and the extensive data generated, combined with AI assistance, will lead to a paradigm change in vaccine and antibody development and drug discoveries for human health.



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Plenary Speaker

吳敏求
Miin Wu

Current Position

- 旺宏電子董事長兼執行長

Education / Training

- 臺灣國立成功大學電機工程學系學士
- 臺灣國立成功大學電機工程學系碩士
- 美國史丹福大學材料科學工程學系碩士

Professional and Research

- 2005~2007 旺宏電子股份有限公司董事長暨總經理
- 1989~2005 旺宏電子股份有限公司創始人及總經理
- 1984~1989 Macronix Inc.(USA) 公司創始人及副總
- 1981~1984 VLSI Technology Inc. 製程開發經理
- 1979~1981 Intel Corp. 製程開發工程師及計劃經理
- 1977~1979 Rockwell International 製程開發工程師及副理
- 1977 Siliconix Inc. 製程開發工程師

Awards & Honors

- 「安永企業家獎」年度大獎暨經營典範企業家獎(2018)
- 教育部社會教育貢獻獎(2017)
- 成功大學名譽博士(2016)
- 台灣玉山科技協會常務理事(2019-迄今)
- 中華民國工商協進會理事(2015-迄今)

3/21(六) 11:20-12:00
3 樓 致德堂

醫學 × AI：半導體正在創造下一個醫學奇蹟

吳敏求
Miin Wu

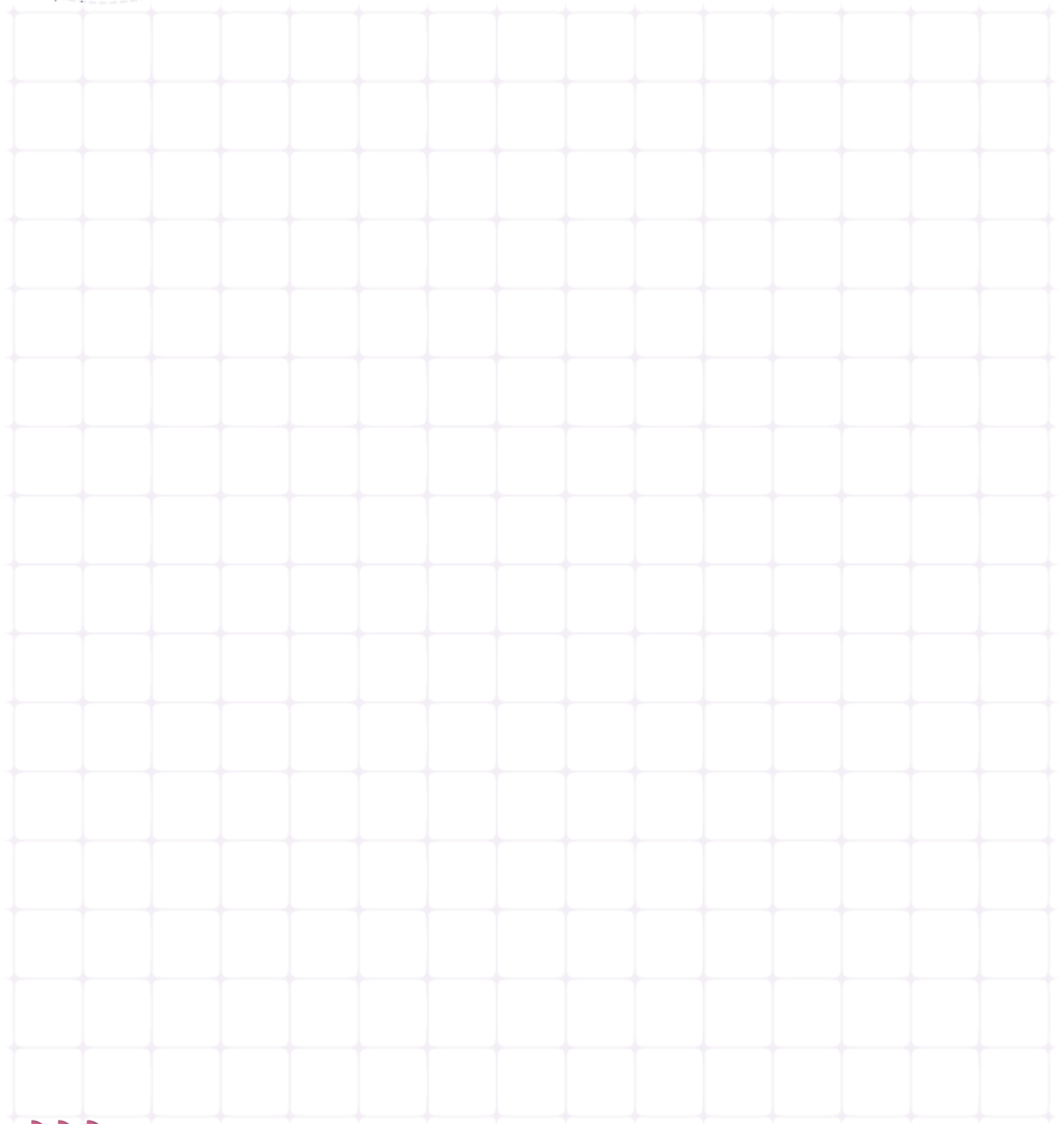
本演講主題「醫學 X AI：半導體正在創造下一個醫學奇蹟」探討半導體技術如何驅動醫學領域的創新與變革。人工智慧 (AI) 透過累積大量過去醫療案例經驗，提升對疾病診斷與治療的判讀能力，助力醫學影像分析、基因定序及智慧健康監測等應用。半導體晶片作為 AI 系統的核心，提供強大且高效的運算能力，促使醫療診斷與治療更快速且精準，加速實現精準醫療世代的來臨。

其中，記憶體作為半導體的重要組成部分，在 AI 驅動的醫療應用中扮演關鍵角色。面對巨量醫療數據與即時運算需求，高速、大容量且低延遲的記憶體成為不可或缺的基礎設施。先進的非揮發性記憶體技術，是提升 AI 模型運算效率與系統穩定性不可或缺的關鍵元件。

半導體與醫療領域整合硬體與軟體平台的跨界合作，更可望帶來令人期待的創新應用。未來，半導體將不僅是技術支援，更成為醫藥科技創新及醫療服務模式轉型的關鍵驅動力，有望創造出令人期待的醫學奇蹟，成為革新醫療未來的新引擎！



第40屆生物醫學聯合學術年會





第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

大會專題演講 Special Session



第40屆生物醫學聯合學術年會



Speaker

【AI 驅動分子影像•開啟肝臟精準診療新紀元會】

陳肇隆

Chao-Long Chen

Current Position

- 高雄長庚紀念醫院名譽院長
- 中國工程院院士

Education / Training

- 高雄醫學大學醫學院醫學系

Professional and Research

- 高雄長庚紀念醫院院長 2003-2015
- 國際活體肝臟移植醫學會會長 2020-2021

Awards & Honors

- 行政院傑出科技榮譽獎 1995
- 國際肝臟移植醫學會終身成就獎 2019
- 亞太肝膽胰醫學會當代傳奇 2025

Perspectives on Liver Transplantation – Innovation, Education and Beyond

陳肇隆
Chao-Long Chen

Liver transplantation is one of the most difficult endeavors in the field of medicine. As a premier liver transplant center, Kaohsiung Chang Gung Memorial Hospital (KCGMH) has many distinctions to its credit. This lecture elaborates on the development of this transplant center, on the innovations and strategies which have contributed to its excellence, and finally on the efforts to benefit humanity beyond the shores of Taiwan.

Taiwan over the years has made remarkable strides in liver transplantation and presently living donor liver transplantation (LDLT) at KCGMH is among the best in the world when measured in terms of survival outcomes. The high incidence of viral hepatitis in Taiwan has translated to a high burden of cirrhosis, end-stage liver failure and hepatocellular carcinoma (HCC). With more health conscious society and nationwide active periodic screening programs, the disease diagnosis has increased causing an apparent shortage of organs.

Overcoming the initial challenges in transplantation, the first successful liver transplantation in Asia was performed in 1984. Since then there is no looking back and 2500 liver transplants was accomplished in 2025 at KCGMH. It is credited with many other milestones including the first LDLT in Taiwan, and the first split liver transplant in Asia.

The issues of social-cultural barriers and religious beliefs in East Asian countries were responsible for the delay in embracing deceased donor organ donation. The success of the first Asian liver transplant helped in changing this perception and Taiwan became the first country in Asia to have legislation on brain death and organ transplantation in the year 1987, 10 years ahead of Japan, 12 years before Korea. This played an important role in the promotion of transplant medicine in Taiwan.

The initial journey was full of hurdles and extensive cooperation with other Asian counterparts helped in crossing them. Long sessions of repeated animal experiments, regular exchanges and friendly collaboration during the initial years made us reduce the learning curve with excellent results. The successful liver transplantation outcomes helped in creating an environment of positive mindset and made people to accept liver



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transplantation as a life saving procedure. Trust gained from patients and positive feedback due to excellent outcomes gave the necessary momentum and helped us achieve a stupendous growth in the last decade.

Our center has also accumulated a wealth of experience, and established standardized protocols for patient management and quality of care. This is endorsed and recognized by the world bodies and our health care providers, including surgeons, physicians and radiologists find their name in the list of leading global experts.

Technical innovations in donor hepatectomy, vascular and biliary reconstruction, vibrant interventional radiology for managing complications and perioperative management of transplant patients, and the development of associated specialties have enabled achievement of excellent results after LDLT. Our center is the most active center, among the 30 liver transplant programs approved by the Taiwan Ministry of Health and Welfare, and having the highest survival rate, with 91 % at 3 years. Our survival statistics in LDLT compared favorably with the over-all survival rates in the US, Europe, and Japan. These best survival rates are also applicable in pediatric LDLT for biliary atresia and HCC as well.

The aggressive campaigns, active government support, a universal health insurance system, spurt in economic development, excellent network of hospitals, competent and trained health care providers have all helped in improving outcomes of liver transplantation.

These excellent results improved our credibility in the international transplant community and there was an increase in number of overseas patients seeking liver transplantation in our center.

LDLT has gained worldwide acceptance and we took several proactive skill transfer initiatives in expediting the techniques of LDLT internationally. We have a long tradition of sharing our skills and experience in order to improve life of humanity. Our international outreach in liver transplantation took us to Japan, Philippines, Vietnam and leading university hospitals in China. We actively mentor the younger generation of liver transplant specialists to pass on the baton. We have trained more than 400 international fellows to-date. Our international outreach programs have also trained surgeon, physicians and nurses from several Central and South American countries and helped us forge a strong medical tie. As medical diplomacy, we have helped them to establish liver transplant programs in Central and South America.

Our data are placed in the public domain under the auspices of Taiwan National Health Insurance towards maintaining transparency and quality standards. Regular sharing of data in international conferences and publication of outcome series in peer review journals ensures in sustaining our standards by creating checks and balances. Taiwan has evolved as a global player with an important contribution to the field of liver transplantation over the last 4 decades.

I believe that medicine is about saving lives, and has no place for egoism.

Where medical service in Taiwan is today is because our physicians were fortunate in the past to receive training in the US, Europe or Japan. It is now upon us to impart our know-how to the international medical community without reservation.



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Speaker

【AI 驅動分子影像•開啟肝臟精準診療新紀元會】

何信瑩
Shinn-Ying Ho

Current Position

- 國立陽明交通大學 生物資訊及系統生物所 特聘教授

Education / Training

- 國立交通大學 資訊工程博士

Professional and Research

- 國立交通大學生物科技學院 教授兼副院長
- 國立交通大學生物科技學院/生物資訊所 教授兼所長
- 台灣生物資訊與系統生物學會 理事長 (2021-2025)

Awards & Honors

- 榮獲國立陽明交通大學學術卓越貢獻表揚
- 全球 Top 2% 終身頂尖科學家 (2021 ~ 2025)
- 國家新創獎 學研新創獎/臨床新創獎 (2021, 2022, 2023, 2024, 2025)

AI-Driven Clinical Decision Support System for Hepatocellular Carcinoma Management

何信瑩

Shinn-Ying Ho

This presentation introduces a pioneering AI dual-core strategy—leveraging Deep Learning (DL) and Evolutionary Learning (EL) —to systematically address the complex challenges in HCC management. We utilize the "HCC Clinical Data and CT Image Database," meticulously annotated by the Taipei Veterans General Hospital AI Liver Cancer Team, to construct a highly integrated Clinical Decision Support System (CDSS). In the image analysis front end, we have developed the "Hierarchical Fusion Strategy Network (HFS-Net)" architecture. This architecture is specifically designed for the triphasic characteristics of HCC CT images and employs a coarse-to-fine "divide and conquer" strategy for large and small tumors, achieving high-accuracy tumor detection and segmentation. By incorporating adaptive triphasic tumor auto-alignment, localization fusion, and a spatial attention mechanism, segmentation accuracy can be boosted to nearly 90%. The system further introduces an innovative tumor morphological auto-classification framework to precisely extract radiomics features and hidden layer features, serving as high-dimensional inputs for subsequent prediction modeling. For prognosis and survival prediction across various treatment plans, which relies on biomedical multimodal data fusion, we employ Evolutionary Computation to effectively tackle the NP-Hard problem of feature selection and model parameter optimization. The integrated data modalities are extensive, including clinical biochemical values, medical images, genomics (mRNA and miRNA), and gut microbiota; treatment strategies cover surgery, transarterial chemoembolization (TACE), radiofrequency ablation (RFA), and immunotherapy; and prediction tasks span classification, regression, recurrence and survival analysis. The developed "Biomedical Evolutionary Learning Platform" can efficiently generate highly explainable, personalized prediction models, and has successfully established multiple clinical decision support systems (honored with five consecutive National Innovation Awards). The ultimate goal is to develop an AI software medical device (SaMD) that complies with regulatory standards, thus accelerating the clinical translation of precision medicine.



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Speaker

【AI 驅動分子影像•開啟肝臟精準診療新紀元會】

陳尚文

Shang-Wen Chen

Current Position

- 中國醫藥大學附設醫院放射腫瘤科主治醫師
- 中國醫藥大學醫學系及生醫所專任教授
- 台北醫學大學醫學系兼任教授

Education / Training

- 台北醫學大學醫學系

Professional and Research

- Publication >100 articles, H-index 33
- Patent 6 (Taiwan 4, USA 2)

Awards & Honors

- SNQ 國家品質標章(2015)：高精度個人化子宮頸癌放射治療
- NVIDIA 2018 台灣海報論文競賽冠軍

Title: Prediction of local relapse in patients with definitive chemoradiotherapy-treated cervical cancer by deep learning from ^{18}F -fluorodeoxyglucose positron emission tomography/computed tomography

- SNQ 國家品質標章(2020)：精準婦癌近接放射治療

AI 強化 18F-FDG PET/CT 對於癌病治療預後的預測

陳尚文
Shang-Wen Chen

The treatment for cancer encounters several challenges despite recent advances in therapy. In the age of precision medicine, understanding the tumor microenvironment is crucial because it might represent tumor proliferation, vascular supply, and metabolism. Through different approaches; therefore, treatment team may need to know the evolution of tumor cells that develop resistance to current treatment. At present, 18F-fluorodeoxyglucose (FDG) positron emission tomography-computed tomography (PET/CT) has emerged as a cornerstone in the staging and treatment monitoring of several cancers. Our previous studies found a correlation between 18F-FDG PET radiomic and immunohistochemical biomarkers and patient survival outcomes. In the era of artificial intelligence, deep learning-based computer vision provides an approach for segmentation-free outcome prediction. It can circumvent the potential uncertainty or labor-intensive task in retrieving human-engineered radiomics. This presentation will introduce modern imaging processing techniques. Through this approach, the prediction performance for treatment outcomes in various cancer patients could be maximized. Certainly, the true clinical value of these models needs to be confirmed through rigorous external validation.



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Speaker

【AI 驅動分子影像•開啟肝臟精準診療新紀元會】

吳志宏

Chih-Horng Wu

Current Position

- 衛生福利部雙和醫院影像醫學部主任

Education / Training

- 台大醫學系 學士
- 台大臨床醫學研究所 碩士
- 台大臨床醫學研究所 博士

Professional and Research

- 台大醫院 主治醫師 (2011~迄今)
- 新竹台大醫院 副主任 (2012/01~2013/12)
- 台大醫學院 臨床講師 (2016/01~2021/07)
- 台大醫學院 助理教授 (2021/08~2026/01)

Awards & Honors

- 中華民國放射線醫學會論文獎 (2015, 2016, 2024)
- 亞太腫瘤消融大會及亞太心血管介入放射線大會最佳口頭發表 (2022, 2023)
- 國家新創獎 (2024)

Selected Publications

- Automatic Real-Time Detection and Diagnosis of Liver Tumor with Ultrasound. Wu CH, Sheu JC, Chou PL, Lee J, Nien HC. J Hepatocell Carcinoma. 2025 Jul 23;12:1599-1611.
- Comparison of Long-Term Outcomes Between Repeated Hepatic Resection and Radiofrequency Ablation in Patients with Small Recurrent Hepatocellular Carcinoma After Initial Curative Resection: A Propensity Score Matched Study. Hsiao CY, Hu RH, Liang PC, Wu CH. J Hepatocell Carcinoma. 2025 Jul 23;12:1587-1598.
- Comparison of Computed Tomography and Ultrasound-Guided Radiofrequency Ablation for Recurrent Subdiaphragmatic Hepatocellular Carcinoma After Resection. Liu HY, Hsiao CY, Hu RH, Liang PC, Wu CH. J Hepatocell Carcinoma. 2025 Jun 27;12:1231-1240.

深度學習在超音波檢查肝腫瘤自動偵測與辨識之應用

吳志宏
Chih-Horng Wu

Background/Aim: Ultrasonography is the most commonly used screening tool for hepatocellular carcinoma (HCC). However, its diagnostic performance is highly operator-dependent. This study aimed to develop deep learning (DL) models to automatically detect and diagnose hepatic lesions on ultrasound images, with HCC being the predominant malignancy.

Methods: We retrospectively enrolled patients with hepatic tumors diagnosed by abdominal ultrasound between January 2002 and December 2020, including both malignant and benign lesions. A total of 1,576 patients with 4,599 images and 6,001 annotated lesions were analyzed. Eight DL models—ResNet50, Xception, Inception-ResNet-V2, EfficientNet-B5, EfficientNetV2-S, EfficientNetV2-L, Swin-T, and Swin-B—were developed for lesion classification, while YOLOR models were used for real-time lesion detection. Diagnostic performance was evaluated by the area under the receiver operating characteristic curve (AUC). Mean Average Precision (mAP) was calculated based on the area under the precision-recall curve across categories to assess detection performance.

Results: The dataset was divided into training (n=1,061), validation (n=373), and testing (n=142) cohorts. The AUCs for ResNet50, Xception, Inception-ResNet-V2, EfficientNet-B5, EfficientNetV2-S, EfficientNetV2-L, Swin-T, and Swin-B were 0.88, 0.89, 0.88, 0.90, 0.85, 0.89, 0.89, and 0.90, respectively. The mAP scores for differentiating malignant and benign lesions using YOLOR-W6 and YOLOR-D6 were 0.5134 and 0.5410 in the validation set, and 0.5342 and 0.5631 in the testing set.

Conclusion: This study demonstrates that DL models can accurately differentiate malignant from benign hepatic lesions on ultrasound images. Real-time DL-based lesion detection and classification are also feasible, providing potential clinical value in supporting ultrasound-based HCC surveillance and reducing operator dependency.



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Speaker

【AI 驅動分子影像•開啟肝臟精準診療新紀元會】

王美惠

Mei-Hui Wang

Current Position

- 國家原子能科技研究院 研究員兼諮議委員

Education / Training

- 國立台灣大學生物科技研究所博士
- 國立台灣大學醫事技術研究所碩士
- 國立台灣大學醫事技術學系學士

Professional and Research

- 約翰霍普金斯大學生物系訪問學者 (2006, 2010)
- 加州聖地牙哥分校生物工程系訪問學者 (1997)
- 國立台灣大學醫事技術學系講師 (1992-1993)

Awards & Honors

- 2025 年獲全球百大科技研發獎、衛生福利獎章三等獎
- 2024 年獲德國紐倫堡發明展銀牌獎
- 2022 年獲國家藥物科技研究發展獎藥品類金質獎

3/21(六) 15:50-16:20
3 樓 致德堂

肝受體正子造影定量、人工智能與臨床應用

王美惠
Mei-Hui Wang

國原院 Dolacga 肝受體正子造影術對肝臟受體的絕佳標靶性，可提供高對比、可量化的肝功能影像，具臨床實用性，臨床應用時，只需將 Ga-68 Dolacga 應用於肝臟顯像約 15-30 分鐘，即可清晰地視覺化肝癌的確切病灶區域範圍與大小，良性與惡性，這種精準掌握疾病負擔 (Disease burden) 的優勢，對於爭取治療時機與制定有效的治療方案——無論是手術切除、質子治療或射頻燒灼，都至關重要。因此榮獲素有「創新界的奧斯卡」美譽的全球百大科技研發獎 (R&D 100 Awards)。



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Speaker

【AI 驅動分子影像•開啟肝臟精準診療新紀元會】

陳金財
David Tan

Current Position

- 冷泉港生物科技股份有限公司 小動物影像產品經理

Education / Training

- 國立陽明大學 生物醫學影像暨放射科學系所碩士

Professional and Research

- 冷泉港生物科技股份有限公司 產品應用科學家
- 冷泉港生物科技股份有限公司 產品經理

小動物分子影像技術新知：從結構到功能代謝的全面躍進

陳金財
David Tan

隨著生技研發對數據精準度的要求日益提升，小動物影像設備正朝向「高效、真實、整合」三大趨勢邁進。

1. MRI 乾式超導技術：擺脫液氦束縛，傳統高場強 MRI 需定期填充液氦，維護成本極高。新一代乾式超導技術透過閉路循環冷卻系統，實現了「零液氦」運作。這不僅大幅降低營運成本，更縮小了設備體積，使高解析度的解剖結構造影能更靈活地部署於各類研究實驗室。
2. 清醒造影：還原最真實的生理數據，為了消除麻醉藥物對神經行為與代謝研究的干擾，清醒動物 PET 及光學造影技術應運而生。藉由高速追蹤與運動補償系統，研究者可在動物完全清醒且自由活動的狀態下，觀測神經遞質與分子訊號。這項突破排除了麻醉帶來的生理偏差，使研究結果更具臨床轉化意義。
3. CT 與光學一體機：物理層面的完美對位，技術整合的尖端體現於 高解析度的 CT 與 3D 光學影像的深度融合。一體機架構確保了空間座標的絕對一致，能自動將高精細的骨骼解剖結構(CT)與分子功能訊號(光學)進行精確配準，解決了手動對位造成的誤差，精準定位藥物分佈與病灶位置。

結語 從乾式超導的便利性到清醒造影的科學價值，影像技術的革新正為轉譯醫學研究提供更直觀、精準的科研利器。



第40屆生物醫學聯合學術年會



Speaker

【AI 驅動分子影像•開啟肝臟精準診療新紀元會】

Sylvain MANGEOT

Current Position

- Bruker Asia Pacific Preclinical Imaging (PCI) Sales Director

Education / Training

- Nancy Medical University, Master's in Biomedical Engineering
- Nancy Medical University, Bachelor's in Biomedical Engineering
- Satakunta University, Pori, Bachelor's International Management

Professional and Research

- APACMed, ASEAN Vice Chair

3/21(六) 16:40-17:00
3 樓 致德堂

From OMI to PET/MRI, a Multimodality Bench to Bed NMI

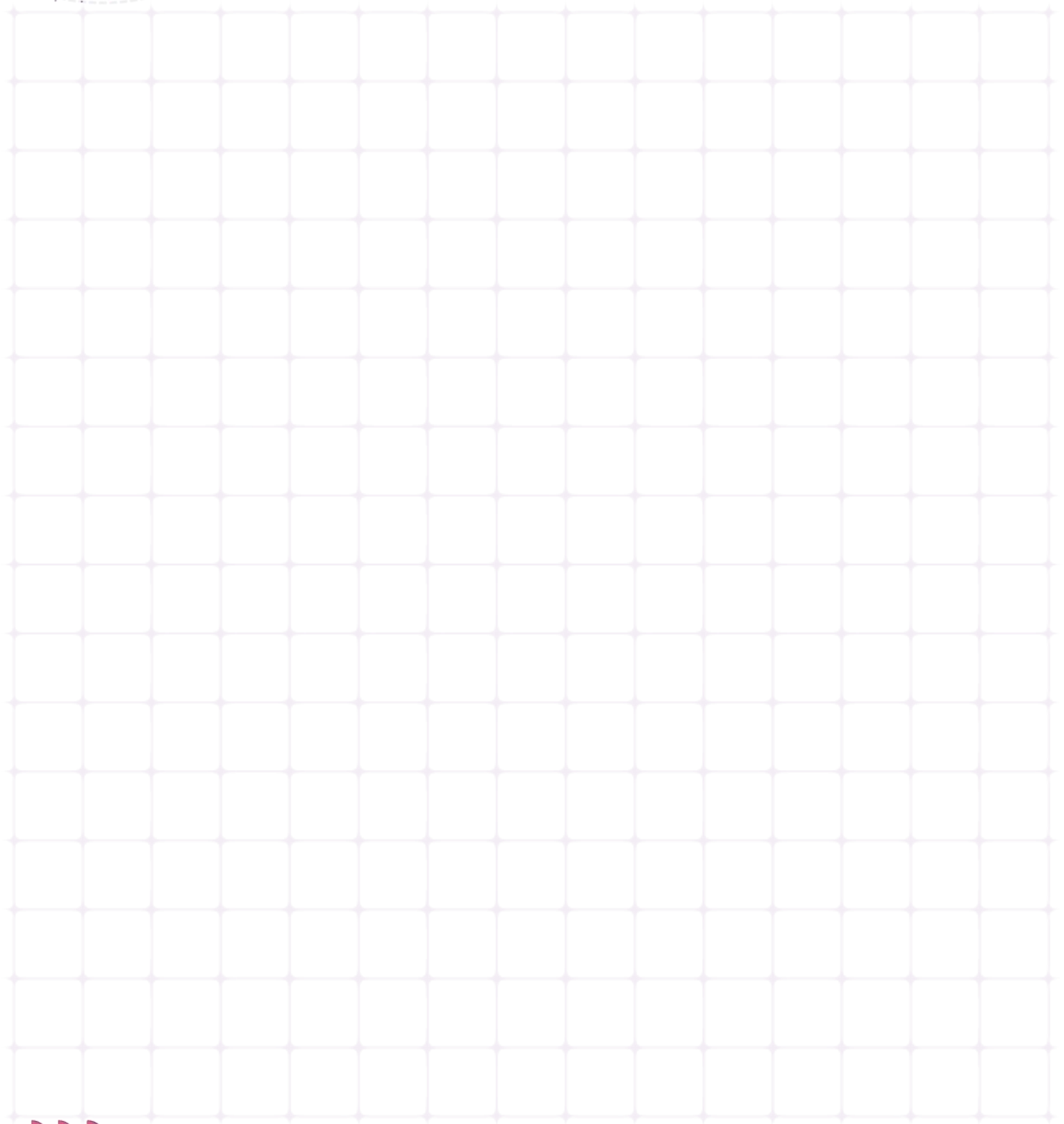
Preclinical imaging approach

Sylvain Mangeot

In this presentation, we will discuss the preclinical imaging equipment landscape, available imaging technologies and multimodal synergies allowing fast cost efficient NM tracer research and development for labs in APAC.



第40屆生物醫學聯合學術年會





第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

陳烱霖轉譯醫學講座 特別演講

The Chiung-Lin Chen
Translational Medicine Award



第40屆生物醫學聯合學術年會



Speaker

【陳炯霖轉譯醫學講座特別演講】

連正章

Cheng-Chang Lien

Current Position

- 國立陽明交通大學神經科學研究所 講座教授
- 國立陽明交通大學生命科學院 院長
- 國科會生命科學推動中心 主任

Education / Training

- 弗來堡大學 醫學博士
- 中國醫藥大學 醫學士

Professional and Research

- 國立陽明交通大學神經科學研究所 講座教授 (2025/08~迄今)
- 國立陽明交通大學生命科學院 院長 (2020/11~迄今)
- 國家科學及技術委員會形態及生理醫學學門 召集人(2023/1~2025/12)

Awards & Honors

- 第四屆陳炯霖轉譯醫學講座 (2025)
- 國家科學及技術委員會 113 年度傑出研究獎 (2024)
- 國家科學及技術委員會(前科技部) 105 年度傑出研究獎 (2016)

Selected Publications

- Hou WH, Jariwala M, Wang KY, Seewald A, Lin YL, Liou YC, Ricci A, Ferraguti F, Lien CC*, Capogna M. Inhibitory fear memory engram in the mouse central lateral amygdala. *Cell Reports*. 2024 Aug 27;43(8):114468. (*corresponding author and lead contact)
- Lin YL, Yang ZS, Wong WY, Lin SC, Wang SJ, Chen SP, Cheng JK, Lu H, Lien CC*. Cellular mechanisms underlying central sensitization in a mouse model of chronic muscle pain. *eLife*. 2022 Nov 15;11:e78610. (*corresponding author)
- Yen TY, Huang X, MacLaren DAA, Schlesiger MI, Monyer H, Lien CC*. Inhibitory projections connecting the dentate gyri in the two hemispheres support spatial and contextual memory. *Cell Reports*. 2022 May 17;39(7):110831. (*corresponding author)

Excitation-Inhibition Balance in Hippocampal-Amygdala Circuits: Implications for Anxiety and Fear Disorders

連正章

Cheng-Chang Lien

Over the past decade, my research has focused on understanding how the balance between excitation and inhibition in the brain controls behavior, both in health and in disease. This balance—often referred to as excitation–inhibition (E–I) balance—is essential for normal brain function. When it is disrupted, a wide range of neurological and psychiatric conditions can emerge, including epilepsy, Parkinson’s disease, depression, and anxiety disorders. Although restoring E–I balance is a promising therapeutic strategy, current clinical approaches, such as brain stimulation, often act broadly on large brain regions, leading to unwanted side effects. This limitation has motivated my laboratory to identify the specific cell types and circuits that regulate E–I balance, with the goal of enabling more precise interventions.

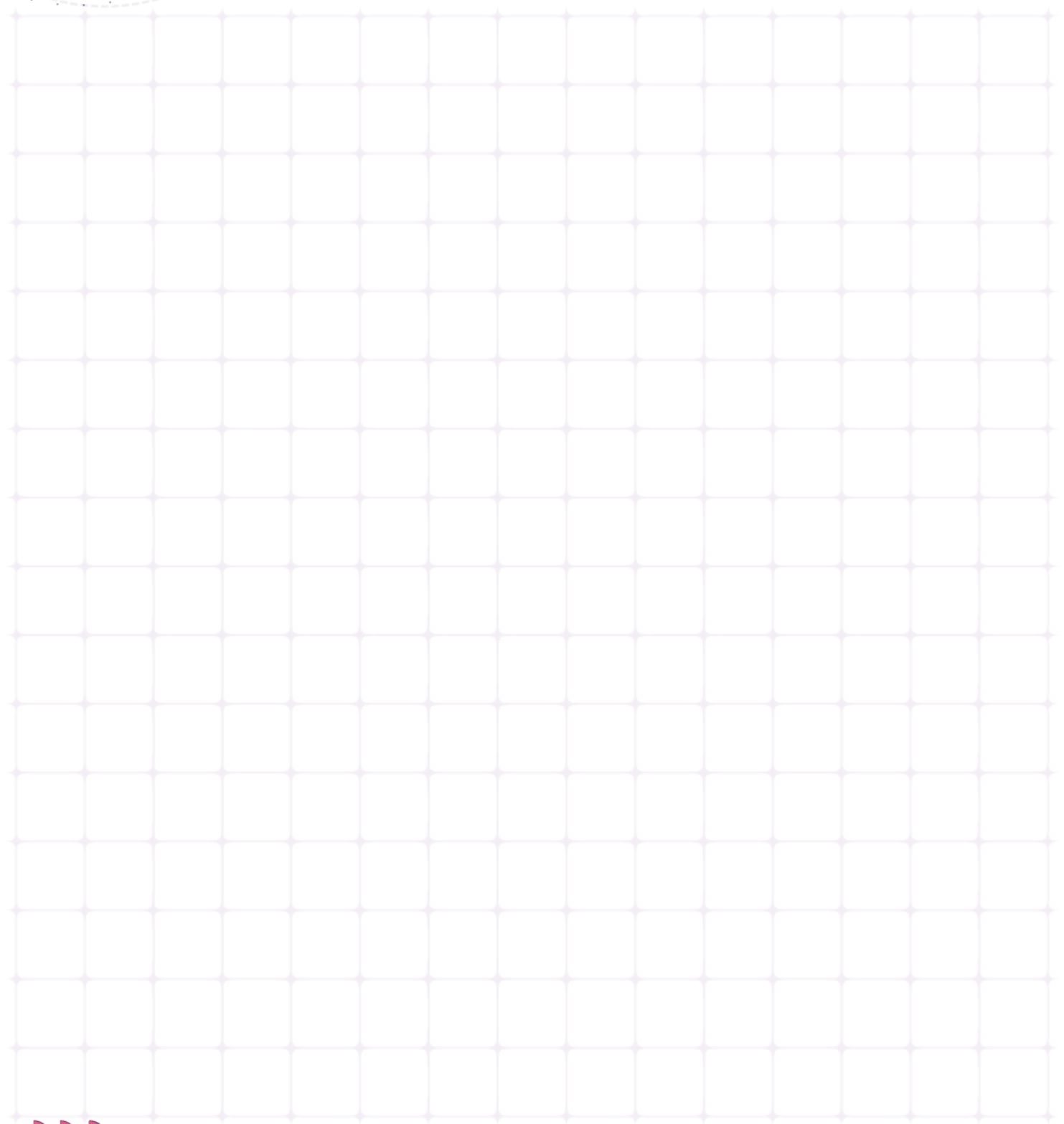
The central focus of our work is how inhibitory neurons that use the neurotransmitter GABA shape brain activity, memory, and emotional behavior. Using genetically modified mice, brain recordings, and targeted circuit manipulation, we discovered an unexpected role for mossy cells in the hippocampus, a brain region involved in memory and emotion. Although mossy cells are excitatory neurons, they strongly recruit inhibitory circuits. We found that these cells become active in anxiety-provoking environments and, by engaging inhibitory neurons, reduce avoidance behavior and promote exploration. This reveals a circuit mechanism through which excitation can reduce anxiety by strengthening inhibition.

More recently, we extended this framework to fear learning. We identified a population of inhibitory neurons in the central amygdala that form a “fear memory engram” —a group of cells that store and regulate fear memories. These inhibitory neurons act as brakes on excessive fear responses. When their activity is reduced, fear behaviors become exaggerated and persistent.

In this talk, I will integrate these findings to show how precise inhibitory circuits and E–I balance control anxiety and fear across brain systems, and how understanding these mechanisms may lead to more targeted treatments for anxiety- and trauma-related panic disorders.



第40屆生物醫學聯合學術年會





第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

學會特別演講 Keynote Speeches



第40屆生物醫學聯合學術年會

學會特別演講

Keynote Speeches

台灣生物化學及分子生物學學會

115 年 3 月 21 日(週六)14:10~15:10

地點：3 樓 33 教室

座長：王育民理事長

講題：Versatile Roles of Circular RNAs

講者：Professor Yoon Ki Kim

單位：Korea Advanced Institute of Science and Technology

中華民國細胞及分子生物學學會 × 中華民國免疫學會

115 年 3 月 21 日 (週六) 09:20~10:20

地點：3 樓 30 教室

座長：司徒惠康 院長

講題：The Importance of Innate Immune Receptors in Health and Disease

講者：Professor Jenny Pan-Yun Ting

單位：Lineberger Comprehensive Cancer Center, University of North Carolina

中華民國細胞及分子生物學學會

115 年 3 月 22 日 (週日) 09:20~10:20

地點：3 樓 30 教室

座長：楊慕華 副校長

講題：Dissecting Tumor-Stroma Crosstalk: From Microenvironmental Control to
Therapeutic Innovation

講者：王憶卿 講座教授

單位：國立成功大學醫學院

中華民國臨床生化學會

115 年 3 月 21 日 (週六) 13:30~14:20

地點：3 樓 31 教室

座長：徐慧貞 理事長

講題：次世代醫療資訊平台之發展與應用

講者：李建璋 處長

單位：衛生福利部資訊處

台灣毒物學學會

115 年 3 月 21 日 (週六) 09:20~10:20

地點：2 樓 29 教室

座長：王應然 教授

講題：Nanoparticulophagy: Implications for Nanodrug Delivery and Cancer Therapy

講者：趙瑞益 教授

單位：國立陽明交通大學

台灣毒物學學會

115 年 3 月 22 日 (週日) 09:30~10:30

地點：2 樓 29 教室

座長：王應然 教授

講題：The Next Era of Disease Modeling: Advancing Preclinical Research through 3R and Innovation

講者：秦咸靜 主任

單位：國家實驗研究院



第40屆生物醫學聯合學術年會

中國生理學會

115 年 3 月 21 日 (週六) 13:00~13:40

地點：1 樓 可勝廳

座長：連正章 教授

講題：A Novel Ion Conducting Route Besides the Central Pore in an Inherited GIRK Mutant

講者：Professor Yoshihiro Kubo

單位：National Institute for Physiological Sciences

中國生理學會

115 年 3 月 21 日 (週六) 13:40~14:20

地點：1 樓 可勝廳

座長：余佳慧 教授

講題：Physiological Ear Plugs: Neuro-Humoral Adaptation Defends the Cochlea

講者：Professor Gary David Housley

單位：University of New South Wales

中國生理學會

115 年 3 月 21 日 (週六) 14:20~15:00

地點：1 樓 可勝廳

座長：李昆澤 教授

講題：The Critical Modulation and Orchestration of Telencephalic Oscillations by Thalamus

講者：郭鐘金 教授

單位：國立台灣大學

台灣藥理學會

115 年 3 月 21 日 (週六) 14:00~15:00

地點：1 樓 第一教室

座長：林建煌 理事長

講題：Ubiquitin at the Crossroads in Regulating PD-1 Function and T Cell Immunity

講者：王憶卿 講座教授

單位：國立成功大學醫學院

中華民國解剖學學會

115 年 3 月 21 日 (週六) 14:30~15:30

地點：3 樓 32 教室

座長：郭余民 理事長

講題：Proprioceptors and Sngception

講者：陳志成 博士

單位：中央研究院生物醫學科學研究所



第40屆生物醫學聯合學術年會



Speaker

Yoon Ki Kim

Current Position

- Professor, Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST)

Education / Training

- Department of Life Science, POSTECH, Ph.D. (2002)
- Department of Life Science, POSTECH, M.S. (1998)
- Department of Life Science, POSTECH, B.S. (1996)

Professional and Research

- Professor, Dept. of Biological Sciences, KAIST (2022-present)
- Assistant, associate, and full professor, Division of Life Sciences, Korea University (2005-2022)
- Post-Doctoral Fellow, Department of Biochemistry and Biophysics, School of Medicine and Dentistry, University of Rochester, New York (2002-2005)

Awards & Honors

- 14th Young Scientist Award (a Presidential Commendation) (2010)

Selected Publications

- Sung Ho Boo, Min-Kyung Shin, Hyun Jung Hwang, Hyeonsoo Hwang, Sunwoo Chang, TaeSoo Kim, Daehyun Baek, and Yoon Ki Kim (2024.12) Circular RNAs trigger nonsense-mediated mRNA decay. *Molecular Cell* 84(24):4862-4877.e7.
- Jeeyoon Chang, Min-Kyung Shin, Joori Park, Hyun Jung Hwang, Nicolas Locker, Junhak Ahn, Doyeon Kim, Daehyun Baek, Yeonkyoung Park, Yujin Lee, Sung Ho Boo, Hyeong-In Kim, and Yoon Ki Kim (2023.11) An interaction between eIF4A3 and eIF3g drives the internal initiation of translation. *Nucleic Acids Research* 51(20):10950-10969.
- Hyun Jung Hwang, Tae Lim Park, Hyeong-In Kim, Yeonkyoung Park, Geunhee Kim, Chiyeol Song, Won-Ki Cho*, and Yoon Ki Kim* (*equal contribution) (2023.10) YTHDF2 facilitates aggresome formation via UPF1 in an m6A-independent manner. *Nature Communications* 14:6248.
- Hyun Jung Hwang and Yoon Ki Kim (2023.02) The role of LC3B in autophagy as an RNA-binding protein. *Autophagy* 19(3): 1028-1030.

Versatile Roles of Circular RNAs

Yoon Ki Kim

Intermolecular and intramolecular RNA-RNA interactions are pivotal determinants of a spectrum of fundamental biological processes. For instance, intermolecular RNA-RNA interactions between snRNAs and intron sequences orchestrate pre-mRNA splicing. Similarly, the interplay between snoRNA and rRNA constitutes a pivotal step in rRNA maturation. Furthermore, the association between microRNA and mRNA induces rapid degradation or translational silencing of targeted mRNAs. In this talk, I will introduce our recent finding that circular RNAs (circRNAs) can associate with mRNAs, triggering rapid degradation of the mRNAs. Specifically, we elucidate a molecular mechanism, in which the interaction between circRNA and mRNA triggers rapid degradation of the mRNA through nonsense-mediated mRNA decay (NMD) pathway, which we termed circRNA-induced NMD (circNMD). I will also emphasize that circNMD can be elicited by both endogenous and artificially engineered circRNAs. Our observations reveal that exogenously introduced circRNAs, precisely tailored to form perfect base-pairing with endogenous mRNA, markedly diminish the levels of a target mRNA. These findings illuminate the substantial potential of circRNAs as a gene silencing tool, similar to microRNA-mediated gene silencing. Importantly, in conjunction with the inherent higher stability of circRNAs in comparison to linear mRNAs, our observations highlight the potential of circRNA as promising therapeutic agents for gene silencing via the circNMD pathway.



第40屆生物醫學聯合學術年會



Speaker

丁邦容

Jenny Pan-Yun Ting

Current Position

- Lineberger Comprehensive Cancer Center, University of North Carolina
450 West Drive Department of Genetics (Primary), Department of Microbiology-Immunology (Secondary)

Education / Training

- Postdoctoral Research Associate, Department of Microbiology and Immunology, Duke University Medical Center, Durham, North Carolina (1982-1983)
- Postdoctoral Fellow, Department of Microbiology and Immunology, University of Southern California Medical Center, Los Angeles, California (1979-1981)
- Doctor of Philosophy, Microbiology-Immunology, Northwestern University, Chicago, Illinois (1975-1979)

Professional and Research

- University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, William Rand Kenan Professor of Genetics (2014 – Present)
- University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, William Rand Kenan Professor of Microbiology and Immunology (2009 – 2014)
- University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, Founding Director, Center for Translational Immunology (2008 – Present)

Awards & Honors

- Indiana University School of Medicine Mark Brothers Award (2026)
- Clarivate/Analytics Highly Cited Researcher (2017 to present)
- Distinguished Fellow, American Association of Immunologists (2023)

Selected Publications

- Alves T, Swanson KV, Ginary MS, Freire M, Moss K, Divaris K, Beck J, Santos 1. Alves T, Swanson KV, Ginary MS, Freire M, Moss K, Divaris K, Beck J, Santos PCP, Brickey WJ, Wrobel JA, Min HY, Syed M, Morelli T, Seaman WT, Preisser JS, Hu D, Preisser H, Makhanova N, Susin C, Vias NP, Styner M, Zhang S, Pirih FQ, Chang J, Gill HS, Lietzan AD, Webster-Cyriaque J, Ting JPY*, Marchesan JT*. Inflammasome targeting for periodontitis prevention is sex dependent. Proc Natl Acad Sci U S A. 2025 Nov 4;122(44):e2507092122. * Co-senior authors. PMID: 41144672
- Zhang BC, Pedersen A, Reinert LS, Li Y, Narita R, Idorn M, Hu L, Skouboe MK, Li S, Maimaitili M, Ding X, Cong Y, Zhao J, Frémond ML, Mikkelsen K, Gao Z, Huang JR, Thomsen EA, Mikkelsen JH, Venkatraman R, Thomsen MK, Iversen MB, Assil S, Zhang R, Henneman L, Jakobsen MR, Oxvig C, Dalgaard TS, Møller P, Fago A, Wang T, Andersen CBF, De Nardo D, Reggiori F, Ting JP, Mikkelsen JG, Bak RO, Mogensen TH, Li P, Paludan SR. STING signals to NF-κB from late endolysosomal compartments using IRF3 as an adaptor. Nat Immunol. 2025 Nov;26(11):1916-1930. PMID: 40973797

The Importance of Innate Immune Receptors in Health and Disease

丁邦容
Jenny Pan-Yun Ting

Innate immune receptors play crucial roles in all forms of diseases. These include cancer, infectious diseases, autoimmunity, autoinflammatory disorders and metabolic disorders. Our lab's focus is on the roles of innate immunity in a broad spectrum and diseases and their molecular mechanisms of action. One of our key focus is in on the NLR (NBD-LRR proteins or NOD-like receptors) family. Our work in models of diseases has revealed the roles of NLRs in both hematopoietic and non-immune cells to affect disease outcomes. More recently, we have explored the ways by which innate immune receptors can inherently affect adaptive immune cells to alter the outcome of autoimmune diseases, inflammation and cancer. We have also explored ways by which mRNA nanotechnology can be used to activate the innate immune system as a venue for immunotherapy.



第40屆生物醫學聯合學術年會

Speaker



王憶卿

Yi-Ching Wang

Current Position

- 國立成功大學醫學院藥理所 講座教授
- 國立成功大學醫學院藥理所 所長

Education / Training

- 1993, PhD, 密西根州立大學 遺傳所

Professional and Research

- 1995-1999, 副教授, 私立中山醫學大學 分子毒理所
- 1999-2006, 教授, 國立台灣師範大學 生命科學系
- 2006-2015, 特聘教授, 國立成功大學 醫學院 藥理所

Awards & Honors

- 2017 財團法人王民寧先生紀念基金會【基礎醫學類】傑出貢獻獎
- 2022 教育部學術獎
- 2023 第 19 屆永信李天德醫藥科技獎—卓越醫藥科技獎
- 2024 國科會傑出特約研究員獎

Selected Publications

- Hsieh HC, Young MJ, Chen KY, Su WC, Lin CC, Yen YT, Hung JJ*, Wang YC*. 2025. Deubiquitinase USP24 activated by IL-6/STAT3 enhances PD-1 protein stability and suppresses T cell antitumor response. Science Advances 11(16):eadt4258.
- Kuo WT, Kuo IY, Hsieh HC, Wu ST, Su WC, Wang YC*. 2024. Rab37 mediates trafficking and membrane presentation of PD-1 to sustain T cell exhaustion in lung cancer. J Biomed Sci. 7;31(1):20.
- Yang PS, Yu MH, Hou YC, Chang CP, Lin SC, Kuo IY, Su PC, Cheng HC, Su WC, Shan YS*, Wang YC*. 2022. Targeting protumor factor chitinase-3-like-1 secreted by Rab37 vesicles for cancer immunotherapy. Theranostics, 12(1):340-361 (cover article).
- Hsieh CH, Hsieh HC, Shih FS, Wang PW, Yang LX, Shieh DB*, Yi-Ching Wang*. 2021. An innovative NRF2 nano-modulator induces lung cancer ferroptosis and elicits an immunostimulatory tumor microenvironment. Theranostics 11(14):7072-7091 (cover article).
- Kuo IY, Yang YE, Yang PS, Tsai YJ, Tzeng HT, Cheng HC, Kuo WT, Su WC, Chang CP*, Wang YC*. 2021. Converged Rab37/IL-6 trafficking and STAT3/PD-1 transcription axes elicit an immunosuppressive lung tumor microenvironment. Theranostics 11(14):7029-7044.

Dissecting Tumor-Stroma Crosstalk: From Microenvironmental Control to Therapeutic Innovation

王憶卿
Yi-Ching Wang

Pancreatic ductal adenocarcinoma (PDAC) is characterized by a dense, immunosuppressive stroma that limits therapeutic efficacy. Although chitinase-3-like protein 1 (CHI3L1) promotes angiogenesis and fibrosis, the upstream mechanisms regulating its induction within the tumor microenvironment (TME) remain poorly defined. By integrating spatial transcriptomics, secretomics, and multicellular organoid modeling, we identified a stromal signaling network that drives CHI3L1 upregulation and PDAC progression. Three-cell co-culture organoids composed of cancer cells, macrophages, and pancreatic stellate fibroblasts revealed key stromal-derived factors, CCL2, CXCL10, and SPARC, that cooperatively induce CHI3L1 via NF- κ B activation and STAT3-mediated epigenetic reprogramming. Functionally, CHI3L1 promotes fibrotic remodeling and immunosuppression, reinforcing the desmoplastic, immune-excluded phenotype of PDAC. Notably, CHI3L1 induction establishes a feed-forward loop that sustains fibrosis and immune evasion. In vivo dual blockade of the CCL2/CCR2 axis and CHI3L1 disrupted this stromal-tumor crosstalk, significantly reducing tumor growth, metastasis, and fibrosis. Collectively, these findings define a targetable cross-talk between stromal cell-derived factors and cancer cell receptor-mediated epigenetic and transcriptional upregulation of CHI3L1 during cancer progression. This framework also provides a generalizable model for elucidating the regulatory mechanisms governing other proteins that exhibit stepwise upregulation during tumorigenesis.



第40屆生物醫學聯合學術年會



Speaker

李建璋

Chien-Chang Lee

Current Position

- 衛生福利部資訊處 處長 (2024 年至今)
- 台灣大學醫學院急診醫學科 臨床教授 (2021 年至今)
- 台大智慧醫療中心 顧問 (2021 年至今)

Education / Training

- 2014, PhD, 美國哈佛大學流行病學
- 2004, MS, 國立臺灣大學臨床醫學研究所
- 1997, 醫學士, 國立臺灣大學醫學系

Professional and Research

- 2020-2024, 副主任, 台大智慧醫療中心
- 2020-2023, 理事長, 台灣兒童急診醫學會
- 2012-2016, 主任, 台大雲林分院急診醫學部

Awards & Honors

- 2025 IDweek 美國感染症學會最佳論文獎 (IDSA Committee Choice Award)
- 2024 & 2025, 美國愛迪生發明獎金牌獎(2 度得獎)
- 2021-2023, 美國史丹佛大學全球 2% 高引用學者

Selected Publications

- Vincenzo Russotto, etd. (2021) Intubation practices and adverse peri-intubation events in critically ill patients from 29 countries
- Namendys-Silva, Ignacio Martin-Loeches, Marc Leone, Mary-Nicoleta Lupu, Jean-Louis Vincent, Icon Investigators. (2018) Sepsis in intensive care unit patients: worldwide data from the intensive care over nations audit
- Jean-Louis Vincent, John C Marshall, Silvio A Namendys-Silva, Bruno François, Ignacio Martin-Loeches, Jeffrey Lipman, Konrad Reinhart, Massimo Antonelli, Peter Pickkers, Hassane Njimi, Edgar Jimenez, Yasser Sakr (2014) Assessment of the worldwide burden of critical illness: the intensive care over nations (ICON) audit

3/21(六) 13:30-14:20
3 樓 31 教室

次世代醫療資訊平台之發展與應用

李建璋
Chien-Chang Lee

本次演講將聚焦於目前台灣醫院的電子病歷系統開發不一，導致資料格式不一致，無法滿足智慧醫療的需求，為此衛福部將推動次世代數位醫療平台，對接國際標準，實現資料、規則及應用程式的統一。計畫將導入國際醫學資料標準 FHIR，以統一電子病歷資料記錄格式；利用 CQL 建立統一的健保申報與醫療品質規則，以提升醫療品質與行政效率；並導入 SMART on FHIR 標準，統一智慧醫療應用程式的開發，促進生態系的發展。此外，計畫的五大願景包括建立醫療人工智慧生態系、推動醫院品質管理數位化、發展智慧化臨床試驗平台、成立真實世界電子病歷資料庫及實現個人化數位健康管理。衛福部設立三大 AI 中心，包括負責任 AI 執行中心、臨床 AI 取證驗證中心和 AI 影響性研究中心，以推進智慧醫療相關技術之發展與應用。



第40屆生物醫學聯合學術年會



Speaker

趙瑞益

Jui-I Chao

Current Position

- Professor, Department of Biological Science and Technology, National Yang Ming Chiao Tung University
- Professor, Institute of Molecular Medicine and Bioengineering, National Yang Ming Chiao Tung University
- Distinguished Professor, College of Engineering Bioscience, National Yang Ming Chiao Tung University

Education / Training

- 2001, Ph.D. Life Science, National Tsing Hua University, Taiwan
- 1995, M.S. Biomedical Science, National Tsing Hua University, Taiwan
- 1993, B.S. Biology, National Cheng Kung University, Taiwan

Professional and Research

- 2025-Present, Distinguished Professor, College of Engineering Bioscience, National Yang Ming Chiao Tung University, Taiwan
- 2021-Present, Director, Laboratory Animal Center of National Yang Ming Chiao Tung University, Taiwan
- 2019-2025, Professor and Chairman, Department of Biological Science and Technology, National Yang Ming Chiao Tung University, Taiwan

Awards & Honors

- 2025 Outstanding Alumni, College of Life Sciences and Medicine, National Tsing Hua University
- 2024 Outstanding Research Award, Taiwan Nanomedicine Society
- 2022 Outstanding Alumni, Department of Life Sciences, National Cheng Kung University

Selected Publications

- Lin, YW, Lin, TT, Chen, CH, Wang, RH, Lin, YH, Tseng, TY, Zhuang, YJ, Tang, SY, Lin, YC, Pang, JY, Chakravarthy, RD, Lin, HC, Tzou, SC, Chao, JI* (2023) Enhancing efficacy of albumin-bound paclitaxel for human lung and colorectal cancers through autophagy receptor sequestosome 1 (SQSTM1)/p62-mediated nanodrug delivery and cancer therapy, ACS Nano, 17(19): 19033-19051.
- Liao, WS, Ho, Y, Lin, YW, Raj, EN, Liu, KK, Chen, C, Zhou, XZ, Lu, KP, Chao, JI* (2019) Targeting EGFR of triple-negative breast cancer enhances the therapeutic efficacy of paclitaxel- and cetuximab-conjugated nanodiamond nanocomposite. Acta Biomaterialia, 86: 395-405.

Nanoparticulophagy: Implications for Nanodrug Delivery and Cancer Therapy

趙瑞益
Jui-I Chao

Selective autophagy is a conserved pathway that delivers macromolecules and organelles to lysosomes for degradation; however, the intracellular fate of nanoparticles and nanodrugs remains unclear. Here, we demonstrate that nanoparticles undergo selective autophagy through interactions with ubiquitinated proteins, autophagy receptors, and LC3, forming nanoparticulosomes that are transported to lysosomes—a process termed nanoparticulophagy. Using albumin-bound paclitaxel (Nab-PTX), we show that the autophagy receptor sequestosome 1 (SQSTM1) plays a crucial role in nanodrug delivery and therapeutic efficacy in cancer. Nab-PTX induces SQSTM1 phosphorylation at Ser403 and increases LC3-II levels, thereby promoting autophagosome formation. SQSTM1 facilitates the sequestration of Nab-PTX into autophagosomes, lysosomal albumin degradation, and subsequent PTX release, leading to mitotic catastrophe and apoptosis. SQSTM1 knockout attenuated Nab-PTX-induced caspase-3 activation, apoptosis, and tumor suppression both in vitro and in vivo. Clinically, SQSTM1 is overexpressed in advanced tumors and correlates with poor overall survival. Targeting SQSTM1 may represent an important strategy to improve nanodrug efficacy in clinical cancer therapy. Nanoparticulophagy provides a mechanistic framework for understanding nanodrug intracellular trafficking and cancer therapy.



第40屆生物醫學聯合學術年會

Speaker



秦咸靜

Hsian-Jean Chin

Current Position

- 國家實驗研究院 國家生物模式中心 主任

Education / Training

- 2025, PhD, University of Connecticut Health Center Department of Genetic and Developmental Biology, USA
- 1998, D.V.M., National Taiwan University Department of Veterinary Medicine, Taiwan

Professional and Research

- 2020-Present, 主任, 國家實驗研究院國家生物模式中心
- 2019-2020, 副主任/ 首席獸醫師, 國家實驗研究院國家生物模式中心

Awards & Honors

- 2025 亞洲實驗動物資源聯盟 (AMMRA) 主席
- 2025 美國消費電子展(CES) 創新獎

Selected Publications

- Teboul L, Amos-Landgraf J, Benavides FJ, Birling MC,, Brown SDM, Bryda E, Bunton-Stasyshyn R, Chin HJ, Crispo M, Delerue F, Dobbie M, Franklin CL, Fuchtbauer EM, Gao X, Golzio C, Haffner R, Hérault Y, Hrabě de Angelis M, Lloyd K, Magnuson TR, Montoliu L, Murray SA, Nam KH, Nutter LMJ, Pailhous E, Manuel de Villena FP, Peterson K, Reinholdt L, Sedlacek R, Seong JK, Shiroishi T, Smith S, Takeo T, Tinsley L, Vilotte JL, Warming S, Wells S, Whitelaw B, Yoshiki Y, AGR, AMMRA, CELPHEDIA infrastructure, INFRAFRONTIER consortium, IMGS, IMPC, ISTT, LASA, MMRRRC, PA, Pavlovic G. (2024) Improving laboratory animal genetic reporting: LAGeR guidelines. Nature Communications 15:5574
- Liu KT, Wang PW, Hsieh HY, Pan HC, Chin HJ, Lin CW, Huang YJ, Liao YC, Tsai YC, Liu SR, Su IC, Song YF, Yin GC, Wu KC, Chuang EY, Fan YJ, Yu J. Site-specific thrombus formation: advancements in photothrombosis-on-a-chip technology. (2024) Lab on a Chip. 24, 3422-33
- Chin HJ, Dobbie MS, Gao X, Hennessy JE, Nam KH, Seong JK, Shiroishi T, Takeo T, Yoshiki A, Zao J, Wang CKL. (2022) Asian Mouse Mutagenesis Resource Association (AMMRA): Mouse genetics and laboratory animal resources in the Asia Pacific. Mammalian Genome, 33, 192-202

The Next Era of Disease Modeling: Advancing Preclinical Research through 3R and Innovation

秦咸靜

Hsian-Jean Chin

The next era of disease modeling is shifting from animal-dependent preclinical pipelines toward human-relevant, data-rich systems. This transition is being accelerated by both scientific innovation and regulatory momentum—most notably the U.S. Food and Drug Administration (FDA) modernization efforts, which encourage broader adoption of New Approach Methodologies (NAMs) to improve translational predictability while reducing dependence on animal studies. In parallel, Taiwan is strategically advancing a cross-ministerial 3R (Replacement, Reduction, Refinement) program to strengthen national capabilities in alternative models, validation frameworks, and industrial translation.

This talk will highlight the strategic roadmap and key outcomes of the Taiwan 3R Initiative. The initiative aims to systematically advance replacement alternatives such as organoids and organ-on-chip (OoC) platforms, reduce animal numbers through optimized study designs and more predictive early-stage screening, and refine necessary animal use through improved welfare practices, humane endpoints, and enhanced monitoring. Importantly, Taiwan is well-positioned to contribute to this global shift by leveraging its strengths in semiconductors, precision manufacturing, and biomedical research—enabling scalable, standardized, and sensor-integrated NAMs platforms. By leveraging innovations in NAMs, aligning with the FDA modernization trajectory, we can build a forward-looking preclinical ecosystem that is more predictive, more ethical, and more globally connected.



第40屆生物醫學聯合學術年會

Speaker



Yoshihiro Kubo

Current Position

- Professor, National Institute for Physiological Sciences, Department of Molecular and Cellular Physiology, Division of Biophysics and Neurobiology
- President, International Union of Physiological Sciences (IUPS)
- President, The Physiological Society of Japan (PSJ)

Education / Training

- 1985, MD, University of Tokyo, School of Medicine, Japan
- 1989, PhD, University of Tokyo, Graduate School of Medicine, Japan

Professional and Research

- 2003-Present, Professor, National Institute for Physiological Sciences, Division of Biophysics and Neurobiology, Japan
- 2000-2003, Professor, Tokyo Medical and Dental University Graduate School of Medicine, Department of Physiology, Japan
- 1997-2000, Senior Research Scientist, Tokyo Metropolitan Institute for Neuroscience, Department of Neurophysiology, Japan

Selected Publications

- Liu C, Chen IS, Barri M, Murrell-Lagnado R, Kubo Y (2024) Structural determinants of M2R involved in inhibition by Sigma-1R. *Journal of Biological Chemistry* 300(12): 108006.
- Liu C, Chen IS, Tateyama M, Kubo Y (2024) Structural determinants of the direct inhibition of GIRK channels by Sigma-1 receptor antagonist. *Journal of Biological Chemistry* 300(5):107219.
- Shimomura T, Hirazawa K, Kubo Y (2023) Conformational rearrangements in the 2nd voltage sensor domain switch PIP2- and voltage-gating modes in two-pore channels. *Proc Natl Acad Sci USA* 120: e2209569120.
- Chen IS, Eldstrom J, Fedida D, Kubo Y (2022). A novel ion conducting route besides the central pore in an inherited mutant of G-protein-gated inwardly rectifying K⁺ channel. *Journal of Physiology* 600: 603-622.
- Andriani R, Kubo Y (2021) Voltage-clamp fluorometry analysis of structural rearrangements of ATP-gated channel P2X₂ upon hyperpolarization. *Elife* 10: e65822.

A Novel Ion Conducting Route Besides the Central Pore in an Inherited GIRK Mutant

Yoshihiro Kubo

G protein-gated inwardly rectifying K⁺ (GIRK) channels are critical regulators of membrane excitability in the brain, heart, and other organs. K⁺ channels are highly selective for K⁺ over Na⁺, a property conferred by the selectivity filter in the central pore. Mutations in and around the GIRK selectivity filter are associated with some inherited human diseases, including Keppen-Lubinsky syndrome. It is widely assumed -without direct evidence- that the pathophysiology arises from impaired selectivity caused by deformation of the central permeation pathway. We showed that this is not necessarily the case: in some mutants, a distinct secondary ion-conducting route exhibiting abnormal ion selectivity is formed alongside the central pore.



第40屆生物醫學聯合學術年會



Speaker

Gary David Housley

Current Position

- Scientia (Distinguished) Research Professor, Chair of Physiology, School of Biomedical Sciences, University of New South Wales (UNSW), Sydney, Australia
- Co-Leader, Bionics & Biorobotics, Tyree Institute for Health Engineering (IHealthE)
- President, Federation of Asian & Oceanian Physiological Societies (FAOPS)

Education / Training

- 1986, PhD, University of Auckland, New Zealand
- 1983, MS, University of Auckland, New Zealand
- 1981, BS, University of Auckland, New Zealand

Professional and Research

- 1986-1988, Post-doctoral Fellow, Tulane University, USA
- 1988-1989, Research Associate, University of Bristol, United Kingdom
- 2001-2006, Associate Professor, University of Auckland, New Zealand
- 2006-Present, Professor, UNSW Sydney, Australia

Awards & Honors

- 2024 Chief guest and Keynote speaker at South Asian Association of Physiologists (SAAP) IX Pakistan
- 2017 Australian Physiological Society Medal
- 2014 UNSW Sydney Advanced Innovation Award for bionic array-driven gene electrotransfer

Selected Publications

- Jeremy L. Pinyon, Georg von Jonquieres, Stephen L. Mow, Amr Al Abed, Keng-Yin Lai, Mathumathi Manoharan, Edward N. Crawford, Stanley H. Xue, Sarah Smith-Moore, Lisa J. Caproni, Sarah Milsom, Matthias Klugmann, Nigel H. Lovell, Gary D. Housley*. Vector-Free Deep Tissue Targeting of DNA/RNA Therapeutics via Single Capacitive Discharge Conductivity-Clamped Gene Electrotransfer. *Advanced Science* 2025; 12(3): e2406545
- Pinyon JL, von Jonquieres G, Crawford EN, Abed AA, Power JM, Klugmann M, Browne CJ, Housley DM, Wise AK, Fallon JB, Shepherd RK, Lin JY, McMahon C, McAlpine D, Birman CS, Lai W, Enke YL, Carter PM, Patrick JF, Gay RD, Marie C, Scherman D, Lovell NH, Housley GD*. Gene Electrotransfer via Conductivity-Clamped Electric Field Focusing Pivots Sensori-Motor DNA Therapeutics: "A Spoonful of Sugar Helps the Medicine Go Down". *Advanced Science* 2024; 11(30):e2401392.

Physiological ear Plugs: Neuro-Humoral Adaptation Defends the Cochlea

Gary David Housley

Our ears are extraordinary special sensory instruments, with the ability to encode an exceptional dynamic range of sound intensity with precise tonotopic mapping (place-specific transduction of sound frequencies along the cochlear's organ of Corti). The hearing organ relies upon a limited number of irreplaceable sensory hair cells and primary auditory neurons, where sound coding and auditory neurotransmission are achieved by differentiation within these cell types. The 'cochlear amplifier' (CA) exemplifies this, where outer hair cells act as electro-mechanical elements to enhance sound transduction at the inner hair cells to provide our exquisite hearing sensitivity. Olivocochlear efferent feedback tunes the CA for frequency discrimination and binaural regulation of sensitivity in response to sound dynamics. This dynamic neural feedback is otoprotective, acting to suppress the CA gain at high sound levels, precluding glutamatergic excitotoxicity at the afferent synapses; where auditory synaptopathy is a primary cause of noise-induced hearing loss (NIHL). The neural control of the CA is evident with contralateral suppression; noise presented to one ear causes a rapid reduction in the amplitude of distortion product otoacoustic emissions (DPOAE) recorded from the opposite ear. This efferent feedback dynamic is largely transient, adapting within seconds, however, with sustained elevated noise levels, bilateral suppression of DPOAEs develop within a few minutes which persist for many hours after noise ceases. In mice lacking ATP-gated ion channels encoded by the P2rx2 gene (P2rx2KO), this noise - induced hearing adaptation was found to be absent, unmasking purinergic humoral control of hearing sensitivity. P2rx2KO mice exhibit vulnerability to NIHL, and this has been extended to humans where loss of function P2RX2 mutations present haplo-insufficiency leading to progressive autosomal dominant non-syndromic hearing loss (DFNA41). Interrogation of the underlying purinergic signalplex likely offers insights to the diversity of hearing loss vulnerability in the community and is the subject of the UNSW-led 'Hearing for Life' Programme.



第40屆生物醫學聯合學術年會

Speaker



郭鐘金

Chung-Chin Kuo

Current Position

- Professor, Department of Physiology, National Taiwan University
- Staff Physician, Department of Neurology, National Taiwan University Hospital

Education / Training

- 1983, MD, National Taiwan University, Taiwan
- 1992, PhD, Harvard University, U.S.A.

Professional and Research

- 2000-2006, Chair, Dept. of Physiology, National Taiwan University
- 2010-2016, Chair, Dept. of Neurology, National Taiwan University Hospital

Awards & Honors

- 1997, 1999, 2002, 國科會傑出研究獎
- 2015 有庠科技講座-生技醫藥類
- 2021 侯金堆傑出榮譽獎

Selected Publications

- Lin, Y.-C., Lai, Y.-C., Chou, P., Hsueh, S.-W., Lin, T.-H., Huang, C.-S., Wang, R.-W., Yang, Y.-C., and Kuo, C.-C. (2021) How can a Na⁺ channel inhibitor ameliorate seizures in Lennox-Gastaut syndrome? *Annals of Neurology* 89(6): 1099-1113
- Lee, L.-H. N., Huang, C.-S., Wang, R.-W., Lai, H.-J., Chung, C.-C., Yang, Y.-C. and Kuo, C.-C. (2022) Deep brain stimulation rectifies the noisy cortex and irresponsive subthalamus to improve parkinsonian locomotor activities. *npj Parkinson's Disease* 8:77
- Yang, Y.-C., Wang, G.-H., Chou, P., Hsueh, S.-W., Lai, Y.-C., and Kuo, C.-C. (2024) Dynamic electrical synapses rewire brain networks for persistent oscillations and epileptogenesis. *Proceedings of the National Academy of Sciences of the United States of America* 121(8):e2313042121
- Lee, L.-H.N., Ngan, C.-Y., Yang, C.-K., Wang, R.-W., Lai, H.-J., Chen, C.-H., Yang, Y.-C., Kuo, C.-C. (2025) Motor cortex stimulation ameliorates parkinsonian locomotor deficits: effectual and mechanistic differences from subthalamic modulation. *npj Parkinson's Disease* 11:32
- Chou, P., Lai, Y.-C., Zheng, Y.-H., Yang, Y.-C., Kuo, C.-C. (2025) Frequency-coded spatiotemporal control of telencephalic ictal oscillations and inter-cortical coherence by thalamus. *Neurobiology of Disease* 213:106993

The Critical Modulation and Orchestration of Telencephalic Oscillations by Thalamus

郭鐘金

Chung-Chin Kuo

The telencephalon or cerebrum marks the highest achievement of human evolution and cognition. Electrophysiologically, cerebral cortical activities are characterized by continuous but ever-changing oscillations, some of which are well discernible in electroencephalograms (EEG) with corresponding behavioral presentations. We found that the cortical networks are specialized for self-sustained oscillating activities. The self-sustained activities, however, are critically modulated and orchestrated by diencephalic thalamus. Either electrical or chemical ictogenic stimulation of basolateral amygdala (BLA) induces augmentation of δ -frequency local field potential (LFP) oscillations in situ. However, the thalamic mediodorsal nucleus (MD), which is reciprocally connected with BLA, responds with mixed θ - α and δ oscillations at first. MD may then be entrained more and more toward the latter, leading to augmented δ oscillations as well as δ coherence in the thalamocortical systems, and the sequential changes in oscillating activities are readily translated into different stages of seizures in behavior. Inhibition of MD with topical tetrodotoxin dissipates the coherent δ augmentation and decreases multi-unit spikes in BLA and the other telencephalic areas, indicative of the essential control of both regional cortical activities and inter-cortical or systemic communications by the thalamus. Application of pentylenetetrazol, conventionally a proconvulsant, could induce interchanging periods of δ and θ - α augmentation in MD. However, concomitant electrical stimulation of BLA at the former and latter periods is much more and less likely to induce seizures, respectively. The intriguing thalamic δ entrainment and " θ - α antagonism" are mechanistically ascribable to local GABA-glutamate interactions and the absolute requirement of cortical glutamatergic input for the generation of thalamic burst discharges ("relay bursts"). We conclude that the thalamus critically modulates and orchestrates the temporal pace as well as spatial scale of telencephalic oscillations to make the highly complicated but most colorful functions of the cerebral cortex.



第40屆生物醫學聯合學術年會

Speaker



王憶卿

Yi-Ching Wang

Current Position

- 國立成功大學醫學院藥理所 講座教授
- 國立成功大學醫學院藥理所 所長

Education / Training

- 1993, PhD, 密西根州立大學 遺傳所

Professional and Research

- 1995-1999, 副教授, 私立中山醫學大學 分子毒理所
- 1999-2006, 教授, 國立台灣師範大學 生命科學系
- 2006-2015, 特聘教授, 國立成功大學 醫學院 藥理所

Awards & Honors

- 2017 財團法人王民寧先生紀念基金會【基礎醫學類】傑出貢獻獎
- 2022 教育部學術獎
- 2023 第 19 屆永信李天德醫藥科技獎—卓越醫藥科技獎
- 2024 國科會傑出特約研究員獎

Selected Publications

- Hsieh HC, Young MJ, Chen KY, Su WC, Lin CC, Yen YT, Hung JJ*, Wang YC*. 2025. Deubiquitinase USP24 activated by IL-6/STAT3 enhances PD-1 protein stability and suppresses T cell antitumor response. Science Advances 11(16):eadt4258.
- Kuo WT, Kuo IY, Hsieh HC, Wu ST, Su WC, Wang YC*. 2024. Rab37 mediates trafficking and membrane presentation of PD-1 to sustain T cell exhaustion in lung cancer. J Biomed Sci. 7;31(1):20.
- Yang PS, Yu MH, Hou YC, Chang CP, Lin SC, Kuo IY, Su PC, Cheng HC, Su WC, Shan YS*, Wang YC*. 2022. Targeting protumor factor chitinase-3-like-1 secreted by Rab37 vesicles for cancer immunotherapy. Theranostics, 12(1):340-361 (cover article).
- Hsieh CH, Hsieh HC, Shih FS, Wang PW, Yang LX, Shieh DB*, Yi-Ching Wang*. 2021. An innovative NRF2 nano-modulator induces lung cancer ferroptosis and elicits an immunostimulatory tumor microenvironment. Theranostics 11(14):7072-7091 (cover article).
- Kuo IY, Yang YE, Yang PS, Tsai YJ, Tzeng HT, Cheng HC, Kuo WT, Su WC, Chang CP*, Wang YC*. 2021. Converged Rab37/IL-6 trafficking and STAT3/PD-1 transcription axes elicit an immunosuppressive lung tumor microenvironment. Theranostics 11(14):7029-7044.

Ubiquitin at the Crossroads in Regulating PD-1 Function and T Cell Immunity

王憶卿
Yi-Ching Wang

Immune checkpoint receptors such as PD-1 regulate cancer immunity by modulating tumor-infiltrating T cells (TILs). The overexpression of PD-1 in TILs drives immune exhaustion, creating an immunosuppressive tumor microenvironment (TME) that ultimately limits the therapeutic efficacy of immune checkpoint blockade (ICB). Post-translational modifications (PTMs), including phosphorylation, ubiquitination, and deubiquitination, critically regulate checkpoint receptor stability. Dysregulation of kinases, E3 ligases, and deubiquitinases facilitates tumor immune escape. We have identified key regulators of PD-1 stability: the deubiquitinase USP24, the E3 ligase, and the phosphokinase. Phosphorylation recruits USP24 to stabilize PD-1, whereas E3 ligase ubiquitinates unphosphorylated forms for degradation, maintaining PD-1 homeostasis. Using cell lines, ex vivo systems, GEMMs, and patient samples, we investigate how USP24 deubiquitinase, kinases, and E3 ligase regulate PD-1 in T cells and TIL populations, and examine functional outputs such as T cell activation. Clinical analyses determine whether PTM signatures, such as USP24⁺ p-PD-1⁺ CD8⁺ TILs, predict outcomes or response to ICB in lung cancer cohorts. Finally, USP24 inhibitors, kinase blockers, and E3 activators, which uncover additional therapeutic strategies, will be discussed in this talk. This integrated platform will illustrate fundamental PTM mechanisms driving immune dysfunction and support the development of personalized immunotherapy strategies.



第40屆生物醫學聯合學術年會



Speaker

陳志成

Chih-Cheng Chen

Current Position

- 中央研究院生物醫學科學研究所 · 特聘研究員 · Division Chief
- 台灣痠痛研究學會理事長
- 國際疼痛研究學會期刊主編

Education / Training

- 1997, PhD, 英國倫敦大學 Department of Anatomy (Neurobiology)
- 1990, MS, 國立台灣大學動物學研究所
- 1988, BS, 國立台灣大學動物學系

Professional and Research

- 2019-Present, 副所長, 中研院生醫所
- 2016-Present, 研究員, 中研院生醫所
- 2022-Present, 理事長, 台灣痠痛研究學會

Awards & Honors

- 2023 國科會傑出研究獎
- 2017 科技部傑出研究獎
- 2017 中研院傑出研究獎

Selected Publications

- Chien Ya-Chih, Lin Shing-Hong, Lien Cheng-Chang, Wood John N., Chen Chih-Cheng Lacking ASIC1a in ASIC4-positive amygdala/bed nucleus of the stria terminalis (BNST) neurons reduces anxiety and innate fear in mice. *Journal of Biomedical Science* 32(1), 43 (2025-04)
- Su IW, Hung CH, Lin JH, Chen CC A revisit of soreness and acidosis-related pain. *Pain* PMID: 40198723, Online ahead of print (2025)
- Lee CH, Lin JH, Lin SH, Chang CT, Wu YW, Bewick G, Banks RW, Grunder S, Hochgeschwender U, (Chen CC)* A role for proprioceptors in sngception.. *Science advances* 11(5), eabc5219 (2025)
- Chuang YC, Jiang BY, (Chen CC)* Effect of Advillin Knockout on Diabetic Neuropathy Induced by Multiple Low Doses of Streptozotocin. *Journal of physiological investigation* 68(1), 11-21 (2025)
- Yang CT, Shyu BC, Lin WT, Lu KH, Lin CR, Wen YR, (Chen CC)* Establishing an Electrophysiological Recording Platform for Epidural Spinal Cord Stimulation in Neuropathic Pain Rats.. *Journal of pain research* 18, 327-340 (2025)

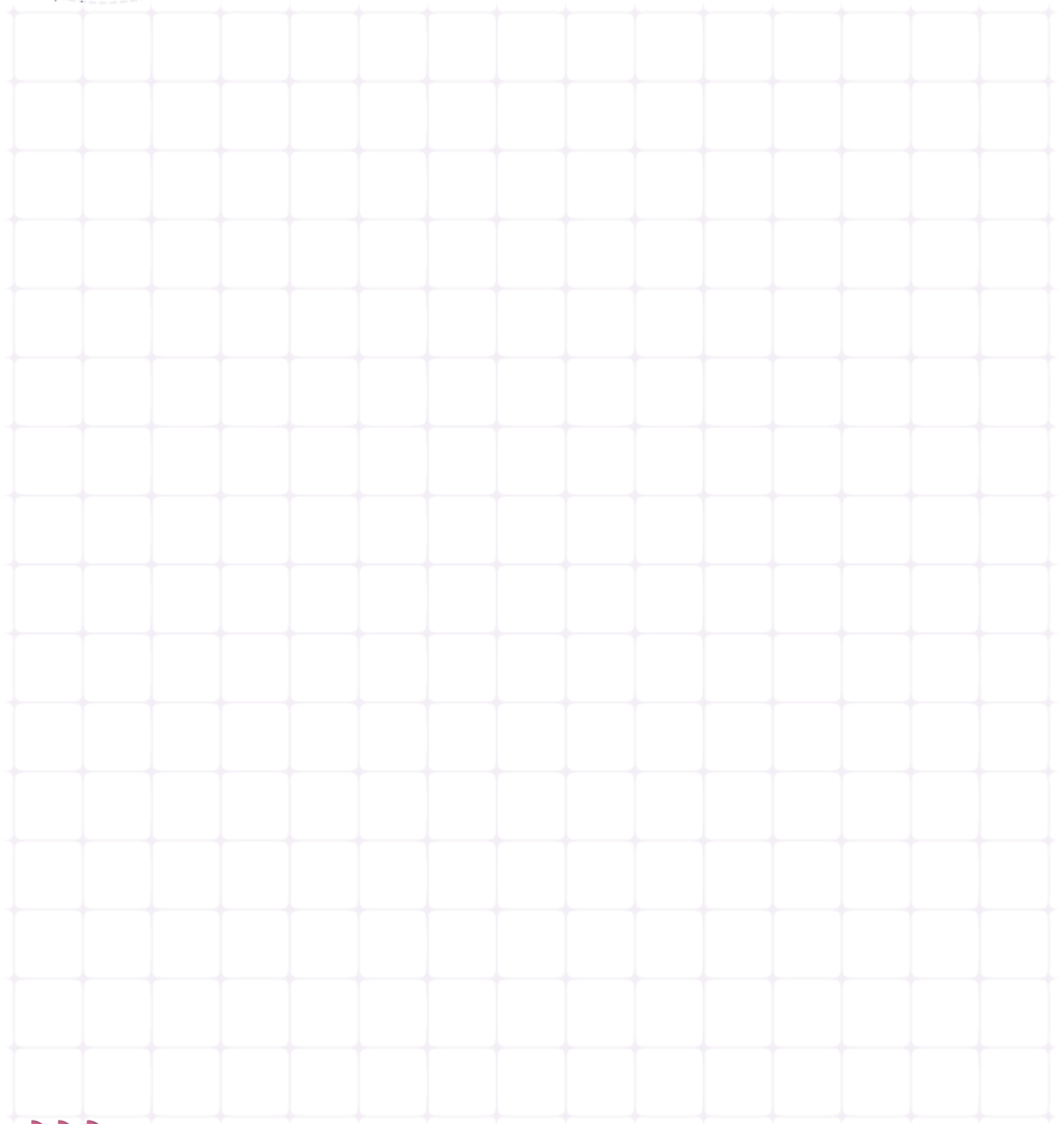
Proprioceptors and Sngception

陳志成
Chih-Cheng Chen

Proprioceptors are the primary mechanosensory neurons ending on muscle spindles or golgi tendon organs to monitor the status of muscle contraction and/or body position. Although proprioceptors are known as non-nociceptive, low-threshold mechanoreceptors, they also express the pro-nociceptive acid-sensing ion channel 3 (ASIC3). Here we demonstrated ASIC3 is a dual function protein for both acid-sensing and mechano-sensing. Also, we revealed a new role for proprioceptors in sensing acidosis, which we have named sngception, and that they make a crucial contribution to acid-induced pain chronicity. In mouse models, conditional knockout of ASIC3 in proprioceptors but not nociceptors disturbed proprioceptive functions and abolished acid-induced chronic hyperalgesia. In contrast, selectively activating proprioceptors via chemo-optogenetic stimuli resulted in hyperalgesic priming that favored chronic pain induced by acidosis. In healthy human volunteers, intramuscular acidification induced acid-perception (sng) but not pain. Conversely, in a spinal-cord-injured patient who lost pain sensation in the right leg, proprioception as well as sngception were remaining somatosensory functions, associated with the spinal dorsal column. Together, evidence from both mouse models and human studies suggests a role for proprioceptors in acidosis sensing (or sngception).



第40屆生物醫學聯合學術年會





第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

科技新知研討會

Technology Symposium



第40屆生物醫學聯合學術年會

科技新知研討會

Technology Symposium

時間：3月21日(六) 13:00-13:30

地點：3樓 34 教室

單位：進階生物科技股份有限公司

Speaker

柯振業 進階生技 資深副理/博士

陳炳憲 進階生技 產品經理

Moderator

葉家賢 總經理

細胞/基因治療與器官晶片服務新趨勢

(一) 細胞與基因治療產品之臨床前安全性評估與生物分布(Bio-distribution)試驗策略

細胞與基因治療 (CGT) 產品因具備活體特性與長效作用機制，其臨床前安全性評估面臨與傳統小分子藥物截然不同的挑戰。其中，生物分布 (Bio-distribution) 試驗不僅是法規單位審查的關鍵，更是評估產品在體內存續時間、目標組織定位及非預期脫靶效應 (Off-target effect) 的核心依據，故 ICH-S12 針對基因治療產品之生物分布有明確的規範。進階生技可提供相關之非臨床服務項目，協助 GCT 產品之研發與進入臨床試驗。

(二) 人體器官晶片在藥物 IND 和 NDA 過程中的關鍵角色

細胞與基因治療產品在慢性病、感染症與癌症等領域展現高度潛力，但仍面臨法規與 CMC 挑戰。進階生技提供從研發到 GMP 生產、QC 與安全性測試的全方位解決方案，協助客戶加速產品上市。

時間：3 月 21 日 (六) 13:30-14:00

地點：3 樓 34 教室

單位：昶安科技有限公司

Speaker

邱巧絨 昶安科技 技術應用科學家

Moderator

Jennie Huang 專員

轉錄到表現：TotalSeq™開啟免疫細胞解析的新維度

本場次演講將以 2025 年諾貝爾生醫獎聚焦的調節型 T 細胞 (Treg) 為核心，從研究 Treg 時常見的分析侷限切入，介紹可同步量測 RNA 與蛋白表現的 CITE-seq 技術，並說明其關鍵工具 TotalSeq™如何突破傳統單細胞 RNA-seq 的不足，大幅提升免疫細胞分群解析度與功能狀態判讀能力。會中亦將介紹 BioLegend 依不同單細胞平台所發展的 TotalSeq™ 抗體產品線與應用流程，協助研究者在複雜免疫系統中獲得更全面的多組學資訊。應用案例部分，本次特別選擇兩篇近期具代表性的 Treg 研究：Immunity (2024) 透過 TotalSeq™ Universal Cocktail 與 Hashtag 混樣策略，解析 IL-2 治療後 SLE 病人中具臨床反應的功能性 Treg 次群；Science Advances (2024) 則結合 TotalSeq-C 抗體建立 Treg 的分化軌跡，揭示老化過程中功能衰退的關鍵族群。透過技術原理與案例並行的方式，本場將展示 TotalSeq™在免疫多組學研究中的價值，以及其在推動 Treg 生物學理解上所扮演的關鍵角色。



第40屆生物醫學聯合學術年會

時間：3月21日 (六) 14:00-14:30

地點：3樓 34 教室

單位：財桂生物股份有限公司

Speaker

Gavian Lua 財桂生物 應用及客製化解決方案經理

Moderator

黃凱翎 研發經理

An end-to-end enzymatic based methylation sequencing for low input DNA samples

DNA methylation plays an important role in gene regulation and has been used in clinical samples as biomarkers in cancer diagnostics. The traditional method of detecting methylated DNA (Bisulfite sequencing) uses chemicals to convert cytosines into uracils, damaging and degrading DNA in the process. This results in a loss of methylation marks and biasness in data. To overcome this challenge, NEBNext Enzymatic Methyl-seq (EM-seq) uses an enzymatic method which leaves DNA intact, generates high library yields and is compatible with low input samples such as cfDNA and FFPE. Combining EM-seq library preparation with enzymatic fragmentation (NEBNext UltraShear) enables automation capabilities and streamlines the workflow. Here we will discuss the mechanism and workflow of EM-seq, its performance with cfDNA and FFPE DNA samples and ability to simultaneously call variants and methylations.

時間：3月21日(六) 14:30-15:00

地點：3樓 34 教室

單位：弘晉有限公司

Speaker

施景皓 弘晉公司 產品應用科學家

Moderator

林季霆 業務主任

AI 生醫新領域－VisionSort™，AI 驅動無標記細胞分選儀

ThinkCyte 是以人工智慧與先進細胞光學為核心的深科技公司，旨在改變全球生命科學與醫療研究的方式。其技術源自東京大學與大阪大學的前瞻研究，整合高速光學、微流控與 AI 分析方法，建立以 Ghost Cytometry®專利技術為基礎的無標記細胞分析平台，協助研究人員在不依賴螢光或抗體標記的情況下，解析細胞形態與功能差異。

VisionSort™為 ThinkCyte 的核心無標記細胞分選系統，透過 GhostCytometry®擷取細胞通過系統時所產生的光學訊號並進行高維度形態分析，可即時、非侵入式地辨識與分選細胞，在維持高存活率與功能性的同時提供高通量、資訊量豐富的細胞形態資料，適用於幹細胞研究、免疫細胞分析、細胞與基因治療製程、藥物與表型導向 CRISPR 篩選，以及疾病相關細胞亞群鑑定等研究與轉譯應用。



第40屆生物醫學聯合學術年會

時間：3月21日(六) 15:20-15:50

地點：3樓 34 教室

單位：特司光學股份有限公司

Speaker

林政鞍 中原大學生物醫學工程學系 副教授
癌症生醫工程中心 主任

Moderator

周昆德 總經理

向大師致敬：跨越百年之超顯微鏡術發展與生醫影像新視野

TIRS OPTICS

超顯微鏡術 (Ultramicroscopy) 於 1901 年由 Richard Zsigmondy 與蔡司顯微專家 Henry Siedentopf 共同完成，其核心突破 Abbe 光學繞射極限，使低於解析尺度的膠體粒子得以被「看見」，奠定現代膠體化學基礎，並使 Zsigmondy 榮獲 1925 年諾貝爾化學獎，深遠影響分子尺度研究與原子論驗證。跨越百年，2023 年由韓偉博士創設的中原醫工系取得全內反射散射(TIRS)光學專利技術，承襲超顯微鏡「以散射取代解析」的核心精神。TIRS OPTICS 團隊透過玻片界面形成漸逝波等光物理，可在不改變光學顯微鏡架構下，顯著提升奈米尺度檢體成像對比與「奈米視覺」，特別適用於即時液態樣本觀測，如外泌體、病原菌與細胞動態結構。模組化設計可擴充至多數光學顯微鏡，升級為微奈米級觀測平台，提供生醫影像嶄新的奈米視野。「TIRS OPTICS」以全球首創奈米光學技術向百年大師致敬，開啟跨世代的生醫觀測新視界。

時間：3月21日(六) 15:50-16:20

地點：3樓 34教室

單位：國家同步輻射研究中心

Speaker

鄭有舜 國家同步輻射研究中心 研究員/博士

陳建樺 國家同步輻射研究中心 副研究員/博士

Moderator

黃駿翔 博士

同步輻射的生醫前研：從藥物傳輸機制到細胞超微結構

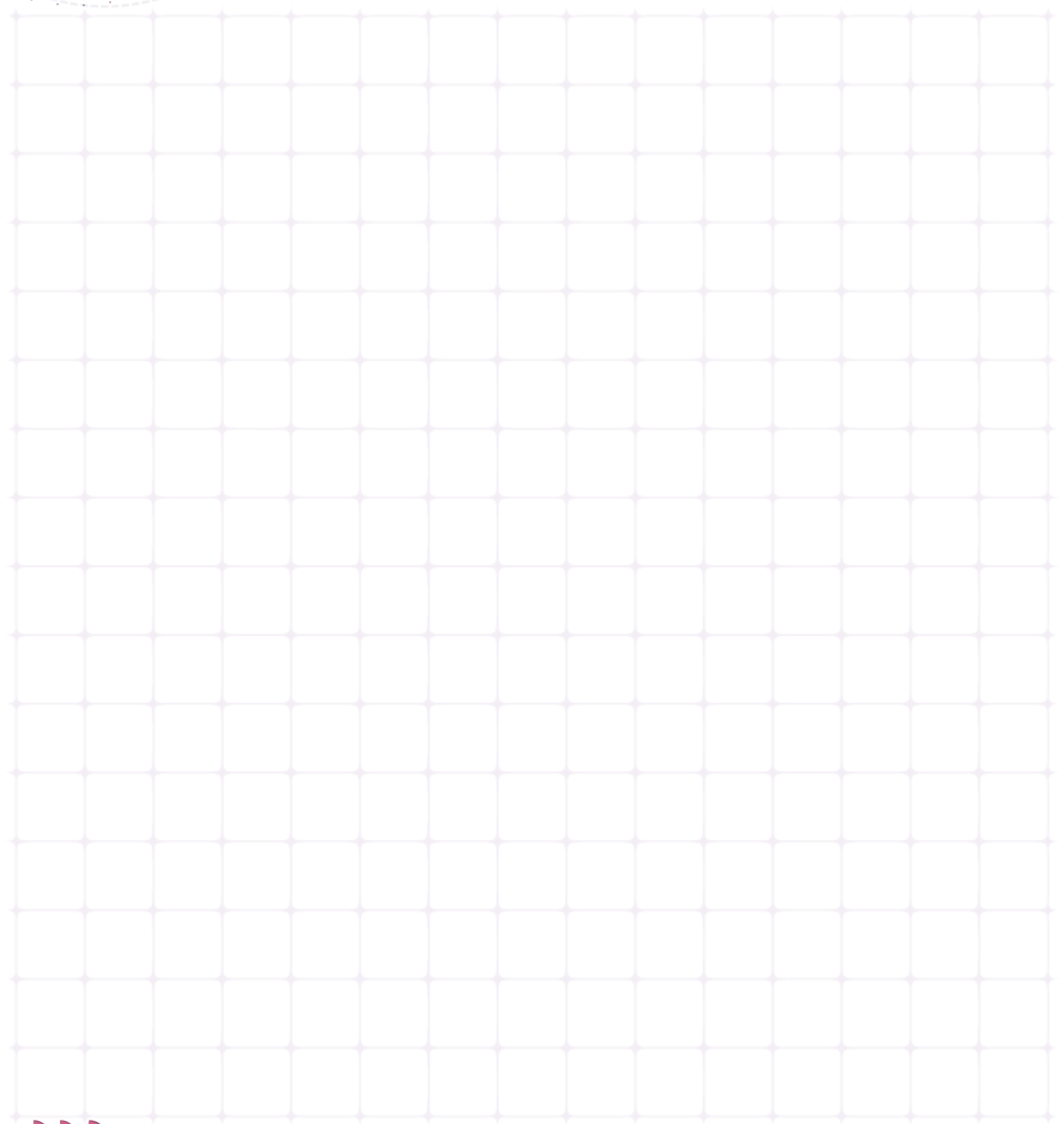
(Biomedical Frontiers at TPS: From Drug Delivery Mechanisms to Cellular Ultrastructures)

(TPS 13A) We illustrate the recent successful applications of the small- and wide-angle X-ray scattering (SAXS-WAXS or SWAXS) of the TPS 13A beamline of NSRRC. Integrated with an online size-exclusion chromatography (SEC) system, TPS 13A SWAXS probes solution structures of biomolecules across a broad range of length scales—from a few angstroms to several hundred nanometers. Combined with molecular dynamics (MD) simulations, SEC-SWAXS enables reconstructions of all-atom models of biomolecules in solution, including hydration structures. With SWAXS-driven MD, we demonstrate a few successful examples in biomedical applications, including drug loading-and release of liposomes and lipid nanoparticles, binding complex of transthyretin tetramer with small drug molecules, and serum proteins in a series of medicated serum samples. With the structural resolution and detecting efficiency, SEC-SWAXS demonstrates the potential for early diagnostics of the development of immune-mediated inflammatory disease from key serum proteins.

(TPS 24A) Soft X-ray tomography (SXT) allows label-free, quantitative 3D imaging of intact cells in a near-native state. It captures entire cell structures at approximately 30–50 nm resolution. Operating within the water window, SXT produces volumetric maps of the linear absorption coefficient (LAC). The reconstructions of the tomograms provide a density-like contrast that enables unbiased comparison across conditions and individual cells. We will demonstrate how SXT visualizes organelle systems that include the nucleus, mitochondria, ER, lysosomes, and lipid droplets within the same cell. The quantified result enables measurements of organelle volume, surface area, shape, spatial arrangement, and contact-site networks. These measurements facilitate linking ultrastructural features to functional states such as metabolic rewiring, stress responses, organelle quality control, and intracellular trafficking. By analyzing hundreds of single cells, SXT uncovers population heterogeneity and rare sub-states often hidden in ensemble assays. When combined with correlative fluorescence techniques to identify specific pathways or subpopulations, SXT becomes a powerful tool for mechanistic cell biology, supporting studies on drug response, infection, and biomolecular condensate-related remodeling.



第40屆生物醫學聯合學術年會





第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

研討會演講 Symposia



第40屆生物醫學聯合學術年會

台灣分子生物影像學會

時間：3月22日(日)

地點：2樓 20 教室

主持人：李易展 教授

時間	講題 & 講師
10:40 - 11:20	Investigating the Role of Mitochondrial Transporters in Cancer and Immune Responses 張御展 副教授 / 國立陽明交通大學生物醫學影像暨放射科學系
11:20 - 12:00	Impact Matters: Small Animal MRI Evidence of Long-Lasting Brain Alterations after Repetitive Mild Traumatic Brain Injury 高瑀絜 助理教授 / 國立陽明交通大學 生物醫學影像暨放射科學系

時間：3月22日(日)

地點：2樓 20 教室

主持人：楊邦宏 副教授

時間	講題 & 講師
13:00 - 13:40	超音波影像新革命：超快速超音波影像下的世界 謝寶育 助理教授 / 長庚大學 醫學影像暨放射科學系



台灣生物化學及分子生物學學會

主題：RNA Integrity Control and Therapeutic Applications

時間：3 月 21 日 (六)

地點：3 樓 33 教室

主持人：蕭貴陽 副教授

時間	講題 & 講師
15:30 - 16:00	Wrapping the Messenger in Closed RNA 余佳益 副研究員 / 國家衛生研究院感染症與疫苗研究所
16:00 - 16:30	Targeting R-loop Homeostasis and RNA Damage Responses to Enhance Chemotherapeutic Efficacy 陳榮貴 助理教授 / 臺灣大學醫學院分子醫學研究所
16:30 - 17:00	Cytoplasmic RNA Condensates Partition mRNAs between Translation and Decay 張崇德 助理教授 / 國立陽明交通大學生化暨分子生物研究所

主題：AI-Driven Innovations in Drug Discovery and Therapeutic Development

時間：3 月 22 日 (日)

地點：3 樓 33 教室

主持人：林士鳴 副教授

時間	講題 & 講師
13:00 - 13:30	Generative AI for Molecular Design 楊進木 院長 / 國立陽明交通大學工程生物科學學院
13:30 - 14:00	Discovery of Potent Antiviral and Anticancer Drugs by Virtual Screening 陸志豪 副教授 / 國立陽明交通大學生物資訊及系統生物研究所
14:00 - 14:30	AI-Driven mRNA Sequence Optimization for Protein Synthesis Rate Improvement 楊子賢 副教授 / 國立成功大學生物醫學工程學系
14:30 - 15:00	Advancing Artificial Intelligence in Antibiotic Resistance from Predictive Modeling to Antimicrobial Peptide Discovery 鍾佳儒 助理教授 / 國立中央大學資訊工程學系



第40屆生物醫學聯合學術年會

中華民國細胞及分子生物學學會×中華民國免疫學會

時間：3月21日(六)

地點：3樓 30 教室

主持人：徐立中 教授

時間	講題 & 講師
13:20 - 14:00	How a Bacterial Pathogen Detoxifies Its Intracellular Niche to Support Survival 張書蓉 副教授 / National Taiwan University Graduate Institute of Microbiology, College of Medicine
14:00 - 14:30	Endosomes as Signaling Platforms for Cytosolic Innate Immune Receptors: Insights into RIG-I-like Receptor, NOD-like Receptor Pathways, and Beyond 凌斌 教授 / 國立成功大學醫學院微生物及免疫學研究所
14:30 - 15:00	T Cell Stress Response and Lupus Organ Damage 陳秉民 助理教授 / 國立臺灣大學醫學院生物化學暨分子生物學研究所

時間：3月22日(日)

地點：3樓 30 教室

主持人：楊皇煜 副教授

時間	講題 & 講師
13:20 - 14:00	Unlocking Phenotypic Plasticity in Ovarian Cancer via Multiomics Approaches 黃韻如 Program Director / Smart MHI, International College, NTU
14:00 - 14:30	From Space to Systems: Spatial Transcriptomics and Multi-Omics Integration Sheds Light on Tumor Ecosystem Dynamics 劉軒 教授 / 長庚大學生化暨分子生物學科
14:30 - 15:00	Mapping Immunological Complexity in Disease Progression with Single-Cell Multi-Omics and Machine Learning 林建達 助理教授 / 台灣大學生化科技系

中華民國細胞及分子生物學學會×中華民國免疫學會

時間：3月22日(日)

地點：3樓 30 教室

主持人：林國儀 研究員

時間	講題 & 講師
15:20 - 16:00	Simple Rules for Grant Writing 張智芬 教授 / 國立台灣大學醫學院分子醫學研究所



第40屆生物醫學聯合學術年會

中華民國臨床生化學會

時間：3月21日(六)

地點：3樓31教室

主持人：楊雅倩 教授

時間	講題 & 講師
14:20 - 15:00	AI-Powered Multi-Omics Data Analysis for Precision Medicine 陳倩瑜 教授兼系主任 / 國立臺灣大學生物機電工程學系

主持人：葉振聲 醫師

時間	講題 & 講師
15:20 - 16:00	AI-ECG for Dyskalemia 林石化 教授 / 國防醫學大學內科學

主持人：謝淑珠 教授

時間	講題 & 講師
16:00 - 16:40	善用 AI，重新定義生化工作的價值與角色 Leveraging AI to Redefine the Value and Role of Biochemical Work 賴明德 名譽教授 / 成功大學醫學院生化研究所

台灣毒物學學會

主題：毒理學安全評估新方法論的應用 Application of new approach methodologies for safety assessment in toxicology

時間：3月21日(六)

地點：2樓 29教室

主持人：何元順 教授

時間	講題 & 講師
13:00 - 13:30	From Skin to Lung: Harnessing Shared Mechanisms to Predict Respiratory Sensitization 王家琪 教授 / 國立台灣大學獸醫學院
13:30 - 14:00	Revolutionizing Global Snakebite Crisis with NETosis Blockade Therapy 許素菁 副研究員 / 財團法人國家衛生研究院感染症與疫苗研究所
14:00 - 14:30	A High-Throughput, High-Content Zebrafish Embryo Model for Nanotoxicity Assessment Using Autophagy as an Adverse Outcome Pathway Biomarker 陳姿羽 助理教授 / 高雄醫學大學醫學院生理學系
14:30 - 15:00	新穎替代測試方法(NAMs)的驗證流程與法規接受 The Validation and Regulatory Acceptance of New Approach Methodologies (NAMs) 鄭獻仁 副研究員 / 財團法人國家實驗研究院 國家生物模式中心



第40屆生物醫學聯合學術年會

台灣毒物學學會

主題：環境中的污染物對科學、政策與健康的影響 Contaminants in the Environment:
Science、Policy and Health Implications

時間：3月22日(日)

地點：2樓 29教室

主持人：李志恒 教授

時間	講題 & 講師
13:00 - 13:30	Kidneys at Risk: The Hidden Impact of Particulate Plastics 邱惠雯 教授 / 臺北醫學大學臨床醫學研究所
13:30 - 14:00	Analysis of Kidney Toxicity of Microplastics and Nanoplastics Using Experimental and Clinical Observational Study 顏宗海 主任 / 林口長庚紀念醫院臨床毒物中心
14:00 - 14:30	Occurrence and Potential Health Risks of Dietary Advanced Glycation End Products 洪偉倫 副教授 / 臺北醫學大學食品安全學系
14:30 - 15:00	Lipid Reprogramming Reveals the Molecular Blueprint for Alcohol/BPA Co-driven Hepatocarcinogenesis 邱依琇 助理教授 / 高雄醫學大學藥學院毒理學碩士學位學程

中國生理學會

主題：新進學者專題演講

時間：3月22日(日)

地點：1樓 可勝廳

主持人：林赫 教授

時間	講題 & 講師
13:00 - 13:24	The Dialogue between Neuroinflammation and Adult Neurogenesis: Alterations and Therapeutic Potentials in Neurological Disorders 洪鈺雯 助理教授 / 國立中興大學生命科學系
13:24 - 13:48	以化療藥物紫杉醇為例，研究藥物對神經肌肉系統的影響/ Investigating the Acute Effects of Paclitaxel on the Neuromuscular System 林育龍 助理教授 / 臺北醫學大學 國際轉譯科學碩士學位學程
13:48 - 14:12	Integrated Molecular Drivers of Obesity-Induced Cardiomyopathy: Chemokine, Lipid-Inflammatory, and ESCRT-Exosome Pathways 黃君邦 助理教授 / 中山醫學大學醫學系生理學科
14:12 - 14:36	Cell Proprioception in Tubulogenesis 郭承翔 助理教授 / 國立成功大學醫學院生理學科暨研究所
14:36 - 15:00	The Interplay of Macrophages, Tumor Cells, and Pancreatic Stellate Cells: Unraveling Mechanisms of Immune Suppression in Pancreatic Cancer Progression 王竹安 助理教授 / 國立成功大學基礎醫學研究所



第40屆生物醫學聯合學術年會

台灣藥理學會

主題：The New Frontier of Exosome-Based Therapy Extracellular Vesicles (EVs) as Messengers and Therapeutics

時間：3月22日(日)

地點：1樓 第一教室

主持人：陳怡文 教授

時間	講題 & 講師
09:00 - 09:30	Exploring the Future of Extracellular Vesicle Research in Cancer Diagnosis and Therapy 程吉安 助理教授/ 台大藥學系
09:30 - 10:00	Targeted Extracellular Vesicle-Based Therapeutic Platform: A Nanocarrier for Nucleic Acid and Chemotherapeutic Drug Delivery 陳怡文 教授 / 中國醫藥大學生物醫學研究所
10:00 - 10:30	Messages That Matter: Turning Cancer's Tricks into New Therapies 李華容 Deputy Director / Institute of Cellular and System Medicine, National Health Research Institutes

主題：AI's Role in Next-Generation Drug Discovery and Personalized Medicine

時間：3月22日(日)

地點：1樓 第一教室

主持人：許凱程 主任

時間	講題 & 講師
13:30 - 14:00	AI 於新藥開發的發展與應用 柯屹又 Deputy Division Director / ITRI, Biomedical Technology and Device Research Laboratories
14:00 - 14:30	Intelligent Drug Design Platform for the Discovery and optimization of Novel Kinase Inhibitors 許凱程 主任 / 臺北醫學大學創新醫學科技研發產業博士學位學程
14:30 - 15:00	資料稀缺下的人工智慧藥物設計方法 Artificial Intelligence Approaches for Drug Design under Data Scarcity 童俊維 研究員 / 國家衛生研究院生技與藥物研究所

中華民國解剖學學會

主題：Nanomedicine

時間：3月22日(日)

地點：3樓 32 教室

主持人：龔秀妮 教授

時間	講題 & 講師
09:00 - 09:30	Macrophage Interaction and Its Influence on Tumor-Derived Extracellular Vesicles: Implications for Early Diagnosis and Treatment Selection in Pancreatic Cancer 王竹安 助理教授 / 國立成功大學基礎醫學研究所
09:30 - 10:00	Human Umbilical Cord Mesenchymal Stem Cell-Derived Exosomes Enhance Cisplatin-Induced Apoptosis via ROS-Fas Signaling in Nasopharyngeal Carcinoma Cells 李迎霄 助理教授 / 義守大學醫學院醫學系
10:00 - 10:30	Extracellular Vesicle Control of Cellular Behavior: Bridging Tumor Immunomodulation and Placental Physiology 龔秀妮 教授 / 國立台灣大學解剖學暨細胞生物學研究所

主題：新進老師研究分享

時間：3月22日(日)

地點：3樓 32 教室

主持人：林谷峻 教授

時間	講題 & 講師
13:30 - 14:00	Mesenteric Lymphatic Targeting of Antiretroviral Agents for Improved Treatment of HIV/AIDS 利用腸繫膜淋巴投遞改善抗反轉錄病毒藥物對於 HIV/AIDS 的療效 朱彥儒 助理教授 / 國防醫學大學生物及解剖學研究所
14:00 - 14:30	視網膜退化疾病的創新治療策略：從幹細胞到奈米科技 Innovative Therapeutic Approaches for Retinal Degeneration: From Stem Cells to Nanotechnology 楊添鈞 助理教授 / 臺北醫學醫學院解剖暨細胞生物學科
14:30 - 15:00	從動物行為模式到外泌體治療策略：憂鬱症相關生物機制的研究進展 From Animal Behavioral Models to Exosome-Based Therapeutic Approaches: Progress in Understanding the Biological Mechanisms of Depression 莊涵雯 助理教授 / 中國醫藥大學醫學院醫學系學士班解剖學科



第40屆生物醫學聯合學術年會



Speaker

張御展

Yu-Chan Chang

Current Position

- Associate Professor, Department of Biomedical Imaging and Radiological Science (BIRS), National Yang Ming Chiao Tung University

Education / Training

- Department of Life sciences, National Defense Medical Center, Ph.D. (2017)
- Department of Dentistry, National Defense Medical Center, M.S. (2011)
- Department of Dental Hygiene, China Medicine University, B.S. (2009)

Professional and Research

- Postdoctoral fellow, Genomics Research Center, Academia Sinica
- Adjunct Assistant Professor, Institute of Pathology and Parasitology, National Defense Medical Center
- Assistant Professor, Department of Biomedical Imaging and Radiological Science (BIRS), National Yang Ming Chiao Tung University

Awards & Honors

- Springer Nature Author Service Award 2025 (BMC Cancer)
- Springer Nature Editorial Contribution Award 2025 (BMC Cancer)
- IJMS Young Investigator Award (2024)

Selected Publications

- Yang YF, He ZJ, Kuo HH, Lin YY, Kim CH, Cai HY, Chen CH, Hsiao M, Chen YC, Chang MH, Chang YC*. Targeting ESR1 restores SQSTM1-dependent autophagy and sensitizes ER-positive breast cancer to oxidative and radiation stress. *Cell Death Discov.* 2025. 11(1):451.
- Chung SY, Yeh YC, Huang CJ, Chiang NJ, Hsu SS, Chan MH, Lu ML, Hsu TS, Hung YP, Yeh CN, Hsiao M, Chang YC*, Wang YC*, Chen MH*. Comparative impact of tertiary lymphoid structures and tumor-infiltrating lymphocytes in cholangiocarcinoma. *J Immunother Cancer.*
- Han-Hsi Kuo, Zhao-Jing He, Phi Ngoc Tram, Hee-Do Kim, Cheorl-Ho Kim, Yu-Chan Chang*. Multiverse of phosphoglycerate kinase: Exploring canonical, moonlighting, and tumor microenvironmental functions. *Biochim Biophys Acta Mol Basis Dis.* 2026 Feb; 1872(2):168072.

Investigating the Role of Mitochondrial Transporters in Cancer and Immune Responses

張御展
Yu-Chan Chang

Cancer cells exhibit profound metabolic heterogeneity and metabolism abnormalities. Our research has identified a critical dependency on mitochondrial metabolism in multiple malignancies, particularly cholangiocarcinoma (CCA), which has limited therapeutic options and a poor prognosis. Using CRISPR library screening, we identified SLC25A11, a solute carrier located in the inner mitochondrial membrane, as a key regulator of reactive oxygen species (ROS) scavenging, oxidative phosphorylation and ferroptosis. Through multi-omics profiling and molecular imaging, we established an SLC25A11-based signature comprising lipid peroxidation, NRF2-dependent antioxidant signaling and CUL3 neddylation. Lipidomic analysis revealed that SLC25A11-regulated polyunsaturated fatty acid (PUFA) metabolism drives reprogramming of the tumor microenvironment (TME). This metabolic shift facilitates dynamic changes in mitochondria that enable cancer cells to sustain physiological survival and evade immune surveillance. Furthermore, modulating metabolite concentrations within the TME significantly impacted radiation sensitivity and immune checkpoint responses. Our findings demonstrate that SLC25A11 is a critical link between mitochondrial metabolic fitness and patient responsiveness to immunotherapy. This highlights its potential as a prognostic biomarker and target for innovative combination therapies in cholangiocarcinoma (CCA).



第40屆生物醫學聯合學術年會



Speaker

高瑀絜

Yu-Chieh Jill Kao

Current Position

- Assistant Professor, Department of Biomedical Imaging and Radiological Science (BIRS), National Yang Ming Chiao Tung University

Education / Training

- Ph.D. from Institute of Biomedical Engineering, National Taiwan University, Taiwan
- B.S. from Biomedical Imaging and Radiological Sciences, National Yang Ming University, Taiwan

Professional and Research

- 2014-2019 Assistant Research Fellow, Neuroscience Research Center, Taipei Medical University
- 2012-2014 Postdoc Associate, University of North Carolina, Chapel Hill, NC

Awards & Honors

- 2022- Higher Education Acadamey Fellowship
- 2023- NYCU 卓越導師獎

Selected Publications

- Hsieh HH, Chu PA, Lin YH, Kao YC, Chung YH, Hsu ST, Mo JM, Wu CY, Peng SL. Imaging diabetic cardiomyopathy in a type 1 diabetic rat model using 18F-FEPPA PET. Nuclear Med Biol. 2024.
- Tazoe J, Lu CF, Hsieh BY, Chen CY*, Kao YC*. Altered Cerebrospinal Fluid Diffusivity in the Rat Brain in Neurological Disorders. Biomed J. 2022. S2319-4170(22)00006-3.
- Hsieh BY*, Kao YC, N Zou, YP Lin, YY Mei, SY Chu, DC Wu. Vascular Response of Penetrating Vessels during Cortical Spreading Depolarization with Ultrasound Dynamic Ultrafast Doppler Imaging. Front. Neurosci. 2022.
- Doss KKM, Mion P, Kao YC, Kuo TT, Chen CJ*. Performance Evaluation of a PET of 7T Bruker Micro-PET/MR Based on NEMA NU 4-2008 Standards. Electronics. 2022. 11, 2194.

Impact Matters: Small Animal MRI Evidence of Long-Lasting Brain Alterations after Repetitive Mild Traumatic Brain Injury

高瑀絜
Yu-Chieh Jill Kao

Mild traumatic brain injury (mTBI) is the most common form of brain injury and is increasingly recognized as an important risk factor for later-life neurodegeneration. Despite persistent cognitive and motor symptoms in a substantial proportion of patients, mTBI is often considered a “silent epidemic” because routine clinical neuroimaging frequently shows no obvious abnormalities, particularly in the early phase after injury. To address this gap, we developed a clinically relevant closed-head injury (CHI) rat model that reproduces key features of uncomplicated mTBI, including the absence of overt tissue loss alongside measurable behavioral deficits. Using this model, we implemented a longitudinal, multi-parametric MRI approach to sensitively characterize brain alterations following mTBI. We identified measurable and time-dependent changes in brain microstructure, cortical volume, and functional connectivity after mTBI, which were supported by corresponding behavioral impairments and histopathological findings. Importantly, MRI changes varied according to injury parameters, including impact location, number of injuries, and inter-injury intervals, suggesting the critical role of impact characteristics in determining injury severity, particularly in repetitive mTBI. Following repeated injury, persistent microstructural abnormalities were observed in remote white matter regions for up to 90 days, indicating long-lasting and widespread brain effects beyond the primary impact site. Moreover, reduced functional connectivity within motor-related networks was negatively correlated with motor performance, providing direct evidence that altered brain network organization contributes to functional deficits after mTBI. Together, these findings establish a translational and longitudinal imaging framework that bridges human mTBI observations with mechanistic insights from animal models and highlight the sensitivity of advanced MRI techniques for detecting subtle yet persistent brain alterations after mild brain injury.



第40屆生物醫學聯合學術年會



Speaker

謝寶育

Bao-Yu Hsieh

Current Position

- 長庚大學醫學影像暨放射科學系 助理教授

Education / Training

- 台灣大學 生醫電子與資訊學研究所博士

Research Interest

- 生醫影像 (Biomedical imaging)
- 超快速超音波影像 (Ultrasound ultrafast imaging)
- 超音波彈性、微血流影像 (Ultrasound elasticity and ultrafast Doppler imaging)
- 光聲影像 (Photoacoustic imaging)

Selected Publications

- Wei-Huan Xie, Chun-Ting Su, Yu-Chieh Jill Kao, Tung-Hao Chang, Yuan-Jen Chang, Chun-Hsu Yao, and Bao-Yu Hsieh, "Radiotherapy dose characterization of gel dosimetry using shear wave elasticity imaging," *Med. Phys.*, 47(3), 1404-1410, 2020.
- Bao-Yu Hsieh, Shaozhen Song, Thu-Mai Nguyen, Soon Joon Yoon, Tueng T. Shen, Ruikang K. Wang, Matthew O'Donnell, "Moving-source elastic wave reconstruction for high-resolution optical coherence elastography," *J. Biomed. Opt.*, 21(11), 116006, 2016.
- S. Song, W. Wei, B.-Y. Hsieh, I. Pelivanov, T. Shen, M. O'Donnell, and R.K. Wang, "Strategies to improve phase-stability of ultrafast swept source optical coherence tomography for single shot imaging of transient mechanical waves at 16 kHz frame rate," *Appl. Phys. Lett.*, 108(19), 191104, 2016.
- Bao-Yu Hsieh, J. Kim, J. Zhu, S. Li, X. Zhang, and X. Jiang, "A laser ultrasound transducer using carbon nanofibers-polydimethylsiloxane composite thin film," *Appl. Phys. Lett.*, 106(2), 021902, 2015.

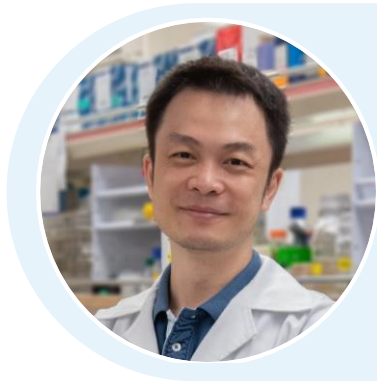
超音波影像新革命：超快速超音波影像下的世界

謝寶育
Bao-Yu Hsieh

近年來，超音波無論是在影像與治療技術上皆有許多技術上的突破，顯著提升其在精準醫療中的臨床價值。從賦予急診醫學及偏鄉居家診療高機動性的手持式無線超音波，到人工智慧的影像輔助診斷，以及高強度聚焦超音波治療適應症的擴展，皆顯示超音波已成為臨床不可或缺的關鍵診療工具。在眾多技術發展下，「超快速超音波影像」的興起甚為關鍵。該技術透過平面波發射，使成像速度突破每秒上萬幀，遠超傳統線掃描模式。不僅大幅增加時間解析度，更賦予影像追蹤組織微細物理現象的能力，包含追蹤剪力波傳遞及捕捉極低速微細血流訊號，為超音波影像開啟全新視野。本研究團隊以此核心技術開發「超音波剪力波彈性影像」與「高靈敏度功能性血流影像」，應用於臨床前研究與創新開發。在彈性影像應用上，整合超音波診治平台，實現 HIFU 治療的精準定位、導引與監控；並用於「輻射靈敏凝膠劑量計」計讀，提供放射光子/質子治療三維劑量驗證。亦長期發展小動物腦功能性超音波 (fUS) 平台，深入探討缺血性中風急性期血流動力學變化，以及腫瘤質子治療之新生血管監控。將深入剖析超快速超音波如何打開生物醫學觀察的新視窗，從微觀的力學特性到宏觀的功能性影像，展現其在未來精準醫學中的無限潛力。



第40屆生物醫學聯合學術年會



Speaker

余佳益

Chia-Yi Yu

Current Position

- Associate Investigator, National Institute of Infectious Diseases and Vaccinology, National Health Research Institutes
- Associate Professor (Joint Appointment), Department of Microbiology and Immunology, National Cheng Kung University (NCKU)

Education / Training

- 2006, PhD, Graduate Institute of Life Sciences, founded by the joint efforts of National Defense Medical Center (NDMC), Academia Sinica, and NHRI
- 2001, MS, Department of Microbiology and Immunology, NDMC
- 1999, BS, School of Medical Laboratory Science and Biotechnology, Taipei Medical University

Professional and Research

- 2014-2017, Research Assistant Professor, Department of Microbiology and Immunology, and Department of Medical Laboratory Science and Biotechnology, NCKU
- 2014-2014, Postdoctoral Fellow, Virology, Center of Infectious Disease and Signaling Research, NCKU
- 2007-2013, Postdoctoral Research Fellowship, Virology, Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan

Awards & Honors

- 2025 莫德納台灣 mRNA 前瞻新創獎 (Moderna Taiwan mRNA Innovation Awards)
- 2025 第二十二屆國家新創獎 - 學研新創獎 (The 22nd National Innovation Award - Academic and Research Innovation Category)

Selected Publications

- A cis-acting ligase ribozyme generates circular RNA in vitro for ectopic protein functioning. Nat Commun. 2024 Aug 4; 15(1): 6607.
- Zika virus cleaves GSDMD to disseminate prognosticable and controllable oncolysis in a human glioblastoma cell model. Mol Ther Oncolytics. 2023 Jan 2;28:104-117.
- DNA-induced 2'3'-cGAMP enhances haplotype-specific human STING cleavage by dengue protease. Proc Natl Acad Sci U S A. 2020 Jul 7;117(27):15947-15954.
- Dengue Virus Impairs Mitochondrial Fusion by Cleaving Mitofusins. PLoS Pathogens (2015) Dec 11(12): e1005350.

Wrapping the Messenger in Closed RNA

余佳益
Chia-Yi Yu

The natural instability of linear RNA limits the utility of mRNA in vaccines and therapeutics. Circular RNA (circRNA) provides improved stability, but conventional synthesis often yields low efficiency, heterogeneous products, and small RNA byproducts. We developed a cis-acting ligase ribozyme (RzL)-mediated strategy that enables the autonomous circularization of RNA, producing highly pure circRNA with a markedly increased yield and no byproduct formation. Functionally, circRNAs containing internal ribosome entry sites (IRES) enabled the translation of antiviral proteins in cell culture, offering broad-spectrum antiviral activity. Additionally, circRNAs encoding the RNA-guided nuclease Cas13 selectively degraded viral RNA sequences, demonstrating programmable antiviral potential. By combining increased stability with sequence versatility, this platform overcomes long-standing technical challenges and provides a scalable approach for precise circRNA production. These advances position circRNA as a next-generation modality with translational applications in vaccine design, antiviral strategies, and broader biomedical interventions.



第40屆生物醫學聯合學術年會



Speaker

陳榮貴

Jung-Kuei Chen

Current Position

- 臺灣大學醫學院 分子醫學研究所 助理教授

Education / Training

- 2018, PhD, UT Austin, USA
- 2008, MS, 台灣大學, Taiwan
- 2006, BS, 中山大學, Taiwan

Professional and Research

- 2019-2024, Research Scientist, MIT, USA
- 2011-2018, Research Assistant, UT Austin, USA

Awards & Honors

- 2025 Yushan Young Fellow, Ministry of Education, Taiwan
- 2023 2030 Cross-Generation Emerging Young Scholar, NSTC, Taiwan
- 2021 Ludwig Center at MIT Postdoctoral Fellow & Fellowship, MIT, USA

Selected Publications

- An RNA Damage Response Network Mediates the Lethality of 5-FU in Colorectal Cancer. Cell Rep Med, 2024
- DDX18 prevents R-loop induced DNA damage and genome instability via PARP-1. Cell Rep, 2022
- PARP-1-dependent recruitment of cold-inducible RNA-binding protein promotes double-strand break repair and genome stability. PNAS, 2018

Targeting R-loop Homeostasis and RNA Damage Responses to Enhance Chemotherapeutic Efficacy

陳榮貴

Jung-Kuei Chen

RNA carries out diverse roles essential for life. Similar to DNA, RNA integrity is consistently subjected to all kinds of endogenous and exogenous damage. Yet for many years, such damage was viewed as negligible due to the transient nature of most RNA species. Here, poly (ADP-ribose) polymerase-1 (PARP-1) is found to mediate the association of RNA helicase DDX18 with R loops (DNA/RNA hybrids), regulating R-loop homeostasis. Loss of DDX18 leads to R-loop accumulation, genome instability, and enhanced sensitivity to replication damaging agents, underscoring the significance of PARP-1/DDX18 in R-loop regulation and genomic maintenance. In addition, mechanistic insights into 5-fluorouracil (5-FU) action reveal that its cytotoxicity in colorectal cancer (CRC) is primarily driven by RNA damage during ribosome biogenesis, rather than DNA damage. Tumors with high ribosome biogenesis are more susceptible to 5-FU, and enhancing this pathway can potentiate its therapeutic effect. Collectively, these findings highlight therapeutic potential of targeting R-loop and RNA damage responses in cancer treatment.



第40屆生物醫學聯合學術年會



Speaker

張崇德

Chung-Te Chang

Current Position

- 國立陽明交通大學生化暨分子生物研究所 助理教授

Education / Training

- 2012, PhD, The University of Sheffield, 英國
- 2005, MS, 國立中興大學, 台灣
- 2003, BS, 慈濟大學, 台灣

Professional and Research

- 2019-Present, 助理教授, 國立陽明交通大學
- 2012-2019, 博士後研究員, Max Planck Institute for Developmental Biology, 德國

Awards & Honors

- 2019 Special Outstanding Talent Award, Ministry of Science and Technology, Taiwan
- 2015 Max Planck Research Grants, Max Planck Society, Germany
- 2012 Max Planck Grants for Advanced Postdoctoral Training, Max Planck Society, Germany

Selected Publications

- Yu-Hsuan Cheng, Ting-Wen Chen, Wei-Chung Chiang, Jean-Cheng Kuo, Yi-Sheng Ho, Michelle Noble, Chung-Te Chang. (2025) EDC4 C-terminal domain scaffolds P-body assembly and links P-body dynamics to p53-mediated tumor suppression. *RNA* 31:1176-1194
- Ting-Wen Chen, Hsiao-Wei Liao, Michelle Noble, Jing-Yi Siao, Yu-Hsuan Cheng, Wei-Chung Chiang, Yi-Tzu Lo, Chung-Te Chang. (2024) Human DCP1 is crucial for mRNA decapping and possesses paralog-specific gene regulating functions. *eLife* 13:RP94811
- Ramona Weber, Chung-Te Chang. (2024) Human DDX6 regulates translation and decay of inefficiently translated mRNAs. *eLife* 13:RP92426
- Chung-Te Chang, Sowndarya Muthukumar, Ramona Weber, Yevgen Leviansky, Ying Chen, Dipankar Bhandari, Catia Igreja, Lara Wohlbold, Eugene Valkov, Elisa Izaurralde. (2019) A low-complexity region in human XRN1 directly recruits deadenylation and decapping factors in 5'-3' messenger RNA decay. *Nucleic Acids Research* 47:9282-9295
- Tobias Raisch*, Chung-Te Chang*, Yevgen Leviansky*, Sowndarya Muthukumar, Stefan Raunser, Eugene Valkov. (2019) Reconstitution of recombinant human CCR4-NOT reveals molecular insights into regulated deadenylation. *Nature Communications* 10:3173 (*co-first)

3/21(六) 16:30-17:00
3 樓 33 教室

Cytoplasmic RNA Condensates Partition mRNAs between Translation and Decay

張崇德
Chung-Te Chang

Post-transcriptional control regulates gene expression by coupling translational status to mRNA stability. This lecture focuses on how cytoplasmic RNA–protein condensates organize this coupling by partitioning transcripts into distinct functional states, including active translation and decay-prone pools. I will discuss mechanisms that connect ribosome behavior and co-translational events to mRNA turnover, and how scaffold-driven assemblies can reshape pathway outputs at the transcriptome level. Finally, I will consider how changes in gene production, including miRNA-associated transcriptional regulation, are propagated into the cytoplasm and integrated through translation–decay balancing mechanisms. Together, these concepts provide a coherent framework for understanding how human cells tune gene expression beyond transcription.



第40屆生物醫學聯合學術年會



Speaker

楊進木

Jinn-Moon Yang

Current Position

- 國立陽明交通大學工程生物科學學院院長

Education / Training

- 2001, PhD, National Taiwan University, Taiwan

Professional and Research

- 2020-2023, Dean, College of Biological Science and Technology, NYCU
- 2007-2013, Director, Institute of Bioinformatics and Systems Biology, NCTU

Awards & Honors

- 2021 科技部傑出研究獎
- 2021 第十九屆有庠科技講座- 生技醫藥類
- 2020 第三十屆王民寧獎- 藥學類傑出貢獻獎

Selected Publications

- Yang, J. M.* and Tung, C. H. (2006) Protein structure database search and evolutionary classification, *Nucleic Acids Research*, 34(13):3646-59.
- Hsu, K. C., Chen, Y. F., Lin, S. R., and Yang, J. M.* (2011) iGEMDOCK: a graphical environment of enhancing GEMDOCK using pharmacological interactions and post-screening analysis, *BMC Bioinformatics*, 12 Suppl 1:S33. (highly cited paper)
- Lin, C. Y., Lee, C. H., Chuang, Y. H., Lee, J. Y., Chiu, Y. Y., Lee, Y. H. W., Jong, Y. J., Hwang, J. K., Huang, S. H., Chen, L. C., Wu, C. H., Tu, S. H., Ho, Y. S., Yang, J. M.* (2019) Membrane protein-regulated networks across human cancers, *Nature Communications*, 10(1):3131.
- Pathak, N., Chen, Y. T., Hsu, Y. C., Hsu, N. Y., Kuo, C. J., Tsai, H. P., Kang, J. J., Huang, C. H., Chang, S. Y., Chang, Y. H., Liang, P. H. and Yang, J. M.* (2021) Uncovering flexible active site conformations of SARS-CoV-2 3CL proteases through protease pharmacophore clusters and COVID-19 drug repurposing, *ACS nano*, 857–872. (highly cited paper)
- Chen, Y.T., Li, J., Chang, J.N., Luo, Y.C., Yu, W., Chen, L.C., Yang, J.M.* (2023) Transcriptomic analysis of World Trade Center particulate Matter-induced pulmonary inflammation and drug treatments. *Environment International*, 177:108027. doi: 10.1016/j.envint.2023.108027.

3/22(日) 13:00-13:30
3 樓 33 教室

Generative AI for molecular design

楊進木

Jinn-Moon Yang

Generative Artificial Intelligence (AI), fueled by vast datasets, is revolutionizing molecular design and drug development. In this talk, I will explore several Generative AI models and their applications in these fields. First, I will introduce Compound Generative Pre-trained Transformer (CompGPT), a model designed to navigate compound spaces and facilitate drug design. Next, I will discuss a general-purpose protein model and a specialized GPT for protein engineering. Additionally, I will present a GPT-based approach for designing antibodies targeting specific antigens. Lastly, I will introduce a Graph Transformer-Convolution Network model aimed at drug repurposing.



第40屆生物醫學聯合學術年會



Speaker

陸志豪

Chih-Hao Lu

Current Position

- 國立陽明交通大學生物資訊及系統生物研究所 副教授
- 國立陽明交通大學生物科技學系 副教授

Education / Training

- 1993, PhD, 密西根州立大學 遺傳所

Professional and Research

- 1995-1999, 副教授, 私立中山醫學大學 分子毒理所
- 1999-2006, 教授, 國立台灣師範大學 生命科學系
- 2006-2015, 特聘教授, 國立成功大學 醫學院 藥理所

Awards & Honors

- 2017 財團法人王民寧先生紀念基金會【基礎醫學類】傑出貢獻獎
- 2022 教育部學術獎
- 2023 第19屆永信李天德醫藥科技獎—卓越醫藥科技獎
- 2024 國科會傑出特約研究員獎

Selected Publications

- Hsieh HC, Young MJ, Chen KY, Su WC, Lin CC, Yen YT, Hung JJ*, Wang YC*. 2025. Deubiquitinase USP24 activated by IL-6/STAT3 enhances PD-1 protein stability and suppresses T cell antitumor response. *Science Advances* 11(16):eadt4258.
- Kuo WT, Kuo IY, Hsieh HC, Wu ST, Su WC, Wang YC*. 2024. Rab37 mediates trafficking and membrane presentation of PD-1 to sustain T cell exhaustion in lung cancer. *J Biomed Sci.* 7;31(1):20.
- Yang PS, Yu MH, Hou YC, Chang CP, Lin SC, Kuo IY, Su PC, Cheng HC, Su WC, Shan YS*, Wang YC*. 2022. Targeting protumor factor chitinase-3-like-1 secreted by Rab37 vesicles for cancer immunotherapy. *Theranostics*, 12(1):340-361 (cover article).
- Hsieh CH, Hsieh HC, Shih FS, Wang PW, Yang LX, Shieh DB*, Yi-Ching Wang*. 2021. An innovative NRF2 nano-modulator induces lung cancer ferroptosis and elicits an immunostimulatory tumor microenvironment. *Theranostics* 11(14):7072-7091 (cover article).
- Kuo IY, Yang YE, Yang PS, Tsai YJ, Tzeng HT, Cheng HC, Kuo WT, Su WC, Chang CP*, Wang YC*. 2021. Converged Rab37/IL-6 trafficking and STAT3/PD-1 transcription axes elicit an immunosuppressive lung tumor microenvironment. *Theranostics* 11(14):7029-7044.

Discovery of Potent Antiviral and Anticancer Drugs by Virtual Screening

陸志豪
Chih-Hao Lu

Over the past five years (2021-2025), we have employed various consensus methods, including molecular docking, molecular dynamics (MD) simulations, interaction preference recognition, and compound similarity searches, to discover potent antiviral and anticancer compounds. Through virtual screening and experimental validation, we successfully identified several potential lead compounds and repurposed drugs.

In 2025, we established a structure-based drug discovery pipeline that incorporates virtual screening, in vitro assays, molecular dynamics (MD) simulations, and mutational validation. This pipeline was used to identify a broad-spectrum antiviral agent targeting the Dengue Virus envelope protein. The promising compound NSC382*** demonstrated the most consistent and potent antiviral activity across all serotypes, with EC_{50} values ranging from 0.95 μ M (DENV-2) to 1.45 μ M (DENV-1). Additionally, we screened FDA-approved drugs for their antiviral activity against the dengue virus and identified darunavir (DRV) as a promising candidate. This drug targets the hydrophobic pocket of the envelope protein and shows the highest efficacy against three DENV serotypes, with an EC_{50} of less than 1 μ M.

During 2024 and 2023, we focused on the spike protein and Mpro enzyme of SARS-CoV-2. Compound NSC660824 exhibited the most potent antiviral efficacy against both the wildtype SARS-CoV-2 (with an EC_{50} of 5.9 μ M) and the Omicron variant (with an EC_{50} of 9.3 μ M), targeting the spike protein. Compounds NSC89640 and its structural analog, NSC89641, which target the SARS-CoV-2 Mpro enzyme, displaying half-maximal inhibitory concentrations (IC_{50}) of 2.69 μ M and 3.05 μ M, respectively. These compounds also exhibited inhibitory activity against MERS-CoV-2, with an IC_{50} of less than 3.5 μ M.

In 2022, we identified a novel small-molecule inhibitor, NSC662451, which effectively blocked the PD-1/sPD-L1 interaction while allowing the secretion of interleukin-2 and interferon- γ by Jurkat cells. This suggests its potential as an alternative immune checkpoint cancer therapy targeting PD-1. In 2021, our computational strategy led to the identification of three inhibitors targeting the SA receptor binding site: NSC85561, NSC47715, and NSC7223. These inhibitors were validated through experimental data, showing antiviral activity against Influenza A Virus (IAV), with EC_{50} values ranging from 2.31 to 2.53 μ M.

Overall, our structure-based drug discovery pipeline has yielded promising results, demonstrating that our framework effectively identifies potent lead compounds and repurposes existing drugs for the development of antiviral and anticancer therapies.



第40屆生物醫學聯合學術年會



Speaker

楊子賢

Tzu-Hsien Yang

Current Position

- 國立成功大學生物醫學工程學系 副教授

Education / Training

- PhD, 國立成功大學電機工程學系
- BS, 國立成功大學電機工程學系

Professional and Research

- 副教授, 國立成功大學生物醫學工程學系
- 助理教授, 國立成功大學生物醫學工程學系
- 助理教授, 國立高雄大學資訊管理學系學系

Selected Publications

- T.-H. Yang†, Y.-H. Huang†, Y.-H. Lee, J.-N. Lai, K.-D. Chen, M.-H. Guo, Y. Pang, C.-Y. Chen, W.-S. Wu#, and H.-C. Kuo# (2025), "Identifying the risk of Kawasaki disease based solely on routine blood test features through novel construction of machine learning models," Computational and Structural Biotechnology Journal, vol. 27, pp. 2832–2842. †: Co-first author
- T.-H. Yang#, (2024) "DEBFold: computational identification of RNA secondary structures for sequences across structural families using deep learning," Journal of Chemical Information and Modeling, vol. 64 (9), pp. 3756–3766.
- T.-H. Yang†, G.-D. Syu†, C.-S. Chen†, G.-R. Chen, S.-E. Jhong, P.-H. Lin, P.-C. Lin, Y.-C. Wang, Pramod Shah, Y.-Y. Tseng, and W.-S. Wu# (2024), "BAPCP: a comprehensive and user-friendly web tool for identifying biomarkers from protein microarray technologies," Computer Methods and Programs in Biomedicine, vol. 254, p. 108260. †: co-first authors
- T.-H. Yang, J.-C. Chen, S.-H. Wu, F.-Y. Chang, Y.-C. Huang, M.-H. Lee, Y.-Y. Tseng, and W.-S. Wu# (2023), "Identifying human miRNA target sites via learning the interaction patterns between miRNA and mRNA segments," Journal of Chemical Information and Modeling, vol. 64 (7), pp. 2445–2453.
- T.-H. Yang#, Y.-H. Yu, S.-H. Wu, and F.-Y. Zhang (2023), "CFA: an explainable deep learning model for annotating the transcriptional roles of cis-regulatory modules based on epigenetic codes," Computers in Biology and Medicine, vol. 152, p. 106375.

AI-Driven mRNA Sequence Optimization for Protein Synthesis Rate Improvement

楊子賢

Tzu-Hsien Yang

Recombinant protein-based therapeutics have become a central component of modern biopharmaceutical development due to their high specificity and therapeutic efficacy. Most therapeutic proteins are produced in Chinese hamster ovary (CHO) cells, yet the design of efficient protein synthesis processes in this system remains largely empirical. Current development pipelines rely heavily on trial-and-error optimization, resulting in high costs, long timelines, and limited scalability.

Protein production efficiency in CHO cells is strongly influenced by the stability and translation efficiency of the corresponding mRNA templates. These properties are determined by complex and interdependent sequence features, including codon usage bias, regulatory elements in the 5' and 3' untranslated regions, and sequence-derived structural constraints. Existing computational tools typically consider only a subset of these factors and fail to capture their nonlinear interactions, limiting their utility for industrial-scale protein manufacturing.

In this talk, I will present an AI-assisted framework for optimizing mRNA sequence templates in CHO cells to enhance recombinant protein expression. By integrating multi-layered sequence features related to mRNA stability and translational efficiency, this approach addresses two key challenges in protein synthesis: maintaining stable mRNA templates and maximizing translation output. This work aims to reduce the development costs, improve production efficiency, and accelerate the translation of protein-based therapeutics.



第40屆生物醫學聯合學術年會



Speaker

鍾佳儒

Chia-Ru Chung

Current Position

- 國立中央大學資訊工程學系 助理教授

Education / Training

- 2021, PhD, 國立中央大學 資訊工程學系

Professional and Research

- 2022-2023, 博士後研究, 香港中文大學
- 2021-2022, 博士後研究, 國立中央大學

Awards & Honors

- 2025 國立中央大學新聘國鼎青年
- 2021 Member of The Honor Society of Phi Tau Phi

Selected Publications

- dbPTM 2025 update: comprehensive integration of PTMs and proteomic data for advanced insights into cancer research. 2025. Nucleic Acids Research, 53(D1), D377–D386.
- dbAMP 3.0: updated resource of antimicrobial activity and structural annotation of peptides in the post-pandemic era. 2025. Nucleic Acids Research, 53(D1), D364–D376.
- A risk assessment framework for multidrug-resistant *Staphylococcus aureus* using machine learning and mass spectrometry technology. 2023. Briefings in Bioinformatics, 22(4), bbaa293.
- A large-scale investigation and identification of methicillin-resistant *Staphylococcus aureus* based on peaks binning of matrix-assisted laser desorption ionization-time of flight MS spectra. 2021. Briefings in Bioinformatics, 22(3), bbaa138.
- Characterization and identification of antimicrobial peptides with different functional activities. 2020. Briefings in Bioinformatics, 21 (3), 1098-1114.

Advancing Artificial Intelligence in Antibiotic Resistance from Predictive Modeling to Antimicrobial Peptide Discovery

鍾佳儒
Chia-Ru Chung

Antibiotic resistance has emerged as a critical global health challenge, undermining the effective treatment of bacterial infections and increasing pressure on clinical decision-making and the development of new anti-infective options. Artificial intelligence (AI) can help address this challenge by associating resistance-aware clinical prediction with data-driven discovery of alternative antimicrobial strategies. An integrated AI-centric framework is described as advancing antibiotic resistance research across a continuum from predictive modeling to antimicrobial peptide (AMP) discovery. In the clinical setting, routinely generated pathogen data, particularly mass spectrometry-based spectral profiles, are used to infer resistance patterns before conventional antibiotic susceptibility testing results become available. By linking characteristic spectral signatures to resistance phenotypes, AI-enabled prediction supports earlier estimation of pathogen susceptibility and more informed initial antibiotic selection, with the potential to reduce unnecessary broad-spectrum antibiotic exposure and associated selective pressure. Complementing resistance prediction, AI is applied to AMP discovery as a strategy for combating resistant bacterial infections. Peptide sequences are assessed to predict functional activity profiles and clinically relevant properties, including antimicrobial potency and safety-related risks such as hemolysis. Integrating these predictive outputs enables systematic prioritization of peptide candidates that better balance efficacy and tolerability, accelerating the identification of promising leads for downstream experimental validation. These capabilities position AI as a practical bridge between rapid resistance-informed treatment decisions and accelerated discovery of antimicrobial candidates in the context of escalating antibiotic resistance.



第40屆生物醫學聯合學術年會



Speaker

張書蓉

Shu-Jung Chang

Current Position

- National Taiwan University/Associate Professor Graduate Institute of Microbiology, College of Medicine

Education / Training

- 2013, PhD, National Yang-Ming (Yangming Jiaotong) University Department of Life Sciences and Institute of Genome Sciences
- 2008, MS, Taipei Medical University Institute of Medical Sciences
- 2006, BS, Tzu-Chi University Department of Public Health

Professional and Research

- 2025-Present, Associate Professor, National Taiwan University Graduate Institute of Microbiology, College of Medicine, Taipei, Taiwan
- 2020-2025, Assistant Professor, National Taiwan University Graduate Institute of Microbiology, College of Medicine, Taipei, Taiwan
- 2015-2020, Post-doctoral Fellow Department of Microbial Pathogenesis, Yale University, New Haven, CT, USA

Awards & Honors

- 2025 - 2030, Yushan Young Scholar (Second Term), Ministry of Education, Taiwan
- 2024 The 20th Tien Te Lee Biomedical Awards (Young Scientist Award)
- 2020 - 2025, Yushan Young Scholar (First Term), Ministry of Education, Taiwan

Selected Publications

- Chieh-Hua Fu*, Yu-Ting Hsu*, Shao-Chun Hsu, Nai-Shu Chen, Hsueh-Wen Hu, Ting-Yin Wu, Yi-Jou Huang, Ying-Chu Chen, An-Chi Luo, Yu-Tsung Huang, Shu-Jung Chang# (2025). Intracellular Salmonella hijacks the mitochondrial citrate carrier to evade host oxidative defenses. *Nature Communications*, 16 (1): 9806 (#Corresponding author)
- Han-Yi Chen, Wan-Chen Hsieh, Yu-Chieh Liu, Huei-Ying Li, Po-Yo Liu, Yu-Ting Hsu, Shao-Chun Hsu, An-Chi Luo, Wei-Chen Kuo, Yi-Jhen Huang, Gan-Guang Liou, Meng-Yun Lin, Chun-Jung Ko, Hsing-Chen Tsai, Shu-Jung Chang# (2024). Mitochondrial injury induced by a Salmonella genotoxin triggers the proinflammatory senescence-associated secretory phenotype. *Nature Communications*, 15 (1): 2778 (#Corresponding author)
- Shu-Jung Chang*, Yu-Ting Hsu, Yun Chen, Yen-Yi Lin, Maria Lara-Tejero, Jorge E Galan (2022). Typhoid toxin sorting and exocytic transport from Salmonella Typhi-infected cells. *eLife* 11: e78561 (*First author)

3/21(六) 13:20-14:00
3 樓 30 教室

How a Bacterial Pathogen Detoxifies Its Intracellular Niche to Support Survival

張書蓉
Shu-Jung Chang

Intracellular bacterial pathogens must overcome numerous host defenses to survive and replicate within host cells. A key challenge is their ability to modify the membrane-bound compartments, or vacuoles, that house them. Emerging evidence shows that pathogens do not rely solely on their own virulence factors; they also exploit host organelles and metabolic processes to construct a more permissive intracellular environment. In this seminar, I will present our recent findings demonstrating that *Salmonella enterica* rewires host mitochondrial metabolite transport to sustain its intracellular lifestyle. We uncovered a mechanism through which the pathogen reroutes a mitochondrial citrate transporter to its vacuolar niche, mitigating oxidative stress and enhancing bacterial replication. This process is orchestrated by a specific bacterial effector that links host metabolic remodeling with vacuole detoxification. More broadly, these findings reveal an unexpected strategy of organelle hijacking in which pathogens tap into mitochondrial functions to shape their replication niche. Understanding these interactions not only advances our knowledge of fundamental cell and infection biology but also opens potential avenues for designing host-directed antimicrobial approaches.



第40屆生物醫學聯合學術年會



Speaker

凌斌

Pin Ling

Current Position

- 國立成功大學醫學院微生物及免疫學研究所 教授

Education / Training

- 2001, PhD, Department of Microbiology and Immunology, Baylor College of Medicine
- 1998, BS, 國立陽明大學醫事技術學系

Professional and Research

- 2025-Present, 教授, 國立成功大學醫學院 微生物及免疫學研究所
- 2012-2025, 副教授, 國立成功大學醫學院 微生物及免疫學研究所
- 2005-2012, 助理教授, 國立成功大學醫學院 微生物及免疫學研究所

Awards & Honors

- 2025 中華民國免疫學會 沈水德翁文教基金會 學術論文獎

Selected Publications

- Chen, K. R., Yang, C. Y., Shu, S. G., Lo, Y. C., Lee, K. W., Wang, L. C., Chen, J. B., Shih, M. C., Chang, H. C., Hsiao, Y. J., Wu, C. L., Tan, T. H., and Ling, P.* (2024) Endosomes serve as signaling platforms for RIG-I ubiquitination and activation. *Science Advances*, 10(45), eadq0660.
- Yang, M. L., Chen, Y. C., Wang, C. T., Chong, H. E., Chung, N. H., Leu, C. H., Liu, F. T., Lai, M. M. C., Ling, P., Wu, C. L. & Shiau, A. L., (2023.2) Upregulation of galectin-3 in influenza A virus infection promotes viral RNA synthesis through its association with viral PA protein. *Journal of Biomedical Science*. 30(1):14.
- Lin, C. Y., Shih, M. C., Chang, H. C., Lin, K. J., Chen, L. F., Huang, S. W., Yang, M. L., Ma, S. K., Shiau, A. L., Wang, J. R., Chen, K. R. & Ling, P.* (2021.10) Influenza A virus NS1 resembles a TRAF3-interacting motif to target the RNA sensing-TRAF3-type I IFN axis and impair antiviral innate immunity. *Journal of Biomedical Science*. 28(1):66.
- Chen, K. R., Chang, C. H., Huang, C. Y., Lin, C. Y., Lin, W. Y., Lo, Y. C., Yang, C. Y., Hsing, E. W., Chen, L. F., Shih, S. R., Shiau, A. L., Lei, H. Y., Tan, T. H., Ling, P. 2012. TBK1-associated protein in endolysosomes (TAPE)/CC2D1A is a key regulator linking RIG-I-like receptors to antiviral immunity. *The Journal of Biological Chemistry* 287:32216-32221.

Endosomes as Signaling Platforms for Cytosolic Innate Immune Receptors: Insights into RIG-I-like Receptor, NOD-like Receptor Pathways, and Beyond

凌斌
Pin Ling

Considerable progress has been made in understanding host defense against pathogen infection, not only at the host level but also at the cellular level. Pathogens (such as viruses, bacteria, and protozoa) exploit host cellular networks, like the cytoskeleton, endocytic pathways, and membranous organelles, to facilitate invasion and replication in host cells. Meanwhile, upon infection, host cellular networks are implicated in organizing the higher-order assembly of pattern-recognition receptors, known as biomolecular condensates, to trigger innate immune signaling and host defense. RIG-I is a cytosolic viral RNA sensor critical for host antiviral defense against RNA virus infection, including SARS-CoV-2 and influenza. RIG-I has been shown to survey viral RNA in subcellular compartments, including stress granules, mitochondria-associated membranes, microsomes, and the nucleus. Endosomes are focal compartments at the junction of virus entry and host innate immune defense. Our recent work has revealed endosomes as signaling platforms for RIG-I sensing and activation at early viral infection. RIG-I is recruited onto endosomes, the “gateway” of virus invasion into a host cell, to detect viral RNA immediately upon breaching the endosomal membrane. Endosomal adaptor TAPE (TBK1-Associated Protein in Endolysosomes) is crucial for mediating the assembly of the RIG-I signaling complex. The host’s immune response timing is vital for the arms race between the host and pathogens. This novel RIG-I action mode enables the host to detect viral infection and induce antiviral immunity much earlier than previously thought. Further, our ongoing work has also investigated the interplay between the endosome-Golgi network and other innate immune receptor pathways, including NOD2 and inflammasomes. We will share our insights in the talk.



第40屆生物醫學聯合學術年會



Speaker

陳秉民

Ping-Min Chen

Current Position

- 國立臺灣大學醫學院生物化學暨分子生物學研究所助理教授
- 國立臺灣大學醫學院附設醫院綜合診療部血液淨化科主治醫師

Education / Training

- 2019, PhD, 耶魯大學, 美國
- 2008, BS, 國立臺灣大學, 中華民國

Professional and Research

- 2020-2022, 博士後研究員, 哈佛大學醫學院貝斯以色列女執事醫學中心

Awards & Honors

- 2023 教育部玉山青年學者
- 2021 科技部 2030 跨世代年輕學者方案新秀學者

Selected Publications

- Little AJ, Chen PM (Co-first author), Vesely MD, Khan RN, Fiedler J, Garritano J, Maisha FI, McNiff JM, Craft J. HIF-1 regulates pathogenic cytotoxic T cells in lupus skin disease, JCI Insight 2023 Aug 22;8(16):e166076
- Chen PM, Katsuyama E, Satyam A, Li H, Rubio J, Jung S, Andrzejewski S, Becherer JD, Tsokos MG, Abdi R, Tsokos GC. CD38 reduces mitochondrial fitness and cytotoxic T cell response against viral infection in lupus patients by suppressing mitophagy. Sci Adv. 2022 Jun 15; 8 (24): eabo4271.
- Chen PM, Wilson PC, Shyer JA, Veselits M, Steach HR, Cui C, Moeckel, G, Clark MR, Craft J. Kidney tissue hypoxia dictates T cell-mediated injury in murine lupus nephritis, Sci Transl Med. 2020 Apr 8;12(538):eaay1620.

3/21(六) 14:30-15:00
3 樓 30 教室

T Cell Stress Response and Lupus Organ Damage

陳秉民
Ping-Min Chen

Systemic lupus erythematosus (SLE) is characterized by pathogenic autoantibodies production due to loss of B cell tolerance. Yet, tissue injury persists despite blockade of autoreactive T-cell dependent B-cell maturation in the spleen and other secondary lymphoid organs after onset of kidney and skin inflammation. We therefore propose targeting T cell maladaptation in the inflamed tissue as the new avenue of therapeutic approach. In our previous publications, T cells in the inflamed kidney and skin presented with high Hypoxia-Inducible Factor (HIF)-1 in response to stressed tissue microenvironment, and either conditional knockout or small molecule inhibitor reverse organ damage.

We further found that the T cell stress response is quintessential for the transition of circulating memory T cells into tissue stem-like precursor T cells, an important population that gives rise to the majority of tissue-damaging effector T cells. These findings highlight how the immune system responds to environmental stress, initiating a vicious cycle of tissue injury, increased microenvironmental stress, and amplified T cell-mediated damage. In this talk, I will discuss our approach to identifying molecular targets through single-cell RNA sequencing analysis, and how we validate these findings in FFPE human tissues using spatial transcriptomics on the MERSCOPE platform.



第40屆生物醫學聯合學術年會



Speaker

黃韻如

Ruby Yun-Ju Huang

Current Position

- Program Director, Smart MHI, International College, NTU
- Professor, School of Medicine, College of Medicine, NTU

Education / Training

- 2008, PhD, 國立臺灣大學醫學院解剖學暨細胞生物學研究所, 臺灣

Professional and Research

- 2019-Present, 專任教授, 國立臺灣大學醫學系, 臺灣
- 2019-Present, 訪問教授, 日本熊本大學, 日本
- 2019, 訪問教授, 新加坡楊潞齡醫學院, 新加坡

Awards & Honors

- 2019 玉山青年學者
- 2025 《遠見》USR 大學社會責任 - 楷模獎

Selected Publications

- Tai YT, Lin WC, Ye J, Chen DT, Chen KC, Wang DY, Tan TZ, Wei LH, Huang RY. Spatial Profiling of Ovarian Clear Cell Carcinoma Reveals Immune-Hot Features Mod Pathol. 2024 Oct 10;38(1):100630.
- Yen HH, Chen PY, Huang RY, Jeng JM, Lai IR. Clinicopathological features and cancer transcriptomic profiling of poorly cohesive gastric carcinoma subtypes. J Pathol Clin Res. 2024 Jul;10(4):e12387.
- Pang QY, Chiu YC, Huang RYJ. Regulating epithelial-mesenchymal plasticity from 3D genome organization. Commun Biol. 2024;7:750.
- Tai YK, Iversen JN, Chan KKW, Fong CHH, Abdul Razar RB, Ramanan S, Yap LYJ, Yin JN, Toh SJ, Wong CJK, Koh PFA, Huang RYJ, Franco-Obregón A. Secretome from Magnetically Stimulated Muscle Exhibits Anticancer Potency: Novel Preconditioning Methodology Highlighting HTRA1 Action. Cells. 2024;13(5):460.
- Yeo XH, Sundararajan V, Wu ZW, Phua ZJC, Ho YY, Peh KLE, Chiu YC, Tan TZ, Kappei D, Ho YS, Tan DSP, Tam WL, Huang RYJ. The effect of inhibition of receptor tyrosine kinase AXL on DNA damage response in ovarian cancer. Commun Biol. 2023 Jun 22;6(1):660.

Unlocking Phenotypic Plasticity in Ovarian Cancer via Multiomics Approaches

黃韻如
Ruby Yun-Ju Huang

“Unlocking phenotypic plasticity” is one of the cancer hallmarks which denotes how cancer cells and the cells within the tumor microenvironments (TME) could adapt during disease progression. This cellular plasticity within distinct TME neighborhoods further contributes to tumor heterogeneity. Epithelial-mesenchymal transition (EMT) is such a mechanism crucial in gastrulation and development that has been shown to contribute to cellular plasticity in cancer. The EM plasticity along the phenotypic spectrum could be elucidated via multiomics approaches to understand the regulatory mechanisms of the plasticity switch. Using ovarian cancer as a disease model, this talk will explain alternative enhancer usage driving the EM phenotypes and its impacts on 3D genome architectures. Focusing on a rare histological subtype, ovarian clear cell carcinoma (OCCC), this talk will also explain the switch between the epithelial (EpiCC) to the mesenchymal (MesCC) gene expression subtype from early to advance-staged diseases. Spatial transcriptomic (ST) profiling of tumor centers and invasive margins/tumor-stromal interfaces and functional studies in advanced OCCC further reveal that the EM gradient is negatively correlated with oxidative phosphorylation (OXPHOS) and the expression of LCN2, an iron metabolism-related gene, possibly via the co-regulation of a pioneer factor SOX9.



第40屆生物醫學聯合學術年會



Speaker

劉軒

Hsuan Liu

Current Position

- Professor, Department of Biochemistry and Molecular Biology, Chang Gung University

Education / Training

- 2005, PhD, Institute of Molecular Medicine, National Taiwan University
- 1998, MS, Institute of Basic Medical Sciences, Chang Gung University
- 1996, BS, Department of Biology, Kaohsiung Medical University

Professional and Research

- 2018-2023, Associate Professor, Department of Biochemistry and Molecular Biology, Chang Gung University
- 2014-2018, Assistant Professor, Department of Biochemistry and Molecular Biology, Chang Gung University

Awards & Honors

- 中華民國專利發明第:I661198 號。譚賢明、劉軒、賴儀瑄。長庚大學。診斷或預斷人類口腔癌的方法。專利期間: 2019/6/1~2038/01/25。
- 中華民國專利發明第:I666449 號。譚賢明、劉軒、賴儀瑄。長庚大學。診斷或預斷人類口腔癌的方法。專利期間: 2019/7/21~2038/1/25
- 香港專利發明編號第:HK40010644。譚賢明、劉軒、賴儀瑄。長庚大學。診斷或預斷人類口腔癌的系統和應用。專利期間:2023-02-17~2039-01-16。

Selected Publications

- Liu YH, Chen YT, Chen YC, Chin E, Lai YY, Ma CP, Chang IY, Tan CM, Hsu PT, Lai YH, Tsai WS, Yang CY, Yu JS, Hsu HC, Liu H (2025). Functional Dynamic Modulation of Colorectal Cancer Initiation and Metastatic Capacity by a Novel MiR-7974 Regulatory Axis. Biomedical journal (revision). (Corresponding author)
- Chang HC, Tsai CY, Hsu CL, Tai TS, Cheng ML, Chuang YM, Tang HY, Lin KJ, Chen JJ, Chang SH, Ko YC, Chi YW, Liu H, Tan BC, Shen CR, Yang CW, Ho PC, Yang HY (2025, Mar). Asparagine deprivation enhances T cell antitumor response in patients via ROS-mediated metabolic and signal adaptations. Nature Metabolism.
- Tseng YH, Tran TTM, Chang JT, Huang YT, Nguyen AT, Chang IY, Chen YT, Hsieh HW, Juang YL, Chang PM, Huang TY, Chang YC, Chen YM*, Liu H*, Huang CF* (2025, Jan). Utilizing TP53 hotspot mutations as effective predictors of gemcitabine treatment outcome in non-small-cell lung cancer. Cell Death Discovery, 11(1):26. (Corresponding author)

3/22(日) 14:00 - 14:30
3 樓 30 教室

From space to systems: spatial transcriptomics and multi-omics integration sheds light on tumor ecosystem dynamics

劉軒

Hsuan Liu

To elucidate the pathobiology of environmentally driven tumor malignancies, we performed an integrative analysis combining proteogenomics, metabolomics, and spatial transcriptomics. This multi-omics approach uncovered distinct molecular programs and key features of tumor progression, including metabolic reprogramming, immune modulation, and stromal remodeling. Trajectory analysis focused specifically on malignant cells revealed dynamic state transitions, highlighting phenotypic plasticity, differentiation hierarchies, and transcriptional programs associated with disease progression. By integrating multi-omic subtypes with spatial context, we refined the molecular taxonomy of tumors and identified region-specific regulatory circuits. This comprehensive framework provides critical insights into tumor ecosystem architecture and supports the development of precision therapeutic strategies guided by spatial characteristics and temporal dynamics.



第40屆生物醫學聯合學術年會



Speaker

林建達

Jian-Da Lin

Current Position

- 台灣大學化科技系 助理教授
- 台灣大學 智慧醫療與健康資訊碩士學程 兼任助理教授
- 台灣農業化學會 秘書長

Education / Training

- 2016, PhD, Rutgers University, U.S.A

Professional and Research

- 2020-2021, Staff Scientist, National Institute of Allergy and Infectious Diseases (NIAID), U.S.A
- 2016-2020, PostDoc Fellow, NYU School of Medicine, U.S.A

Awards & Honors

- 2022-2025, AAI Early Career Faculty Grant, The American Association of Immunologists (AAI)
- 2021-2026, Yushan Young Scholar (玉山青年學者), The Ministry of Education (MOE)
- 2021-2026, Einstein Grant (愛因斯坦培植計畫), National Science and Technology Council (NSTC)

Selected Publications

- Redefining inflammatory macrophage phenotypes across stages and tissues by single-cell transcriptomics. *Science Immunology*, 7(70), April 2022.
- *Bacillus subtilis* natto NTU-18 attenuates atherosclerosis progression by modulating peripheral immune cell alterations. *Applied Microbiology and Biotechnology*, 109 (1), October 2025.
- Adipocyte lipolysis activates epithelial stem cells for hair regeneration through fatty acid metabolic signaling. *Cell Metabolism*, 37, November 2025.
- Early-life ketone body signaling promotes beige fat biogenesis through changes in histone acetylation and β -hydroxybutyrylation. *Nature Metabolism*, 7, October 2025.
- Rewilding catalyzes maturation of the humoral immune system. *Science Advances*, 11(10), March 2025.

Mapping Immunological Complexity in Disease Progression with Single-Cell Multi-Omics and Machine Learning

林建達
Jian-Da Lin

Precision medicine aims to stratify disease based on individual genetic, environmental, and lifestyle factors. To advance this goal, we developed an integrated single-cell multi-omics platform, featuring CITE-seq, combinatorial barcoding, and 40+ marker spectral flow cytometry, combined with machine learning for high-resolution immune and microbiome profiling across diverse disease contexts. We can perform single-cell multi-omics analysis to redefine immune cell subsets by revealing key regulatory networks and immune cell dynamics across tissues and disease stages.

Using high-dimensional flow cytometry with two 13-marker panels, we longitudinally profiled 18 immune cell subsets across lymphoid and myeloid compartments in an AAV-mPCSK9-induced murine atherosclerosis model. We identified daily administration of *Bacillus subtilis* natto NTU-18 significantly reduced aortic lesion burden without altering serum cholesterol. Further immune profiling revealed dynamic T-cell reprogramming, including transient CD44⁺ trained CD8⁺ expansion and sustained enrichment of CD25⁺CD4⁺ regulatory T cells. These findings suggest that *B. subtilis* natto NTU-18 mitigates atherosclerosis through immune modulation rather than lipid lowering.

In pancreatic ductal adenocarcinoma (PDAC), we performed high-dimensional immune profiling of peripheral blood by spectral flow cytometry analysis from healthy donors and treatment-naïve PDAC patients. Over 70 immune subsets were delineated, uncovering stage-dependent remodeling marked by effector/memory T cell expansion and depletion of naïve/regulatory subsets. CD95 and CD45RA emerged as robust classifiers (AUC > 0.8) in machine learning models and were validated in public scRNA-seq datasets, supporting the utility of immune phenotyping in PDAC diagnosis and monitoring.

In Parkinson's disease (PD), we show that early colonization with *Parabacteroides goldsteinii* in LRRK2G2019S germ-free mice improved motor performance, reduced neuroinflammation, and limited α -synuclein pathology. Mechanistically, *P. goldsteinii* restored gut homeostasis via suppression of TLR4 signaling, expansion of anti-inflammatory CD4⁺CD8 $\alpha\alpha$ ⁺ intraepithelial T cells, upregulation of tight junction genes, and enhancement of mitochondrial bioenergetics.

Collectively, these studies highlight the power of single-cell multi-omics and machine learning to uncover disease-modifying immune and microbial networks, offering potentials for precision diagnostics and therapeutics.



第40屆生物醫學聯合學術年會



Speaker

張智芬
Zee-Fen Chang

Current Position

- 台灣大學醫學院分子醫學研究所 教授

Education / Training

- BS, Department of Agricultural Chemistry, National Taiwan University, Taiwan
- MS, Department of Agricultural Chemistry, National Taiwan University, Taiwan
- PhD, Institute of Biochemistry, Rutgers University, U.S.A

Professional and Research

- 2016-Present, Professor, Institute of Molecular Medicine, National Taiwan University
- 2010-2016, Professor, Institute of Biochemistry and Molecular Biology, National Yang-Ming University
- 1997-2010, Professor, Institute of Biochemistry and Molecular Biology, College of Medicine, National Taiwan University

Awards & Honors

- Education Ministry Academic Award
- Education Ministry National Chair Award

Selected Publications

- Chen CW, Chen YJ, Cuili X, Chen YH, Chang ZF* PRKN activation for mitophagy requires an NME3-regulated phosphatidic acid signal that separates mitochondria from endoplasmic reticulum tethering.
- Chen CW, Su C, Huang CY, Huang XR, Cuili X, Chao T, Fan CH, Ting CW, Yi-Wei Tsai YW, Yang KC, Yeh TY, Hsieh ST, Chen YJ, Feng Y, Hunter T, and Chang ZF*. NME3 is a gatekeeper for DRP1-dependent mitophagy in hypoxia. Nat Comm. 15:2264, 2024.
- Huang CY, Chung YH, Wu SY, Wang HY, Lin CY, Yang TJ, Fang JM, Hu CM, Chang ZF* Glutathione determines chronic myeloid leukemia vulnerability to an inhibitor of CMPK and TMPK. Comm Biology 10:843, 2024.
- Su YA, Chiu HY, Chang YC, Sung CJ, Chen CW, Reika Tei, Huang XR, Hsu SC, Lin SS, Wang HC, Lin YC, Hsu JC, Bauer H, Feng Y, Baskin JM, Chang ZF*, Liu YW*. NME3 binds to phosphatidic acid and mediates PLD6-induced mitochondrial tethering. J Cell Biol 222: e20230109, 2023. (Selected as a spotlight in JCB and TICB).

3/22(日) 15:20-16:00
3 樓 30 教室

Simple Rules for Grant Writing

張智芬
Zee-Fen Chang

科學探索旨在發現未知的原理，建立新知識，而科學研究是須要根據有組織的現有知識，提出問題，做有效性的規劃，架構設計的流程。大部分的實質性研究都須透過經費的支持，得以執行具深入性，更新性，及完整性的實驗或數據分析。這個演講將分享如何繕寫研究計劃的基本原則及邏輯。



第40屆生物醫學聯合學術年會



Speaker

陳倩瑜

Chien-Yu Chen

Current Position

- 國立臺灣大學生物機電工程學系 教授兼系主任

Education / Training

- 2003, PhD, 國立台灣大學, 中華民國
- 1998, 史丹福大學, 美國
- 1996, BS, 國立台灣大學, 中華民國

Professional and Research

- 2019-2020, 基因科學家, 財團法人台灣人工智慧發展基金會-台灣人工智慧實驗室
- 2008-2013, 副教授, 國立台灣大學-生物產業機電工程學系
- 2005-2008, 助理教授, 國立台灣大學-生物產業機電工程學系

Awards & Honors

- 2022 - 2024, 國立臺灣大學專任教師教學優良獎
- 2016, 國立臺灣大學專任教師教學傑出獎

Selected Publications

- Jacob Shujui Hsu, Dung-Chi Wu, Shang-Hung Shih, Jen-Feng Liu, Ya-Chen Tsai, Tung-Lin Lee, Wei-An Chen, Yi-Hsuan Tseng, Yi-Chung Lo, Hong-Ye Lin, Yi-Chieh Chen, Jing-Yi Chen, Ting-Hsuan Chou, Darby Tien-Hao Chang, Ming Wei Su, Wei-Hong Guo, Hsin-Hsiang Mao, Chien-Yu Chen*, Pei-Lung Chen*, Complete genomic profiles of 1496 Taiwanese reveal curated medical insights, *Journal of Advanced Research*, 2024.
- Emadeldin Hassanin*, Ko-Han Lee, Tzung-Chien Hsieh, Rana Aldisi, Yi-Lun Lee, Dheeraj Bobbili, Peter Krawitz, Patrick May, Chien-Yu Chen* and Carlo Maj*, Trans-ancestry polygenic models for the prediction of LDL blood levels: an analysis of the United Kingdom Biobank and Taiwan Biobank, *Frontiers in Genetics*, 14, 2023.
- Peng-Hsuan Li, Ting-Fu Chen, Jheng-Ying Yu, Shang-Hung Shih, Chan-Hung Su, Yin-Hung Lin, Huai-Kuang Tsai, Hsueh-Fen Juan, Chien-Yu Chen, Jia-Hsin Huang, pubmedKB: an interactive web server for exploring biomedical entity relations in the biomedical literature, *Nucleic Acids Research*, Vol.50, Issue W1, 5 pp. W616-622, 2022.

3/21(六) 14:20-15:00
3 樓 31 教室

AI-Powered Multi-Omics Data Analysis for Precision Medicine

陳倩瑜
Chien-Yu Chen

The analysis of personal multi-omics data is pivotal in advancing precision medicine. AI-powered multi-omics data analysis accelerates our understanding of human gene functions and the impacts of personal genetic variants on these functional elements. This talk will begin with an overview of the data flow from genome, epigenome, and transcriptome to proteome. Following this, I will discuss the types of high-throughput multi-omics data generated by next-generation sequencing since 2006. Recent advances in deep learning methods have shown great promise in addressing challenging problems in computational biology, such as protein structure prediction and gene regulation modeling. These developments in deep neural networks are poised to significantly enhance clinical practices in precision medicine in the near future.



第40屆生物醫學聯合學術年會



Speaker

林石化

Shih-Hua Lin

Current Position

- 國防醫學大學內科學 教授
- 三軍總醫院腎臟科內科 主治醫師
- 台灣腎臟醫學會 理事

Education / Training

- 1988, BS, 國防醫學院, 台灣
- 1997, 研究員, 加拿大多倫多大學附設醫院, 加拿大

Professional and Research

- 2018-2019, 院長, 國防醫學院, 台灣
- 2016-2018, 院長, 三軍總醫院, 台灣
- 2011-2012, 主任, 三軍總醫院內科部, 台灣

Awards & Honors

- 2023 The Best Doctor in Nephrology, Taiwan
- 2021 24th National Biotechnology & Medical Care Quality Award: Gold Award
- 2019 16th National Innovation Award for research and application, Taiwan, ROC
- 2020 17th National Innovation Award for research and application, Taiwan, ROC

Selected Publications

- Artificial Intelligence enabled Dyskalemia using Electrocardiogram (AIDE) alert on potassium imbalance treatment: a pragmatic randomized controlled trial. Nature Comm 2025
- Monitoring serum potassium concentration in patients with severe hyperkalemia: the role of bloodless artificial intelligence-enabled electrocardiography. Clin Kidney J 2025;18(4):sfaf092.
- Artificial intelligence-enabled electrocardiography alert intervention and all-cause mortality: A pragmatic randomized clinical trial. Nature Med 2024; 30(5): 1461-1470.
- Point-of-care artificial intelligence-enabled ECG for dyskalemia: A retrospective cohort study for accuracy and outcome prediction. NPG Digital Med 2022; 5: 8 (1-12)

AI-ECG for Dyskalemia

林石化
Shih-Hua Lin

Severe dyskalemia (hypokalemia and hyperkalemia) are potentially life-threatening emergency requiring prompt recognition and management. Their diagnosis almost always relies on the laboratory reports with the unexpected turnaround time. Since the cardiac tissue is very sensitive to dyskalemia, electrocardiography (ECG) as a non-invasive bedside tool may help detect the potentially fatal dyskalemia prior to laboratory report. Currently, artificial intelligence (AI) technique can help detect cardiac and non-cardiac diseases affecting on the heart. Using a large data-driven deep learning model (DLM) with annotated ECGs, we have successfully developed the AI-ECG12NET to early recognize severe dyskalemia in a large retrospective and prospective cohort studies. Clinical applications of ECG12Net include early recognition of severe dyskalemia within 1 minute, much faster than laboratory testing, the identification of the underlying causes for dyskalemia (hypokalemic paralysis, thyrotoxic periodic paralysis, digoxin intoxication), rapid exclusion of pseudodyskalemia to avoid inappropriate management, the monitoring of serum potassium (K⁺) changes during the treatment of severe dyskalemia, and even the predication of adverse cardiovascular outcomes (previvor) associated with ECG-dyskalemia. Thus, the AI-ECG analysis provides both a quantitative indicator and prognostic predication for decision support. The ECG12Net model could be also incorporated into ECG machines in ambulances or remote areas to facilitate telemedicine and applied to a wearable device for dyskalemia.



第40屆生物醫學聯合學術年會



Speaker

賴明德

Ming-Derg Lai

Current Position

- Emeritus Professor National Chen Kung University
- Academic Affairs Consultant
- Distinguished Expert, NCKU Hospital Research Consultation Clinic

Education / Training

- 1978, BS, National Taiwan University, Taiwan
- 1980, MS, National Taiwan University, Taiwan
- 1987, PhD, Baylor College of Medicine, USA

Professional and Research

- 2020-2022, Senior Vice-President, National Cheng Kung University
- 2015-2019, Vice-President, National Cheng Kung University
- 2002-2022, Distinguished Professor, National Cheng Kung University

Awards & Honors

- 2002 Best Teacher Award at National Cheng Kung University
- 2005 Research Distinguished Professor Award at National Cheng Kung University
- 2016 Research Distinguished Professor Award at National Cheng Kung University

Selected Publications

- Chen SA, Tsai MH, Wu FT, Hsiang A, Chen YL, Lei HY, Tzai TS, Leung HW, Jin YT, Hsieh CL, Hwang LH, Lai MD*. (2000) Induction of anti-tumor immunity with combination of HER2/neu DNA vaccine and IL-2 gene-modified tumor vaccine. Clin. Cancer. Res. 6: 4381-4388
- Lin CC, Chou CW, Shiao AL, Tu CF, Ko TM, Chen YL, Yang BC, Tao MH, Lai MD* (2004) Therapeutic HER2/neu DNA vaccine inhibits mouse tumor naturally overexpressing endogenous neu. Mol. Ther. 10: 290-301.
- Yen MC, Lin CC, Chen YL, Huang SS, Yang HJ, Chang CP, Lei HY, Lai MD*. A novel cancer therapy by skin delivery of indoleamine 2,3-dioxygenase siRNA. Clin. Cancer Res. 2009 15: 641-649.

Leveraging AI to Redefine the Value and Role of Biochemical Work

賴明德

Ming-Derg Lai

Facing the rapid evolution of AI technology, this lecture will explore the new capabilities and re-defined roles required for biochemistry researchers and practitioners in the age of AI. It will also cover how to leverage artificial intelligence to enhance research efficiency, strengthen the quality of clinical interpretation, and expand professional value.

In the fields of basic biochemical research and clinical biochemistry, Large Language Models (LLMs) can already assist with experimental design, protein structure and function prediction, and image/spectral analysis. Researchers can be freed from tedious, repetitive tasks, allowing them to dedicate more effort to critical thinking, hypothesis generation, and innovative research directions.

At the same time, AI will profoundly change the safety and efficiency of laboratory medicine processes. From interpreting specimen quality and providing QC early warnings to alerting clinicians to the clinical risks of abnormal test values, AI can offer accurate and reproducible auxiliary interpretations and support medical decision-making, thereby improving the timeliness of diagnosis. By integrating electronic medical records, instrument data, and multi-omics information, AI can transform traditional result reports into clinically meaningful insights, allowing the laboratory department to play an even more crucial role within the healthcare system.

In the future, researchers should make good use of AI tools to facilitate human-machine collaboration, promoting the generation of creative concepts, data searching, and organization. By using a "simulated attack and response" model with opposing AI agents, researchers can examine their findings from different angles, making their results more comprehensive and rigorous.

Students and practitioners should transition from the role of "operator" to "supervisor" and "consultant." They must leverage AI to build essential cross-disciplinary skills (data science, bioinformatics, multi-omics integrative analysis) and then use the comprehensive analysis provided by AI tools to offer diagnostic perspectives from laboratory medicine for complex and challenging cases.

The AI era is not a threat; it is an opportunity for the biochemical profession to upgrade. Only by utilizing AI can biochemical professionals redefine their value and exert greater influence in future scientific research and clinical healthcare settings.



第40屆生物醫學聯合學術年會



Speaker

王家琪

Chia-Chi Wang

Current Position

- Professor, School of Veterinary Medicine, National Taiwan University

Education / Training

- 2010, Ph.D. in Department and Graduate Institute of Veterinary Medicine, National Taiwan University, Taiwan
- 2005, M.S. in Department and Graduate Institute of Veterinary Medicine, National Taiwan University, Taiwan

Professional and Research

- 2019-2025, Associate Professor, National Taiwan University, Taiwan
- 2011-2019, Assistant Professor & Associate Professor, Kaohsiung Medical University, Taiwan
- 2012-2012, Visiting Scholar, Genetic and Molecular Toxicology, NCTR, US FDA

Awards & Honors

- 2021 Taipei Medical University Excellent Research Paper Award

Selected Publications

- Chiu YW, Tung CW* and Wang CC*. Multitask learning for predicting pulmonary absorption of chemicals. Food Chem Toxicol. 2024, 185, 114453. (*Corresponding author)
- Kan HL, Wang SS, Liao CL, Tsai WR, Wang CC* and Tung CW* (2024) An Integrated Testing Strategy and Online Tool for Assessing Skin Sensitization of Agrochemical Formulations, Toxics, 12(12), 936. (*Corresponding author)
- Kuo JF, Wu HY, Tung CW, Huang WH, Lin CS and Wang CC*. Induction of thymus atrophy and disruption of thymocyte development by fipronil through dysregulation of IL-7-associated genes, Chem Res Toxicol. 2024, 37(9), 1488–1500. (*Corresponding author)
- Kuo JF, Cheng YH, Tung CW and Wang CC*. Fipronil disturbs the antigen-specific immune responses and GABAergic gene expression in the ovalbumin-immunized BALB/c mice, BMC Vet Res. 2024, 20(1), 30. (*Corresponding author)
- Wang CC, Wang SS, Liao CL, Tsai WR* and Tung CW*. Reconfiguring the online tool of SkinSensPred for predicting skin sensitization of pesticides, J Pestic Sci. 2022, 47(4), 184-189.

From Skin to Lung: Harnessing Shared Mechanisms to Predict Respiratory Sensitization

王家琪
Chia-Chi Wang

Respiratory sensitization represents a critical yet underexplored area in chemical safety assessment, with increasing emphasis on developing New Approach Methodologies (NAMs) to replace animal testing. Mechanistically, respiratory sensitization shares several parallels with skin sensitization, including the covalent binding of reactive chemicals to proteins (KE1), activation and migration of dendritic cells (KE3), and antigen presentation leading to T-cell proliferation (KE4). These common pathways provide a strong foundation for adapting established skin sensitization models to respiratory endpoints.

Recognizing this need, the OECD has initiated detailed review papers to facilitate the development of test methods for low-molecular-weight chemicals. These efforts highlight the importance of harmonization, comprehensive mechanistic coverage, and the integration of both in vitro and in silico approaches into regulatory frameworks. Nevertheless, it should be noted that these test methods remain under validation, and OECD guidelines are currently undergoing public consultation to build consensus within the scientific community.

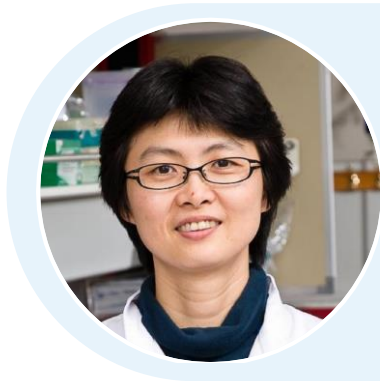
In our preliminary studies, we examined the expression of TSLP, CCL2, and CCL5 in A549 lung epithelial cells following exposure to respiratory sensitizers. While CCL2 and TSLP showed no significant changes, both CCL5 protein and mRNA levels were consistently elevated, underscoring its potential as a mechanistic marker. To further explore this, we established CCL5 reporter cell lines using A549 cells. These reporter assays enable simultaneous monitoring of inflammatory and oxidative stress responses in lung epithelial cells exposed to respiratory sensitizers.

In parallel, we leveraged existing experimental datasets to explore how known respiratory sensitizers interfere with gene expression in lung epithelial cells, aiming to uncover additional pathways potentially involved in sensitization. L1000 transcriptomic big-data analysis systematically identified molecular networks and differentially expressed genes, revealing that respiratory sensitizers induce immune activation, inflammatory signaling, and apoptosis. Furthermore, the integration of bioinformatics approaches with the expanded SkinSensDB can provide deeper mechanistic insights and facilitate the development of predictive models for respiratory sensitization.

In conclusion, our findings suggest that CCL5 can serve as a predictive biomarker for respiratory sensitization, particularly in relation to KE2 of the adverse outcome pathway. This work represents an important step toward the development of sensitive and reliable in vitro assays that can be integrated into future NAMs frameworks for chemical risk assessment. By combining predictive insights from shared skin sensitization key events (KE1, KE3, and KE4), there is significant potential to establish integrated approaches for respiratory sensitization. Looking ahead, further efforts may focus on identifying additional biomarkers and developing multi-gene prediction strategies, thereby expanding the detection capability across diverse respiratory sensitizers and enhancing mechanistic coverage.



第40屆生物醫學聯合學術年會



Speaker

許素菁

Shu-Ching Hsu

Current Position

- 財團法人國家衛生研究院感染症與疫苗研究所 副研究員
- 國立中興大學/高雄醫學大學/慈濟大學/中國醫藥大學 合聘副教授
- 社團法人台灣生醫創新學會 理事

Education / Training

- 2000, PhD, Graduate Institute of Microbiology, College of Medicine, National Taiwan University, Taiwan
- 1995, MS, Department of Microbiology and Immunology, National Yang-Ming University, Taiwan
- 1993, BS, Department of Microbiology, Soochow University, Taiwan

Professional and Research

- 2015-2016, 理事, 台灣精準醫學會(TPMS)
- 2015-2018, 研究發展顧問暨 合聘研究員, 秀傳醫療社團法人秀傳紀念醫院
- 2002-2005, Postdoctoral Fellow, Center for Gene Therapy, Tulane University, Louisiana, USA

Selected Publications

- Method for fat reduction and thereof. (PCT/US2024/047190. Sep 18, 2024) Method for Treating NETosis-Mediated Diseases. (PCT/US24/10905, Jan 09, 2024)
- Yang YS*, Hsu DW, Huang CL, Tsou LK, Zhang MM, Mao YC, Liu PY, Wu WG, Hsu SC#. Revolutionizing Global Snakebite Crisis with NETosis Blockade Therapy. [Submitted to Science Translational Medicine (2025)]
- Tai TS*, Chen YH*, Yao CL*, Lin JH, Yang YS, Kuo SC, Hsu SC#. Cellular Sentinels: Empowering Survival and Immune Defense in Hematopoietic Stem Cell Transplantation through Mesenchymal Stem Cells and T Lymphocytes. BMC Medicine, 2025, accepted. (SCI)
- Tai TS*, Hsu DW*, Yang YS*, Tsai CY, Shi JW, Wu CH, Hsu SC#. IL-10RA governor the expression of IDO in the instruction of lymphocyte immunity. British Journal of Cancer, 2025:132,126-136. (SCI)
- Chen YH, Wang Y, Liao CH, Hsu SC#. The potential of adoptive transfer of $\gamma\delta 2$ T cells to enhance blinatumomab's antitumor activity against B-cell malignancy. Scientific Reports, 2021:11, 12398-12412.

Revolutionizing Global Snakebite Crisis with NETosis Blockade Therapy

許素菁
Shu-Ching Hsu

Extensive tissue damage induced by snakebite envenoming (SBE) remains a critical global health issue despite antivenom therapy. Our investigation into individuals bitten by *Naja atra* revealed persistent NETosis as the primary of snake venom-induced tissue destruction. The adenosine-releasing pathway involved in *N. atra* bite envenoming activates adenosine receptor 1 (AR1), thereby exacerbating pathogenic NETosis. While adenosine mobilizes neutrophils to enhance immune defense at the wound site, NETosis simultaneously contributes to ongoing local tissue destruction. Furthermore, we discovered that the combined pharmacological inhibition of peptidyl arginine deiminase 4 (PAD4) and AR1 effectively reduced NETosis and alleviated venom-induced tissue damage. Our study uncovered a promising strategy for managing antivenom-unresponsive tissue damage in various SBEs, aligning with the objectives of the WHO Neglected Tropical Disease (NTD) Programme.



第40屆生物醫學聯合學術年會

Speaker



陳姿羽

Zi-Yu Chen

Current Position

- Assistant Professor, Department of Physiology, School of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan

Education / Training

- 2022, PhD, 國立成功大學環境醫學研究所, 中華民國
- 2016, MS, 國立成功大學生理學研究所, 中華民國
- 2013, 國立嘉義大學動物科學學系、生化科技學系, 中華民國

Professional and Research

- 2025-Present, 助理教授, 高雄醫學大學醫學系生理學科
- 2022-2025, 博士後研究員, 國立成功大學環境醫學研究所

Awards & Honors

- 2022 Grand Review 博士生暨博士後研究學術競賽博士生傑出獎
- 2021 醫學院研究日博士生論文競賽 - 優選論文
- 2019 台灣毒物學學會第一屆墾丁冬令營口說論文競賽第一名

Selected Publications

- Yen-Ling Lee†, Zi-Yu Chen†, Tzu-Ning Li, Jian-Feng Hsueh, Ying-Jan Wang* (2023, Nov). A novel integrated testing strategy (ITS) for evaluating acute fish toxicity with new approach methodologies (NAMs). *Environment International*, 193:109112. (SCI), JCR=2024, I.F.= 9.7, Ranking= 25/374, (6.7%). (Co-first author)
- Zi-Yu Chen†, Yi-Chun Yang, Bour-Jr Wang†, Fong-Yu Cheng, Yen-Ling Lee, Yu-Hsuan Lee*, Ying-Jan Wang* (2022, Sep). Comparing different surface modifications of zinc oxide nanoparticles in the developmental toxicity of zebrafish embryos and larvae. *Ecotoxicology and Environmental Safety*, 243:113967. (SCI), JCR=2024, I.F.= 6.1, Ranking = 10/106, (9.4%). (Co-first author)
- Zi-Yu Chen†, Yu-Chen Su, Fong-Yu Cheng, Shian-Jang Yan*, Ying-Jan Wang* (2021, Oct). Lifetime bioaccumulation of silver nanoparticles accelerates functional aging by inactivating antioxidant pathways, an effect reversed by pterostilbene. *Environmental Science: Nano*, 8:3774-3791. (SCI), JCR=2024, I.F.= 5.1, Ranking = 90/374, (24.06%). (First author)

A High-Throughput, High-Content Zebrafish Embryo Model for Nanotoxicity Assessment Using Autophagy as an Adverse Outcome Pathway Biomarker

陳姿羽
Zi-Yu Chen

As nanotechnology advances, the increasing use of nanoparticles (NPs) raises concerns about their environmental and biological risks. Traditional in vivo and in vitro toxicity assessments are limited by high costs, time demands, and difficulty in linking molecular mechanisms to adverse outcomes within the Adverse Outcome Pathway (AOP) framework. Anchored in the AOP, high-throughput screening/high-content screening (HTS/HCS) approaches offer a rapid and mechanistic strategy for large-scale toxicity screening, enhancing predictive value for regulatory applications. Reactive oxygen species (ROS) accumulation and autophagy dysregulation are common NP-induced mechanisms and potential molecular key events (MKEs) within the AOP framework. This study establishes a zebrafish embryo HTS/HCS model using ROS and autophagy as AOP-linked biomarkers for acute nanotoxicity evaluation. To standardize exposure conditions, we optimized testing parameters and identified deionized water as a stable medium that prevents NP physicochemical alteration. Using zebrafish liver epithelial cell lines and zebrafish embryos, we validated ROS accumulation ($r = 0.84$) and autophagy disruption ($r = 0.99$) as reliable MKEs. Furthermore, both responses were shown to mechanistically mediate NP-induced lethality. This study offers a robust and scalable platform for mechanism-driven NP safety assessment in environmental and regulatory toxicology. Future work will integrate intermediate cellular-level outcomes to support cross-validation of molecular and cellular key events within the AOP framework. AI-based integrative analysis will strengthen mechanistic interpretation and enable predictive modeling for nanoparticle hazard and risk assessment.



第40屆生物醫學聯合學術年會



Speaker

鄭獻仁

Hsien-Jen Cheng

Current Position

- 財團法人國家實驗研究院國家生物模式中心 副研究員
- 臺灣動物實驗替代方法驗證實驗室 專案計畫經理
- 國立中央大學生命科學系 兼任助理教授

Education / Training

- 2008, PhD, 國立成功大學基礎醫學研究所 博士, 台灣
- 2000, MS, 國立成功大學生命科學研究所, 台灣

Professional and Research

- 2024-Present, 副研究員, 國家實驗研究院 國家生物模式中心, 台灣
- 2019-Present, 兼任助理教授, 國立中央大學 生命科學系, 台灣
- 2017-2024, 博士後研究員, 國家衛生研究院 國家環境醫學研究所, 台灣

Awards & Honors

- 2015 第 12 屆國家新創獎「於腫瘤細胞活化的鉑金藥物」-研究團隊成員
- 2016 Nano Tech 第 15 屆國際奈米科技展覽暨研討會-台灣館代表參展成員

Selected Publications

- Cheng, H.J., Hsu, W.L., Lin, P., Chen, Y.C., Lin, T.H., Fang, S.S., Tsai, M.H., Lin, Y.J., Wang, S.P., Chen, H., Jan, M.S., Luo, Y.H. (2024) Involvement of Autophagy and Gut Dysbiosis in Ambient Particulate Matter-induced Colonic Inflammation. *Ecotoxicol Environ Saf*, 286:117171.
- Luo, Y.H., Cheng, H.J., Tsai, F.Y., Tsou, T.C., Lin, S.Y., Lin, P. (2020) Primary amine modified gold nanodots regulate macrophage function and antioxidant response: potential therapeutics targeting of Nrf2. *Int J Nanomedicine*, 15:8411-8426.
- Liang, P.I., Wang, C.C., Cheng, H.J., Wang, S.S., Lin, Y.C., Lin, P.P., and Tung, C.W. (2020) Curation of cancer hallmark-based genes and pathways for in silico characterization of chemical carcinogenesis. *Database (Oxford)*, 2020:baaa045.
- Tung, C.W., Cheng, H.J., Wang, C.C., Wang, S.S. and Lin, P.P. (2020) Leveraging complementary computational models for prioritizing chemicals of developmental and reproductive toxicity concern: an example of food contact materials. *Arch Toxicol*, 94:485-494.

新穎替代測試方法(NAMs)的驗證流程與法規接受

鄭獻仁

Hsien-Jen Cheng

新穎替代測試方法(NAMs)的驗證與法規接受，是推動化學品、化妝品、農藥、食品及藥品等安全評估轉型的關鍵機制。目的是提供具生物學相關性、提升評估效能與準確性的評估方法與策略，實踐兼顧科學與倫理導向的 3Rs 原則，逐步減少法規測試對動物實驗的依賴。

危害評估測試方法的驗證流程主要依據 OECD GD 34 技術文件規範分為幾個主要階段。研發階段，產業或學研單位依據科學機制與生物相關性開發符合特定評估終點的測試方法，透過試驗優化建立標準流程與基本再現性。完成實驗室內初步驗證後，將「方法提交」給驗證機構(如 ICATM 成員)進行初步評估，是否進入正式驗證取決於法規需求、科學性與 3R 貢獻；接著展開實驗室間「驗證研究」，以盲測方式累積參考物質數據，系統性檢驗方法的轉移性、可靠性與相關性，並建立性能標準；此後進行「同行審查」，由獨立專家檢視驗證報告與相關資料，評估優缺點、限制與適用範圍，並公開科學建議；再由驗證機構召集利益相關方依驗證審查結果提出「調和建議」；最後「法規接受」階段，由各國/區域法規機關(如 EPA、FDA、ECHA)及國際組織(如 OECD、ICCR、ICH)評估決定是否採納，正式轉化為強制規定或建議使用的標準方法，支持相關物質登錄與管理等法規應用。

隨著國際趨勢轉變與 NAMs 快速發展，OECD 正著手於修訂 GD 34，將更強調使用情境(COU)的設定、整合性評估策略(IATA 與 DA)的靈活應用，加速法規接受與實行。跨部會的臺灣動物實驗替代科技計畫(Taiwan 3R Initiative, T3R)積極推動 NAMs 開發與建立第三方驗證系統(TaiCVAM)，協助國內法規管理單位推行與應用 NAMs，接軌國際標準。



第40屆生物醫學聯合學術年會



Speaker

邱惠雯

Hui-Wen Chiu

Current Position

- 臺北醫學大學臨床醫學研究所 教授
- 臺北醫學大學部立雙和醫院研究部 院聘研究員

Education / Training

- 2011, PhD, 國立成功大學環境醫學研究所, 中華民國
- 2007, MS, 國立成功大學環境醫學研究所, 中華民國
- 2005, BS, 中國醫藥大學營養學系, 中華民國

Professional and Research

- 2018-2021, 副教授, 臺北醫學大學臨床醫學研究所, 中華民國
- 2015-2018, 助理教授, 臺北醫學大學臨床醫學研究所, 中華民國

Awards & Honors

- 2025 入選「全球前 2% 科學家名單」 World's Top 2% Scientists
- 2025 臺北醫學大學教學優良教師
- 2016, 2017, 2019, 2020, 臺北醫學大學部立雙和醫院研究論文暨海報比賽優勝

Selected Publications

- Y-H Lee, C-M Zheng, Y-J Wang, Y-L Wang and H-W Chiu*. Effects of microplastics and nanoplastics on the kidney and cardiovascular system. Nature Reviews Nephrology 21, 585–596 (2025) (Corresponding author) 「Cover」
- H-W Chiu, C-W Chu, C-C Huang, Z-C Chia, Y-L Wang, Y-H Lee*. Polystyrene microplastics induce hepatic lipid metabolism and energy disorder by upregulating the NR4A1-AMPK signaling pathway. Environmental Pollution 369, 125850 (2025) (First author)
- Y-L Wang#, Y-H Lee, Y-H Hsu, I-J Chiu, C C-Y Huang, C-C Huang, Z-C Chia, C-P Lee, Y-F Lin# and H-W Chiu*. The kidney-related effects of polystyrene microplastics on human kidney proximal tubular epithelial cells HK-2 and male C57BL/6 mice. Environmental Health Perspectives 129, 57003 (2021) (Corresponding author)
- Y-H Hsu#, H-C Chuang, Y-H Lee, Y-F Lin, Y-J Chen, T-C Hsiao, M-Y Wu# and H-W Chiu*. Traffic-related particulate matter exposure induces nephrotoxicity in vitro and in vivo. Free Radical Biology & Medicine 135, 235-244 (2019) (Corresponding author)

Kidneys at Risk: The Hidden Impact of Particulate Plastics

邱惠雯

Hui-Wen Chiu

Particulate plastics—including microplastics (MPs, <5 mm) and nanoplastics (NPs, <1 μm)—originate either from intentionally manufactured small plastic materials or from the breakdown of larger plastic products. Because these particles are now widespread across water, air, soil, and the food chain, they have become a major environmental and public health issue. Particulate plastics have been detected in multiple human organs and fluids, including the placenta, lungs, gastrointestinal tract, liver, bloodstream, urine, and kidneys, confirming that people are exposed through ingestion, inhalation, and skin contact. Both experimental models and clinical observations indicate that the buildup of particulate plastics in bodily tissues can disrupt metabolic processes, induce oxidative stress and inflammation, and impair organ function, all of which may contribute to disease development and adverse health outcomes. Research focused specifically on how particulate plastics interact with the kidneys is still limited, but concerns over their potential nephrotoxicity are growing. Individuals with chronic kidney disease (CKD) may be particularly vulnerable, as reduced renal clearance could lead to greater retention of particulate plastics and potentially accelerate disease progression. Our laboratory has recently begun investigating these kidney-related effects. We further observed that, in addition to directly affecting renal cells, particulate plastics promoted the release of extracellular vesicles (EVs) from these cells, which subsequently induced changes in neighboring cells, including elevated oxidative stress and increased expression of proteins related to fibrosis. Improving our understanding of the health impacts of particulate plastics—especially their influence on renal physiology—will be essential for assessing human health risks.



第40屆生物醫學聯合學術年會



Speaker

顏宗海

Tzung-Hai Yen

Current Position

- 林口長庚紀念醫院臨床毒物中心 主任
- 林口長庚紀念醫院腎臟科系 副主任
- 長庚大學醫學院 教授

Education / Training

- 1993, BS, 國立台灣大學醫學系, 台灣
- 2006, PhD, 倫敦大學瑪麗皇后學院, 英國

Professional and Research

- 2016-2017, 副主任, 林口長庚紀念醫院醫學研究發展部, 台灣
- 2003-2006, 訪問學者, London Research Institute, 英國
- 1995-2000, 住院醫師, 林口長庚紀念醫院, 台灣

Awards & Honors

- 2025 第四屆亞太永續行動獎 SDG04 銀獎
- 2024 教育部社會 教育貢獻獎
- 2023 環境保護署毒物及化學物質局 第三屆綠色化學應用及創新獎

Selected Publications

- Chiang CC, Yeh H, Shiu RF, Chin WC, Yen TH*. Impact of Microplastics and Nanoplastics on Liver Health: Current Understanding and Future Research Directions. World J Gastroenterol 2024;30:1011-1017
- Chiu LC, Lee CS, Hsu PC, Li HH, Chan TM, Hsiao CC, Kuo SC, Ko HW, Lin SM, Wang CH, Lin HC, Chu PH, Yen TH*. Urinary cadmium concentration is associated with the severity and clinical outcomes of COVID-19: a bicenter observational cohort study. Environ Health 2024;23:29
- Yen YK*, Yang CM, Kao CT, Yen TH*, Shanmugam R, Chen YL, Lin HE. A ZnO-nanorod/PEDOT: PSS nanocomposite functionalized bridge-like membrane type nanomechanical sensing device for ultrasensitive blood lead detection. Anal Chim Acta 2024;1331:343317

Analysis of Kidney Toxicity of Microplastics and Nanoplastics Using Experimental and Clinical Observational Study

顏宗海
Tzung-Hai Yen

The issue of plastic pollutants has become a growing concern. Plastic pollution endangers oceanic mammals, fish, and seabirds and accumulates in large mid-ocean gyres. It breaks down into microplastics (particle size < 5 mm) and nanoplastics (particle size < 1 μ m) that can move in the bodies of aquatic creatures, incorporating species used by humans. Both microplastics and nanoplastics can cause DNA damage, cytotoxicity, and oxidative stress in various organisms. The primary known impacts of microplastic/nanoplastic are observed in the liver and respiratory system, leading to hepatic and lung toxicity. Although research on the effects of microplastics and nanoplastics on kidney is still in its early stages, there are potential concerns. This speech presented our laboratory works on nephrotoxicity of microplastics and nanoplastics using experimental and clinical observational study.



第40屆生物醫學聯合學術年會

Speaker



洪偉倫

Wei-Lun Hung

Current Position

- 臺北醫學大學食品安全學系副教授

Education / Training

- 2012, PhD, 國立臺灣大學食品科技研究所, 臺灣
- 2005, BS, 輔仁大學食品科學系, 臺灣

Professional and Research

- 2018-2023, 助理教授, 臺北醫學大學
- 2016-2018, 博士後研究員, 美國佛羅里達大學食品科學與人類營養學系
- 2015-2016, 博士後研究員, 美國羅格斯大學食品科學系

Awards & Honors

- 2024 Sigma Xi 科學研究學會正式會員
- 2022 Journal of Agricultural and Food Chemistry 期刊傑出審查委員獎
- 2020 Journal of Food and Drug Analysis 前十大高引用論文

Selected Publications

- Huang SF, Chang YT, Hsia SM, Liao KW, Tsai CY, Huang SY, Ho CT, Hung WL. Distinct effects of methylglyoxal-derived hydroimidazolone 1, N ϵ -carboxyethyllysine, and an advanced glycation end product-rich diet on lipid metabolism, gut microbiota, and secondary bile acids in high-fat diet-induced obese mice. Food Chemistry 2025, 492, 145634.
- Tsai CY, Liao, KW, Hsia, SM, Tsai YC, Lin KJ, Ho CT, Hung WL. Key factors influencing the formation of α -dicarbonyls and dietary advanced glycation end products in bread and commercial bakery products: Impacts of sugar, lipid and gluten protein. Food Chemistry: X 2025, 102286.
- Hsiao YW, Hsia SM, Pan MH, Ho CT, Hung WL. Berry anthocyanins prevent α -dicarbonyls and advanced glycation end product formation in phosphate-buffered saline-based model systems, cookie and ground pork. Journal of Food Science 2024, 89, 3745-3758.
- Lin, YY, Huang SF, Liao, KW, Ho, CT, Hung, WL*. Quantitation of α -dicarbonyls, lysine- and arginine-derived advanced glycation end products in commercial canned meat and seafood products. Journal of Agricultural and Food Chemistry 2023, 71, 6727-6737.

Occurrence and Potential Health Risks of Dietary Advanced Glycation End Products

洪偉倫

Wei-Lun Hung

The Maillard reaction (MR) is a nonenzymatic browning process that improves the flavor and appearance of thermally processed foods but also generates potentially harmful products, such as advanced glycation end products (AGEs). Excessive dietary AGE intake has been linked to oxidative stress, inflammation, and chronic disease risks. In our recent work, we identified multiple lysine- and arginine-derived AGEs, with N ϵ -(carboxymethyl)lysine (CML), N ϵ -(carboxyethyl)lysine (CEL), and methylglyoxal-hydroimidazolone 1 (MG-H1) as predominant species. We further show that both the presence and type of condiments markedly modulate AGE formation, and correlation analysis indicates that AGE levels are positively associated with product nutrient composition. Using a high-fat diet-induced mouse model, we demonstrate that dietary AGE supplementation promotes hepatic accumulation of arginine-derived AGEs. Untargeted and targeted metabolomics/lipidomics revealed prominent alterations in hepatic phospholipid, amino acid, and fatty acid profiles. 16S rRNA sequencing showed a significant shift in gut microbiota composition accompanied by changes in microbial-derived metabolites. Collectively, our findings integrate food matrix determinants and in vivo multi-omics evidence to show that dietary AGEs modulate gut microbiota and host metabolic pathways, providing mechanistic insight into how AGE-rich foods may contribute to obesity-related metabolic dysfunction.



第40屆生物醫學聯合學術年會

Speaker



邱依琇

Yi-Shiou Chiou

Current Position

- 高雄醫學大學藥學院毒理學碩士學位學程 助理教授

Education / Training

- 2016, PhD, 國立成功大學, 中華民國
- 2009, MS, 國立高雄海洋科技大學, 中華民國
- 2006, BS, 國立高雄海洋科技大學, 中華民國

Professional and Research

- 2018-2021, 助理研究員, 清華-伯克利深圳學院精準醫學與公共健康研究中心/深圳灣實驗室醫藥健康技術與工程研究所, 中國
- 2017-2018, 博士後研究員, 國立台灣大學食品科技研究所, 中華民國
- 2013-2013, Visiting scholar, Rutgers University- Department of Food Science, School of Environmental and Biological Sciences, 美國

Awards & Honors

- 2025 國家科學及技術委員會補助大專校院研究獎勵
- 2024 高雄醫學大學優秀論文獎
- 2023 高雄醫學大學特殊優秀教研人才

Selected Publications

- Innovative analytical techniques for identifying metabolites of the UV filter homosalate through UPLC-MS: Environmental and health implications
- Advanced metabolomics-based approach to reveal new insights into Bisphenol A metabolism and its presence in human excreta and water bodies in Taiwan
- Vertical pathway inhibition of receptor tyrosine kinases and BAD with synergistic efficacy in triple negative breast cancer
- Selective Formation of Osteogenic and Vasculogenic Tissues for Cartilage Regeneration
- Piceatannol Prevents Colon Cancer Progression via Dual-Targeting to M2-Polarized Tumor Associated Macrophages and the TGF- β 1 Positive Feedback Signaling Pathway

Lipid Reprogramming Reveals the Molecular Blueprint for Alcohol/BPA Co-driven Hepatocarcinogenesis

邱依琇
Yi-Shiou Chiou

Bisphenol A (BPA) and alcohol (ALC) are recognized hepatotoxicants to which humans are chronically exposed through environmental sources, dietary habits, and preferences for alcoholic beverages. However, there is currently a lack of conclusive evidence concerning the synergistic hepatotoxic effects associated with co-exposure. Given the pervasive environmental presence of BPA, the synergistic hepatic toxicity associated with habitual alcohol consumption reveals a critical gap in current single-compound risk assessment frameworks. This study established acute and chronic cellular co-exposure models and investigated ALC-potentiated mechanisms underlying the hepatic lipotoxicity and hepatocarcinogenesis of BPA. Here, our study provides the first comprehensive biomarkers and an exposure threshold for synergistic hepatic lipotoxicity, with direct implications for food safety and public health policy. From a public health standpoint, these findings underscore the urgent need to integrate chemical-behavioral co-exposure pathways into environmental health policies to better prevent liver injury and mitigate carcinogenic risk in daily life.



第40屆生物醫學聯合學術年會



Speaker

洪鈺雯

Yu-Wen Hung

Current Position

- 國立中興大學生命科學系助理教授

Education / Training

- 2013, PhD, 國立陽明大學生理學研究所, 台灣
- 2004, BS, 國立中興大學生命科學系, 台灣

Professional and Research

- 2017-2023, 博士後研究員, 國家衛生研究院細胞及系統醫學研究所, 台灣
- 2014-2017, 博士後研究員, 國立陽明大學腦科學研究所, 台灣
- 2013-2014, 博士後研究員, 國立陽明大學腦科學中心, 台灣

Awards & Honors

- 2019 國家衛生研究院 優秀論文口頭報告 佳作獎
- 2015 科技部 103 年度博士後研究人員學術著作獎
- 2012 Tadokoro 1st Prize for Best Oral Presentation, the 9th Asian & Oceanian Epilepsy Congress

Selected Publications

- Chien-Fu Yeh, Ming-Ying Lan, Ching-Chia Lin, Yu-Wen Hung, Wei-Hao Huang, Yi-Ling Lai. 2025. Dual blockade of IL-4 and IL-13 with dupilumab ameliorates sensorineural olfactory dysfunction after chronic rhinosinusitis. *Rhinology* 63-1: 32-42.
- Chien-Fu Yeh, Tung-Yueh Chuang, Ming-Ying Lan, Yung-Yang Lin, Wei-Hao Huang, *Yu-Wen Hung. 2024. Soluble epoxide hydrolase inhibitor ameliorates olfactory dysfunction, modulates microglia polarization, and attenuates neuroinflammation after ischemic brain injury. *Journal of Neuroimmune Pharmacology* 19 (1):54. (*corresponding author)
- #Wei-Hao Huang, #Yu-Wen Hung, #Wei Hung, Ming-Ying Lan, Chien-Fu Yeh. 2024. Murine model of eosinophilic chronic rhinosinusitis with nasal polyposis inducing neuroinflammation and olfactory dysfunction. *Journal of Allergy and Clinical Immunology* 154 (2):325-339.e3. (#equal contribution)
- Yu-Wen Hung, Guan-Ling Lu, Hwei-Hsien Chen, Hsiu-Hui Tung, Sheau-Ling Lee. 2023 Sep. Gliptins normalize posttraumatic hippocampal neurogenesis and restore cognitive function after controlled cortical impact on sensorimotor cortex. *Biomedicine & Pharmacotherapy* 165: 115270.

The Dialogue between Neuroinflammation and Adult Neurogenesis: Alterations and Therapeutic Potentials in Neurological Disorders

洪鈺雯

Yu-Wen Hung

Adult hippocampal neurogenesis within the dentate gyrus (DG) is essential for learning, memory, and circuit adaptability. However, this process is highly vulnerable to brain insults such as status epilepticus and traumatic brain injury. Evidence from our work and others demonstrates that injury-induced neuroinflammation profoundly reshapes the neurogenic niche via glial activation, chemokine signaling, and local structural disruption, thereby altering the trajectory of adult-born neurons. These perturbations result in aberrant migration, ectopic granule cell formation, and impaired synaptic integration, ultimately contributing to hippocampal hyperexcitability, epileptogenesis, and cognitive dysfunction. In status epilepticus, elevated MCP-1 and the emergence of CCR2-expressing neuroblasts drive pathological migration and ectopic incorporation into DG circuits. In traumatic brain injury, excessive inflammation and astrocyte reactivation disrupt neurogenesis, whereas incretin-based therapies normalize post-injury neurogenic dynamics and preserve DG electrophysiology. Together, these findings highlight the mechanistic interplay between neuroinflammation and injury-altered neurogenesis, and identify the neurogenic niche as a promising therapeutic target for preventing long-term neurological sequelae after brain injury.



第40屆生物醫學聯合學術年會



Speaker

林育龍

Yu-Lung Lin

Current Position

- 臺北醫學大學 國際轉譯科學碩士學位學程 助理教授

Education / Training

- 2012, PhD, 國防醫學院/生命科學研究所, 台灣
- 2006, MS, 國防醫學院/生理所, 台灣
- 2004, BS, 國立嘉義大學/分子與生物化學系, 台灣

Professional and Research

- 2014-2022, 博士後研究員, 明尼蘇達大學, 美國

Awards & Honors

- 2024 優秀年輕學者研究計畫
- 2014 補助赴國外從事博士後研究(甲類)

Selected Publications

- Lin, Y.L., Liu, P.Y., Tsai, Y.L. et al. RNF128 regulates the adaptive metabolic response to fasting by modulating PPAR α function. *Cell Death Differ* (2025).
- Lin, Y.L., Nhieu, J., Lerdall, T., Milbauer, L., Wei, C.W., Lee, D.J., Oh, S.H., Thayer, S., and Wei, L.N. (2023). A novel 3D bilayer hydrogel tri-culture system for studying functional motor units. *Cell Biosci* 13, 168. 10.1186/s13578-023-01115-2.
- Liu, P.Y.*, Chen, C.Y.*, Lin, Y.L.*, Lin, C.M., Tsai, W.C., Tsai, Y.L., Lin, G.J., Chen, Y.G., Wang, S.Y., Sun, R.N., et al. (2023). RNF128 regulates neutrophil infiltration and myeloperoxidase functions to prevent acute lung injury. *Cell Death Dis* 14, 369. 10.1038/s41419-023-05890-1.
- Lin, Y.L., Nhieu, J., Liu, P.Y., Le, G., Lee, D.J., Wei, C.W., Lin, Y.W., Oh, S.H., Lowe, D., and Wei, L.N. (2022). CRABP1-CaMKII-Agrn regulates the maintenance of neuromuscular junction in spinal motor neuron. *Cell Death Differ*. 10.1038/s41418-022-00959-4.

Investigating the Acute Effects of Paclitaxel on the Neuromuscular System

林育龍
Yu-Lung Lin

Paclitaxel is among the most widely used chemotherapeutic agents, yet its neuromuscular consequences remain largely unexplored beyond its well-known induction of peripheral neuropathy. Here, we show that a single dose of paclitaxel is sufficient to induce rapid neuromuscular dysfunction. Mice exhibited impaired motor performance in the hanging test within 24 hours, which further deteriorated by 72 hours. Immunohistochemical analyses revealed acute structural disruption of neuromuscular junctions (NMJs), indicating early synaptic vulnerability. To identify the molecular programs underlying these changes, we performed transcriptome profiling of the tibialis anterior muscle and spinal cord. Pathway analyses highlighted perturbed cell–cell communication networks, including key signaling molecules implicated in motor neuron–muscle interactions. These alterations suggest coordinated mechanisms of NMJ degeneration, accompanied by early activation of regenerative pathways. Together, our findings uncover an unrecognized, rapid neuromuscular toxicity of paclitaxel and provide a molecular framework for understanding NMJ injury and repair following chemotherapy exposure.



第40屆生物醫學聯合學術年會



Speaker

黃君邦

Jiun-Pang Huang

Current Position

- 中山醫學大學醫學系生理學科/助理教授

Education / Training

- 2013, PhD, 長庚大學, 台灣
- 2006, MS, 長庚大學, 台灣
- 2002, BS, 中山醫學大學, 台灣

Professional and Research

- 2016-2023, 博士後研究員, 長庚大學健康老化研究中心, 台灣
- 2014-2016, 博士後研究員, 法語天主教魯汶大學臨床實驗中心, 比利時
- 2013-2014, 博士後研究員, 長庚大學生物醫學系, 台灣

Awards & Honors

- 2019 9th FAOPS Congress 2019. Kobe, Japan. Young Scientist Travel Award and Masao Ito Memorial Award
- 2019 Post-Doctoral & Early Career Scholars Workshop. Healthy Aging Research Center, Chang Gung University. Taoyuan Taiwan. Outstanding Presentation Award.
- 2022 CCL5-programmed MDSCs counteract HFD-associated cardiac dysfunction 2022 IUPS. Beijing, China. Virtual Travel Award.

Selected Publications

- Huang JP, Chen KH, Chang CY, Hsieh PS, Kuo CY, Hung LM (2025, Nov). C-C Chemokine Receptor 5 Deficiency Impairs Cardiac and Metabolic Homeostasis, Driving Heart Failure with Preserved Ejection Fraction-like Pathophysiology. Journal of Physiological Investigation, 68(6):p 358-371. 本人為第一作者.
- Huang JP, Chen KH, Hsieh PS, Kuo CY, Yu CL, Hung LM (2025, Sep). Genetic deficiency of CCL5 exhibits the phenotypes of HFpEF and aggravates apoptotic cardiomyopathy in HFD-induced diabetic mice. J Mol Med (Berl), doi: 10.1007/s00109-025-02579-0. 本人為第一作者.
- Huang JP, Chang CC, Kuo CY, Huang KJ, Sokal EM, Chen KH, Hung LM (2022, Jul). Exosomal microRNAs miR-30d-5p and miR-126a-5p Are Associated with Heart Failure with Preserved Ejection Fraction in STZ-Induced Type 1 Diabetic Rats. Int J Mol Sci, 23(14):7514. 本人為第一作者.

Integrated Molecular Drivers of Obesity-Induced Cardiomyopathy: Chemokine, Lipid-Inflammatory, and ESCRT-Exosome Pathways

黃君邦

Jiun-Pang Huang

Obesity and diabetes profoundly reshape the cardiac microenvironment, driving the development of heart failure, impaired metabolic homeostasis, and progressive cardiomyopathic remodeling. Our integrated work indicates that chemokine signaling dysregulation, lipid-inflammatory stress pathways and endosomal sorting complex required for transport (ESCRT)-exosome pathway are convergent mechanisms underpinning obesity-induced cardiac diseases and identifies several promising therapeutic targets.

We demonstrate that genetic deficiency of the chemokine CCL5 induces heart failure with preserved ejection fraction (HFpEF)-like phenotypes under metabolic stress, characterized by impaired diastolic relaxation, enhanced cardiomyocyte apoptosis and indicated vulnerability to high-fat diet induced diabetic injury. Parallel investigations demonstrate that disruption of CCL5/CCR5 signaling compromises systemic metabolic equilibrium, leading to maladaptive cardiac remodeling and further promoting HFpEF pathophysiology. Conversely, excessive CCL5/CCR5 activation within brown adipose tissue suppresses adaptive thermogenesis, exacerbates insulin resistance, and indirectly intensifies cardiac metabolic burden. Together, these findings establish CCL5/CCR5 as a key regulator linking systemic metabolic dysfunction to cardiac structural and functional decline. Additionally, we show that pharmacological inhibition of cytosolic phospholipase A2 (cPLA2) attenuates dilated cardiomyopathy-like remodeling in cholesterol-treated H9C2 cardiomyocytes and MUNO rats. cPLA2 blockade mitigates lipid-driven oxidative stress, preserves mitochondrial function, and suppresses pro-apoptotic signaling, revealing a clinically translatable therapeutic strategy that targets upstream metabolic-inflammatory crosstalk.

Beyond chemokine signaling and cPLA2-targeting intervention, we also examine the mechanistic importance of exosomal microRNAs in driving cardiometabolic injury. We identified exosomal miR-30d-5p and miR-126a-5p as key molecular signatures associated with HFpEF development in streptozotocin-induced type 1 diabetic rats. These miRNAs converge on inflammatory, endothelial, and apoptotic pathways, highlighting their value as both biomarkers and functional mediators of diabetic cardiomyopathy progression. Additionally, we uncover a critical regulatory role for ESCRT-associated proteins Protein-X1 and Protein-X6 in cardiac hypertrophy and exosome homeostasis. Overexpression of either protein induces pathological hypertrophy, whereas genetic silencing attenuates angiotensin II-induced remodeling and restores aberrant exosome biogenesis, including normalization of exosomal microRNA profiles. These findings demonstrate ESCRT-associated proteins Protein-X1 and Protein-X6 as upstream determinants coupling exosome dysfunction to hypertrophic signaling.

Together, our studies delineate a mechanistic framework connecting chemokine imbalance, thermogenic impairment, lipid-inflammatory stress and ESCRT- exosome dysregulation, and this may act synergistically to drive obesity-induced cardiac dysfunction. Our work supports multiple druggable nodes presenting translational potential for the treatment and prevention of obesity- and diabetes-associated cardiomyopathy.



第40屆生物醫學聯合學術年會



Speaker

郭承翔

Cheng-Hsiang Kuo

Current Position

- 國立成功大學醫學院生理學科暨研究所 助理教授

Education / Training

- 2012, PhD, 國立成功大學, 中華民國

Professional and Research

- 2024-2025 助理研究學者, 國立成功大學生物化學暨分子生物學研究所, 中華民國
- 2020-2023 助理研究員, 國立成功大學國際傷口修復與再生中心, 中華民國
- 2013-2014 博士後研究學者, 芝加哥大學醫學系, 美國

Awards & Honors

- 2024 國立成功大學 Grand Review 博士生暨博士後研究學術競賽博士後傑出獎
- 2022 成杏優秀論文獎, 財團法人成杏醫學文教基金會

Selected Publications

- Hsiao-Ning Huang #, Lun-Wei Lee #, Cheng-Hsiang Kuo, Tzyy Yue Wong, Wen-Tai Chiu, Ming-Jer Tang*. 2025 Nov. Regulation of the mechanoresponsive Neat1 and PSPC1 by substrate stiffness in TGF- β 1-induced renal progenitor cell fate. J Biomed Sci. 32(1):99.
- Thi Kim Ngan Ngo, Hua-Lin Wu, Cheng-Hsiang Kuo*, Ting-Yuan Tu*. 2025 Jan. Studying the role of thrombomodulin-plasminogen interaction in spatial and interfacial invasion of melanoma metastatic progression. Int. J. Biol. Macromol. 284(Pt 1):138053.
- Cheng-Hsiang Kuo*, Gang-Hui Lee, Hua-Lin Wu, Jyun-Yuan Huang, Ming-Jer Tang*. 2024 Feb. Breaking the symmetry of cell contractility drives tubulogenesis via CXCL1 polarization. Proc. Natl. Acad. Sci. U. S. A., 121(9):e2315894121.
- Cheng-Hsiang Kuo*, Ya-Fang Wu, Bi-Ing Chang, Chao-Kai Hsu, Chao-Han Lai, Hua-Lin Wu*. 2022 Nov. Interference in melanoma CD248 function reduces vascular mimicry and metastasis. J Biomed Sci. 29(1):98.

Cell Proprioception in Tubulogenesis

郭承翔

Cheng-Hsiang Kuo

Cell proprioception refers to the intrinsic ability of cells to sense and adapt to their mechanical environment, particularly the stiffness of the surrounding extracellular matrix (ECM). This process relies on mechanosensitive proteins, including integrins, cadherins, and ion channels, that detect alterations in the cell membrane, cytoskeleton, and ECM. Mechanical cues are subsequently transduced into biochemical signals through pathways such as the MAPK pathway, ultimately regulating gene expression, migration, and differentiation. In this presentation, an in vitro model of tubulogenesis using renal proximal tubular epithelial cells cultured on collagen gels will be presented. By employing collagen derived from different sources, we identified a defined range of matrix stiffness that supports tubulogenesis and highlighted key molecules, including CD29 and CXCL1, as critical mediators of tube formation. Furthermore, the spatial organization and mechanical properties of collagen fibers associated with tubulogenesis were characterized using a coaxial culture system in combination with confocal microscopy and atomic force microscopy. Overall, this model illustrates how cells interpret biomechanical cues to coordinate cell-ECM and cell-cell interactions during morphological change. While biomechanics provides the conceptual framework for this system, the integration of biochemical signals and the underlying molecular mechanisms remains to be fully elucidated.



第40屆生物醫學聯合學術年會



Speaker

王竹安

Chu-An Wang

Current Position

- 國立成功大學基礎醫學研究所 助理教授

Education / Training

- PhD, Molecular Biology University of Colorado Denver, Anschutz Medical Campus
- MS, 國立成功大學分子醫學研究所
- BS, 中山醫學大學生物醫學科學學系

Professional and Research

- 博士後, Department of Pharmacology, University of Colorado Denver, Anschutz Medical Campus
- 博士後, 國立成功大學基礎醫學研究所

Selected Publications

- Intercellular TIMP-1-CD63 signaling directs the evolution of immune escape and metastasis in KRAS mutated pancreatic cancer cells. *Mol Cancer* 24,25 (2025)
- Melanophilin-induced primary cilia promote pancreatic cancer metastasis. *Cell Death & Disease*. 2025 Jan 16;16(1):22.
- Increased ratio of red cell distribution width to lymphocyte percentage as a novel preoperative marker for unfavorable survival outcomes in upper tract urothelial carcinoma. *Biomedical Reports*. 2024 Dec 10;22(2):32.
- Preoperative systemic inflammation response index enhances the prognostic value of tumor multifocality in upper tract urothelial carcinoma. *Oncol Lett*. 2024 Jul 15;28(3):436.
- Suppression of Extracellular Vesicle VEGF-C-mediated Lymphangiogenesis and Pancreatic Cancer Early Dissemination By a Selective HDAC1/2 Inhibitor. *Mol Cancer Ther*. 2021 Sep;20(9):1550-1560.

The Interplay of Macrophages, Tumor Cells, and Pancreatic Stellate Cells: Unraveling Mechanisms of Immune Suppression in Pancreatic Cancer Progression

王竹安
Chu-An Wang

Pancreatic ductal adenocarcinoma (PDAC) is a highly lethal cancer marked by poor vascularization, dense desmoplasia, and a profoundly immunosuppressive microenvironment that limits drug delivery and fosters metastasis and immunotherapy resistance. Early macrophage infiltration into KRAS-mutant pancreatic lesions and their interactions with a specific subset of KRAS-mutant epithelial cells drive tumor progression. Using single-cell RNA sequencing, genetically engineered mouse models, and complementary in vitro and in vivo experiments, we identify a feed-forward circuit between TIMP1-expressing macrophages and CD63^{high} PDAC cells. This circuit imposes an ERK^{active}/DUSP2^{low} state in cancer cells, promoting loss of cell–cell adhesion, enhanced lymphangiogenesis, and immune evasion—hallmarks of malignant progression. The same macrophage subset is a major source of IL-1 β , which reprograms pancreatic stellate cells from a myofibroblastic to an inflammatory CAF-like phenotype with elevated expression of immunosuppressive cytokines. Digital spatial analysis confirms close physical association of these macrophages, tumor cells, and fibroblasts in situ. Together, these data reveal how macrophages concurrently drive tumor-intrinsic changes that favor malignancy and orchestrate stromal remodeling that amplifies local immune suppression and tumor immune escape.



第40屆生物醫學聯合學術年會



Speaker

程吉安

Chi-An Cheng

Current Position

- 台大藥學系 助理教授
- 台大國際三校農業生技與健康醫療碩士學位學程 合聘助理教授
- 台大醫學院藥物研究中心藥效及毒理評估組 組長

Education / Training

- 2025-Present, 秘書長, 台灣自由基學會, 台灣
- 2025-Present, 委員, 台灣藥學會, 台灣
- 2020-2022, 博士後研究員, 美國哈佛醫學院, 美國

Professional and Research

- 2025 114 年度國科會吳大猷先生紀念獎
- 2025 台灣藥物基因體學會陳垣崇院士年輕學者獎
- 2024 李鎮源教授醫學研究青年學者獎

Selected Publications

- Li, J. F.; Chen, S. W.; Chu, Y. S.; Kuo, S. T.; Hung, Y. H.; Yeh, P. Y.; Chen, Y. A.; Yu, S. P.; Ko, C. J.; Cheng, C. A.* Surface or Luminal? Decoding Tumor Extracellular Vesicle Logic for Functional Insight and Therapeutic Reprogramming, *Advanced Functional Materials* 2025, e21108. • Selected as Front Cover Story
- Hsu, C. W.; Fang, Y. C.; Li, J. F.; Cheng, C. A.* Decoding Complex Biological Milieus: SHINER's Approach to Profiling and Functioning of Extracellular Vesicle Subpopulations, *Small* 2025, 2503638. • Featured in Asia Research News | ChemNews
- Cheng, C. A.*; Hou, K. C.; Hsu, C. W.; Chiang, L. C. Ultrasensitive and High-Resolution Protein Spatially Decoding Framework for Tumor Extracellular Vesicles, *Advanced Science* 2024, 11, 2304926. • Selected as Front Cover Story • Featured in NTU Front Page/Spotlight News | NTU Pharmacy Bulletin | Quanterix
- Cheng, C. A.*; Chiang, L. C.; Chu, Y. S. Integrated Pipeline for Ultrasensitive Protein Detection in Cancer Nanomedicine, *RSC Advances* 2023, 13, 14685–14697.

Exploring the Future of Extracellular Vesicle Research in Cancer Diagnosis and Therapy

程吉安
Chi-An Cheng

Extracellular vesicle (EV) research is rapidly advancing from fundamental science to translational applications in EV-based personalized therapeutics and diagnostics. Yet, fundamental questions persist regarding EV biology and mechanisms, particularly concerning the heterogeneous interactions between EVs and cells. Recognizing the multilayered heterogeneity of EVs as both a challenge and an opportunity, in my presentation, I will highlight three exciting EV technological advancements developed by our multidisciplinary group. Especially, these newly developed technologies address technical gaps in dissecting the molecular contents of EV subsets. We believe these approaches could advance our understanding of diverse EV biology and accelerate EV-based personalized diagnostics and therapeutics.



第40屆生物醫學聯合學術年會



Speaker

陳怡文

YiWen Chen

Current Position

- 中國醫藥大學生物醫學研究所 教授

Education / Training

- 2009, PhD, Florida State University, USA
- 2006, MS, Florida State University, USA

Professional and Research

- 2012-2014, 助理教授, 東海大學, 臺灣
- 2010-2012, 研究員, 工業技術研究院, 臺灣

Awards & Honors

- 2025 未來科技獎
- 2018-2025, 國家新創獎
- 2020 傑出教授

Selected Publications

- MY Shie, SW Huang, Y Chen, MC Chen, CM Pan, CY Chen, YH Lin, MH Yu, KW Kan, SC Chiu, HC Jennifer Ho, YW Chen*, DY Cho*, Engineering HLA-G-Targeted Extracellular Vesicles Nanoplatfrom for Enhanced Cancer Therapy through Precise Cancer Drug Delivery, Nature Communications, 2025 Dec, 16:11308
- YW Chen, YH Lin, CC Ho, CC Yu, MH Yu, KX Alvin Lee, SC Chiu, DY Cho, MY Shie, High-yield extracellular vesicle production from HEK293T cells encapsulated in 3D auxetic scaffolds with cyclic mechanical stimulation for effective drug carrier systems, Biofabrication, 2024 Oct, 16(4):045035
- MY Shie, HY Fang, KW Kan, CC Ho, CY Tu, PC Lee, PR Hsueh, CH Chen, T Ni, A. KC Lee, JC Chen, YC Shen, JG Chang, YF Shen, TJ Lin, B Wang, MC Hung, DY Cho, YW Chen*. Highly mimetic ex vivo lung-cancer spheroid-based physiological model for clinical precision therapeutics. 2023 Feb 10():2206603
- YA Chen, MY Shie, KB Chang, CM Su, CC Ho, SW Ye, YWChen* , Novel L-cysteine-functionalized Au@MnO₂/MoO₃ nanocomposites for electrochemical detection of apoptosis-related proteins in immunogenic cell death of patient-derived lung cancer cells, Sensors and Actuators Reports, 2025 Mar, 9(1):100316-100327

Targeted Extracellular Vesicle-Based Therapeutic Platform: A Nanocarrier for Nucleic Acid and Chemotherapeutic Drug Delivery

陳怡文
YiWen Chen

Extracellular vesicles (EVs) have emerged as promising drug delivery vehicles; however, their clinical translation has been hindered by limited targeting specificity, suboptimal cargo loading, scalability challenges, and regulatory uncertainty. To address these limitations, we developed Troy Exo, a next-generation engineered EV platform derived from HEK293T cells and surface-functionalized with an α HLA-G nanobody for highly specific tumor targeting. HLA-G is an immune-tolerant antigen overexpressed in multiple malignancies, making it an attractive and clinically relevant target for precision oncology.

Troy Exo is genetically engineered to display α HLA-G nanobodies on the EV surface, enabling selective recognition and binding to HLA-G-positive cancer cells, while the EV lumen serves as a versatile compartment for loading therapeutic agents, including small-molecule chemotherapeutics and nucleic acids. A stable HEK293T producer cell line expressing the α HLA-G nanobody was established and expanded to a GMP-grade Master Cell Bank, supporting robust and reproducible EV manufacturing. Large-scale production was successfully achieved using a 100-L bioreactor, yielding EVs with consistent physicochemical properties, of which approximately 65% expressed α HLA-G, confirming high targeting fidelity suitable for clinical development.

Comprehensive biodistribution (BioD), pharmacokinetic (PK), and GLP toxicology studies were conducted to evaluate the in vivo performance and safety of Troy Exo. Following intravenous administration, Troy Exo demonstrated rapid and preferential tumor accumulation within 1 hour, as confirmed by labeling-based tracking. A 36-day GLP toxicology study revealed no mortality, treatment-related adverse events, or clinically significant abnormalities across clinical chemistry, neurological assessment, histopathology, or immunogenicity analyses, supporting a favorable safety profile with minimal systemic toxicity. The therapeutic versatility of Troy Exo was demonstrated in multiple cancer models. For breast cancer, doxorubicin (Dox) was loaded into Troy Exo using an extrusion-based method. In vivo studies showed rapid tumor accumulation of Dox-Troy Exo and approximately four-fold higher cytotoxicity compared to free Dox, while significantly reducing cardiotoxicity. Troy Exo represents a clinically validated, scalable, and modular EV-based delivery system, offering a powerful alternative to synthetic nanocarriers and supporting multi-indication development as a next-generation precision cancer therapeutic platform.



第40屆生物醫學聯合學術年會



Speaker

李華容

Hua-Jung Li

Current Position

- Deputy Director, Institute of Cellular and System Medicine, National Health Research Institutes

Education / Training

- 2007, PhD, University of California, Los Angeles, US
- 2003, MS, National Yang-Ming University, TW
- 2001, BS, National Taiwan University, TW

Professional and Research

- 2019-Present, Associate Investigator, National Health Research Institutes
- 2012-2019, Assistant Investigator, National Health Research Institutes
- 2010-2012, Postdoctoral Fellow, Whitehead Institute for Biomedical Research (MIT)

Awards & Honors

- 2025 第二十二屆國家新創獎
- 2021 國家衛生研究院年輕學者研究獎
- 2019 吳大猷先生紀念獎

Selected Publications

- Chen SY, He PL, Lu LY, Lin MC, Chan SH, Tsai JS, Luo WT, Wang LH, and Li HJ* ST6GAL1-Mediated Sialylation of PECAM-1 promotes a transcellular diapedesis-like process that directs lung tropism of metastatic breast cancer. *Cancer Research* 2025;85:1199-1218.
- 李華容*細胞外囊泡在先進醫療中的應用與監管挑戰.當代醫藥法規月刊, 2025-04,174 期
- Lin MC, Kuo WH, Chen SY, Hsu JY, Lu LY, Wang CC, Chen YJ, Tsai JS, and Li HJ* Ago2/CAV1 interaction potentiates metastasis via controlling Ago2 localization and miRNA action. *EMBO Reports* 2024;25:2441-2478.
- Chen SY, Lin MC, Tsai JS, He PL, Luo WT, Chiu IM, Herschman HR, and Li HJ* Exosomal 2',3'-CNP from mesenchymal stem cells promotes hippocampus CA1 neurogenesis/neuritogenesis and contributes to rescue of cognition/learning deficiencies of damaged brain. *Stem Cells Translational Medicine* 2020;9:499-517

Messages That Matter: Turning Cancer's Tricks into New Therapies

李華容
Hua-Jung Li

Extracellular vesicles (EVs) act as molecular messages that shape how cells behave in development, regeneration, and disease. My research program reveals that these messages—often exploited by cancer—can be decoded and redirected into powerful therapeutic strategies. We discovered that cancer cells use regulated EV cargo sorting to maintain stemness, evade chemotherapy, and navigate vascular barriers during metastasis. By inhibiting EP4 signaling, we can force cancer cells to release induced exosomes (iExos) that purge stemness-associated cargos, shifting them from mesenchymal/CSC-like phenotypes to epithelial, drug-sensitive states. This approach effectively reverses cancer's survival tricks.

At the same time, we harnessed this mechanism for regeneration. EP4 antagonist-elicited MSC exosomes promote hippocampal repair, restore cognition, and modulate inflammation, establishing iExos as a promising platform for CNS therapeutics. Mechanistic studies further uncovered a Caveolin-1/Ago2 pathway that governs miRNA export, and a glycosylation code—ST6GAL1-mediated α 2,6-sialylation of PECAM-1—that enables tumor cells to breach pulmonary endothelium and initiate lung-tropic metastasis.

Together, these findings demonstrate how deciphering cancer's EV-based communication systems not only explains disease progression but also inspires new therapeutic paradigms, transforming malignant “messages” into tools for healing.



第40屆生物醫學聯合學術年會



Speaker

柯屹又

Yi-Yu Ke

Current Position

- Deputy Division Director, ITRI, Biomedical Technology and Device Research Laboratories

Education / Training

- 2006, PhD, Molecular Medicine Department of Life Science, National Tsing Hua University,
- 2001, MS, Physics Department of Physics, National Taiwan University
- 1999, BS, Physics Department of Physics, Chung Yuan Christian University

Professional and Research

- 2022-2025, Group Director , Development Center for Biotechnology, Institute for Drug Evaluation Platform Intelligent Medicine Group
- 2021-2022, CEO, JUMPING DRUG International Co., Ltd. CEO and Chief scientist.
- 2016-2021, Assistant Investigator, Institute of Biotechnology and Pharmaceutical Research, National Health Research Institutes

Awards & Honors

- 2024 第 21 屆國家新創獎
- 2022 第 19 屆國家新創獎
- 2020 科技部未來科技獎

Selected Publications

- Chang, Y.C.; Hsieh, M.L.; Lee, H.L.; Hee, S.W.; Chang, C.F.; Yen, H.Y.; Chen, Y.A.; Chen, Y.R.; Chou, Y.W.; Li, F.A.; Ke, Y.Y.; Chen, S.Y.; Hung, M.S.; Hung, A.F.H.; Huang, J.Y.; Chiu, C.H.; Lin, S.Y.; Shih, S.F.; Hsu, C.N.; Hwang, J.J.; Yeh, T.K.; Cheng, T.J.R.; Liao, K.C.W.; Laio, D.; Lin, S.W.; Chen, T.Y.; Hu, C.M.; Vogel, U.; Saar, D.; Kragelund, B.B.; Tsou, L.K.; Tseng, Y.H.; Chuang, L.M. Author Correction: Identification of PTGR2 inhibitors as a new therapeutic strategy for diabetes and obesity. EMBO Mol Med. 2025, May 17; (5):938-966.
- Chang, Y.C.; Hsieh, M.L.; Lee, H.L.; Hee, S.W.; Chang, C.F.; Yen, H.Y.; Chen, Y.A.; Chen, Y.R.; Chou, Y.W.; Li, F.A.; Ke, Y.Y.; Chen, S.Y.; Hung, M.S.; Hung, A.F.; Huang, J.Y.; Chiu, C.H.; Lin, S.Y.; Shih, S.F.; Hsu, C.N.; Hwang, J.J.; Yeh, T.K.; Cheng, T.R.; Liao, K.C.; Laio, D.; Lin, S.W.; Chen, T.Y.; Hu, C.M.; Vogel, U.; Saar, D.; Kragelund, B.B.; Tsou, L.K.; Tseng, Y.H.; Chuang, L.M.. Author Correction: Identification of PTGR2 inhibitors as a new therapeutic strategy for diabetes and obesity. EMBO Mol Med. 2025 May;17(5):1184.
- Fan, C.S.; Hung, H.C.; Chen, C.C.; Chen, L.L.; Ke, Y.Y.; Yeh, T.K.; Huang, C.T.; Chang, T.Y.; Yen, K.J.; Chen, C.H.; Chua, K.V.; Hsu, J.T.A.; Huang, T.S. Development of a Humanized Antibody Targeting Extracellular HSP90 α to Suppress Endothelial-Mesenchymal Transition-Enhanced Tumor Growth of Pancreatic Adenocarcinoma Cells. Cells. 2024, Jul 4; 13(13):1146.

3/22(日) 13:30-14:00
1 樓 第一教室

AI 於新藥開發的發展與應用

柯屹又
Yi-Yu Ke

本演講介紹人工智慧(AI)如何與傳統電腦輔助藥物設計(CADD)技術深度整合，並實際導入現代藥物研發流程中，內容涵蓋從疾病與標靶識別、先導化合物篩選與優化，到臨床前藥效、藥物動力學與毒理預測等關鍵階段，系統性說明 AI 在各研發環節中所扮演的角色與可落地的應用方式。演講同時說明機器學習、深度學習與生成式 AI 等技術於藥物開發中的實際應用，並比較其與傳統 CADD 方法(如 docking、QSAR 與分子動力模擬)在使用時機與功能定位上的差異，透過真實新藥開發案例，展示 AI 如何輔助分子設計、藥效與藥物動力學預測、脫靶與毒性風險評估，以及加速先導物優化與決策流程，說明 AI 如何由輔助工具進一步轉化為驅動藥物研發效率與品質的核心技術，協助縮短研發時程、降低試錯成本，並提升藥物開發的成功率。



第40屆生物醫學聯合學術年會



Speaker

許凱程

Hsu Kai-Cheng

Current Position

- 臺北醫學大學創新醫學科技研發產業博士學位學程 主任/教授
- 臺北醫學大學癌症生物學與藥物研發研究所 教授

Education / Training

- 2011, PhD, 國立交通大學, 中華民國

Professional and Research

- 2022, 教授, 臺北醫學大學 癌症生物學與藥物研發研究所, 中華民國

Awards & Honors

- 2024 全球前 2%頂尖科學家 (Stanford/Elsevier)
- 2024 未來科技獎
- 2024 第 21 屆國家新創獎

Selected Publications

- Yang CL, Wu YW, Tu HJ, Yeh YH, Lin TE, Sung TY, Li MC, Yen SC, Hsieh JH, Yu MC, Hsieh SY, Hsieh HP, Pan SL*, Hsu KC*. (2025) Identification and Biological Evaluation of a Novel CLK4 Inhibitor Targeting Alternative Splicing in Pancreatic Cancer Using Structure-Based Virtual Screening. *Advanced Science*, 2416323.
- Wu YW, HuangFu WC, Lin TE, Peng CH, Tu HJ, Sung TY, Sung TY, Yen SC, Pan SL, Hsu KC* (2024) Identification of selective dual-specificity tyrosine phosphorylation-regulated kinase 1A (DYRK1A) inhibitors and their effects on tau and microtubule. *International Journal of Biological Macromolecules*, 259, 129074.
- Shih WH, Huang HL, HuangFu WC, Lin TE, Sung TY, Li MC, Huang GL, Chang YW, Yen SC, Hsieh HP, Hsu KC*, Pan SL* (2024) Discovery of novel TANK-Binding Kinase 1 (TBK1) inhibitor against pancreatic ductal adenocarcinoma. *International Journal of Biological Macromolecules*, 137296.
- Chen JH, Tu HJ, Lin TE, Peng ZX, Wu YW, Yen SC, Sung TY, Hsieh JH, Lee HY, Pan SL, HuangFu WC*, Hsu KC* (2024) Discovery of dual-specificity tyrosine-phosphorylation-regulated kinase 1A (DYRK1A) inhibitors using an artificial intelligence model and their effects on tau and tubulin dynamics. *Biomedicine and Pharmacotherapy*, 181, 117688.

Intelligent Drug Design Platform for the Discovery and Optimization of Novel Kinase Inhibitors

許凱程
Hsu Kai-Cheng

Traditional small-molecule drug development demands immense financial resources and extensive time commitments, yet often yields a low success rate. To address these challenges, we have developed an artificial intelligence (AI) platform for drug design and discovery to reduce both the time and cost associated with drug development processes. The platform comprises models targeting the four key phases of drug development: (1) hit identification, (2) lead optimization, (3) cytotoxicity prediction, and (4) ADME prediction. For hit identification, the platform features multiple models that can predict potential inhibitors for protein kinases with an average accuracy of 85%. In the lead optimization phase, it generates one million compound derivatives and selects the most promising candidates for synthesis. To assess cytotoxicity, 12 cancer cell models have been established, achieving an average prediction accuracy of 90%. For ADME evaluation, the platform integrates various models to assess the drug-like properties of compounds. To date, the AI platform has successfully designed novel inhibitors targeting 51 kinases, resulting in the development of 506 kinase inhibitors ($IC_{50} < 100$ nM), 25 of which exhibit IC_{50} values below 10 nM, indicating promising potential for further development. We believe that this platform can accelerate multiple stages of drug development, reduce overall costs, and improve the success rate of new therapeutics.



第40屆生物醫學聯合學術年會



Speaker

童俊維

Chun-Wei Tung

Current Position

- 國家衛生研究院生技與藥物研究所 研究員

Education / Training

- 2010, PhD, 國立交通大學生物資訊研究所, 台灣
- 2005, BS, 國立成功大學生物學系, 台灣

Professional and Research

- 2025-Present, 兼任教授, 國立台灣大學毒理學研究所, 台灣
- 2021-Present, 兼任教授, 台北醫學大學大數據科技及管理研究所, 台灣

Awards & Honors

- 2025 2024 Top Scholar by ScholarGPS
- 2023 Outstanding Alumni (by Department of Life Sciences, National Cheng Kung University, Tainan, Taiwan)
- 2018 Publons Peer Review Awards 2018 (Top 1% in Multidisciplinary)

Selected Publications

- W.C. Huang and C.W. Tung* (2026) Multitask learning and transfer learning approaches in target-based chemical toxicity modeling: GPCRs as an example, Chapter in Cheminformatic Modelling and Data Gap Filling for a Green and Sustainable Environment (Kunal Roy, Arkaprava Banerjee, eds.), Elsevier, in press.
- H.L. Kan, S.S. Wang and C.W. Tung* (2025) ZFinfer: A Novel Chemical-Phenotype Inference System for Zebrafish for Filling Data Gaps in Environmental Pollutant Research, Ecotoxicology and Environmental Safety, 302, 118682.
- R.H. Lin, P. Lin, C.C. Wang and C.W. Tung* (2024) A Novel Multitask Learning Algorithm for Tasks with Distinct Chemical Space: Zebrafish Toxicity Prediction as an Example, Journal of Cheminformatics, 16(1), 91.
- W.C. Huang, W.T. Lin, M.S. Hung, J.C. Lee and C.W. Tung* (2024) Decrypting orphan GPCR drug discovery via multitask learning, Journal of Cheminformatics, 16(1), 10.
- Y.W. Chiu, C.W. Tung* and C.C. Wang* (2024) Multitask learning for predicting pulmonary absorption of chemicals, Food and Chemical Toxicology, 185, 114453.

Artificial Intelligence Approaches for Drug Design under Data Scarcity

童俊維

Chun-Wei Tung

Drug discovery under data-scarce conditions presents unique challenges that limit the effectiveness of conventional approaches. Molecular docking often fails when structural information is incomplete or binding sites are highly dynamic, while traditional AI models struggle to generalize in the presence of sparse and heterogeneous bioactivity data. To overcome these limitations, we developed MTForestNET, a multi-task learning framework that leverages biological activity correlations to improve predictive accuracy and robustness. By organizing tasks into a neural network-like architecture, MTForestNET enables effective knowledge transfer across related datasets. We further demonstrate how multi-task learning combined with transfer learning can facilitate drug design for orphan G protein-coupled receptors (GPCRs), where conventional methods are particularly constrained by data scarcity. Case studies from our research highlight applications in drug design and toxicity prediction, illustrating how advanced machine learning approaches can provide reliable solutions where docking and conventional AI fall short. This work underscores the importance of task-relatedness and transferability in building AI-driven platforms for drug development under data-scarce conditions.



第40屆生物醫學聯合學術年會



Speaker

王竹安

Chu-An Wang

Current Position

- 國立成功大學基礎醫學研究所 助理教授

Education / Training

- PhD, Molecular Biology University of Colorado Denver, Anschutz Medical Campus
- MS, 國立成功大學分子醫學研究所
- BS, 中山醫學大學 生物醫學科學學系

Professional and Research

- 博士後, Department of Pharmacology, University of Colorado Denver, Anschutz Medical Campus
- 博士後, 國立成功大學基礎醫學研究所

Selected Publications

- Intercellular TIMP-1-CD63 signaling directs the evolution of immune escape and metastasis in KRAS mutated pancreatic cancer cells. *Mol Cancer* 24,25 (2025)
- Melanophilin-induced primary cilia promote pancreatic cancer metastasis. *Cell Death & Disease*. 2025 Jan 16;16(1):22.
- Increased ratio of red cell distribution width to lymphocyte percentage as a novel preoperative marker for unfavorable survival outcomes in upper tract urothelial carcinoma. *Biomedical Reports*. 2024 Dec 10;22(2):32.
- Preoperative systemic inflammation response index enhances the prognostic value of tumor multifocality in upper tract urothelial carcinoma. *Oncol Lett*. 2024 Jul 15;28(3):436.
- Suppression of Extracellular Vesicle VEGF-C-mediated Lymphangiogenesis and Pancreatic Cancer Early Dissemination By a Selective HDAC1/2 Inhibitor. *Mol Cancer Ther*. 2021 Sep;20(9):1550-1560.

Macrophage Interaction and Its Influence on Tumor-Derived Extracellular Vesicles: Implications for Early Diagnosis and Treatment Selection in Pancreatic Cancer

王竹安
Chu-An Wang

Pancreatic ductal adenocarcinoma (PDAC), frequently driven by KRAS mutations, co-opts macrophages to establish a tumor supportive microenvironment that enhances metastasis and immune evasion. We find that macrophage signaling activates ERK and suppresses dual specificity phosphatase 2 (DUSP2) in PDAC cells, causing sustained ERK activation and promoting extracellular vesicle (EV)-mediated release of vascular endothelial growth factor C (VEGF C). EV associated VEGF C drives lymphangiogenesis and lymphovascular invasion, linking macrophage-tumor crosstalk to early metastatic dissemination. Bioinformatic screening nominated histone deacetylase (HDAC) inhibitors as candidate therapeutics; treatment with the HDAC1/2 inhibitor B390 restored DUSP2 expression, reduced tumor growth, and increased apoptosis, while decreasing EV associated VEGF C and suppressing lymphangiogenesis and metastasis in mouse models. These findings indicate that macrophage driven modulation of tumor EV cargo such as VEGF C may serve as an early diagnostic biomarker and actionable therapeutic target. Targeting the macrophage-EV-VEGF C axis could improve early detection and reduce metastatic progression in PDAC.



第40屆生物醫學聯合學術年會



Speaker

李迎霄

Ying-Xiao Li

Current Position

- 義守大學醫學院醫學系 助理教授

Education / Training

- PhD, 日本鹿兒島大學醫齒學綜合研究科

Professional and Research

- 助理教授, 慈濟大學全人教育中心
- 客座研究員, 日本鹿兒島大學
- 博士後研究員, 美國哈佛大學醫學部波士頓兒童醫院

Awards & Honors

- 2025 Endocrine, Metabolic & Immune Disorders - Drug Targets 審查委員

Selected Publications

- Ying-Xiao Li, Bu-Miin Huang, Chih-Chieh Tao, Yu-Yan Lan Exosomes Derived from Human Umbilical Cord Mesenchymal Stem Cells Enhance Cisplatin-induced Apoptotic Effects via the ROS-Fas Pathway in Human NPC-TW01 Nasopharyngeal Carcinoma Cells ANTICANCER RESEARCH, vol.45, no.7, pp.3117-3126, 2025.06
- Wu PY, Lai SY, Su YT, Yang KC, Chau YP, Don MJ, Lu KH, Shy HT, Lai SM, Kung HN. β -Lapachone, an NQO1 activator, alleviates diabetic cardiomyopathy by regulating antioxidant ability and mitochondrial function. Phytomedicine. 2022 Sep; 104:154255. phymed. 2022.154255. Epub 2022 Jun 6. PMID: 35738116.
- Chih-Chun Wang, Tzer-Zen Hwang, Ching-Feng Lien, Ying-Xiao Li, Yu-Yan Lan Serum Starvation-induced ROS Production Activates the ERK-AP-1-TfR1 Pathway to Up-regulate Survivin to Support Nasopharyngeal Carcinoma Cell Viability Cancer Genomics & Proteomics, vol.22, no.3, pp.458-466, 2025.05
- Yen-Ting Wu, Lei-Chin Chen, Han-Hsuan Wang, Chen-Xuan He, Chia-Hung Chien, Chih-Chieh Tao, Ying-Xiao Li, Yun-Ju Chen, Yu-Yan Lan Scutellarein enhances cisplatin-induced apoptotic effects by suppressing the PI3K/AKT-MDR1 pathway in human NPC/HK1 nasopharyngeal carcinoma cells Biomedical Reports, vol.22, no.4, pp.60, 2025.02

Human Umbilical Cord Mesenchymal Stem Cell-Derived Exosomes Enhance Cisplatin-Induced Apoptosis via ROS-Fas Signaling in Nasopharyngeal Carcinoma Cells

李迎霄

Ying-Xiao Li

Background: Exosomes, nano-sized extracellular vesicles secreted by various cell types such as mesenchymal stem cells (MSCs), immune cells, and tumor cells, have emerged as important regulators of intercellular communication. Their source-specific cargo allows them to influence tumor progression, drug response, and immune modulation. Among MSC-derived exosomes, those from human umbilical cord MSCs (hUC MSC-Exos) are of particular interest due to their low immunogenicity and therapeutic potential. This study explored whether hUC MSC-Exos possess intrinsic anticancer activity and whether they can enhance cisplatin-induced cytotoxicity in nasopharyngeal carcinoma (NPC) cells.

Despite being a cornerstone in NPC treatment, cisplatin often leads to unsatisfactory outcomes due to acquired chemoresistance and recurrence. Motivated by the need for more effective combination strategies, we investigated whether hUC MSC-Exos could sensitize NPC cells to cisplatin and elucidated the underlying mechanism.

Methods: NPC cells were treated with cisplatin, hUC MSC-Exos, or their combination. Cell viability was measured by MTT assay. Apoptotic activity was evaluated using ELISA (cytokeratin 18 fragment) and Western blotting caspase-3, -7, -8, -9, Fas, and tBid. Mitochondrial membrane potential (MMP) was assessed with JC-1 staining, while ROS levels were quantified using DCFH-DA fluorescence. The ROS scavenger N-acetylcysteine (NAC) was used to validate the role of oxidative stress.

Results: hUC MSC-Exos alone caused a modest reduction in cell viability. However, when combined with cisplatin, they significantly enhanced cytotoxicity, leading to increased apoptosis marker expression, including cytokeratin 18 fragment release, caspase cascade activation, and MMP disruption. The co-treatment markedly elevated intracellular ROS levels, accompanied by upregulation of Fas and tBid, implicating both extrinsic and intrinsic apoptotic pathways were activated. Notably, NAC inhibited ROS generation and downstream apoptotic signaling, confirming ROS as an upstream trigger of Fas-mediated apoptosis.

Perspective and Translational Implications: Our findings reveal that hUC MSC-Exos enhance cisplatin-induced apoptosis in NPC cells through ROS-dependent activation of the Fas signaling pathway, offering a novel avenue to overcome chemoresistance. Beyond oncology, the therapeutic potential of exosomes extends across multiple disease domains. In endocrine disorders (e.g., diabetes), exosomes regulate hormonal signaling and metabolic adaptation; in neurodegenerative diseases, they mediate neuroinflammation and synaptic maintenance; in autoimmune conditions, they modulate immune cell polarization. These cross-systemic roles reflect the translational versatility of exosome-based interventions. Future work will focus on identifying key bioactive exosome cargo, validating in vivo efficacy, and engineering exosome-based delivery systems to integrate into next-generation combinatorial therapies.



第40屆生物醫學聯合學術年會



Speaker

龔秀妮

Hsiu-Ni Kung

Current Position

- 國立台灣大學解剖學暨細胞生物學研究所 教授

Education / Training

- PhD, 國立台灣大學解剖學研究所

Professional and Research

- 博士後研究員, 國立台灣大學解剖暨細胞生物學研究所
- 博士後研究員, 美國北卡羅來納州杜克大學
- 副教授, 國立台灣大學解剖暨細胞生物學研究所

Awards & Honors

- 2021 台大醫學院教學優良獎
- 2022 台大醫學院教學優良獎
- 2024 台大醫學院教學優良獎

Selected Publications

- Lu YC, Ho CH, Hong JH, Kuo MC, Liao YA, Jaw FS, Cheng JC, Huang CY, Chang KP, Chen CH, Lin JA, Hsiao A, Kung HN. NKG2A and circulating extracellular vesicles are key regulators of natural killer cell activity in prostate cancer after prostatectomy. *Mol Oncol*. 2023 Aug;17(8):1613-1627. Epub 2023 Mar 27. PMID: 36931723; PMCID: PMC10399716.
- Wu PY, Lai SY, Su YT, Yang KC, Chau YP, Don MJ, Lu KH, Shy HT, Lai SM, Kung HN. β -Lapachone, an NQO1 activator, alleviates diabetic cardiomyopathy by regulating antioxidant ability and mitochondrial function. *Phytomedicine*. 2022 Sep;104:154255. Epub 2022 Jun 6. PMID: 35738116.
- Lin SY, Syu JP, Lo YT, Chau YP, Don MJ, Shy HT, Lai SM, Kung HN. Mitochondrial activity is the key to the protective effect of β -Lapachone, a NAD⁺ booster, in healthy cells against cisplatin cytotoxicity. *Phytomedicine*. 2022 Jul;101:154094. Epub 2022 Apr 4. PMID: 35447421.
- Chen YS, Chuang WC, Kung HN, Cheng CY, Huang DY, Sekar P, Lin WW. Pan-Caspase Inhibitor zVAD Induces Necroptotic and Autophagic Cell Death in TLR3/4-Stimulated Macrophages. *Mol Cells*. 2022 Apr 30;45(4):257-272. PMID: 34949739; PMCID: PMC9001149.

Extracellular Vesicle Control of Cellular Behavior: Bridging Tumor Immunomodulation and Placental Physiology

龔秀妮
Hsiu-Ni Kung

Extracellular vesicles (EVs) serve as critical mediators of intercellular communication by transporting bioactive molecules that influence the behavior and fate of recipient cells. This presentation highlights two distinct biological contexts in which EV-mediated signaling plays a central regulatory role: tumor-immune interactions and placental cell invasion.

In the first part, I will discuss our findings on how tumor-derived EVs modulate natural killer (NK) cell activity. We discovered that prostate cancer releases abundant EVs enriched with specific ligands capable of binding to receptors on NK cells. These EVs adhere to the NK-cell surface and suppress their cytotoxic function, thereby reducing the ability of NK cells to recognize and eliminate cancer cells. By comparing EV profiles collected from patients before and after prostatectomy, we identified NKG2A on NK cells as a key receptor through which prostate cancer EVs exert their inhibitory effect. Importantly, blocking the interaction between EV-associated ligands and NKG2A preserves NK-cell cytotoxicity, suggesting a potential therapeutic strategy to restore innate immune surveillance against prostate cancer.

The second part of the presentation focuses on EV-mediated communication within the placental microenvironment. Clinical observations indicate that women with previous uterine surgery and residual scar tissue have a significantly increased risk of placenta accreta spectrum (PAS). Based on this correlation, we hypothesized that fibroblasts present in scar tissue may influence trophoblast invasion during early placentation. Using in vitro models, we demonstrated that fibroblasts secrete EVs that enhance the invasive capacity of trophoblast stem cells. Further molecular profiling revealed specific miRNAs enriched in these fibroblast-derived EVs, implicating them as potential mediators of aberrant trophoblast invasion. These EV-associated miRNAs may serve as future diagnostic markers or therapeutic targets for pregnancies at risk of PAS.

Together, these studies illustrate how EVs act as versatile and powerful modulators of cellular behavior across cancer biology and placental development. Understanding the mechanisms by which EVs regulate immune evasion and cell invasion provides new insights into disease progression and opens avenues for innovative diagnostic and therapeutic approaches.



第40屆生物醫學聯合學術年會



Speaker

朱彥儒

Yen-Ju Chu

Current Position

- 國防醫學大學生物及解剖學研究所 助理教授

Education / Training

- 藥學博士, 英國諾丁漢大學
- MS, 國防醫學院藥理學
- BS, 國防醫學院藥學系

Professional and Research

- 2023-2024, 藥學官, 三軍總醫院臨床藥學部
- 2016-2018, 衛材行政補給官, 三軍總醫院三軍總醫院衛材補給保養室

Awards & Honors

- 2022 三軍總醫院杏林獎-年度醫事人員優良著作獎第一名

Selected Publications

- Wong A, Chu Y, Chen H, Feng W, Ji L, Qin C, Stocks MJ, Marlow M, Gershkovich P. Distribution of lamivudine into lymph node HIV reservoir. *Int J Pharm.* 2023 Dec ; 648:123574.
- Chu Y, Wong A, Chen H, Ji L, Qin C, Feng W, Stocks MJ, Gershkovich P. Development of lipophilic ester prodrugs of dolutegravir for intestinal lymphatic transport. *Eur J Pharm Biopharm.* 2023 Oct; 191:90-102.
- Feng W, Qin C, Abdelrazig S, Bai Z, Raji M, Darwish R, Chu Y, Ji L, Gray DA, Stocks MJ, Constantinescu CS, Barrett DA, Fischer PM, Gershkovich P. Vegetable oils composition affects the intestinal lymphatic transport and systemic bioavailability of co-administered lipophilic drug cannabidiol. *Int J Pharm.* 2022 Aug; 25;624:121947.
- Feng W, Qin C, Cipolla E, Lee JB, Zgair A, Chu Y, Ortori CA, Stocks MJ, Constantinescu CS, Barrett DA, Fischer PM, Gershkovich P. Inclusion of Medium-Chain Triglyceride in Lipid-Based Formulation of Cannabidiol Facilitates Micellar Solubilization In Vitro, but In Vivo Performance Remains Superior with Pure Sesame Oil Vehicle. *Pharmaceutics.* 2021 Aug 27; 13(9): 1349.

Mesenteric Lymphatic Targeting of Antiretroviral Agents for Improved Treatment of HIV/AIDS

朱彥儒
Yen-Ju Chu

Insufficient drug penetration into HIV-1 reservoirs, specifically mesenteric lymph nodes (MLNs), prevents the eradication of the virus. This study aimed to target MLNs via the intestinal lymphatic pathway using chylomicron-mediated transport. We evaluated an LCT-based formulation of tipranavir (TPV) and a lipophilic prodrug strategy for dolutegravir (DTG). Although TPV showed high affinity for chylomicrons in vitro, in vivo studies in rats revealed limitations. While the LCT formulation successfully increased TPV concentrations in the mesenteric lymph (3-fold higher than plasma), it failed to significantly enhance accumulation within the MLNs tissue itself. On the other hands, lipophilic prodrug system of DTG successfully increasing the tissue/serum ratio of DTG levels in the MLNs. These results suggest that exploitation of the lymphatic transport pathway via simple LCT co-administration is insufficient for targeting nodal reservoirs. Successful eradication of HIV in the GALT will likely require advanced lipophilic prodrug derivatization combined with lipid-based delivery systems.



第40屆生物醫學聯合學術年會



Speaker

楊添鈞

Tien-Chun Yang

Current Position

- 臺北醫學醫學院解剖暨細胞生物學科 助理教授

Education / Training

- 2016, PhD, 國立陽明大學生命科學系暨基因體科學研究所
- 2004, MS, 國防醫學院生物及解剖學科暨研究所
- 1999, BS, 輔仁大學生物系

Professional and Research

- 2016-2021, 博士後, 北榮民總醫院醫學研究部

Selected Publications

- Associations of child and adolescent obesity with the risk of neuroinflammatory diseases: analysis of data from a global health-care database
- Anatomical variations in 3D imaging: A case report of a dorsal metacarpal artery anomaly
- CEBPB/POU2F2 modulates Endothelin1 expression in prehypertensive SHR vascular smooth muscle cells
- Carboxylated nanodiamond-mediated CRISPR-Cas9 delivery of human retinoschisis mutation into human iPSCs and mouse retina
- Mitochondrial transport mediates survival of retinal ganglion cells in affected LHON patients

Innovative Therapeutic Approaches for Retinal Degeneration: From Stem Cells to Nanotechnology

楊添鈞

Tien-Chun Yang

Retinal degeneration and related neural dysfunction are major causes of irreversible vision loss, characterized by structural disruption and functional impairment across multiple cellular layers of the posterior eye segment. Owing to the marked heterogeneity in pathogenic mechanisms and cellular vulnerability, the development of human-relevant models and broadly applicable therapeutic strategies remains a central challenge in retinal research. Human induced pluripotent stem cell-derived retinal cells and tissue models provide effective platforms for dissecting disease-associated cellular vulnerability and pathogenic mechanisms. These systems enable systematic investigation of how metabolic stress, mitochondrial dysfunction, and mechanosensitive signaling contribute to retinal degeneration. Patient-derived neuronal models facilitate the analysis of molecular pathways underlying neurodegeneration, while magnetic nanoparticle-guided axon extension assays reveal the role of mechanosensitive channels in regulating neuronal structural plasticity and regenerative capacity. Nanotechnology offers highly adaptable strategies for overcoming delivery barriers in the posterior eye segment. Functionalized nanocarriers can be rationally engineered according to cell-type specificity and therapeutic requirements, enabling precise gene modulation or drug delivery. Such approaches have demonstrated applicability in the correction of genetic abnormalities within the photoreceptor layer, the modulation of retinal pigment epithelium-associated pathology, and the protection of retinal neurons under oxidative and metabolic stress conditions. The integration of human-relevant retinal models, mechanistic analysis, and nanotechnology-based delivery strategies establishes a scalable and generalizable research framework. This platform supports the exploration of innovative therapeutic approaches across diverse posterior segment disorders and provides a foundation for the development of precise and translational retinal therapies.



第40屆生物醫學聯合學術年會



Speaker

莊涵雯

Han-Wen Chuang

Current Position

- 中國醫藥大學醫學院醫學系學士班解剖學科 助理教授

Education / Training

- 2022, PhD, 中國醫藥大學生物醫學研究所

Selected Publications

- Interventions Mediate Rapid Antidepressant Effects by Activating the Mammalian Target of Rapamycin Signaling and Brain-Derived Neurotrophic Factor Release
- Decreased efficacy of the ketamine and scopolamine-induced sustained antidepressant-like effects in rats receiving metformin
- Echinacoside exhibits antidepressant-like effects through AMPAR–Akt/ERK–mTOR pathway stimulation and BDNF expression in mice
- Roles of Akt and ERK in mTOR-Dependent Antidepressant Effects of Vanillic Acid

From Animal Behavioral Models to Exosome-Based Therapeutic Approaches: Progress in Understanding the Biological Mechanisms of Depression

莊涵雯

Han-Wen Chuang

Major depressive disorder (MDD) is a psychiatric condition characterized by its pathophysiology, which includes dysregulation of neural plasticity, altered neurotrophic support, and disruptions in multiple intracellular signaling pathways. Animal behavioral models have long served as functional readouts linking molecular alterations to brain dysfunction and are widely used in depression-related research. Our laboratory has focused on establishing and refining animal models of depression, integrating both acute and chronic behavioral paradigms, such as the forced swimming test (FST) and chronic unpredictable stress (CUS), to evaluate depression-like behaviors. These behavioral assessments are further coupled with molecular analyses of specific brain regions to investigate changes in pathways related to synaptic plasticity, stress response, and energy metabolism.

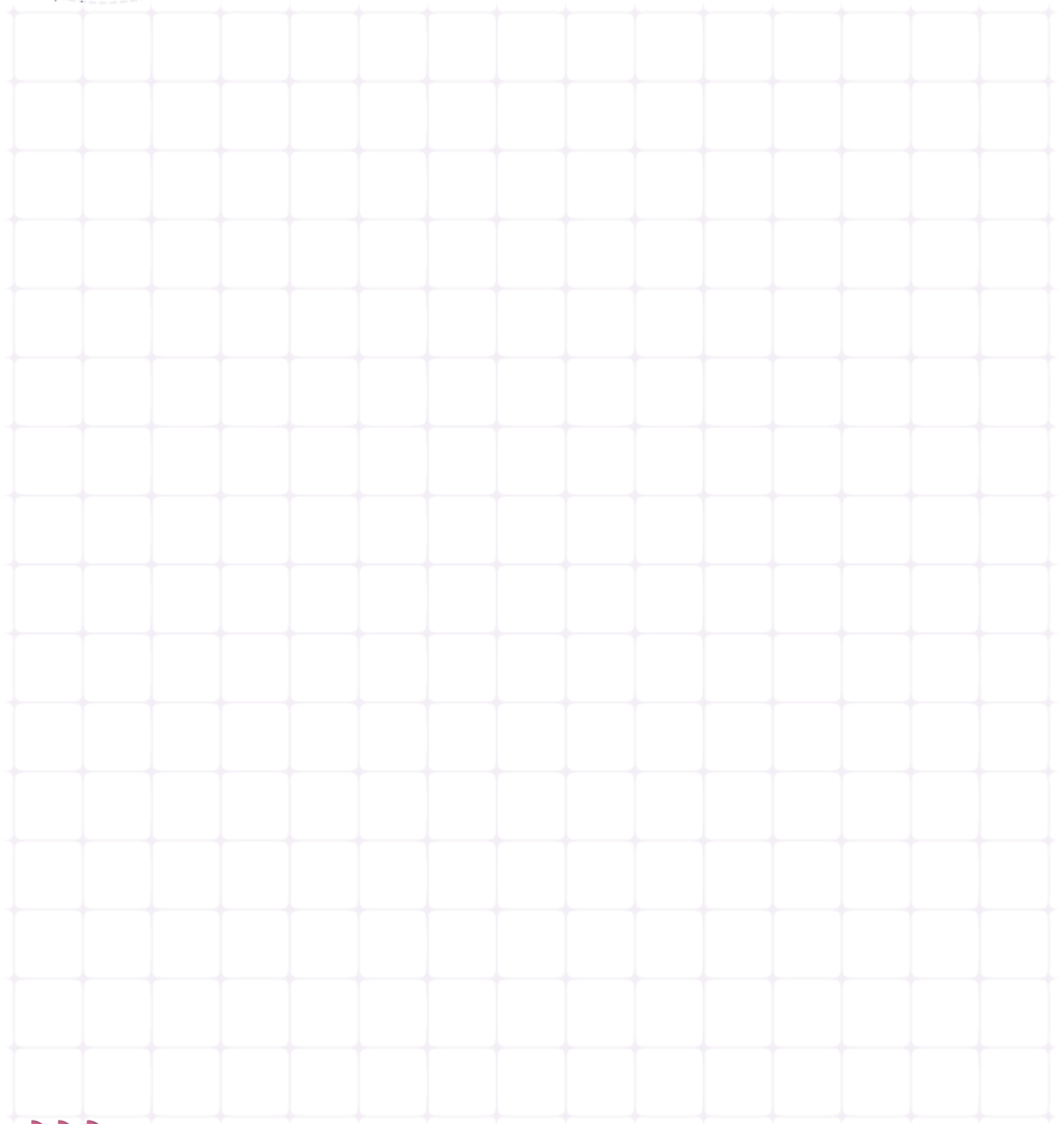
In our previous studies, we demonstrated that certain herbal medicine-derived compounds significantly ameliorate depression-like behaviors in rodents. These behavioral improvements were accompanied by corresponding molecular changes in brain regions such as the hippocampus and prefrontal cortex, including the modulation of neurotrophic factors and key signaling pathways implicated in depression. Despite these promising findings, conventional drug delivery approaches remain limited by non-specific systemic distribution, potential side effects, and delayed onset of therapeutic efficacy. These limitations prompted us to explore alternative strategies to enhance therapeutic precision and efficiency.

Extracellular vesicles, particularly exosome-like extracellular vehicles (EVs), have recently attracted increasing attention due to their biocompatibility and their intrinsic role in mediating intercellular communication. Emerging evidence suggests that EVs can serve as novel drug delivery platforms capable of transporting bioactive molecules across biological barriers, including those of the central nervous system. In this presentation, we introduce our current research direction aimed at leveraging EVs as carriers for molecules associated with depression-related pathways. We begin with in vitro cellular models to assess EV-mediated modulation of intracellular protein expression, which will serve as a foundation for subsequent in vivo studies evaluating behavioral responses and brain-region-specific molecular changes.

By integrating animal behavioral analyses, protein analysis of relevant brain regions, and innovative EV-based delivery strategies, we aim to provide new insights into the pathophysiology of depression and to explore potential avenues toward more precise and effective antidepressant therapies.



第40屆生物醫學聯合學術年會





第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

口頭論文報告資訊

Oral Presentation



第40屆生物醫學聯合學術年會

台灣分子生物影像學會

時間：3月22日(日) 13:40~16:00

地點：2樓 20教室

編號	論文題目
MI-O-001	Melatonin Disrupts the STAT1/LIFR Signaling Axis to Suppress Gastric Cancer Progression and Epithelial-Mesenchymal Transition 詹佳陽, 許美鈴 Chia-Yang Chan, Sheu, Meei-Ling
MI-O-002	Brain Parcellation from CT Images Using a Deep Neural Network 洪芷葳, 林琚媛, 林可瀚, 施政廷, 吳東信, 楊邦宏 Hung, Chih-Wei, Jyun-Yuan Lin, Ko-Han Lin, Cheng-Ting Shih, Tung-Hsin Wu, Bang-Hung Yang
MI-O-003	Estimation of Heterogeneous Voxel Dose Kernel using Deep learning from CT images for Personalized Internal Dosimetry 劉欣旻, 王佳柔, 林可瀚, 楊邦宏, 吳東信, 施政廷 Hsin-Min Liu, Jia-Rou Wang, Ko-Han Lin, Bang-Hung Yang, Tung-Hsin Wu, Cheng-Ting Shih
MI-O-004	Recent Development and Application of the Q-Striatum Software for Dopamine Transporter SPECT Imaging 林汶正, 陳美芬, 楊邦宏, 劉仁賢, 林康平 Wen-Chen, Lin, Mei-Fen Chen, Bang-Hung Yang, Ren-Shyan Liu, Kang-Ping Lin
MI-O-005	Exploring the Effects of Cofilin-1-Induced Exosome Secretion Enhances Human Lung Cancer Cell Proliferation, Migration, and Invasion 黃鉞涵, 李易展 Bo-Han Hung, Yi-Jang Lee
MI-O-006	Intranasal Erinacine A Improves Long-term Neurological Outcomes Beyond Early Lesion Reduction After Ischemic Stroke 宋映葦, 蔡靈霖, 許珮蓓, 李麗雅, 陳勁初, 李怡萱, 高瑀絜 Ying-Wei, Sung, Ting-Lin Tsai, Pei-Chien Hsu, Li-Ya Lee, Chin-Chu Chen, Yi-Hsuan Lee, Yu-Chieh Jill Kao

編號	論文題目
MI-O-007	Comparative Evaluation of 18F-fluciclovine PET for Pre-Boron Neutron Capture Therapy (BNCT) Patient Selection Chan Wan-Chi, Ting-Yu Chang, Ko-Han Lin, Tzu-Yu Lee, Yi-Ting Tsai, Yi-Wei Chen, Cheng-Lin Wu, Chun-Yi Wu
MI-O-008	Fucoidan-based nanoparticles improve radiotherapy outcomes in triple-negative breast cancer by targeting radiation-induced P-selectin 蔡杏嫻, 莊惠燕 Hsing Hsien Tsai, Hui Yen Chuang
MI-O-009	Investigating the Cerebellar Tracts in Preterm and Term Infants Using Diffusion Magnetic Resonance Imaging 彭凱威, 黃聖閔 彭凱威, Sheng-Min Huang
MI-O-010	Stability of Semi-Supervised Learning in Automatic Segmentation for Different Imaging Modalities 蘇柏勳, 吳沛芸, 盧家鋒 Po-Hsun Su, Pei-Yun Wu, Chia-Feng Lu
MI-O-011	Multi-Tracer PET Imaging Reveals Neurotransmitter System Interactions in a Non-Human Primate Model of Parkinson's Disease 陳芊汗, 陳智遠, 葉信顯, 施睿琬, 馬國興 Cian-Cian Chen, , Skye Hsin-Hsien Yeh, Jui-Hu Shih, Kuo-Hsing Ma
MI-O-012	Lu-177 Radiotherapy with Upconversion Nanoparticles Targeting c-MET Pathway in Head and Neck Squamous Cell Carcinoma 林凱弘, 吳駿一, 張御展, 詹明賢 Kai-Hung, Lin, Chun-Yi Wu, Yu-Chan Chang, Ming-Hsien Chan



第40屆生物醫學聯合學術年會

中華民國臨床生化學會

時間：3月22日(日) 09:00~10:30

地點：3樓 31 教室

編號	論文題目
CACB-O1	Targeting the Stress Sensor HLJ1 Unlocks Adaptive Lipolysis to Counteract Diet-Induced Obesity 徐煒倫, 陳奕淳, 林俊宏, 蘇剛毅 HSU, WEI-LUN, Yi-Chun Chen, Kevin Devlin, Kang-Yi Su
CACB-O2	Hlj1 Deficiency Promotes Scd1 Upregulation via Hsf1 Stabilization in Adipocytes Under High-Fat Diet-Induced Stress 陳奕淳, 徐煒倫, 林俊宏, 蘇剛毅 Chen, Yi-Chun, Wei-Lun Hsu, Kevin Devlin, Kang-Yi Su
CACB-O3	Therapeutic Effects of a Novel AMPK Activator SCT on Pulmonary Fibrosis through Suppression of TGF- β /Smad and JAK2/STAT3 Signaling 陳妍廷, 邱韋中, 黃瑋 Yen-Ting Chen, Wei-Chung Chiou, Cheng Huang
CACB-O4	Y54G11A.4 Is an Evolutionarily Conserved Bacterial Pore-Forming Toxin Defense Gene Regulated by the Arginine Methylation of HLH-30 謝惠臻, 陳昌熙 Hui-Chen Hsieh, Chang-Shi Chen
CACB-O5	Proline-rich Fermented Rice Bran Diet Attenuates Liver Fibrosis through Inhibiting Hepatic Stellate Cells Activation 謝佳恩, 施明煊, 李予淮, 邱琬淳, 廖宜真 Hsieh chia en, Ming-Syuan Shih, Yu-Huai Li, Wan-Chun Chiu, Yi-Jen Liao
CACB-O6	R-loop Accumulation Drives Mitochondrial Dysfunction in Renal Pathogenesis through Impairing the ATF2-PGC-1 α Axis 林承學, 連育靚, 饒梓明, 李財坤 Cheng-Hsueh Lin, Yu-Ching Lien, Tzu-Ming Jao, Tsai-Kun Li
CACB-O7	Beyond Metanephrines: Sulfate Metabolites as Superior, Stress-Resistant Biomarkers for the Biochemical Diagnosis of Pheochromocytoma Yung-Cheng Jair, Wan-Chen Wu, Pei-Lung Chen, Yen-Hua Pien, Pai-Shan Chen Jair, 吳婉禎, 陳沛隆, 卞彥驊, 陳珮珊
CACB-O8	Biogenesis of sperm-specific organelles regulated by the PDZ-domain proteins SMZ-1 and SMZ-2 in <i>C. elegans</i> 彭筱芳, 吳瑞菁, 劉芷菱, 簡萬能, 王昭雯, 陳昌熙, 許雅筑 Hsiao-Fang Peng, Jui-ching Wu, Chih-Ling Liu, Wann-Neng Jane, Chao-Wen Wang, Chang-Shi Chen, Ya-chu Hsu

台灣毒物學學會

時間：3月21日(六) 15:10~16:20

地點：2樓 29 教室

編號	論文題目
TXO01	Targeting AhR-TNFR1 Signaling With Honokiol Suppresses Gastric Cancer Metastasis 謝宗哲, 許美鈴 Tsung-Che Hsieh, Meei-Ling Sheu
TXO02	Activation of the AhR-Glyoxalase Axis Protects Against Diabetic Retinopathy 葉宜綸, 許美鈴 Yi-Lun Ye, Meei-Ling Sheu
TXO03	Melatonin Suppresses Gastric Cancer Progression and Metastasis by Targeting the STAT1-YAP1 Signaling Axis 詹佳陽, 許美鈴 Chia-Yang Chan, Meei-Ling Sheu
TXO04	BPR2P001 Induces DNA Damage by Suppressing NRF2 and c-MYC/MTHFD2-Dependent Pyrimidine Biosynthesis in Squamous Cell Carcinoma 李立璿, 吳承祐, 莊永仁, 葉燈光, 謝興邦, 張壯榮, 郭靜娟 Hsuan Li Li, Cheng-Yu Wu, Yung-Jen Chuang, Teng-Kuang Yeh, Hsing-Pang Hsieh, Chuang-Rung Chang, Ching-Chuan Kuo
TXO05	Ingredient and Processing Effects on α -Dicarbonyls Formation in Cake: Implications for Dietary Carbonyl Burden 吳庭誼, 洪偉倫 吳庭誼, Wei-Lun Hung
TXO06	Disruption of Aggresome Enhances the Anti-Myeloma Efficacy of Doxorubicin-Ixazomib via ER Stress-Mediated Apoptosis 廖昱婷, 潘佳昀, 潘欣妤, 江琪茵, 滕傑林, 余長澤 Yu Ting Liao, Chia-Yun Pan, Hsin-Yu Bella Pan, Chi-Yin Nina Chiang, Chieh-Lin Jerry Teng, Chang-Tze Ricky Yu
TXO07	IL-7 ⁺ Cancer-Associated Fibroblasts Drive Chemoradiotherapy Insensitivity via SOD2-Mediated Oxidative Stress and PD-L1-Dependent Immune Suppression in Esophageal Squamous Cell Carcinoma 翁之浩, 楊侑恩, 王憶卿 Zhi Hao Weng, You-En Yang, Yi-Ching Wang



第40屆生物醫學聯合學術年會

中國生理學會

時間：3月21日(六) 15:20 - 17:20

地點：1樓 可勝廳

編號	論文題目
PYO001	Praeparatum Mungo Protects against Metabolic Dysfunction-Associated Steatotic Liver Disease through AMPK-Autophagy Signaling and Gut Microbiota Reprogramming 陳玟樺, 陳嘉蕙, 許筑甯, 李宗玄 Wen-Hua Chen, Chia-Hui Chen, Julia Chu-Ning Hsu, Tzong-Shyuan Lee
PYO002	Strain-Specific Enterococcus faecalis Modulates Stress Response via a Phenylalanine Co-Metabolite 蔡于宣, 吳偉立 Yu-Hsuan Tsai, Wei-Li Wu
PYO003	Targeting Hypoxia-Driven CARM1 Overexpression Attenuates Tumor Malignancy and Chemoresistance in Colorectal Cancer 傅兆麟, 蔡少正 Jhao-Lin Fu, Shaw-Jenq Tsai
PYO004	DUSP2 Loss Induces Pancreatic β -cell Identity Rewiring Under Metabolic Stress 張哲維, 王竹安, 蔡少正
PYO005	CCR5 Restrains MDSC Generation and Predicts Clinical Outcomes After Allogeneic Hematopoietic Stem Cell Transplantation 陳碩文, 林庭安, 張原翊 Shuoh-Wen Chen, Ting-An Lin, Yuan-I Chang
PYO006	Role of Cholestyramine in Microbiota-Bile acid-NLRP3 Axis Modulation in Obese Mice 王姿允, 許家柔, 吳莉玲 Jzy-yu Wang, Jia-Rou Hsu, Li-Ling Wu

中華民國解剖學學會

時間：3月22日(日) 15:20 - 16:00

地點：3樓 32 教室

編號	論文題目
AN-001	Sciatic Nerve Stimulation Engages Brainstem GPER/MOR-Regulated Opioid Pathways in Neuropathic Pain 吳明澤, 李榮順 Ming-Tse Wu, Jung-Shun Lee
AN-002	15d-PGJ ₂ enhances cisplatin cytotoxicity via mitochondrial ROS-mediated cell death in human bladder cancer 賴謙睿, 陳澄 Chien Rui Lai, Ying Chen
AN-003	探討 TGR5 拮抗劑 SBI-115 對人類膠質母細胞瘤細胞存活及遷移的影響 魏妮, 陳澄 Weini, Ying Chen
AN-004	Differential Spatial Transcriptomic Profiling of Tumor Microenvironment between Poorly Cohesive Carcinoma (NOS) and Signet Ring Cell Carcinoma of the Stomach 甘佳昕 Chia-Hsin Kan
AN-005	Centriolar Satellites-Mediated Primary Ciliogenesis Facilitates PDAC Chemoresistance under Glutamine Deprivation 石嘉蕙, 王家義 Ka Wai Shek, Chia-Yih Wang
AN-006	Developing Human iPSC-derived Dopaminergic Neuron Organoids to Explore Cellular Senescence 吳采臻, 楊添鈞 Cai Jhen Wu, Tien Chun Yang
AN-007	Indium Chloride (InCl ₃) - Induced Centrosome Amplification Promotes Genomic Instability and Defective Leydig Cell Growth 柯潛望, 王家義, 鄧燕妮 Min-Yun Ke, Chia-Yih Wang, Yen-Ni Teng
AN-008	To Study the Effect of Particulate Matter and Palmitic Acid-Induced Pyroptosis and Related Mechanism 洪芝瑢, 陳雅君, 蔡裘瀚, 陳玉伶 Chih-Jung Hung, Ya-Chun Chen, Chiu-Han Bramantyo Tsai, Yuh-Lien Chen



第40屆生物醫學聯合學術年會

編號	論文題目
AN-009	Mechanistic Insights into the Anti-Obesity Effects of Fresh Allium macrostemon Bunge Water-Ethanol Extract in High-Fat Diet-Induced Obese Mice 陳薇安, 龔秀妮 Weian Chen, Hsiu-Ni Kung
AN-010	Motor Neurodegeneration in Mice modeled with depletion of METTL14 黃宥豪, 謝松蒼 Yu-Hao Huang, Sung-Tsang Hsieh
AN-011	Effect of Parabacteroides goldsteinii-secreted Metabolites on Bile Duct Reconstruction Using ex vivo Cholangiocyte Organoid Model 楊子嫻 Tzu-Hsien Yang
AN-012	Establishment of an iPSC-Derived Heart Organoid-Based Platform for Disease Modeling 葉慈筠, 楊添鈞 Tzu Yun Yeh, Tien-Chun Yang
AN-013	以先進深度學習與 AI 空間分析技術整合骨形態計量中的組織結構與細胞分布 賴昕霖 Xin-Lin Lai
AN-014	Postmitotic Foxg1 Influences L5/L6 Cell fate by Regulating the Establishment Of the Cortical Subplate 謝沛璇, 王詠傑, 侯珮珊 Pey-Shyuan Hsieh, Yung-Chieh Wang, Pei-Shan Hou
AN-015	Targeting RXRA-TNFR1 Signaling With Honokiol Attenuates Gastric Cancer Metastasis 謝宗哲, 許美鈴 Tsung-Che Hsieh, Meei-Ling Sheu
AN-016	Stress Granule Formation Confers Cisplatin Resistance under Nutrient-Deprived Conditions in Triple-Negative Breast Cancer 蘇鈺淇, 王家義 Yu-Chi Su, Chia-Yih Wang



編號	論文題目
AN-017	The Impact of Exercise on Psoriasis Management and Potential Strategies to Mitigate Exercise-Induced Pruritus 林昱安, 湯宜嫻, 徐碩邑, 李愛薇 Yu-An Lin, Yi-Hsien Tang, Shou-Yi Hsu, Ai-Wei Lee
AN-018	Benzamil Induces Apoptosis in Non-Small Cell Lung Cancer Cells by Antagonizing XIAP via Smac and HtrA2 簡梓丞, 羅可軒, 簡梓丞, 羅又瑄, 尹奕璇, 鄭志成, 余信賢, 蘇柏全, 簡梓丞 Tzu-Cheng Chien, Ko-Hsuan Lo, Tzu-Cheng Chien, You-Syuan Lou, Yi-Hsuan Yin, Chih-Cheng Cheng, Hsin-Hsien Yu, Bor-Chyuan Su, Tzu-Cheng Chien



第40屆生物醫學聯合學術年會

中華民國免疫學

時間：3月22日(日) 09:00 - 10:20

地點：3樓 30 教室

編號	論文題目
IMM2612	Intestinal Helminth-Mediated Attenuation of Aortic Plaque Progression via Treg-Independent Immune Modulation 陳羿蓁, 林建達 Yi-Chen Chen, Jian-Da Lin
IMM2625	The Role of Aryl Hydrocarbon Receptor (AhR) in Programming Eosinophil-Mediated Intestinal Immunity 鍾佳諶, Elizabeth A. Jacobsen, 王維樂
IMM2630	Investigating the Role of MYADM in Antigen Presentation by Human iPSC-Derived Macrophages 徐姿怡, 王昱婷, 程泓儒, 宋柏儀 Tzu-Ti Hsu, Yu-Ting Wang, Hong-Ru Chang, Bo-Yi Sung
IMP2612	Mechanisms of Maintaining Thymic Macrophages to Promote T Cell Tolerance 馬語謙, 葛一樊
IMP2615	CD147 Signaling Facilitates Pro-inflammatory Polarization and PANoptosis in Lipid-Laden Monocytes and Atherosclerotic Plaque Instability 洪于蘋, 林秋烽
IMP2616	Role of Mzb1 in Regulating IgA Secretion by Plasma Cells Present in the Lactating Mammary Glands Pei-Ching Lee, Saeka Koyama, Jahidul Islam, Shino Wada, Maya Aoki, Ryota Hirakawa, Mutsumi Furukawa, Tomonori Nochi
IMP2618	The E3 Ligase KLHL20-Mediated Ubiquitination Regulates PD-1 Protein Stability and Shapes Immune Activity 凌倫翎, 陳冠宇, 王憶卿 Ling Lun Ling, Kuan-Yu Chen, Yi-Ching Wang



第40屆生物醫學聯合學術年會

40th Joint Annual Conference of Biomedical Science

壁報論文目錄

Poster Presentation



第40屆生物醫學聯合學術年會

台灣分子生物影像學會

編號	論文題目
MI-P-001	Predicting Pulmonary Function Using Multivariate Regression Analysis with CT-Derived Lung Volume and Muscular Volume for Assessment of COPD 李孟軒, 陳震謙, 吳東信, 施政廷 Lee, Meng Hsuan, Zhen - Chian Chen, Tung - Hsin Wu, Cheng-Ting Shih
MI-P-002	Feasibility of Combining Boron Neutron Capture Therapy with Immune Checkpoint Inhibitor for Melanoma Treatment 辜敏慈, 謝昕樺, 張庭瑀, 吳芷齡, 謝份蓁, 吳駿一 Min-Tzu Ku, Hsin-Hua Hsieh, Ting-Yu Chang, Chih-Ling Wu, Yi-Zhen Hsieh, Chun-Yi Wu
MI-P-003	Efficient Low-Dose PET Image Denoising Via Consistency Model 王子欣, Kishore Krish, 盧家鋒, 陳志成 Tzu-Hsin Wang, Kishore Krish, Chia-Feng Lu, Jyh-Cheng Chen
MI-P-004	Synthesis and In Vitro Evaluation of Novel PSMA Radiopharmaceuticals for Prostate Cancer Imaging 詹詠翔, 陳傳霖 Yung-Hsiang Chan, Chuan-Lin Chen
MI-P-005	Development of Boron-Containing Fibroblast Activation Protein Inhibitors for Boron Neutron Capture Therapy 詹立丞, 邱芯語, 王立穰, 吳駿一 Li-Chen Chan, Xin-Yu Qiu, Avery Landon Wang, Chun-Yi Wu
MI-P-006	Exploring the Potential of Losartan in Modulating Cancer-Associated Fibroblasts to Enhance Radiotherapy Efficacy in Breast Cancer 李昱陞, 莊惠燕 Yu-Sheng Li, Hui-Yen Chuang
MI-P-007	Impact of Cofilin-1 Overexpression on Ligase4 Regulation and Cellular Radiosensitivity Min Yun Tsai, Yi-Jang Lee
MI-P-008	Synthesis and Biological Evaluation of a Novel ⁶⁸ Ga-DOTAFAPI as a PET Probe for Imaging Fibroblast Activation Protein Expression 黎昱璇, 陳傳霖 Yu Hsuan Li, Chuan Lin Chen
MI-P-009	Infrared Microscopy Reveals a Shift in Corpus Callosum Lipid Composition Toward an Aging-Like Profile in Cofilin-1 Transgenic Mouse Brains 高佳偉, 黃佩瑜, 李耀昌, 李易展 Chia-Wei, Kao, Pei-Yu Huang, Yao-Chang Lee, Yi-Jang Lee
MI-P-010	Attenuation-Corrected Image Synthesis in Preclinical PET Using Denoising Diffusion Models with Multi-Loss Optimization. 多麟曼, Sivakumar Duraisamy, 陳志成 Kishore Krishnagiri Manoj Doss, Sivakumar Duraisamy, Jyh-Cheng Chen

編號	論文題目
MI-P-011	Olaparib Improves the Efficacy of Radiotherapy in BRCA1/2-Proficient Triple-Negative Breast Cancer in Vitro and in Vivo 江晨瑄, 莊惠燕 Chen-Hsuan Chiang, Hui-Yen Chuang
MI-P-012	Identification of iron deposits in SK-Hep-1 and its three-dimensional tracing technique for subcellular localization. Mo Da Sang, 謝嘉濬, 林易弘, 林子敬 Mo Da-Sang, Chia-Chun Hsieh, Yi-Hung Lin, Zi-Jing Lin
MI-P-013	Investigation of Temperature-Dependent BPA-sorbitol Uptake in lung cancer. 黃嫻樞, 黃鉞涵, 李易展 Hsien-Ting Huang, Bo-Han Huang, Yi-Jang Lee
MI-P-014	Disrupted DTI Developmental Trajectories of the Hippocampus Following Adolescent Mild Traumatic Brain Injury 郭品慧, 劉芸媛, Huai-An Kuo, 謝寶育, 盧家鋒, 高瑀絜 Pin-Hui-Kuo, Yun-Tun Liu, Huai-An Kuo, Bao-Yu Hsieh, Chia-Feng Lu, Yu-Chieh Jill Kao
MI-P-015	Towards cGMP Compliance: Optimization of Precursors and Production Routes for 18F-FBPA 張庭瑀, 詹琬琪, 吳駿一 Ting-Yu Chang, Wan-Chi Chan, Chun-Yi Wu
MI-P-016	CD97 enriched exosomes enhance ferroptosis-mediated radiosensitivity 楊睿丞 Rui-Cheng Yang
MI-P-017	結合自動化焦距分類與資料庫整合之眼科裂隙燈角膜影像管理系統 許愷軒, 林康平, 彭祥恩, 林妤辰, 林汶正, 陳美芬 Kai-Syuan Hsu, Kang-Ping Lin, Hsiang-En Peng, Yu-Chen Lin, Wen-Chen Lin, Mei-Fen Chen
MI-P-018	Gd ₂ O ₃ :Yb,Er@SiO ₂ @DOX@FA Nanoplatfor for Dual-Mode NIR-II/MRI Imaging and Synergistic Chemoradiotherapy of Breast Cancer 彭詩芸, 詹明賢, 林凱弘 Shih-Yun, Peng, Ming-Hsien, Chan, Kai-Hung, Lin
MI-P-019	Gray Matter-Based Analysis of Preterm and Term Neonatal Brain Microstructure and Function 韓霽筠, 黃聖閔 Pei-Yun Han, Sheng-Min Huang
MI-P-020	Development of a Real-time Annotation Software System for Ophthalmic Slit Lamp Image Acquisition 彭祥恩, 林妤辰, 林汶正, 蔡正倫, 林康平 Hsiang-En Peng, Yu-Chen, Wen-Chen Lin, Cheng-Lun Tsai, Kang-Ping Lin



第40屆生物醫學聯合學術年會

編號	論文題目
MI-P-021	Toxicokinetic and Histopathological Safety Assessment of the Long-Acting PSMA-Targeting Radiopharmaceutical ^{177}Lu -NARI-PSMA in SD Rat 陳亮丞, 黃永睿, 陳明偉, 羅瑋霖, 李世瑛, 王世民, 陳夙容, 羅世偉 Chen Liang-Cheng, Yuan-Ruei Huang, Ming-Wei Chen, Wei-Lin Lo, Shih-Ying Lee, Shih-Ming Wang, Su-Jung Chen, Shih-Wei Lo
MI-P-022	Investigation of 8-O-Acetylharpagide Induced G2/M Arrest and Radiosensitization Effects on Hypopharyngeal Cancer Cells 楊宛諭, 李易展 Wan Yu Yang, Yi-Jang Lee
MI-P-023	CFP-to-FFA Generation System Combining a Retinal Dataset and a Novel Network Architecture 湛雅涓, 林汶正, 林康平 Ya-Chuan Chan, Wen-Chen Lin, Kang-Ping Lin
MI-P-024	Thin Plate Spline Registration System for Retinal CFP and FFA Images 湛雅涓, 林汶正, 林康平 Ya-Chuan Chan, Wen-Chen Lin, Kang-Ping Lin
MI-P-025	Deep Learning-Based Contrast Media Extravasation Detection 林呈燁, 呂紹弘, 林汶正, 陳美芬, 林康平 Chengye Lin, Shao-Hung Lu, Wen-Chen Lin, Mei-Fen Chen, Kang-Ping Lin
MI-P-026	Development of a Nectin-4-Targeted Theranostic Pair for Bladder Cancer Treatment 李紫瑜, 張耀文, 翁茂琦, 吳駿一 Tzu-Yu Lee, Yao-Wen Chang, Mao-Chi Weng, Chun-Yi Wu
MI-P-027	Theranostic $\text{FePt}@ \text{CuS}$ Nanoplatfrom Integrating Photothermal, Photodynamic and Chemodynamic Therapy with MRI Imaging for Enhanced Anticancer Efficacy 林琪英, 詹明賢 Chi-Ying Lin, Ming-Hsien Chan
MI-P-028	Ultrasound-Mediated Oxygenated Drug-Loaded Microbubbles for Inner Ear Drug Delivery and Protection Against Noise-Induced Hearing Loss 邱正超, 劉奕岑, 鄧舒柔, 林怡君, 王智弘, 施政坪, 廖愛禾 Cheng-Chao Chiu, Yi-Tsen Liu, Yu-Jou Teng, Yi-Chun Lin, Chih-Hung Wang, Cheng-Ping Shih, Ai-Ho Liao
MI-P-029	Functional Connectivity Changes Following Prefrontal Cortex-Targeted Mild Traumatic Brain Injury in Adolescent Rats 劉芸妘, 郭品慧, 宋映葦, Huai-An Kuo, 盧家鋒, 高瑀絜 Yun-Yun Liu, Pin-Hui Kuo, Ying-Wei Sung, Annie Kuo, Chia-Feng Lu, Yu-Chieh Jill Kao
MI-P-030	Enhancing the Precision of TCM Tongue Color Analysis via Vision Language Models: A LoRA-Based Fine-Tuning Approach 曾茂源, 黃伯瑜, 陳至良, 林康平 Mao-Yuan, Tseng, Po-Yu Huang, Zhi-Liang Chen, Kang-Ping Lin

編號	論文題目
MI-P-031	3D structural analysis of Japanese Encephalitis Virus like Particles 鄭涵方, 陳冠雯, 趙黛瑜, 吳尚蓉 Han-Fang Cheng, Guan-Wen Chen, Day-Yu Chao, Shang-Rong Wu
MI-P-032	Neuroinflammation and PTSD-Like Behaviors following Blast-Induced Traumatic Brain Injury Assessed with [¹⁸ F]-FEPPA PET Imaging 王星惠, 林立凡, 陳元皓, 馬國興 Hsing-Hui Wang, Li-Fan Lin, Yuan-Hao Chen, Kuo-Hsin Ma g
MI-P-033	Moonlight Function of Pyrimidine Biosynthesis Enzyme Dihydroorotate Dehydrogenase in Urothelial Carcinoma: Oncogenic Driver and Therapeutic Target 何兆璟, 張御展 Zhao-Jing He, Yu-Chan Chang
MI-P-034	Targeting ALDOB-Driven Fructose Metabolism to Enhance Ferroptosis and Immune Responses in MSI-H Colorectal Cancer 郭翰錫 Han-Hsi Kuo
MI-P-035	Targeting the cuproptosis landscape in smoking-related lung adenocarcinoma: The role of DLAT/DLD lipoylation. 林又妤, 張御展 You-Yu Lin, Yu-Chan Chang
MI-P-036	The Effects of Lower-Limb Circulation by 830 nm Laser Acupuncture in Chronic Kidney Disease Patients 張郁婷, 常逸平, 林志慶, 吳季華, 葉芳妤, 黃柏崴, 王佑鈞, 蔡坤宏, 蘇傳宗 Yu-Ting Chang, Yi-Ping Chang, Chih-Ching Lin, Jih-Huah Wu, Fang-Yu Yeh, Bo-Wei Huang, You-Jun Wang, Kun-Hung Tsai, Chuan-Tsung Su
MI-P-037	Prediction of Tumor Volume from X-ray Images via Time-Series Modeling 蘇傳宗, 林秀怡 Chuan-Tsung Su, Hsiu-Yi Lin
MI-P-038	Analysis of Spinal Curvature in Scoliosis Radiographs 蘇傳宗, 方翡莉, 邱彥榕 Chuan-Tsung Su, Fei-Li Fang , Yen-Jung Chiu



第40屆生物醫學聯合學術年會

台灣生物化學及分子生物學學會

編號	論文題目
BC001	Candidate Cargo Receptors Potentially Mediate Zika Virus-Induced Mitophagy Accompanied by Altered Mitochondrial Dynamics 張立婷, 柯博元 Puspa Julistia Puspita, Po-Yuan, Ke
BC002	The mechanism of HCV NS5A-mediated mitophagy 蕭元超, 張志瑋, 柯博元 Yuan-Chao Hsiao, Chih-Wei Chang, Po-Yuan Ke
BC003	The ubiquitin-binding protein ANKRD13A mediates VCP-dependent mitochondrial outer membrane rupture during PINK1/Parkin-mediated mitophagy 朱瑋華, 林煜珊, 郭靖, 姜為中 Wei-Hua Chu, Yu-Shan Lin, Jing Guo, Wei-Chung Chiang
BC004	Development of B7H3 Nab-TAC protein degrader 陳欣妤, 潘昱辰, 王慧菁 Chin Xin Yee, Max Yu-Chen Pan, Lily Hui-Ching Wang
BC005	Microfluidic Assessment of Concentration Gradient- and Flow Velocity-Dependent Reactive Oxygen Species Generation in Cell Spheroids 賴泊佑, 譚翰文, 孫永信, 羅凱尹 Po-Yu, Lai, Hon-Man-Herman Tam, Yung-Shin Sun, Kai-Yin Lo
BC006	The development of Nanobody-TAC, a novel bioPROTAC approach for intracellular HBV viral antigen clearance 潘昱辰, 李庭慧, 陳欣妤, 王慧菁 Max Yu-Chen Pan, Ting Hui Lee, Xin Yee Chin, Lily Hui-Ching Wang
BC007	Microfluidic-Based Evaluation of the Effects of Blue Light Intensity and Antioxidant Concentration Gradients on ROS Production in Retinal Pigment Epithelial Cells (ARPE-19) 譚翰文, 王聖諺, 孫永信, 羅凱尹 Hon Man Herman Tam, Sheng-Yen Wang, Yung-Shin Sun, Kai-Yin Lo
BC008	Longitudinal Profiling of Oral Microbiota and Inflammatory Responses in OSCC Patients Receiving Green Propolis Supplementation 吳宥葶, 李佳欣, 張煦婕, 黃采薇, 邱亦涵 Yu-Ting Wu, Chia-Hsin Lee, Hsu-Chieh Chang, Tsai-Wei Huang, Yi-Han Chiu
BC009	Self-assembled Nanoparticles of an Immune Checkpoint Inhibitor and a Chemotherapy Drug for Improving Cancer Therapy 戴源宏, 洪崇恆, 鄒協成 Yuan Hong Tai, Chung-Heng Hung, Shey-Cherng Tzou
BC010	Golgin-97 Depletion Reshapes the Triple-Negative Breast Cancer Secretome to Drive Invasiveness via Extracellular Vesicle 陳庠廷, 林藝芸, 郭昀芳, 游佳融 Xiang Ting Chen, Yi-Yun Lin, Yun-Fang Kuo, Chia-Jung Yu

編號	論文題目
BC011	Antitumor Effects of Novel Pyrazole-Containing Dipeptide Derivatives in CT-26 Colorectal Cancer Cells: Apoptosis Induction, Cell Cycle Arrest, and Mitochondrial Dysfunction 朱苡瑄, 鄭國聖, 桂國倫, 黃若彤, 邱亦涵 Yi-Hsuan Chu, Kuo-Sheng Cheng, Kuo-Lun Kuei, Jo-Tung Huang, Yi-Han Chiu
BC012	Pentraxin 3/CD44-mediated senescence links tumor microenvironment to sorafenib failure in HCC 陳柄彥, 王育民 Ping-Wen Chen, Ju-Ming Wang
BC013	Investigating PTX3-Mediated M2 Macrophage and Consequent Effects on Cytotoxicity CD8+ T cells in Colorectal Cancer 葉育嘉, 王育民 Yu-Chia Yeh, Ju-Ming Wang
BC014	Investigating the Role of PTX3-Involved Exosomal Trafficking in Melanoma Metastasis and Invasion 王綵葳, 王育民 Chai-Wei Wang, Ju-Ming Wang
BC015	Structure-Guided Rational Design of Thermoresponsive Ferritin Nanocages for Rapid and Non-Destructive Drug Loading 蘇筱晴, 黃群偉, 張虔翊, 黃楓婷 Hsiao-Ching Su, Chiun-Wei Huang, Chien-Yi Chang, Feng-Ting Huang
BC016	Reprogramming the Glioblastoma Microenvironment through FAP-Targeted Nanodelivery and Immunogenic Cell Death 曾翊翔, 林家仔, 黃楓婷, 黃群偉 TSENG Yi-Hsiang, Jia-Yu Lin, Feng-Ting Huang, Chiun-Wei Huang
BC017	Development of tumor-targeting polyelectrolyte-coated PLGA nanoparticles via microfluidic technology. 王羿程, 陳信安, 金佳營, 楊晏安, 黃士旻, 楊震中, 陳正忠 Xin-An Chen, Chia-Ying Chin, Yen-An Young, Shih-Hsin Huang, Jenn-Jong Young, Cheng-cheung Chen
BC018	Development and Mechanistic Investigation of a Nuclear-Targeting Delivery Platform for Anticancer Therapeutics 李之勤, 戴源宏, 洪崇恆, 鄧協成 Zhi-Qin Li, Yuan-Hong Tai, Chung-Heng Hung, Shey-Cherng Tzou
BC019	Spatial Proteomics Identifies a KIF5A–RAC1 Transport Module Driving Mitochondrial Transfer Through Tunneling Nanotubes in Neuroblastoma 俞松林, 高翊竣, 黃宣誠, 阮雪芬 Sung-Lin Yu, Yi-Chun Kao, Hsuan-Cheng Huang, Hsueh-Fen Juan



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BC020	3D Structure of Cell Clusters on Soft Gel Reveals Intratumoral Cancer Cell Heterogeneity 郭展佑, 高婷玉, 張文玲, 賴銘淙, 鍾元強, 方聖雄, 徐治平 Zhanyou Guo, Ting-Yu Kao, Wen-Lin Chang, Ming-Tsung Lai, Yuan-Chiang Chung, Sheng-Shiung Fang, Chih-Ping Hsu
BC021	Elucidating the Molecular Drivers of Phyllodes Tumor Malignancy and Metastasis to Identify Actionable Therapeutic Targets 潘紫榆, 劉晴昱, 譚翰文, 潘群凱, 楊雅雯, 羅凱尹 Pan Zih Yu, Ching-Yu Liu, Hon-Man-Herman Tam, Chun-Kai Pan, Ya-Wen Yang, Kai-Yin Lo
BC022	The Role of ^{64}Cu -ATSM and ^{64}Cu -GTSM in Pancreatic Cancer Diagnosis: Correlations with Hypoxia and KRAS G12D Mutation. 羅佳茜 Chia-Chien Lo
BC023	Cisplatin Induces NRF2-Mediated Transcription and Autophagic Secretion of IL-33 in Esophageal Squamous Cell Carcinoma 劉薰, 謝智雄, 何孟亭, 張維倫, 王憶卿 Hsun Liu, Chih-Hsiung Hsieh, Meng-Ting Ho, Wei-Lun Chang, Yi-Ching Wang
BC024	Investigating the Efficacy and Mechanism of Rosoxacin in Treating Metabolic Dysfunction-Associated Steatotic Liver Disease 黃筱真, 楊進木, 鄒協成 Hsiao-Chen Huang, Jinn-Moon Yang, Shey-Cherng Tzou
BC025	Drosophila WIPI3/4 Maintains Intestinal Tissue Homeostasis by Restraining Stem Cell Proliferation and Modulating mTOR Signaling 陳冠宇, 李翊瑄, 陳光超 Kuan-Yu Chen, I-Hsuan Lee, Guang-Chao Chen
BC026	Fas Apoptosis Inhibitory Molecule (FAIM) Regulates Adipose Browning, Glucose Homeostasis and Thermogenesis Vasundhra Gautam, Lloyd Noriega, 王志豪 Vasundhra Gautam, Lloyd Noriega, Chih-Hao Wang
BC027	Exploring the Roles of Hepatic Integrin $\alpha\beta 1$ in TGF- β Mediated Liver Fibrosis 林沛璇, 盧俞伶, 何國牟 林沛璇, Yu-Ling Lu, Guor-Mour Her
BC028	ANGPTL6-regulated Type 1 Macrophages Polarization Alleviates Hepatic Stellate Cells Inflammatory Responses 施明煊, 方誠傑, 廖宜真 Shih Ming Syuan, Cheng-Chieh Fang, Yi-Jen Liao

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BC029	DHODH Inhibition Remodels the Lipid Droplet Proteome and Disrupts Mitochondrial Complex I Assembly 鐘若綺, 陳品妤, 高翊竣, 黃宣誠, 阮雪芬 Jo-Chi Chung, Pin-Yu Chen, Yi-Chun Kao, Hsuan-Cheng Huang, Hsueh-Fen Juan
BC030	Role of Exosomal Specific miRNA in Treating Cyclophosphamide-Induced Premature Ovarian Failure and Circadian Rhythm Disorder in a Mouse Model 邢睿謙, 黃彥華 Jui-Chien Hsing, Yen-Hua Huang
BC031	The Pathological Role of NUSAP1 in Exacerbating MAFLD-Related HCC Progression 林沛瑾, 黃建銘, 黃種粹, 何國牟 Pei-Jin Lin, Chien-Ming Huang, Chung-Tsui Huang, Guor-Mour Her
BC032	Characterization of Translatable Non-Co-Linear Transcripts and Their Regulatory Roles in Breast Cancer 郭炯佑, 陳育辰 Chiung-Yu Kuo, Yu-Chen Chen
BC033	Regulatory Mechanisms and Interplay among the Dedicated Chaperones of Ribosomal Proteins 倪郁雯, 呂奇典, 羅凱尹 Yu-Wen Ni, Chi-Dian Lu, Kai-Yin Lo
BC034	Transcriptional Mechanisms of CEBPB-Driven CCL5 Induction in C9orf72-ALS Associated Microglial Neuroinflammation 謝汶錡, 林俊宇, 王紹銘 Wen Chi, Hsieh, Chun Yu, Lin, Shao Ming, Wang
BC035	Arginine-Rich Dipeptide Repeat Proteins Exacerbate C9orf72-Associated ALS via CEBPD Upregulation 黃雅雯, 王紹銘 Ya Wen Huang, Shao Ming Wang
BC036	The Role of Ubiquitination in Regulating the Protein Stability of Immune Checkpoint Molecules in T Cells 賴儷心, 凌倫翎, 王憶卿 Li-Hsin, Lai, Lun-Ling Ling, Yi-Ching Wang
BC037	Dissecting the Role of SUMOylation in Ribosome Biogenesis: Insights from the Mss4–Bcp1–uL14 Pathway 趙軒德, 陳建瑜, 曾詠銘, 羅凱尹 Hsuan-Te Chao, Chien-Yu Chen, Ving-Mein Chang, Kai-Yin Lo
BC038	Dynamic Transitions and Mechanistic Insights into RAD51-Mediated Homologous Recombination 羅世奇, 葉欣怡, 楊成翰, 林承威, 葉敏琪, 龔宏源, 何孟樵 Luo Shih Chi, Hsin-Yi Yeh, Cheng-Han Yang, Cheng-Wei Lin, Min-Chi Yeh, Peter Chi, Meng-Chiao Ho



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BC039	Unraveling the Role of Yeast Yku Protein in Telomere Maintenance Using Single-Molecule Assays 韓昀健, 林敬哲, 李弘文 Yun-Chieh Han, Jing-Jer Lin, Hung-Wen Li
BC040	Investigating the Role of Polyamines and TGM2 in Cellular Senescence 曾恩慈, 林敬哲 En-Cih Tzeng, Jing-Jer Lin
BC041	Structural insights into the anticancer drug-resistance mutations in human topoisomerase II α 韓采軒, 張庭軒, 詹迺立 Tsai Hsuan Han, Ting Hsuan Chang, Nei Li Chan
BC042	Structural and functional insights into the β -prism domain of <i>Vibrio campbellii</i> α -hemolysin 陳品勳, 林士鳴 Ping-shin Chen, Shin-Ming Lin
BC043	Functional Characterization of the Rpc31 C-Terminal Region in Regulating RNA Polymerase III Transcription 貝塔莉, Hung-Ta Chen Ester Betaria Malau, Hung-Ta Chen
BC044	Structural Basis for the Inhibition of <i>Mycobacterium tuberculosis</i> DNA Gyrase by a Novel Isatin-Phenylhydrazone Compound 鄒禮駿, 黃詩容, 鄧年芮, Fenfei Leng, 詹迺立 Li Chun Tsou, Shih-Jung Huang, Nian-Ruei Deng, Fenfei Leng, Nei-Li Chan
BC045	Substrate Specificity and Structural Insights into the <i>Mycobacterium tuberculosis</i> Glycogen Debranching Enzyme GlgX 李俊廷, 那丹拉, 王好甄, 呂桐睿, 何孟樵 Chun-Ting Lee, Nadendla Eswar Kumar, Yu-Jen Wang, Todd L. Lowary, Meng-Chiao Ho
BC046	Physiological and Molecular Traits Associated with Lineage-Specific Carbapenem Resistance in <i>Acinetobacter baumannii</i> 林佩蓉, 黃姿雯 Pei-Jung Lin, Tzu-Wen Huang
BC047	Purinosome assembly mechanism: a joint action of UBAP2 and UBAP2L 吳嘉哲, 陳瑞華, 周明杰 Chia, Ruey-Hwa Chen, Ming-Chieh Chou
BC048	Role of the Two-Component System VicRK in Regulating Virulence of a Highly Virulent Clinical <i>Cutibacterium Acnes</i> Isolate in <i>Acne Vulgaris</i> 洪誌翎, 鍾筱菁, 施怡賢, 許哲豪 Jhih Ling Hong, Chiau Jing Jung, Yi Hsien Shih, Che Hao Hsu

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BC050	S-Equol (SE) and Menaquinone-7 (MK-7) Improve Osteoarthritis in Ovariectomized Rats by Regulating Bone Metabolism and Cartilage Degradation 黃姿菁, 謝寶萱, 黃莉文, 鄭筱翎, 邱溥容, 胡祐甄, 張基隆 Tzu-Ching Huang, Bau-Shan Hsieh, Li-Wen Huang, Hsiao-Ling Cheng, Pu-Rong Chiu, Yu-Chen Hu, Kee-Lung Chang
BC101	Investigating Health Functions of Folk Herb Tagetes lemmonii by Analyzing Its Antioxidant Ability and Inhibitory Activity against Disease-Related Key Enzyme 許心柔, 吳思霏, 黃贊勳 Hsin-Jou Hsu, Szu-Pei Wu, Tzann-Shun Hwang
BC102	AlphaFold3-Based Structural Insights into the PTX3 A48D Variant: Regulation of Glycosylation and Multimer Dynamics 林宗諺, 許皓瑞, 劉玉凡 Tsong Yen Lin, Hao-Ruei Hsu, Yu-Fan Liu
BC103	Ribosome Biogenesis as Pap Smear Markers for Women with Endometriosis 莊嘉妤, 張育祺, 張穎宜, 許晉銓 Chia-Yu, Chuang, Yu-Chi Chang, Cherry Yin-Yi Chang, Jim Jinn-Chyuan Sheu
BC104	Selection of pH-Dependent Antibodies using Phage Display Technology 高嘉宜, 林佳慧, 駱正凱, 王辰芳, 黃朝暘, 駱育壠 Chia-Yi Kao, Chia-Hui Lin, Cheng-Kai Lo, Chen-Fang Wang, Chao-Yang Huang, Yu-Hsun Lo
BC105	Study on the Antioxidant Activity of Bakuchiol and Its Development for Cosmetic Applications 何宜倩 Yi-Chien Ho
BC106	Innovative Diagnostic Technologies for Early Detection of Cucumber Green Mottle Mosaic Virus in Melon Seedling 關政平, 蕭崇仁, 曾清山, 陳述 Cheng Ping Kuan, Chung-Jen Hsiao, Ching-Shan Tseng, Shu Chen
BC107	A Novel Fluid Microbead-Based Diagnostic Platform for Detecting Watermelon Bacterial Fruit Blotch 關政平, 劉雅婷, 曾清山, 陳述 Cheng Ping Kuan, Ya-Ting Liu, Ching-Shan Tseng, Shu Chen
BC108	Advanced Diagnostic Approaches for Monitoring Tomato Chlorosis Virus in Tomato Seedlings 關政平, 蕭崇仁, 劉雅婷, 曾清山, 陳述 Cheng Ping Kuan, Chung-Jen Hsiao, Ya-Ting Liu, Ching-Shan Tseng, Shu Chen



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BC110	Dissection of CTPS Filament Formation in Promoting Tumor Growth 鄭之云, 王雋諺, 白麗美 Chih Yun Cheng, Chun-Yen Wang, Li-Mei Pai
BC111	CEACAM6 Targeted Nanobody as a Theranostic Nanoplatfrom for the Detection and Management of Head and Neck Cancer 王麗雯 Li-Wen Wang
BC112	Investigation of the molecular mechanism of LL37 action on prostate cancer cell motility and progression 楊上慶, 蒲永孝, 李明學 Shang Ching Yang, Yeong-Shiau Pu, Ming-Shyue Lee
BC113	Cytotoxic Effects of Immunosuppressive Drug in Human Leukemia Cells 黃惠蘭 Huey-Lan HUANG
BC114	Inhibition of Cell Growth with Armillarikin from Armillaria mellea in Human Esophageal Carcinoma Cells 黃惠蘭 Huey-Lan Huang
BC115	Effects of BTK Inhibitor BI1 on Triple-Negative Breast Cancer Motility 江柔葳, 林心滢, 張震東, 李明學 Jou-Wei Chiang, Hsin-Ying Lin, Geen-Dong Chang, Ming-Shyue Lee
BC116	Exploring Therapeutic Vulnerabilities in Nutrient-Deprived Cancer Cells 謝金珊, 王雋諺, 白麗美 Amelia, Chun-Yen Wang, Li-Mei Pai
BC117	The Role of DDRx in Matriptase-2 Suppressed Prostate Cancer Progression 周昱維, 林心滢, 李明學 Yu-Wei Chou, Hsin-Ying Lin, Ming-Shyue Lee
BC118	Development of Globo H-Specific CAR Therapy for Solid Tumor Targeting 祁君霓, 戴瑋恬, 蔡宜珏, 蔡馨儀, 駱育壘 Jyun-Ni Chi, Wei-Tien Tai, Yi-Jiue Tsai, Hsin-Yi Tsai, Yu-Hsun Lo
BC119	Effects of Erianin on the Proliferation and Apoptosis of HCT116 Colorectal Cancer Cells and the Regulatory Role of PAK2 陳廷睿, 詹文雄 Ting Ruei Chen, Wen-Hsiung Chan

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BC120	The roles of ginger aromatic zingerone nanoparticles on the inhibition of tumorigenesis in human urothelial carcinoma cells 駱宜瑋, 孔美蘭, 戴明泓 Yi-Wei Luo, Mei-Lang Kung, Ming-Hong Tai
BC121	MEK Inhibition Mitigates TNF-alpha-Induced Kynurenine Accumulation and Metabolic Toxicity in Muscle Inflammation 尤仁音, Shih-Wen Du, Chiao-Yin Cheng, Ting-Ya Hsu, Chen-Fang Lin Ren-In You, Shih-Wen Du, Chiao-Yin Cheng, Ting-Ya Hsu, Chen-Fang Lin
BC122	Impact of Lipid Dysregulation on Schwann Cell Function and the Protective Role of Unsaturated Fatty Acids in a DPN Cellular Model 張亦昀, 鄒欣樺, 黃建寧, 林志立 Yi-Yun Zhang, Sing-Hua Tsou, Chien-Ning Huang, Chih-Li Lin
BC123	RPE-Derived Exosomes Modulate Müller Glial Responses in an In Vitro Diabetic Retinal Disease Model 翁紹姪, 鄒欣樺, 黃建寧, 許閔彥, 林志立 Shao-Hsing Weng, Sing-Hua Tsou, Chien-Ning Huang, Min-Yen Hsu, Chih-Li Lin
BC124	Polo-like kinase 3 modulates human adipogenesis through PPAR γ and p53 signaling 許曉薇, 張恬君, 張以承, 李柏居, 李威傑, 陳曉玫, 莊立民 Siow-Wey, Hee, Tien-Jyun Chang, Yi-Cheng Chang, Po-Chu Lee, Wei-Jei Lee, Shiau-Mei Chen, Lee-Ming Chuang
BC125	探討 TNS1 相分離在調控肺癌上皮 - 間質轉換 (EMT) 過程中的角色 賴昊煌, 郭津岑 Hao-Huang Lai, Jean-Cheng Kuo
BC126	BT&D2 AI-Guided Discovery and Kinetic Mapping of a Soil-Microbe Glycosyltransferase for Targeted Glycosylation of Indolocarbazole Anticancer Scaffolds 曾柏嚴, 柯承志, 陳申霖, 楊享濤, 邱顯泰 Bo-Yan Zeng, Cheng-Chih Ke, Shen-Lin Chen, Xiang-Jun Yang, Hsien-Tai Chiu
BC127	AI-Guided Discovery and Extractive Fingerprinting of Novel Herbal Formulations for Prevention and Treatment of Hypertrophic Scars and Keloids Using the BT&D2 System 曾柏嚴, 陳申霖, 林辰育, 邱顯泰 Bo-Yan Zeng, Shen-Lin Chen, Cheng-Yu Lin, Hsien-Tai Chiu
BC128	Effects of Hydrogen Peroxide Seed Priming on Germination and Chilling Tolerance in Mung Bean (<i>Vigna radiata</i>) Seedlings 黃凱琳, 陳昌廷, 翁靖媛, 陳思騰, 張喬茵, 游志文 Kai-Lin Huang, Chang-Ting, Chen, Jing-Yuan Weng, Ssu-Teng Chen, Chiao-Yin Chang, Chih-Wen Yu



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BC130	Comparative Evaluation of Live and Heat-Killed GABA-Producing Microbial Candidates on Sleep and Inflammatory Responses in Murine Models 陳柏文, 楊羽潔, 劉禎淑, 蔡承哲, 陳柏元, 楊芷若 陳柏文, Yu-Jie Yang, Zhen-Shu Liu, Cheng-Che Tsai, Bo-Yuan Chen, Zhi-Ruo Yang
BC131	Structural and Biochemical Characterization of a Frameshift-Induced Truncating USP9X Variant Associated with Syndromic Intellectual Disability 鄭詩璇, 許皓瑞, 劉玉凡 Cheng, Shih hsuan, Hao-Ruei Hsu, Yu-Fan Liu
BC132	Age- and Sex-Specific Prevalence of Subclinical Autoimmunity Detected by Antinuclear Antibody Testing in a Hospital-Based Population 徐文通, 陳立民, 蔡光洋, 楊登和, 廖宜恕, 林孟頌, 許宏彰, 張勝皇, 陳嘉文 Wen-Tung Hsu, Li-Mien Chen, Kwang-Yang Tsai, Deng-Ho Yang, Yi-Shu Liao, Meng-Chiung Lin, ung-Chang Hsu, Sheng-Huang Chang, Jia-Wen Chen
BC133	Chronic Hepatitis C Virus Infection with Prediabetes Is Associated with Increased Risks of Cardiovascular Disease and Atherosclerosis 徐文通, 陳立民, 蔡光洋, 楊登和, 廖俊正, 廖宜恕, 林孟頌, 許宏彰, 張勝皇, 陳嘉文 Wen-Tung Hsu, Li-Mien Chen, Kwang-Yang Tsai, Deng-Ho Yang, Chun-Cheng Liao, Yi-Shu Liao, Meng-Chiung Lin, Hung-Chang Hsu, Sheng-Huang Chang, Jia-Wen Chen
BC134	Early-Life Hepatitis B Immunization Reshapes the Gut Microbiota and Attenuates Systemic and Neuroinflammation in Neonatal Mice 董見寧, 邱亦涵 Dong Jian Ning, Yi-Han Chiu
BC135	Bacillus Subtilis Extracellular Vesicles(EVs) Affect Macrophages polarization 黃玉婷, 吳世欣, 王志堯 Tiffany, Shih-Hsin, Wu, Jiu-Yao, Wang
BC136	A Der m 2-Induced IL-8-Based Screening Platform Identifies Curcumin Derivatives as Potential Anti-Inflammatory Modulators in Human Airway Epithelial Cells 廖純嫻, 許皓瑞, 劉玉凡 Chun-Xian Liao, Hao-Ruei Hsu, Yu-Fan Liu
BC137	Establishment of a Der m 2-Induced IL-8 Screening Platform Reveals Anti-Inflammatory Potential of Clinically Used Drugs in Airway Epithelial Cells. 徐榆茹, 許皓瑞, 劉玉凡 Yu-Ru-Hsu, Hao-Ruei Hsu, Yu-Fan Liu

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BC138	SARS-CoV-2 Spike Induces Disease Flares via Binding Human Angiotensin-Converting Enzyme 2 and Toll-Like Receptor 2 to Increase Apoptosis and Autophagy in Systemic Lupus Erythematosus 陳怡成, 謝雨彤, 周祐吉, 蔡青宴, 薛一蘋, 翁嘉澤, 林偉傑, 蔡弘文, 凌斌, 王崇任 Yi-Cheng Chen, Yu-Tung Hsieh, Yu-Chi Chou, Ching-Yen Tsai, Yi-Ping Hsueh, Chia-Tse Weng, Wei-Chieh Lin, Hung-Wen Tsai, Ping Lin, Chrong-Reen Wang
BC139	Low-Cholesterol Environment Promotes DLB-like Pathogenesis by Enhancing A β and α -Synuclein-Induced Neurotoxicity 黃薰慧, 鄒欣樺, 黃建寧, 林志立 Hsun Hui Huang, Sing-Hua Tsou, Chien-Ning Huang, Chih-Li Lin
BC140	Integrated Virtual and MALDI-TOF Screening for the Discovery of Tyrosine Phenol-Lyase Inhibitors from Natural Products and Traditional Chinese Medicine 曾國峰, 陳朝榮 Kuo-Feng Tseng, Chao-Jung Chen
BC141	Structural and functional characterization of a Tc toxin from a Shrimp-pathogenic Vibrio species 郭宛靜, 林士鳴 Wan-Ching Kuo, Shih-Ming Lin
BC142	Strategies for IRES Identification Based on RNA Tertiary Structure Modeling: From Establishing Structural Benchmarks to Large-Scale Database Screening 游家翔, 陳中庸 Chia-Hsiang Yu, Chung-Yung Chen
BC143	A Feasibility Study of Natural Nanoparticles as Carriers for Different Bioactive Components 陳思瑀, 楊顥丞, 馬文隆 Sz-Yu Chen, Johnson Yang, Maverick Ma



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CM002	An E3 Ubiquitin Ligase Regulates Tumor-Associated Macrophage Polarization and Promotes Lung Tumor Progression 黃真榕, 廖偉廷, 徐立中 Viriya Adhiguna Winarso, Wei-Ting Liao, Li-Chung Hsu
CM003	Thermal Modulation of PKR Signaling Controls Antiviral Defense Against Nervous Necrosis Virus in Giant Grouper 李思賢, 陳宗嶽 Sihshien Lee, Tzongyueh Chen
CM004	Investigating LexA Proteins as Potential DNA Loop Extrusion Barriers that Influence Homologous Recombination Repair 陳以婕, 傅詩棋, 陳筱霓, 陳佳昕, 李政昇 Yi-Chieh Chen, Shih-Chi Fu, Hsiao-Ni Chen, Jia-Hsin Chen, Cheng-Sheng Lee
CM005	An E3 ubiquitin Ligase Regulates MHC class II Trafficking in Tumor-Associated Macrophages to Sustain Anti-Tumor Immunity 陳可馨, 廖偉廷, 徐立中 Ke-Hsin, Chen, Wei-Ting, Liao, Li-Chung, Hsu
CM006	AI-assisted Drug Repurposing Identifies FDA-approved Inhibitors Targeting KRASG12D in Pancreatic Ductal Adenocarcinoma 林思蓉, 林群欽, 李珮甄, 劉芷亭, 方淑怡, 翁靖傑 Ssu Jung Lin, Chiun-Chin Lin, Pei-Jhen Li, Chih-Ting Liu, Shu-Yi Fang, Ching-Chieh Weng
CM007	Cohesin-Driven Loop Extrusion Governs Donor Choice During DSB Repair Through Position-Dependent and Regulatory Pathways 陳筱霓, 李政昇 Hsiao Ni Chen, Cheng-Sheng Lee
CM008	TGFBI Integrates Desmoplasia-Driven Mechanotransduction to Promote Metastatic Progression in Pancreatic Ductal Adenocarcinoma 施佩辰, 劉憲, 林宜蓁, 方淑怡, 劉芷亭, 翁靖傑 Pei Chen Shih, Hsien Liu, Yi-Chen Lin, Shu-Yi Fang, Chih-Ting Liu, Ching-Chieh Weng
CM009	The Role of IFIT5 Downregulation in Glioblastoma Multiforme Progression 李芳萱, 洪譽瑄, 陳亭均, 賴韻如 Fang-Hsuan Lee, Yu-Hsuan Hung, Ting-Chun Chen, Yun-Ju Lai

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CM010	Mechanistic Role of ARID1B in Callosal Projection Neuron Development through Regulation of Axon Targeting and Synapse Formation 曾琳斐 LinFei Tseng
CM011	Targeting KIF2C to Overcome Chemoresistance in Ovarian Cancer: A Novel Therapeutic Strategy 林冠如, 王慧菁 Kuan-Ju, Lin, Lily Hui-Chiing Wang
CM012	HDAC6 Defines a Chemotherapy-activated Stromal Program that Promotes CXCL12-driven Metastasis in Pancreatic Ductal Adenocarcinoma 方淑怡, 翁靖傑, 陳永恩, 劉憲 Shu Yi Fang, Ching-Chieh Weng, Michael W.Y. Chan, Hsien Liu
CM013	Human-Driven Evolution of SARS-CoV-2 Breaks Primate Species Barriers 邱鈺庭, 李文雄, 王慧菁 Yu-Ting Chiu, Wen-Hsiung Li, Lily Hui-Ching Wang
CM014	Tumor-Suppressive MiR-375 Inhibits Oral Cancer Cell Proliferation via Blocking Purine Synthesis through Targeting PAICS 賴亭羽, 方慈媛, 夏興國 Ting-Yu Lai, Cih-Yuang Fang, Shine-Gwo Shiah
CM015	Integrated Transcriptomic and Proteomic Profiling Identifies PLD1 as a Critical Regulator of High-Glucose Induced Endothelial Dysfunction 林琦瀚, 楊家欣, 劉玉晴 Devo Lin, Jai-Sing Yang, Yu-Ching Liu
CM016	The Functional Study on the Roles of ITGAV, ITGB1, and ITGBL1 ($\alpha V\beta 1$ - $\beta 1$) Complex in Early Stages of Hepatic Fibrosis and Later Stages of Intrahepatic Cholangiocarcinoma 楊狄潔, 黃種粹, 何國牟 Di Jie Yang, Chung-Tsui Huang, Guor-Mour Her
CM017	Pathophysiological study of Intrahepatic Cholangiocarcinoma Through a CRISPR-Cas9-mediated The TKO CFT compound mutants in Zebrafish 曾涵榆, 黃種粹, 何國牟 Han Yu Tseng, Chung-Tsui Huang, Gour-Mour Her
CM018	Functional Roles of Hyaluronic Acid and CD44 on Collagen Fiber Remodeling in Skin Dermal Fibroblasts 陳薰翊, 鄧暉翰, 許釗凱, 湯銘哲 Xun-Yi Chen, Wei-Han Deng, Chao-Kai Hsu, Ming-Jer Tang
CM019	Extracellular Signaling Regulates Aggresome Formation: the Involvement of EGFR-Ca ²⁺ -NF- κ B in Aggresome Formation and its Therapeutic Implications 艾琇綸, 張瑜芝, 廖昱婷, 黃彥翔, 楊宗穎, 余長澤 Ji-Lun Ai, Yu-Zhi Vivian Zhang, Yu-Ting Amber Liao, Yen-Hsiang Huang, Tsung-Ying Yang, Chang-Tze Ricky Yu



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CM021	Destroying the Cellular Garbage Landfill: Bergamottin Triggers a Synergistic Lethal Storm in Hematological Malignancies by Disrupting the Aggresome Defense System 謝心翎, 廖昱婷, 陳若梅, 滕傑林, 余長澤 Hsin-Ling Hsieh, Yu-Ting Amber Liao, Jo-Mei Maureen Chen, Chieh-Lin Jerry Teng, Chang-Tze Ricky Yu
CM022	SQSTM1 mediates condensate formation to stabilize EGFR in lung cancer cells 江昱嬋, 林彥丞, 趙瑞益 Yuhua Jiang, Yen-Cheng Lin, Jui-I Chao
CM023	Vid27 Mediates an ESCRT-Independent Pathway Promoting Nuclear Envelope Assembly 高珮翊, Emma E Sydir, Human M Farra, David Pellman, 李以如 Pei-Yi Kao, Emma E Sydir, Human M Farra, David Pellman, I-Ju Lee
CM024	Drug Repurposing Strategies Targeting FXR3-Associated Gene Signatures in Pancreatic Cancer 黃巧穎, 余可欣, 李崑豪 Chiou Ying Eng, Ke Xin Yee, Kuen-Haur Lee
CM025	Explore the Role of KIF2C in DNA Double-Strand Break Repair 趙明鴻, 包原韶, 張語軒, 王慧菁 Ming Hong Chao, Yuan-Shao Pao, Yu-Hsuan Chang, Lily Hui-Ching Wang
CM026	Salvia miltiorrhiza Suppresses Secretory Autophagy-Driven Lactate Secretion and Cell Migration in Triple-Negative Breast Cancer 林宛昕, 藍昇輝 Wan-Hsin Lin, Sheng-Hui Lan
CM027	Molecular Mechanism of ASPM-Targeted Regulation of Hepatocellular Carcinoma Cell Fate 潘弘偉, 戴啟明 Hung-Wei Pan
CM028	Protein Engineering and Characterization of Interleukins-2 and -15 for Cell Therapy 施玖伶, 莊偉哲, 張耀宗 Mei-Ling Shih, Woei-Jer Chuang, Yao-Tsung Chang
CM029	Uncovering the Role of the Deubiquitinase USP45 in Cancer Cell Migration and Invasion 林庭葳, 陳光超, 黃莉婷 Ting-Wei Lin, Guang-Chao Chen, Li-Ting Huang

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CM031	Targeted Degradation of Hepatitis B Core Protein Disrupts HBV Nucleocapsid Assembly 吳睿衣, 潘昱辰, 李庭慧, 王慧菁 Jui-I Wu, Yu-Chen Pan, Ting-Hui Lee, Lily, Hui-Ching Wang
CM032	Ultrastructural Organization of Rab11+ Vesicles Carrying Influenza A Virus vRNPs Revealed by Cryo-Electron Tomography 黃泓瑋, 李家瑋, 王俊雄, 王宜萱 Hong-Wei Huang, Chia-Wei Lee, Chun-Hsiung Wang, I-Hsuan Wang
CM033	Development of HBV-Specific CRISPR/Cas9 for Live-Cell Visualization 李庭慧, 王慧菁, 潘昱辰 Ting Hui Lee, Lily Hui-Ching Wang, Max Yu-Chen Pan
CM034	IL-1 β Driven Reprogramming of Pancreatic Stellate Cells into Immunosuppressive LRRc15 ⁺ CAFs in Pancreatic Ductal Adenocarcinoma 沈健, 王竹安 Chieh Shen, Chu-An Wang
CM035	Multiplexed Super-Resolution Microscopy Reveals How Rab11+ Compartments Bias the Trajectory and Fidelity of Influenza A Virus Genome Assembly 吳振輝, 王宜萱 Henry Wu, I-Hsuan Wang
CM036	The alteration of CADM3 in lung and colorectal cancer 王助安, 曾若嘉 Chu-An Wang, Ruo-Chia Tseng
CM037	Investigating the Role of Donor-Proximal Cohesin-Associated Regions and DNA Damage Response Pathways in Loop Extrusion-Enhanced DNA Double-Strand Break Repair 陳佳昕 Jia Hsin Chen
CM038	The role of HCl1 in colorectal cancer 許凱丞, 曾若嘉 Kai-Cheng Hsu, Ruo-Chia Tseng
CM039	Nuclear CHI3L1 Drives Pancreatic Ductal Adenocarcinoma Progression through Noncanonical Glucose-Dependent Acetylation 余順宏, 蘇珮嘉, 王憶卿 Shun-Hong Yu, Pei-Chia Su, Yi-Ching Wang



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CM041	Stay or Move: Multi-Omics Reveal the Heterogeneity of Hybrid E/M and Define Their Spatial Logic in HNSCC 王興翔, 林伯涵, 蔡毓舜, 宋杰紘, 鍾志宏, 楊慕華 Hsing-Hsiang Wang, Po-Han Lin, Yu-Shuen Tsai, Jie-Hong Song, Chih-Hung Chung, Muh-Hwa Yang
CM042	Selection of High-Affinity Iron Oxide-Binding Peptides via Phage Display 池羽淇, 朱忠瀚 Chih Yu-Chi, Chung-Han Chu
CM043	Androgen Deprivation Reprograms Mesenchymal Stem Cells toward a CAF-Like State to Drive STAT3 Activation and Neuroendocrine Differentiation in Prostate Cancer. 王贊鈞, 王齡玉 Tsan Chun Wang, Ling-Yu Wang
CM044	Machine Learning Classifiers for Neuroblastoma Clinical Staging Prediction: Comparative Analysis of Random Forest, XGBoost, and Neural Network Models. 吳耀忠, 林重宏 Yao-Chung Wu, Chorng-Horng Lin
CM045	3D Spheroid Model Reveals the Role of Microenvironment in Hepatitis B Virus Replication 阮紅榮, 王慧菁 Vinh Hong Nguyen, Lily Hui-Ching Wang
CM046	Exploring the Association Between MAFLD-Associated Lipid Metabolic Dysregulation and the Hepatic Metastatic Niche of Colorectal Cancer 謝岳恒, 李崑豪 Yueh-Heng Hsieh, Kuen-Haur Lee
CM047	Purinosome represents an assembly of de novo and salvage purine biosynthesis enzymes and certain stress granule components to promote tumor growth 周詩宇, 周明杰, 陳瑞華 Shih-Yu Chou, Ming-Chieh Chou, Ruey-Hwa Chen
CM048	ORMDL2 Shapes Glioma Progression and Immunity: A Multi-Cohort, Single-Cell, Spatial Synthesis with Clinical and Functional Validation 劉佩筑, 張倍綺, 洪東源, 李耀豐 Pei-Zhu Liu, Pei-Chi Chang, Dueng-Yuan Hueng, Yao-Feng Li
CM049	Jagnal Homolog 1 (JAGN1) Links Tumor Proliferation and DNA-Repair in Glioblastoma: an Integrated Omics, Spatial, and Single-Cell Analyses with Clinic and Function Validation. 黃慧君, 張倍綺, 洪東源, 李耀豐 Hui-Chun Huang, Pei-Chi Chang, Dueng-Yuan Hueng, Yao-Feng Li

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CM051	Orange Pigment in Streptococcus mutans Contributes to Resistance against Oxidative Stress and Immune Surveillance 游家菱, 鍾筱菁 Chia-Ling Yu, Chiau-Jing Jung
CM052	Effects of Aloe vera-Derived Exosomes on Cellular Wound Healing under Simulated Hyperglycemic Conditions 黃謹慧, 潘品辰, 戴浚益, 劉靜雯, 賴筱琦 Chin-Hui Huang, Pin-Chen Pan, Jun-Yi Dai, Ching-Wen Liu, Hsiao-Chi Lai
CM053	Deep Learning-Based Histopathological Image Analysis of H&E Stains for Predicting Common Non-Resistant EGFR Exon Mutations and Targeted Therapy in Non-Small Cell Lung Cancer 顏博民, 王靖維, 趙載光 Bo-Min Yan, Ching-Wei Wang, Tai-Kuang Chao
CM054	The Study of Utilizing B001 for Targeting the DNA Repair Mechanisms in Personalized Cancer Treatment 劉婕妤, 陳金銓 Chieh Yu Liu, Chin Chuan Chen
CM055	Investigating the Extending Lifespan and Molecular Mechanisms of the Compound I001 胡培弛, 陳金銓 Pei-Chih Hu, Chin-Chuan Chen
CM056	Exploring the Potential Therapeutic Targets of a Drug-Tolerant Persister in Head and Neck Cancer 韓思佳, 程含郢, 楊慕華 Sih Jia Han, Han-Ying Cheng, Muh-Hwa Yang
CM057	The CD73-ADORA2B Axis Regulates Type I Interferon Responses in Head and Neck Squamous Cell Carcinoma 陳湘瑢, 賴冠甄, 宋杰紘, 楊慕華 Hsiang-Jung Chen, Kuan-Chen Lai, Jie-Hong Song, Muh-Hwa Yang
CM058	The Role of Fibronectin 1 in Metabolic Reprogramming and Immunomodulation in the Tumor Microenvironment of Liver Cancer 白凱任, 鄭雲心, 黃麗蓉 Kai-Jen Pai, Yun-Hsin Cheng, Li-Rung Huang
CM059	Dendritic Cell vaccine optimized by 5'UTR engineering enhances immunogenicity and antitumor efficacy Yu Zhi Lu, Kuan-Chung Hsiao, Shing-Ling Tsai, Jhih-Peng Tsai, Shih-Cheng Chen, Alan Yueh-Luen Lee, Ko-Jiunn Liu



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CM061	Benzamide-linked Small Molecule LCC18 Induces Integrated Stress Response And Death in Colorectal Cancer Cells Kingsley Chisom Eze, Pei-Ming Yang
CM062	Genotoxic Stress Induces Purinosome Through a Ubiquitin-Dependent Phase Separation Mechanism to Promote Tumor Immune Evasion and Chemoresistance 邱智昊, 陳奕心, 楊珮岑, 鄭婷仁, 陳瑞華 Chih-Hao Chiu, Yi-Hsin Chen, Pei-Tsen Yang, Ting-Jen Rachel Cheng, Ruey-Hwa Chen
CM063	Hypoxia-Induced Extracellular ADP-P2Y ₁₂ -HspB1 Signaling Drives Tunneling Nanotube Formation and Mitochondrial Transfer in Neuroblastoma 馬敏絲, 陳柏安, 高翊竣, 游佩蓁, 黃宣誠, 阮雪芬 Min-Szu Ma, Po-An Chen, Yi-Chun Kao, Pei-Chen Yu, Hsuan-Cheng Huang, Hsueh-Fen Juan
CM064	Proteomics of Molecular Mechanisms in Asiatic Acid-Mediated Suppression of Human Bladder Cancer Cell Proliferation and Metastasis 黃琳蓉, 劉玉晴, 謝逸憲 Lin-Rong Huang, Yu-Ching Liu, Yi-Hsien Hsieh
CM065	Ferroptosis Induces Pyroptosis via Oxidative Modification of N-terminal Gasdermin E in head and neck squamous cell carcinoma 余涵熏, 鍾志宏, 楊慕華 Han Hsun Yu, Chih-Hung Chung, Muh-Hwa Yang
CM066	STK11 F354L Mutation Drives Oncogenic Metabolic Reprogramming through OXPHOS Activation and Dysregulated PGE ₂ Signaling 林楷軒, 徐慧萍, 張詠傑, 張雋曦 Kai-Hsuan Lin, Hui-Ping Hsu, Yung-Chieh Chang, Chun Hei Antonio Cheung
CM067	Homologous recombination counteracts mismatch repair to promote fertility and genetic diversity 洪雅玲, 王廷方 Ya-Ling Hung, Ting-Fang Wang
CM068	Application of Aptamers in the Development of Inflammatory Marker Detection in Urine 陳柏睿, 徐敏恭, 曾俞靜, 龍震宇, 王祥宇 Po-Jui Chen, Min-Kung Hsu, Yu-Jing Zeng, Cheng-Yu Long, Hsian-Yu Wang
CM069	Evaluation of Baculovirus-Expressed Flagellin as a PEDV Vaccine Adjuvant 劉元皓, 柯冠銘, 鄭力廷 Yuan Hao Liu, Guan-Ming Ke, Li-Ting Cheng

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CM071	Immunoglobulin G as a Novel Upstream Driver of Fibrotic Reprogramming in Retinal Pigment Epithelial Cells 黃妍菩, 湯銘哲, 林羽珊, 陳柏予, 郭承翔 Yen-Pu Huang, Ming-Jer Tang, Yu-Shan Lin, Bo-Yu Chen, Cheng-Siang Guo
CM072	Searching for Fermentation Components with Anti-inflammatory Activity in the Guts and the Ability to Promote Probiotic Growth 劉大維, 陳慶源, 謝松源 Ta-Wei D. Liu, Hing-Yuen Chan, Sung-Yuan Hsieh
CM073	Exploring the Mechanisms of a KIF2C Small Molecule Inhibitor in Prolonging Mitotic Progression and Enhancing PICH Recruitment 張語軒, 王慧菁 Yu-Hsuan Chang, Lily Hui-Ching Wang
CM074	Mesoscale Soft X-ray Tomography Reveals Subcellular Rearrangements in Liquid-Liquid Phase Separation and Viral Infections 陳建樺 Jian-hua Chen
CM075	NRF1 Drives Ferroptotic Cell Death via Iron Overload and PERK-ATF4 Signaling in Lung Adenocarcinoma 王一舟, 謝佩坊, 柯俊宏, 吳星賢, 吳俊賢, 林嘉祥, 劉淑芬, 洪瑜嫻, 洪慈穗, 奚明德, 楊堉麟 I-Chou Wang, Pei-Fang Hsieh, Chun-Hung Ko, Hsing-Hsien Wu, Chun-Hsien Wu, Victor C. Lin, Shu-Fen Liu, Yu-Ju Hung, Tzu-Sui Hung, Ming-Der Shi, Yu-Lin Yang
CM076	Targeting NRF1 Inhibits Melanoma Growth Through Mitochondrial Biogenesis-Driven Metabolic Reprogramming and EMT Suppression 柯俊宏, 謝佩坊, 王一舟, 吳星賢, 吳俊賢, 林嘉祥, 劉淑芬, 洪瑜嫻, 洪慈穗, 奚明德, 楊堉麟 Chun-Hung Ko, Pei-Fang Hsieh, I-Chou Wang, Hsing-Hsien Wu, Chun-Hsien Wu, Victor C. Lin, Shu-Fen Liu, Yu-Ju Hung, Tzu-Sui Hung, Ming-Der Shi, Yu-Lin Yang
CM077	Regulatory Effects of Short-Chain Fatty Acids on Vascular Smooth Muscle Cell Function and Atherosclerosis Development 余汶融, 郭呈欽 Wen-Jung Yu, Cheng-Chin Kuo
CM078	Exploring the Mechanisms and Treatment Strategies for Drug Resistance in Prostate Cancer 陳泓基, 張智堯, 王鴻俊 Hong Qi Chen, Zhi-Yao Zhang, Hung-Jung Wang



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CM080	The Promise of X-ray Imaging in Biomedical Research- High Resolution X-ray Imaging for Brains 陳翔欣 Hsiang-Hsin Chen
CM081	Factor N Enhances Proliferative Stability and Autophagic Flux in Human Umbilical Cord-Derived Mesenchymal Stem Cells During Long-Term Expansion 林帛緯, 彭郁翔, 施博凱, 王一舟, 謝佩坊, 柯俊宏, 吳星賢, 吳俊賢, 林嘉祥, 劉淑芬, 洪瑜孺, 洪慈穗, 奚明德, 楊堉麟 Bo-Wei Lin, Yu-Xiang Peng, Bo-Kai Shi, I-Chou Wang, Pei-Fang Hsieh, Chun-Hung Ko, Hsing-Hsien Wu, Chun-Hsien Wu, Victor C. Lin, Shu-Fen Liu, Yu-Ju Hung, Tzu-Sui Hung, Ming-Der Shi, Yu-Lin Yang
CM082	Evolution and International Linkage of the NARI Biodosimetry Laboratory: From Dicentric Chromosome Assay to Smart Medical Applications for Radiation Emergency Response. 姚翔, 林旻萱, 盧安祺, 陳冠因 Xiang Yao, Min-Xuan Lin, An-Chi Lu, Kuan-Yin Chen
CM083	The Interactions of Nucleolin with Epstein-Barr Virus Nuclear Antigen 1 Required for Inhibiting Cell Growth in Human Ovarian Cancer Cells 蔡宗杰 Tzung-Chieh Tsai
CM084	Long-Term Administration of EI-1071 and In Vitro Mechanistic Study of TREM2 Signaling in Microglia in Alzheimer's Disease 黃億芸, 蔡金吾 I-Yun Huang, Jin-Wu Tsai
CM085	GRIN1 Mutation Mechanisms in NMDA Receptor Localization and Cortical Development 陳柏妤, 蔡金吾 Po-Yu Chen, Jin-Wu Tsai
CM086	金頂側耳萃取物之抗氧化能力評估及對 Neuro-2a 小鼠神經母細胞瘤細胞的神經抗衰老作用 紀佳雯, 施養佳 Ji Jia-Wen, Yang-Chia Shih

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CM088	Epigenetic Modifications in Head and Neck Cancer-Derived Extracellular Vesicles and Their Role in Tumor Microenvironment Interactions 何穎宸, 黃則達 Ho Ying-Chen, Tze-Ta Huang
CM089	The Medium with a pH of 6.0 and The Conditioned Medium of The Breast Cancer MDA-MB-468 Cells Induced M2-type Polarization of The Macrophage RAW 264.7 Cell Line 賴紹藩, 賴辰佳, 田孝威 Shao-Chiao Lai, Chen-Jia Lai, Shiao-Wei Tyan
CM090	Liquid Biopsy of SMA Identifies Potential Plasma miRNA Biomarkers 舒佩諭, 李婕寧, 鍾育志, 陳百昇 Shu-Pei-Yu, Jie-Ning Li, Yuh-Jyh Jong, Pai-Sheng Chen
CM091	Expression of ubiquitin carboxyl-terminal hydrolase isozyme L1 and chromogranin A in oxaliplatin-resistant colorectal cancer cells 郭星君, 鄭功全, 黃政義, 謝孟樵, 李克釗 Hsing-Chun Kuo, Kung-Chuan Cheng, Cheng-Yi Huang, Meng-Chiao Hsieh, Ko-Chao Lee
CM092	Factor N Preserves Proliferative Capacity and Mitochondrial Function in Human Umbilical Cord-Derived Mesenchymal Stem Cells During Long-Term Expansion 施雨彤, 林姿穎, 吳孟庭, 王一舟, 謝佩坊, 柯俊宏, 吳星賢, 吳俊賢, 林嘉祥, 劉淑芬, 洪瑜嫻, 洪慈穗, 奚明德, 楊培麟 Yu-Tong Shi, Zih-Ying Lin, Meng-Ting Wu, I-Chou Wang, Pei-Fang Hsieh, Chun-Hung Ko, Hsing-Hsien Wu, Chun-Hsien Wu, Victor C. Lin, Shu-Fen Liu, Yu-Ju Hung, Tzu-Sui Hung, Ming-Der Shi, Yu-Lin Yang
CM093	Characterization of Extracellular Vesicles from Anoectochilus formosanus Hayata and Their Development as High-Performance Skincare Ingredients 邱旻靚, 高毓瑩, 劉坤湘 Min-Ching Chiu, Vivia Y. Kao, Kun-Hsiang Liu
CM094	Investigating the bacteria dependent mechanism of lysine and its derivatives on Caenorhabditis elegans lipid regulation 王郁雯, 阮振維 Yu Wen Wang, Jhen-Wei Ruan



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CM096	Experimental Study on the Effects of Trehalose-Related Molecules on Bacterial Penetration 洪含章, 陳俊翰 Han-Chang Hung, Jiun-Han Chen
CM097	In Vitro Evaluation of the Moisturizing and Anti-aging Effects of Lactobacillus Consortium Ferment Supernatants 劉坤湘, 林羿汶 Kun-Hsiang Liu, Yi-Wen Lin
CM098	Radiosensitizing Nanosystems Trigger Systemic Antitumor Immunity in Breast Cancer 李妮芯, 劉澤英, 江承諭 N-shin Li, Tse-Ying Liu, Cheng-Yu Chiang
CM099	Adipose Stromal Cells Attenuate Diabetes-induced Kidney Dysfunction through GLUT Reduction 蔣桂芳, 陳佩萱, 湯佳樺, 李柏蒼, 陳理維 Kuei-Fang Chiang, Pei-Hsuan Chen, Chia-Hua Tang, Po-Tsang Lee, Lee-Wei Chen
CM100	Evaluation of the Novel Chemical Compound Targeting Glioblastoma: Regulating cell viability and migration 戴嘉宏, 賴韻如 Chia-Hung Tai, Yun-Ju Lai
CM101	Therapeutic Potential of Plant-Derived Extracellular Vesicles for Lung Cancer 李駱霆, 詹絜雯, 陳昱瑄, 王東弘, 陳金銓, 陳琦媛 Luo-Ting Li, Chieh-Wen Chan, Yu-Xuan Chen, Tong-Hong Wang, Chin-Chuan Chen, Chi-Yuan Chen
CM102	Natural Compound-Based Strategies to Address EGFR-TKI Resistance in Lung Cancer 胡佩蓉, 詹絜雯, 陳昱瑄, 許家馨, 王東弘, 陳金銓, 呂彥禮, 陳琦媛 Pei-Rong Hu, Chieh-Wen Chan, Yu-Xuan Chen, Chia-Hsin Hsu, Tong-Hong Wang, Chin-Chuan Chen, Yann-Lii Leu, Chi-Yuan Chen
CM103	Anticancer Mechanisms of Dihydroaustrasulfone Alcohol Isolated from Cladiella Australis on Human Leukemia Cell Lines 周巧閔, 黃穎芝, 劉淑瑛, 賴冠銘, 曾若涵 Chiao-Min Chou, Ying-Chih Huang, Shu-Ying Liu, Kuan-Ming Lai, Ruo-Han Tseng
CM104	The Alteration of HBP1 in Colon Cancer 楊恩悉, 曾若嘉 Cindy Jeo, Ruo-Chia Tseng

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CM105	The Roles of AIM2 and ISG15 in Modulating Tamoxifen Sensitivity in ER-Positive Breast Cancer Cells 蔡歆茹, 薛欣宜, 鍾炯漢, 陳怡曉, 陳懿芬 Hsin-Ju Tsai, Hsin-I Hsuen, Chiung-Han Chung, I-Hsiao Chen, I-Fen Chen
CM106	Cellular gC1qR interacts with Enterovirus-A71 VP4 to spatiotemporally modulate viral uncoating, translation, innate signaling, and cell fate 徐亦萱, 林宛萱, 蔡佩苓, 陳冠維, 林恩如, 連芸吟, 王憲威 Yi Shiuan Hsu, Wan-Hsuan Lin, Pei-Ling Tsai, Kuan-Wei Chen, En-Ju Lin, Yun-Yin Lien, Shainn-Wei Wang
CM107	Visualizing Cellular Organelles in Cells by Soft X-ray Tomography 林子敬, 謝嘉濤, 華莫達桑, 陳昶麟 Zi-Jing Lin, Chia-Chun Hsieh, Mo Da-Sang Hua, Chang-Lin Chen
CM108	An Integrated Cryo-Preparation Protocol for Biological Specimens in Soft X-ray Tomography 謝嘉濤, 陳昶麟, 華莫達桑, 陳建樺, 林子敬 Chia-Chun Hsieh, Chang-Lin Chen, Mo Da-Sang Hua, Jian-Hua Chen, Zi-Jing Lin
CM109	The Role of SERPINE1/2 in Stromal Fibroblasts 徐苡瑄, 吳梨華, 蔡森田 Yi Hsuan Hsu, Li-Wha Wu, Sen-Tien Tsai
CM110	Essential Roles of Nuclear Envelope Assembly Proteins in Sexual Reproduction 朱堂瑀, 黃嘉宣, 陳齊軒, 李以如 Tang-Yu Zhu, Jia-Syuan Huang, Chi-Hsuan Chen, I-Ju Lee
CM111	Application of mRNA/LncRNA-based Technology in Difficult-to-transfected Cell Types and Model Organisms 彭子寧, 孫玉珠, 王慧菁 Tzu-ning Peng, Yuh-Ju Sun, Lily Hui-Ching Wang
CM112	Investigating the Role of p62 in High-Fat Diet–Accelerated Hepatocarcinogenesis in HBV Transgenic Mice 林伯軒, 廖采穎, 劉子平, 蘇健維, 吳肇卿, 陳至理 Bo-Shen Lin, Tsai-Ying Liao, Zih-Ping Liu, Chien-Wei Su, Jaw-Ching Wu, Chih-Li Chen
CM113	4'-Hydroxywogonin from Scutellaria Baicalensis Suppresses Hepatocellular Carcinoma by Targeting the Gas6/Axl-PI3K/AKT Axis 劉弋岑, 陳琦媛, 陳金銓, 葉昭廷, 王東弘 Yi-Tsen Liu, Chi-Yuan Chen, Chin-Chuan Chen, Chau-Ting Yeh, Tong-Hong Wang
CM114	Pituitary adenylate cyclase activating polypeptide (PACAP) affected the bioactivity of chromatophores in zebrafish 黃顥瑄, 杜明耀, 吳帆, 李言箴, 施凱議, Suthaphat Rungchat, Anurak Khieokhajonkhet, 莊弘, 黃尉東 Yi-Hsuan Huang, Ming-Yao Du, Fan Wu, Yen-Chen Lee, Kai-Yi Shih, Suthaphat Rungchat, Anurak Khieokhajonkhet, Hung Chuang, Wei-Tung Huang



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CM116	Pathology-Guided Machine Learning and Deep Learning of Synchrotron FTIR Imaging for Molecular Characterization of Colorectal Cancer 黃佩瑜, 李耀昌 Pei-Yu Huang, Yao-Chang Lee
CM117	Application of an Interpretable Multiscale Deep Learning Model to Assist in the Identification of Invasive Endometrial Carcinoma 林宜賢, 王靖維, 趙載光 Yi-Sian Lin, Ching-Wei Wang, Tai-Kuang Chao
CM118	Strategies for IRES Identification Based on RNA Tertiary Structure Modeling: From Establishing Structural Benchmarks to Large-Scale Database Screening 游家翔, 陳中庸 Chia-Hsiang Yu, Chung-Yung Chen
CM119	Malignancy Detection in Pleural Effusion Cytology via Interpretable Multi-Scale Deep Learning 黃宜瑄, 王靖維, 趙載光 Yi-Xuan, Huang, Ching-Wei Wang, Tai-Kuang Chao
CM120	Establish a system for UVA-induced mutational signature discovery 涂汶吟, 陳燕麟 Wunzin_Tu, Yen-Lin Chen
CM121	Hinokitiol Induces DNA Damage and Cell Cycle Arrest in Primary Effusion Lymphoma Cells 楊好宜, 徐慧雯, 王怡蓁 Yu-Yi Yang, Huey-Wen Shyu, Yi-Fen Wang
CM122	Development of DNA Aptamers Targeting LIN28B for PROTAC-based Cancer Therapy 黃莞婷 Wan Ting Huang
CM123	Specific ACD Promoter Mutations as Potential Early Biomarkers: Regulation of TERT via ETS1 李雲生, 陳燕麟 Yunsheng Lee, Yen-Lin Chen
CM124	The Role of NEIL3 in Macrophage Phagocytosis and Mouse Hepatoma Tumor Microenvironment 許琇筑, 李芸萍, 黃溫雅 Could Zhu Hsu, Yun-Ping Lee, Wenya Huang

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CM125	Protective Effects of Erinacine A-Enriched <i>Hericium erinaceus</i> Mycelium on Reproductive Dysfunction Induced by Polystyrene Microplastics and High-Fat Diet in Male Rats 顏庭妤, 鄭慈蕎, 林猶權, 黃宜玉, 黃登福, 龔瑞林 Ting-Yu, Yen, Tzu-Chiao Cheng, Jerrell Felim, Yi-Yuh Hwang, Deng-Fwu Hwang, Zwe-Ling Kong
CM126	Synergistic Effects of Fucoidan from <i>Undaria pinnatifida</i> and Grouper Peptides on Glucocorticoid-Induced Muscle Atrophy via Protein Turnover Modulation 許耕肇, 林振全, 林猶權, 龔瑞林, 蔡惠君 Geng-Zgao Xu, Cyuan-Jhen Lin, Jerrell Felim, Zwe-Ling Kong, Huey-Jine Chai
CM127	Studying the Role of DDX3-mediated Translational Control in Neurodegeneration 蔡尚育, 賴銘志 Shang-Yu Tsai, Ming-Chih Lai
CM128	Secondary Metabolites of <i>Aspergillus Oryzae</i> Reduced Viability of the Triple-Negative Breast Cancer MDA-MB-468 Cells 張辰嘉, 徐涵庭, 田孝威 Chen-Chia Chang, Han-Ting Xu, Shiaw-Wei Tyan
CM129	The Medium with a pH of 6.0 and The Conditioned Medium of The Breast Cancer MDA-MB-468 Cells Induced M2-type Polarization of The Macrophage RAW 264.7 Cell Line 賴紹蕎, 賴辰佳, 田孝威 Shao-Chiao Lai, Chen-Jia Lai, Shiaw-Wei Tyan
CM130	Exploring the regulatory pathway of TNFRSF12A in metastasis of triple-negative breast cancer 許錦琳, 徐坊宜, 鄭智美, 劉佩芬 Jin Lin, Fang-Yi Hsu, Chih-Mei Cheng, Pei-Feng Liu
CM131	Dysregulated RNA m ⁶ A landscape orchestrated by METTL3 promotes malignant progression of upper tract urothelial carcinoma 林莉婕, 彭嫻華, 黃雯華, 許凱文 Li-Jie Lin, Pei-Hua Peng, Wendy W Hwang-Verslues, Kai-Wen Hsu
CM132	Hypoxia/HIF-1 α -Driven Induction of LINC00514 Promotes Oncogenic Progression 彭嫻華, 林莉婕, 吳孟芷, 許凱文 Pei-Hua Peng, Li-Jie Lin, Meng-Chih Wu, Kai-Wen Hsu
CM133	Early Therapeutic Effects and Underlying Mechanisms of Mesenchymal Stem Cell-Derived Extracellular Vesicles in Spinal Cord Injury 楊道翔, 彭葛蒂, 朱翠玉, 王資竣, 鄭仁坤 Tao-Hsiang Yang, Raju Poongodi, Tsuei-Yu Chu, Tzu-Chun Wang, Jen-Kun Cheng
CM134	Nerve Growth Factor/Farnesoid X Receptor Axis Mitigates Free Fatty Acid-Induced Steatosis in Hepatocytes 陳柏翰, 蔡明憲, 邱挺嘉, 林宇駿, 高英賢 Po-Han Chen, Ming-Shian Tsai, Ting-Chia Chiu, Yu-Chun Lin, Ying-Hsien Kao



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CM136	In Vitro Effects of Irisin on Dermal Fibroblasts under High Glucose Exposure 謝崙晏, 陳欣妤, 陳柏翰, 張慧柔, 高英賢, 許永佳 Ke-Yan Xie, Xin-Yu Chen, Po-Han Chen, Houy-Rou Chang, Ying-Hsien Kao, Yung-Chia Hsu
CM137	Linking Cancer Stemness-Modulating Circular RNA Dysregulation in Colorectal Cancer to Pan-Cancer Dysregulation of Downstream Effectors 黃秋容, 朱廣邦 Chiu-Jung Huang, Kong Bung Choo
CM138	Investigating the Effect of Molecular Hydrogen on Renal Cell Fibrosis 陳韋中, 洪鈺婷, 魏秋偉 Wei-Zhong Chen, Yu-Ting Hung, Chyou-Wei Wei
CM139	Synergistic Effects of Thymidylate Synthase and Hsp90 Inhibition on Osimertinib Response in H1703 Lung Cancer Cells 盧妤欣, 林芸薇 Yu-Xin Lu, Yun-Wei Lin
CM140	Investigating the expression of genes related to CAR cell drug resistance 江若華, 楊家欣 Jo-Hua Chiang, Jai-Sing Yang
CM141	Beneficial Effects of Oligo Fucoidan in Liver Fibrosis Patients with Chronic Hepatitis C Virus Infection 何其蓁, 邱雅鈴, 柯萬盛 Ci Jhen He, Ya-Ling Chiou, Wang-Sheng Ko
CM142	AKT-Thymidylate Synthase Axis Governs Osimertinib Sensitivity in H520 Lung Cancer Cells 涂郁汶, 林芸薇, 陳志誠 Yu-Wen Tu, Yun-Wei Lin, Jyh-Cheng Chen

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CACB-P02	Evaluating the Proofreading Activity of DNA Polymerase I with Distinctive Mismatch Positions In Vitro 方承皓, 游曉沛, 張淑媛, 蘇剛毅, 方偉宏 Cheng-Hao Fang, Hsiao-Pei Yu, Sui-Yuan Chang, Kang-Yi Su, Woei-Horng Fang
CACB-P03	Constructing Machine Learning-based Plasma Metabolite Database for Hepatocellular Carcinoma Diagnosis 周俊彰, 張權發 Chun-Chang Chou, Chuan-Fa Chang
CACB-P04	Investigation of Shared Resistance Networks to MET-TKIs through Transcriptomic Analysis 李家儀, 湯采寧, 簡民惠, 蘇剛毅 Chia I Lee, Tsai-Ning Tang, Min-Hui Chien, Kang-Yi Su
CACB-P05	Fatty Acid Synthesis Is Essential for the Migration of Breast Cancer Brain Metastasis 湯旻樺, 吳宜臻, 蘇詠涵, 郭靜穎 Min-Hua Tang, Yi-Zhen Wu, Yong-Han Su, Ching-Ying Kuo
CACB-P06	Ultra-Processed Food Accelerate Subcutaneous Liver Tumor Growth and Reduce Sorafenib Sensitivity in Mice 鄭苡彤, 施明煊, 高維謙, 邱琬淳, 廖宜真 Yi-Tong, Zheng, Ming-Syuan Shih, Wei-Chien Kao, Wan-Chun Chiu, Yi-Jen Liao
CACB-P07	Dietary Ultra-Processed Foods Led to More Severe Liver Fibrosis, Inflammation, and Fat Accumulation in Mice 高維謙, 鄭苡彤, 施明煊, 邱琬淳, 廖宜真 Wei chien kao, Yi-Tong Zheng, Ming-Syuan Shih, Wan-Chun Chiu, Yi-Jen Liao
CACB-P08	Dose-Dependent Efficacy of Stromal Vascular Fraction Transplantation in Ameliorating Inflammation and Enhancing Myogenic Potential in Diabetic Skeletal Muscle 賴筱琦, 賴婷婷, 陳明慧 Hsiao Chi Lai, Ting-Ting Lai, Ming-Huei Chen
CACB-P09	Fermented Jaboticaba as a Source of Antibacterial Metabolites: Identification of Functional Gluconobacter spp. Active Against Staphylococcus aureus 呂藍欣, 劉承昆, 簡妙娥, 劉誠松, 黃沛析, 吳昭容, 劉俊仁 Lanhsin Lu, Cheng-kun Liu, Miao-O Chien, Cheng-Sung Liu, Pei-Chi Huang, Chao-Jung Wu, Jun-Jen Liu
CACB-P10	HERPUD1 Limits Autophagy-Driven Survival in TNBC during Glucose Deprivation 鄭宇芯, 吳宜臻, 郭靜穎 Yu Hsin Cheng, Yi-Zhen Wu, Ching-Ying Kuo



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CACB-P12	Ganoderma lucidum Mitigates Cadmium-Induced Genotoxic Stress by Preserving hSMUG1-Dependent DNA Repair Fidelity 張惠嵐, 方承皓, 張倖林, 李雅芬, 徐煒倫, 張容瑄, 簡民慧, 張淑媛, 方偉宏, 蘇剛毅 Hui Lan Chang, Cheng-Hao Fang, Hsing-Lin Chang, Ya-Fen Lee, Wei-Lun Hsu, Jung-Hsuan Chang, Min-Hui Chien, Sui-Yuan Chang, Woei-horng Fang, Kang-Yi Su
CACB-P13	Hyaluronic Acid Nanospheres for Inhibiting Breast Cancer Metastasis 陳維翰, 林彥廷, 劉澤英 Wei-Han Chen, Yan-Ting Lin, Tse-Ying Liu
CACB-P14	Hyaluronic Acid Nanoparticles for Suppressing Breast Cancer Metastasis 陳亭瑜, 胡旻鈺, 劉澤英 Ting-Yu Chen, Chan-Yu Hu, Tse-Ying Liu
CACB-P15	The Role of Molecular Hydrogen in Radioprotection: Radical Regulation and Mitigation of Radiation-Induced Dermatitis 郭勝和, 周沛涵, 劉澤英 Shen-Ho Kuo, Pei-Han Chou, Tse-Ying Liu
CACB-P16	Effects of Short-chain Perfluoroalkyl Substances (PFAS) on Hepatic Stellate Cells Activation 潘柔綺, 許銘華, 廖宜真 Rou Qi Pan, Ming-Hua Hsu, Yi-Jen Liao
CACB-P17	Unconventional Cyclin-CDK Regulation of Male Meiotic Division in Caenorhabditis elegans 陳尚陽, 羅章銘, 江宜臻, 吳瑞菁 Shang Yang Chen, Chang Ming Luo, Yi Jhen Chiang, Jui Ching Wu
CACB-P18	Tumor-Intrinsic SERPINE1 Regulates Immunosuppressive Niche Formation during Breast Cancer Liver Metastasis 蔡欣瑜, 莊雅惠 Hsin-Yu Tsai, Ya-Hui Chuang
CACB-P19	Using an in vitro cell culture model to study the effects of VISTA blockade on tumor-associated macrophages and exhausted CD8 ⁺ T cells 王芳玲, 莊雅惠 Fang-Ling Wang, Ya-Hui Chuang
CACB-P20	Preliminary Analysis of Regional Seasonality in Recurrent Oral Herpes Simplex Virus Infection 祝偉銓, 吳昱學 Wei-Quan Zhu, Yu-Hsueh Wu

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CACB-P22	SLC34A2 Facilitates Renal Fibrosis Through Lipotoxicity in Tubular Cells 周聖竺, 劉若婕, 謝霽安, 楊雅倩, 吳家賢, 饒梓明 Sheng-Chu Chou, Ruo-Jie Liu, Chi-An Hsieh, Ya-Chien Yang, Chia-Hsien Wu, Tzu-Ming Jao
CACB-P23	To Investigate the Role of NAD ⁺ on Energy Metabolism in Cisplatin-Induced Acute Kidney Injury 連育靚, 林承學, 李財坤 Yu-Ching Lien, Cheng-Hsueh Lin, Tsai-Kun Li
CACB-P24	The Impact of Nanoparticles and Cell-Derived Vesicles Complex Combined with Radiation on Distant Tumors 賴薈仔, 吳佩霖, 劉澤英 Hui Yu Lai, Pui-Lam Ng, Tse-Ying Liu
CACB-P25	Method Comparison and Systematic Bias Evaluation of Plasma P-tau217 Measurement Between Quanterix Simoa and Roche cobas e801 Platforms 黃士容, 陳之葉, 賴明龍 Shih-Rong Huang, Chih-Yeh Chen, Min-Long Lai
CACB-P26	Optimizing Body Fluid Examination Efficiency with QCC Approach 林家蓁, 吳嘉福, 賴南彰, 黃玉玲, 林佳霓 Lin Chia Chen, Chia-Fu Wu, Nan-Chang Lai, Yu-Ling Huang, Chia-Ni Lin
CACB-P27	SPAE 驅動的 HbA1c 即時品質管制系統建立與驗證 藍珮綺, 吳曉萍, 鄭靜芸, 林佳霓 Lan Pei Qi, Wu Hsiao Ping, Cheng Ching Yun, Lin Chia Ni
CACB-P28	Proposed Strategy Following the Expansion of Cervical Cancer Screening: Performance Evaluation of the Roche Cobas® 5800 System 蕭世柔, 陳之葉, 賴明龍 Shih-Jou Hsiao, Chih-Yeh Chen, Min-Long Lai
CACB-P29	Carbohydrate Metabolism Breath Analysis in the Evaluation of SIBO and IMO: Clinical Observations within a Taiwanese Cohort 張訓銘, 古伯文, 林佳霓 Hsun Ming Chang, Po-Wen Gu, Chia-Ni Lin
CACB-P30	Population-Based Evaluation of Serum Zinc Reference Range (700–1200 µg/L) Using Big-Data Laboratory Results 許瑜欣, 賴明龍, 陳之葉, 林鈺城, 蔡幼琴, 徐真 Yu-Hsin Hsu, Min-Long Lai, Chih-Yeh Chen, Yuk Shing Lam, Deborah Chua, Chen Hsu
CACB-P31	Understanding CTC Testing in the Real World: CSV-CTC Adds Phenotypic Insight 陳之葉, 林鈺城, 賴明龍 Chih-Yeh Chen, Yuk-Shing Lam, Min-Long Lai



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TXP02	Radiotherapy Enhancement in Triple-Negative Breast Cancer Using a Cisplatin-Loaded Gold Nanomedicine 葉雅玲, 陳家怡, 王應然 Ya-Ling Yeh, Chia-Yi Chen, Ying-Jan Wang
TXP03	Impact of Different Grafting Degrees of Hyaluronic Acid-Based HA-Cys-5-FA Dissolving Microneedles on Local Anti-Melanoma Efficacy. 林佑諭, 褚俊傑 Yuyu Lin, Jiunnjye Chuu
TXP04	Involvement of the Retinoic Acid-Mediated Signaling Axis in Chronic Kidney Disease-Associated Cognitive Impairment 李莉蕙, 陳瑞明 Li-Wei Lee, Ruei-Ming Chen
TXP05	The Triazole Plays a Vital Role in Propiconazole and Penconazole-Induced Tremble in Wistar Rats 呂水淵 Shui-Yuan Lu
TXP06	The Developmental Neurotoxicity Tremble of Propiconazole in Five-generation of Wistar Rats 呂水淵 Shui-Yuan Lu
TXP07	The Developmental Neurotoxicity Tremble of Penconazole in Five-generation of Wistar Rats 呂水淵 Shui-Yuan Lu
TXP08	The Developmental Neurotoxicity Tremble of Glyphosate in Four-generation of Wistar Rats 呂水淵 Shui-Yuan Lu
TXP09	The Benzimidazole Plays a Vital Role in Carbendazim-Induced Developmental Neurotoxicity Tremble in Wistar Rats 呂水淵 Shui-Yuan Lu
TXP10	The Benzimidazole Palys a Vital Role in Carbendazim-Induced Epilepsy in Wistar Rats 呂水淵 Shui-Yuan Lu

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TXP12	Application of the TTC Classification Tool and Combined with In Silico Methods for Predicting the Hazard Classification of Pesticide Metabolites 羅彥鈞, 廖俊麟, 黃湧棋 Yen Chun Lo, Chun Lin Liao, Ru Ci Huang
TXP13	Polystyrene Microplastics Trigger Neurovascular Inflammation and Tight Junction Disruption in Brain Microvascular Endothelial and Glial Cells 施昱瑜, 曾惠卿, 謝喜龍 Yu-yu Shih, Hui-Ching Tseng, Hsi-Lung Hsieh
TXP14	Honokiol Remodels the Gastric Cancer Microenvironment via HSP90AB1-Mediated NF- κ B Signaling Inhibition: A Network Pharmacology and Experimental Validation Study 游僂翌, 許美鈴 Szu I Yu, Meei-Ling Sheu
TXP15	ITIH4 Mitigated Lung Injury And Microbiome Dysbiosis in LPS-Induced ARDS Mice 洪碩遠, 莊校奇 Shuo-Yuan, Hung, Hsiao-Chi, Chuang
TXP16	Mechanisms of Autophagy and Calcium Ion Involvement in Radiation-Induced Skin Injury 鄭詠璇, 王應然 Yung-Hsuan Cheng, Ying-Jan Wang
TXP17	Protective Mechanism of N-acetylcysteine Against Acrylamide-Induced Neurotoxicity in SH-SY5Y Cells 林紘如, 陳瀟太 Yunju Lin, Yng-Tay Chen
TXP18	Predicting High-Solubility Pesticides in Culture Media Using Aqueous Solubility QSAR and Medium-Aware Descriptors. 李悅怡, 林良怡 Yueh Yi Lee, Liang-Yi Lin
TXP19	An Nr-KB and AHR Immunotoxicity Prediction Model Construction for Per- and Polyfluoroalkyl Substances (PFASs). 李悅怡 Yueh Yi Lee
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TXP22	Evaluating the Toxicity and Mechanisms of Polystyrene Nanoplastics Combined with Heavy Metals on Swim Bladder Development in Zebrafish Embryos 陳衍佑, 王應然 Yen-Yu Chen, Ying-Jan Wang
TXP23	Investigating Aryl Hydrocarbon Receptor (AhR)-Mediated Alterations in Cellular Functions and Oxidative Stress Responses in Colorectal Cells Exposed to Chrysene 劉殷齊, 廖伯霖 Yin Chi Liu, Po-Lin Liao
TXP24	Protection of D. kaki Bull Heart Persimmon Leaves Extract on Oxidative Stress-Induced Retinal Dysfunction 賴宜廷, 廖伯霖 Yi-Ting Lai, Po-Lin Liao
TXP25	Non-conjugated Polymer Nanomaterials Alleviate Adverse Effects of Zinc Oxide Nanoparticles on UVB-Irradiated Skin via Inhibiting Cell Pyroptosis 莊于萱, 莊宗原, 李宥萱 Yu-Hsuan Chuang, Tzong-Yuan Juang, Yu-Hsuan Lee
TXP26	ER Proteostasis Disruption by L-selenocystine Triggers Paraptosis-Mediated Immunogenic Cell Death in Colorectal Cancer Cells 羅月霞, 王傑民, 徐偉倫, 蔡宗龍, 鄭獻仁, 林子敬, 賴麗珍, 陳柔妤, 廖家好, 謝嘉濤, 姚少凌, 林哲暘, 蔡宛倫, 羅月霞 Yueh-Hsia Luo, Chieh-Min Wang, Wei-Lun Hsu, Tsung-Lung Tsai, Hsien-Jen Cheng, Zi-Jing Lin, Lee-Jene Lai, Rou-Yu Chen, Chia-Yu Liao, Chia-Chun Hsieh, Chao-Ling Yao, Zhe-Young Lin, Wan-Lun Tsai, Yueh-Hsia Luo
TXP27	Effects of the Natural Coumarin Imperatorin on Hepatic Cytochrome P450s in Mice: Isoform-Selectivity and Time-Dependence 翁芸芳, 池佳珊, 劉諱亭, 廖家慶, 李文泰 Yune-Fang Ueng, Jia-Shan Chih, Jie-Ting Liu, Chia-Ching Liaw, Wen-Tai Li
TXP28	An Evaluation on Chronic Toxicity of Zingiber purpureum Essential Oil in Caenorhabditis elegans Models 陳耕筑, Jakaphun Julsrigival, 林英琦 Geng-Jhu Chen, Jakaphun Julsrigival, Ying-Chi Lin
TXP29	Toxic Effects of Combined Exposure to Zearalenone and Deoxynivalenol in Caenorhabditis elegans 劉詠淳, 魏嘉徵 Yung Chun Liu, Chia-Cheng Wei

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TXP30	Activating the IRE1/XBP1s Pathway Mitigates Mitochondrial Dysfunction and Promotes Adaptive Repair in Cisplatin-Induced Kidney Disease 劉若婕, 江采蓁, 陳佳煌, 姜至剛, 洪冠予 RuoJie Liu, Tsai-Chen Chiang, Jia-Huang Chen, Chih-Kang Chiang, Kuan-Yu Hung
TXP31	Apigenin Ameliorates NaIO ₃ -Induced Retinal Degeneration via CCR4-Mediated Immunomodulation 劉淑浚, 許美玲, 賴德偉 Shu Chun Liu, Meei-Ling Sheu, De-Wei Lai
TXP32	Identification of Potential Therapeutic Compounds for Drug- and Stress-Induced Methamphetamine Reinstatement Using Phosphoproteomic Profiling in a Zebrafish Conditioned Place Preference Model 陳了塵, 林妙霞, 郭崇涵, 詹銘煥, 陳慧誠 Liao-Chen Chen, Miao-Xia Lin, Tsung-Han Kuo, Ming-Huan Chan, Hwei-Hsien Chen
TXP33	Targeting STAT3/AhR Signaling by Honokiol Inhibits Gastric Cancer Growth and Metastasis 關歆芮, 許美鈴 Hsin-Jui Chueh, Meei-Ling Sheu
TXP34	Targeting CIP2A With Honokiol Attenuates Tumor Growth, EMT, and Stemness in Gastric Cancer 葉銘杰, 許美鈴 Ming-Chieh Yeh, Meei-Ling Sheu
TXP35	Melatonin Suppresses Gastric Cancer Progression and Metastasis via Activation of RXRB Signaling 林依蕾, 許美鈴 Yi-Lei Lin, Meei-Ling Sheu
TXP36	Melatonin Suppresses Gastric Cancer Metastasis by Activating the EGR1–PEDF Axis 許子宣, 許美鈴 Tzu Hsuan Hsu, Meei-Ling Sheu
TXP37	Using HDAC11 Knockout Mice to Explore its Role and Molecular Mechanism in the Development of Breast Cancer 廖霽涵, 何元順, 陳莉菁 Liao, Pei-Han, Ho, yuan-soon, Chen, Li-Ching
TXP38	Development of ITIH4 Aerosol Drug for Acute Respiratory Distress Syndrome with Hyperthermia 蔡函, 莊校奇, 柯威任, 范淳皓 Han Tsai, Hsiao-Chi Chuang, Wei-Ren Ke, Chun-Hao Fan
TXP39	A Novel CML–ROS–AhR–MTHFD2 Axis Regulates Vascular Pathology in Diabetic Retinopathy 許佑誠, 許美鈴 Yu-Cheng Hsu, Meei-Ling Sheu



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TXP41	Honokiol Suppresses Peritoneal Dissemination of Gastric Cancer by Targeting the STAT3–PAR1 Signaling Axis 宋良策, 許美鈴 Laing-Tse, Sung, Meei-Ling, Sheu
TXP42	Strategies for Mitigating In-Source Fragmentation of Metanephtrines: Preserving Molecular Integrity for High-Sensitivity LC-MS/MS Analysis Yung-Cheng Jair, 吳婉禎, 陳沛隆, 陳珮珊 Yung-Cheng Jair, Wan-Chan Wu, Pei-Lung Chen, Pai-Shan Chen
TXP43	Immunomodulatory Effects of Nanosome-Encapsulated Honokiol (nHNK) on Antigen-Specific and Delayed-Type Hypersensitivity Models 范凱淇, 武勁州, 郭瑞芳, 王家琪, 詹東榮 Hoi Ki Fan, Chin-Chou Wu, Jui-Fang Kuo, Chia-Chi Wang, Tong-Rong Jan
TXP44	Loss of AHR Promotes Lung Fibrosis via PLOD2-Mediated Collagen Cross-linking and Macrophage Activation 吳承謙, 許美鈴 Cheng Chien Wu, Meei-Ling Sheu
TXP45	IDO1-mediated Immunometabolic Reprogramming Contributes to Herceptin Resistance in HER2-positive Breast Cancer 林瑩祺, 何元順, 陳莉菁 Ying-Chi Lin, Yuan-Soon Ho, Li-Ching Chen
TXP46	Tumor-Intrinsic Moesin Regulates Sensitivity to $\gamma\delta$ T-Mediated Antitumor Responses 戴語晴, 楊士鋒, 王毓慶, 吳怡潔, 張怡雯, 阮驛琇, 黃儀真, 湯扶緯, 余忠仁, 蔡幸真 Yu-Ching Tai, Shih-Feng Yang, Yu-Ching Wang, Yi-Chieh Wu, Yi-Wen Chang, Yi-Hsiu Juan, Yi-Jhen Huang, Di-Wei Tang, Chong-Jen Yu, Hsing-Chen Tsai
TXP47	Sucralose Disrupts the Nuclear Receptor–Circadian Axis to Impair Hepatic Lipid Oxidation: An Integrated Multi-Omics Study in HepaRG Cells 陳喻宣, 葉于嘉, 張瑀庭, 羅宇軒 Yu-Xuan Chen, Yu-Jia Yeh, Yu-Ting Chang, Yu-Syuan Luo
TXP48	Application of High-Throughput Transcriptomics for Prioritization and Mixture Risk Assessment of Perfluoroalkyl Substances 施好融, 林怡君 Yu-Jung Shih, Yi-Jun Lin
TXP49	The Effect of Bleomycin-Induced Pulmonary Fibrosis Involving Ferroptosis and the Lung-Protective Potential of Lotus Seedpod 陳建州, 林佳弘, 余佩蓉, 林鈺翔, 陳璟賢, 林慧萱 Jian-Zhou Chen, Jia-Hong Lin, Pei-Rong Yu, Yu-Xiang Lin, Jing-Hsien Chen, Hui-Hsuan Lin

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TXP51	Anti-inflammatory Symptoms of GCLE on an IMQ-Induced Psoriasis-like Mouse Model 廖俊芃, 張瑋峻, 陳品宇, 張詠華, 江秀梅 Chun-Peng Liao, Wei-Chun Chang, Pin-Yu Chen, Yun-Hua Chang, Hsiu-Mei Chiang
TXP52	Exploring Anti-inflammatory Properties of CA in Human Keratinocytes for the Alleviation of Rosacea Symptoms 盧紫妮, 陳筠喬, 許利登, 郭韋萱, 江秀梅 Tzu-Ni Lu, Yun-Chiao Chen, Li-Deng Xu, Wei-Hsuan Kuo, Hsiu-Mei Chiang
TXP53	Targeted PD-L1 Degradation through Rab5/Rab7-mediated Endocytosis and Nanoparticulophagy using Fluorescent Nanodiamond-Conjugated Atezolizumab in Human Lung Cancer Cells 吳軒仔, 林育璋, 龐君諭, 趙瑞益 Shiuan-Yu Wu, Yu-Wei Lin, Jiun-Yu Pang, Jui-I Chao
TXP54	Effects of Alternative Sweeteners on Reactive Carbonyl Species Formation in Baked Cookies 許采暄, 洪偉倫 Tsai Hsuan Hsu, Wei-Lun Hung
TXP55	Targeting Cancer Stemness SSEA-1 Degradation Using Fluorescent Nanodiamond Conjugated SSEA-1 Antibody through Nanoparticulophagy in Human Glioblastoma Multiforme 邱馨平, 陳亭樺, 蘇逸寧, 邱士華, 趙瑞益 Hsin Ping Chiu, Ting-Hua Chen, Yi-Ning Su, Shih-Hwa Chiou, Jui-I Chao
TXP56	Effects of Temperature Variation on Allergy Response in Airway Epithelial Cell: the Role of TRPM5 林芷萱, 莊校奇 Chih-Hsuan Lin, Hsiao-Chi Chuang
TXP57	An Integrated Testing Strategy (ITS) For Assessing Skin Sensitization Potential And Potency Via Key Event Combinations In The Adverse Outcome Pathway (AOP) Framework. 黃暉秦, 王應然 Wei Chin Huang, Ying-Jan Wang
TXP58	Total Diet Study of Trace Metals in Taiwanese Foods: Concentrations, Dietary Exposure, and Health Risk Assessment 司雯葶, 林怡君 Wenting Szu, Yi-Jun Lin
TXP59	Investigating the Pathophysiological Changes of Acupuncture in Acute Respiratory Distress Syndrome and the Mechanisms of Alveolar Epithelial 江承洲, 莊校奇 Cheng-Chou Chiang, Hsiao-Chi Chuang



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TXP61	Multihospital Machine Learning Study of Rapid eGFR Decline Associated with Antihypertensive Combination Therapy in Chronic Kidney Disease 黃泓縉, 鄭彩梅, 邱惠雯 Hung-Jin Huang, Cai-Mei Zheng, Hui-Wen Chiu
TXP62	Comparative Evaluation of Traditional and Alternative PFAS-Induced Lipid Metabolism Adverse Outcome Pathways in In Vitro Models 鄭博育, 陳容甄 Yu Cheng Po, Rong-Jane Chen
TXP63	High glucose induced upregulation of DPP4 promotes ferroptosis and dermal fibroblast senescence via the cGAS-STING pathway 陳姿蓉, 黃襄川, 黃志揚, 郭薇雯 Tzu-jung Chen, Shang-Chuan Ng, Chih-Yang Huang, Wei-Wen Kuo
TXP64	Forsythoside B Attenuates CXCL10-Exacerbated Pyroptosis and Renal Injury by Suppressing the cGAS/STING/AIM2 Pathway in vitro and in vivo. 蔡欣妤, 郭慧亮, 吳鎮天 Hsin Yu Tsai, Huey-Liang Kuo, Cheng-Tien Wu
TXP65	Comprehensive Assessment of Endocrine-Disrupting and Hepatotoxic Mechanisms of Chlorine-Containing Pesticides Using AOP-Based Alternative Testing Approaches 黃彥萍, 陳容甄 Yan Ping Huang, Rong-Jane, Chen
TXP66	Regulation of Lipophagy by Pterostilbene through KLF10 to Ameliorate Non-Alcoholic Fatty Liver Disease 李佩軒, 陳容甄 Pei-Hsuan, Li, Rong-Jane, Chen
TXP67	Traditional Chinese Medicine Callus Prevents Hypoxia-Induced Cardiac Hypertrophy through Suppressing Cytosolic DNA-Sensing cGAS/STING Pathway 王梓璇, 巫玉琳, 柯品榕, 黃志揚, 黃文欽, 郭薇雯 Zhi-Syuan Wang, Yu-Ling Wu, Pin-Jung Ke, Chih-Yang Huang, Huang-Wen Chin, Wei-Wen Kuo
TXP68	Investigation of Pyridoxal sensitizes gemcitabine efficacy in Non-small cell lung cancer Musarat Hussain, Valens Munyembaraga, 郭薇雯, 黃志揚 Musarat Hussain, Valens Munyembaraga, Wei-Wen Kuo, Chih-Yang Huang
TXP69	A Mutational Signature of Non-Smoking Female Lung Adenocarcinoma in Taiwan Potentially Linked to Chinese-Style Cooking-Oil-Fume Exposure 潘姿羽, 李瑞英, 許益祥, 吳明蒼 Tzu-Yu Pan, Jui-Ying Lee, Yi-Hsiang Hsu, Ming-Tsang Wu

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PYP001	Investigation of the Molecular Mechanisms Underlying Short-term Kisspeptin (KP-10) Exposure-induced inhibition of Glucose stimulated Insulin Secretion in Pancreatic β -cells 黃文祺, 邱智賢, 黃謙 Wen-Chi Huang, Chih-Hsien Chiu, Chien Huang
PYP002	PEGylated Nanoparticle-Induced Acute Hemodynamic Response in Ovariectomized plus Estradiol-Primed Rats 廖昱淇, 陳絲怡, 梁淑鈴, 馬蘊華 Yu-Chi Liao, Si-Yi Chen, Shu-Ling Liang, Yunn-Hwa Ma
PYP003	Development of a Quantitative BK Virus Detection Integrating Recombinase Polymerase Amplification and Lateral Flow Immunoassay 房佩忠, 黃慈歲, 余冠毅, 程雲詳, 劉正哲 Pei-Chung Fang, Tzu-Wei Huang, Kuan-Yi Yu, Yun-Hsiang Cheng, Cheng-Che Liu
PYP004	Distinct Neural And Inflammatory Signatures Underlie Similar Depression Behaviors Induced By Different Stress Paradigms 馬琬瑤, 劉正哲, 黃智偉 Wan-Jiun Ma, Cheng-Che Liu, Chih Wei Huang
PYP005	Comparative Analysis of the Oral Microbiome in Children with Precocious Puberty and Healthy Controls 曾威傑, 陳英傳, 王鼎涵, 劉正哲, 林建銘
PYP006	Association between the Tongue Torsum Microbiome and the Severity of ?Gastro-Esophageal Reflux Disease 郭奕聿, 簡宏哲, 王鼎涵, 劉正哲 Yi-Fong Kuo, Hung-Che Chien, Ding-Han Wang, Cheng-Che Liu
PYP007	Functional investigation of RUNX1T1-L/S during the zebrafish adipogenesis 林德昇, 賴正憲, 何國牟 Te-Shung Lin, Cheng-Hsien Lai, Guor Mour Her
PYP008	The Role of the Retrosplenial Cortex in the Regulation of Depressive-Like Behaviors 蔡于庭, 林姿儀, 何淑君 Yu-Ting Tsai, Tzu-Yi Lin, Margaret S. Ho
PYP009	Investigate the mechanism of the feeding disorder Anorexia Nervosa 林祐彤, 何淑君
PYP010	Mechanistic Roles of Microbiota Dysbiosis and Neurite Outgrowth in Post-Infectious Intestinal Hyperalgesia 林俐妤, 涂佳宏, 吳明賢, 郭瑋庭, 忻凌偉, 余佳慧 Li-Yu Lin, Chia-Hung Tu, Ming-Shiang Wu, Wei-Ting Kuo, Ling-Wei Hsin, Linda Chia-Hui Yu



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PYP011	Hippo signaling is involved in E. coli pathobiont-induced tumorigenesis 蘇歆媛, 胡珮慈, 李憶萱, 魏淑鈺, 倪衍玄, 余佳慧 Xin Yuan Sue, Pei-Tzu Hu, Yi-Hsuan Li, Su-Chen Wei, Yen-Hsuan Ni, Linda Chia-Hui Yu
PYP012	Activity- and Dopamine-dependent Stabilization of Motor Cortex Synapses by Subthalamic Stimulation in Prodromal Parkinsonism 葉瀚元, 吳芮妮, 胡昱庭, 郭昭成, 趙文傑, 吳秉軒, 吳秉彥, 蔡兆柏, 游筑嫻, 吳玉威
PYP013	An Awake-Behaving Wide-Field Imaging Platform for Mapping Large-Scale Cortical Circuits Under Deep Brain Stimulation 游筑嫻, 胡昱庭, 葉瀚元, 羅奕喬, 林昱成, 陳妍媛, 鄭信忠, 吳玉威 Jhu Rou You, Yu-Ting Hu, Han-Yuan Yeh, I-Chiao Lo, Yu-Cheng Lin, Yen-Yuan Chen, Sin-Jhong Cheng, Yu-Wei Wu
PYP014	Neural Population Dynamics of Movement and Somatosensory Encoding in the Subthalamic Nucleus and Zona Incerta 鄧皓芸, 吳秉軒, 鍾之晴, 吳玉威 Hao-Yun Teng, Bing-Shiuan Wu, Chih-Ching Chung, Yu-Wei Wu
PYP015	A Cloud-Based Information System for Functional Near-Infrared Spectroscopy Analysis in Psychiatric Research and Clinical Practice 陳慶隆, 蘇昭賢, 陳致衡, 陳俊明, 潘潛廷, 吳承翰 Ching-Long Chen, Zhao-Xian Su, Chi-Hang Chan, Chun-Ming Chen, Jin-Ting Pan, Cheng-Han Wu
PYP016	IL-1R1 Signaling Links Oxidative Stress to Immune Dysregulation in Hepatic Ischemia-Reperfusion Injury 高義筑, 吳莉玲 Yi-Chu Kao, Li-Ling Wu
PYP017	Hyperglycemia Disrupts Mitochondrial Function and Endothelial Junction Integrity in Human Umbilical Vein Endothelial Cells 黃昱翔, 莊硯捷, 吳舒愉 Yu-Hsiang Huang, Yen-Chieh Chuang, Shu-Yu Wu
PYP018	Chronic Hyperglycemia Disrupts Endothelial Structural Integrity and Inflammatory Signaling Balance: Modulatory Effects of Vitamin D 林郁瀚, 鄭珈昆, 吳舒愉 Han Lin Yu, Jia-Pi Zheng, Shu-Yu Wu
PYP019	Adolescent Restraint Stress Induces Anxiety-Related Behaviors in Mice Associated with Histone Acetylation-Linked NKCC1 Upregulation in the Dorsal Hippocampus 陳易群, 林維星, 陳子漠, 呂睿傑, 吳宗訓, 呂國棟, 楊奕玲
PYP020	A Non-Canonical Role of Melanopsin in Blue-Light-Induced Retinal Vascular Activation 李青澔, 楊宗珉, 陳沅希, 范姜芊昀, 李怡萱 Ching-Hao Li, Tsung-Min Yang, Yuan-Hsi Chen, Chien-Yun Fan Chiang, I-Hsuan Li

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PYP021	GYT-088 Restores Endothelial Function and Prevents Retinal Vascular Pathology in Non-Proliferative and Proliferative Diabetic Retinopathies 楊宗珉, 林雅婷, 詹燕茹, 許泰儒, 鄭幼文, 李青濤 Tsung-Min Yang, Ya-Tin Lin, Yen-Ju Chan, Tai-Ju Hsu, Yu-Wen Cheng, Ching-Hao Li
PYP022	Investigation of Molecular Mechanisms Underlying the Anti-Clear Cell Renal Carcinoma Effects of Simvastatin and Troglitazone Combination Treatment 許馨予, 阮淑慧 Hsin Yu Hsu, Shu-Hui Juan
PYP023	Investigating the Role of Soluble Epoxide Hydrolase in Neuroinflammation Using a Nitroglycerin-Induced Migraine-Like Mouse Model 陳捷妤, 蕭立恩, 陳世彬, 阮琪昌 Jie-Yu Chen, Li-En Hsiao, Shih-Pin Chen, Chi-Chang Juan
PYP024	Urinary Proteomics Analysis for Chronic Pelvic Pain Syndrome: Exploring Novel Diagnostic Biomarkers and Pathogenic Mechanisms 汪雅雲, 林佑樺, 林盈宏 Ya Yun Wang, Yu-Hua Lin, Ying-Hung Lin
PYP025	Neurobehavioral and Metabolic Features of NMN Pretreatment in a PTZ-Induced Zebrafish Model 楊文龍, 林彥昌, 歐陽駿濟 Wen-Shuang Yang, Yen-Chang Lin, JunYu Ouyang
PYP026	Cardiac and Muscular Functional Changes Following Fucoidan and Fucoxanthin Supplementation in Aging Mice 蔡琛怡, 林彥昌, 歐陽駿濟
PYP027	KIF20B Mutation Disrupts Spermatogenesis and Acrosome Formation Leading to Male Subfertility 汪雅雲, 林盈宏 Ya Yun Wang, Ying-Hung Lin
PYP028	Excess Ammonia Alters Glutamatergic Synaptic Transmission and GluN2B Expression in an mTOR-Relevant Genetic Context 張景翔, 吳麒均, 李旂緯, 李宜釗, 林惠菁 Ching-Hsiang Chang, Chi-Chun Wu, Chi-Wei Lee, Yi-Chao Lee, Hui-Ching Lin
PYP029	The Effects of the NPFFR2 Agonist AC263093 on the Regulation of Obesity-related Behavioral Alterations 蔡思綺, 林雅婷 Sze Chi Tsai, Ya-Tin Lin
PYP030	The Impact of NPFFR2 Activation on Central Neuroinflammation and Its Contribution to the Impairment of Hypothalamic Insulin Sensitivity 蔡沛潔, 莊昀庭, 賴苡捷, 林雅婷



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PYP032	The Effect of GPR30 Induced by G-1 on the Feather Pigmentation in Mallard Ducks Xiu Min Wu, 唐品琦 Xiu Min Wu, Pin-Chi Tang
PYP033	In Vitro Modeling of Neuronal Senescence and Alzheimer's Disease Using hiPSC-Derived Neurons 陳是瑋, 翁雨蕙
PYP034	The Role of FKBP5/FKBP51 in Regulating Pluripotency and Stress Responses in Human iPSCs 柳曉君, 陳是瑋, 翁雨蕙, 李怡萱 Hsiao-Chun Liu, Shih-Wei Chen, Yu-Hui Wong, Yi-Hsuan Lee
PYP035	Targeting G9a Enhances Imatinib Sensitivity in Chronic Myelogenous Leukemia Cells through Modulation of Autophagy and Apoptosis Pathways 張馨予, 張原翊 Hsin Yu Chang, Yuan-I Chang
PYP036	Soluble Epoxide Hydrolase in Brown Adipose Tissue Regulates Bone Marrow Pro-inflammatory Response 楊禾顗, 陳碩文, 張原翊 He-Yi Yang, Shuoh-Wen Chen, Yuan-I Chang
PYP037	Temperature-Dependent Innate Immune Responses in Viral Mimic-Primed Endotoxin Models of Inflammation 陳敏惠, 張原翊 Min Hui Chen, Yuan-I Chang
PYP038	The Prognosticators of Renal Insufficiency and Beta-2-microglobulin in Newly Diagnosed Multiple Myeloma 蕭鈺璇, 林世強, 余垣斌, 張智鈞 Yu-Hsuan Hsiao, Shih-Chiang Lin, Yuan-Bin Yu, Chih-Chun Chang
PYP039	Learning-dependent emergence of an internal threat-prediction signal in ventral hippocampal circuits 劉奕辰, 連正章 Yi Chen Liou, Cheng Chang Lien
PYP040	Modulation of Pain Engram Cells in the Ventral Posteromedial Nucleus Alleviates Chronic Muscle Pain and Associated Anxiety-like Behaviors 蔡泳蓁, 連正章
PYP041	mGluR5 in Adult Hippocampal Neurogenesis and Its Role in Emotional Behaviors 周瑀凌, 連正章 Katrina Chou, Cheng-Chang Lien

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PYP043	Differential Role of Klotho in Dentate Gyrus and Behavior 歐諾亞,Omeiza, Noah Adavize,Shi-Bing Yang,Cheng-Chang Lien
PYP044	ZO-1 depletion drives spindle misorientation and DNA damage to promote chromosomal instability in colorectal cancer 郭瑋庭,張映捷,蔡依璇,陳儷元,陳漪紋 Wei-Ting Kuo, Ying-Chieh Chang, Yi-Syuan Tsai, Li-yuan Chen, Yi-Wen Chen
PYP045	TGFβ-Driven Occludin Endocytosis Tunes Canonical and Non-Canonical Signaling to Attenuate Caspase-3 Mediated Epithelial Apoptosis 趙紫翎,林家瑩,張映捷,郭瑋庭 Zih-Ling Chao, Chia-Ying Lin, Ying-Chieh Chang, Wei-Ting Kuo
PYP046	Cytotoxic Effects and Mechanistic Investigation of Red Ginger Extract in Combination with Simvastatin on Hepatocellular carcinoma and Cancer Stem Cells 李于慧,吳賜猛,余俊賢,陳日榮 Yu-Hui Lee, Shy-Meeng Wu, Chun-Hsien Yu, Jih-Jung Chen
PYP047	Pinolenic Acid Attenuates LPS-Induced Inflammatory Responses in Murine Macrophages 李哲宇,陳日榮,莊路德
PYP048	miR-6815-3p-Enriched Wharton's Jelly Mesenchymal Stem Cell-Derived Exosomes Modulate Oxidative Stress-Induced Pyroptosis for the Amelioration of Hepatic Aging 陳薇珊,陳冬生 Wei-Shan Chen, Tung-Sheng Chen
PYP049	Transient Activation of Npr3 ⁺ Basal Forebrain Neurons Promotes Reward Seeking by Engaging Endogenous Reward-prediction Error Signals 劉曉甄,林士傑 Hsiao-Chen Liu, Shih-Chieh Lin
PYP050	Pathobiont Emergence Triggered by Epithelial MLCK Activation Drives Microbiota Dysbiosis and Inflammatory Responses in Gnotobiotic Mice 白宇辰,李憶萱,魏淑鈺,林志萱,黃昱璵,余佳慧 Yu Chen Pai, Yi-Hsuan Li, Shu-Chen Wei, Jr-Shiuan Lin, Yu-Tsung Huang, Linda Chia-Hui Yu
PYP051	Modulation of Norepinephrine-Induced Cardiorespiratory and Spinal Cord Blood Flow Responses following Cervical Spinal Cord Injury in Rats 陳叡怡,李昆澤



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PYP053	Dopaminergic-Endocrine Synergy mediates Thermoregulation in Dehydrated Drosophila 江孟軒, 吳嘉霖 Meng Hsuan Chiang, Chia-Lin Wu
PYP054	Molecular Mechanisms of the Apolipoprotein C3-rich Low-Density lipoprotein - Induced GPX4/ACSL4 Axis in Promoting Ferroptosis and Pancreatic β -Cell Failure 李佳蓁, 潘柏毅, 陳芳玉, 沈明毅
PYP055	Primary Cilia Loss Serves as a Novel Mechanism for Ovarian Aging 李昕, 林育秀, 蔡景州, 許晉銓 Sin Lee, Yu-Hsiu Lin, Ching-Chou Tsai, Jim Jinn-Chyuan Sheu
PYP056	Cell-Type-Specific Roles of FKBP51 in Hippocampus under Ischemic Long-Term Potentiation 鄭鳳婷, 鍾婷羽, 李旂緯, 張景祥, 林惠菁 Feng-Ting Cheng, Ting-Yu Chung, Chi-Wei Lee, Ching-Hsiang Chang, Hui-Ching Lin
PYP057	Investigating the Roles of DCC Family Members in Embryonic Development and the Modulation of GDF11-Dependent Signaling 林薇米, 洪瑜騰, 翁雨蕙 Wei-Mi, Lin, Yu-Sheng Hung, Yu-Hui Wong
PYP058	ATG5-Targeting Antisense Oligonucleotides Diminish Autophagy and Induce Mitochondria -Associated Apoptosis in Colorectal Cancer Cells 黃如玫, 謝昂岑, 張珈瑄, 徐志文 Ju-Mei Huang, Ang-Tsen Hsieh, Chia-Hsuan Chang, Chih-Wen Shu
PYP059	Chronic Ketamine Impairs Social Reward by Disrupting Oxytocin-Dependent Synaptic Plasticity in the Nucleus Accumbens 梁子宏, 張綺晴, 林郁婷 TzuHung Liang, Chi-Ching Chang, Yu-Ting Lin
PYP060	Kefir Peptides Regulate Vascular Smooth Muscle Cell Cytoskeletal Dynamics and Phenotypic Plasticity in Atherosclerotic Plaque Stability 靳慶圓, 蔡適鴻, 蔡旻倩 Cing Yuan Jin, Shih-Hung Tsai, Min-Chien Tsai
PYP061	CCR5 Deficiency in Brown Adipocytes Enhances UCP1-Mediated Thermogenesis and Whole-Body Energy Expenditure 施佳儀, 詹沛祺, 謝博軒

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PYP063	Mitigating Immune Responses to Cardiac Direct Reprogramming Enhances In Situ Biological Pacemaker Function 林旻儀, 翁靖惠, 周佩君, 劉至民, 胡瑜峰 MinYi Lin, Ching-Hui Weng, Pei-Chun Chou, Chih-Min Liu, Yu-Feng Hu
PYP064	Urinary Extracellular Vesicles (uEVs) as Non-Invasive Liquid Biopsies for Predicting Lymphovascular Invasion and Metastasis in Upper Tract Urothelial Carcinoma 張靜卉, 詹皓程, 王竹安 Ching Hui Chang, Hau-Chern Jan, Chu-An, Wang
PYP065	The mutual regulation of DDR2 and CRAC channels plays a crucial role in tissue scarring and increased matrix stiffness during TGF-β1-induced fibroblast activation and renal tubulointerstitial fibrosis. 蘇沛熏, 葉儀君 Pei-Xun Su, Yi-Chun Yeh
PYP066	ZO-1-Dependent Barrier Integrity Restrains Neuroplasticity Associated with Irritable Bowel Syndrome and Limits Neurodegenerative Disease-Related Microglial Activation 黃靖文, 蔡依璇, 林俐妤, 余佳慧, 吳明賢, 忻凌偉, 郭瑋庭 Chingwen Huang, Yi-Syuan Tsai, Li-Yu Lin, Linda Chia-Hui Yu, Ming-Shiang Wu, Ling-Wei Hsin, Wei-Ting Kuo
PYP067	Intestinal Epithelial Occludin Facilitates Colitis-Associated Colorectal Carcinogenesis by Sustaining TGFβ-Mediated Hippo and Caspase-3 Signals 劉宛瑄, 蔡依璇, 林家瑩, 郭瑋庭 Wan Hsuan Liu, Yi-Syuan Tsai, Chia-Ying Lin, Wei-Ting Kuo
PYP068	Development of a Diazoxide-Loaded Micelle System for Intranasal Treatment of L-DOPA-Induced Dyskinesia 何政陽, 陳珮君
PYP069	BIOPAC 生理訊號擷取分析系統 魏玉婷, 朱原德 Eleana Wei, HarrisChu
PYP070	Coordinated Accumulation and Uptake of Ether-Linked Lipids Promote Hepatocellular Carcinoma Progression 廖珮吟, 馬文隆 Pei Yin Liao, Wen-Lung Ma



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PYP072	Brain Derived-neurotrophic Factor (BDNF) in the Prelimbic Cortex Modulates Morphine-induced Reward and Aversion in Rats 洪沛濤,黃智偉
PYP073	A role of dopamine receptors in the prelimbic cortex to posttraumatic stress disorder during short-term memory 周郁曦, Cheng En Wu, Andrew Chih Wei Huang
PYP074	NMDA modulations of the basolateral amygdala to methamphetamine-induced conditioned taste aversion learning during conditioning and extinction in rats 李彊,黃智偉,鄭凱恩,Anna Kozłowska Chiang Lee, Andrew Chih Wei Huang, Cai-N Cheng, Anna Kozłowska
PYP075	Paradoxical Effects of Environmental Enrichment on Morphine Reward: Involvement of BDNF and Inflammatory Protein IL-1 β 潘靖怡,鄭凱恩,黃智偉
PYP076	PTSD-Like Stress Enhances Both the Rewarding and Aversive Conditioned Effects of Morphine in Adult Male Rats 蔡宇桐,尤奕竣,黃智偉 Yu Tung Tsai, Yi Chun Yu, Chih Wei Huang
PYP077	Artesunate Attenuates Adipogenic Differentiation in ADSCs with Altered Expression of ER-Stress and Wnt/ β -Catenin-Related Proteins 柯旻霏,林建宏,楊昆達 Min-Pei Ko, Jian-Hong Lin, Kun-Ta Yang
PYP078	Immunoregulatory Effects of Harmine on Microglial Inflammatory Responses in an In Vitro Neuroinflammation Model 楊佳樺,胡瑋芬,黃欣儀,李建輝,廖學健 Chia Hua Yang, Wei-Fen Hu, Hsin-Yi Huang, Chien-Hui Lee, Hock-Kean Liew
PYP079	Phase Response Curve of Taiwanese Field Mice 謝坤勸,楊淑娟 Kun-Ruey Shieh, Shu-Chuan Yang
PYP080	Immunogenicity of EGFRvIII epitope and Aka-Luciferase in mouse glioma implantation model. Chih-Yen Wang
PYP081	Targeting the VEGF-C Autonomous Loop to Overcome Ferroptosis Resistance and Aggressive Progression in PDAC 戴昱菁,王竹安 Yu Jing Tai, Chu An Wang

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PYP083	Anti-Inflammatory Activity of 3"-hydroxyisoxsuprine, A Catechol-Structured Product of Biotransformation Hydroxylation, in LPS-Stimulated RAW264.7 Macrophage Cells 吳健毓, 丁慧如, 陳柔衣, 丁秀玉, 王子元, 吳俊毅, 張德生 Chien-Yu Wu, Huei-Ju Ting, Jou-Yi Chen, Hsiou-Yu Ding, Tzi-Yuan Wang, Jiumn-Yih Wu, Te-Sheng Chang
PYP084	Interaction between Cholinergic Neurons and Microbiome in Regulating Innate Defensive Behavior 陳緯宸, 吳偉立 Chen Wei Chen, Wei-Li Wu
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PYP086	Functional Characterization of SESTD1 in Epithelial-Mesenchymal Transition 游佳蓉, 李政哲 Jiarong You, Cheng-Che Lee
PYP087	The Effect of Prothrombin Complex Concentrate on Spinal Hemorrhage and Physiological Recovery Following Cervical Spinal Cord Injury in Rats 黃舒翔, 李昆澤 Shu-Hsuang Huang, Kun-Ze Lee
PYP088	Impact of Cervical Spinal Cord Contusion on Diaphragm Morphology in Rats 陳冠勛, 李昆澤 陳冠勛, Kun-Ze Lee
PYP089	Modulatory Effect of Cervical Magnetic Theta Burst Stimulation on Cardiorespiratory Pattern and Spinal cord Blood Flow in Rats with Cervical Spinal Cord Contusion 龔志軒, 李昆澤
PYP090	Inspiration Triggered Trans-Spinal Magnetic Theta Burst Stimulation Improves Inspiratory Motor Outputs Following Cervical Spinal Cord Contusion in Rats 李昆澤, 陳叡怡 Kun-Ze Lee, Rui-Yi Chen
PYP091	Trimethylamine N-oxide Induces Early Stress Signaling and NGF Receptor Imbalance in Neuronal Cells 王志煜, 李靜恬 Jiz-Yuh Wang, Ching-Tien Lee
PYP092	嘉義縣某社區藥局民眾對藥事服務認同度及其影響因素之研究 施承典, 郭珉甫, 蔡瓊慧 Cheng-Dean Shih, Min Fu Kuo, Chiung Hui Tsai



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PYP094	Edaravone Mitigates Hypertension-Induced Cerebral Small Vessel Disease in RenTg Mice 劉可伶, 郭怡敏, 李佩珊, 林怡安, 孫羽佑 Ke-Yi Liu, Yi-Min Kuo, Pei-Shan Li, I-An Lin, Yu-Yo Sun
PYP095	Targeting CCR2 ⁺ Monocyte-Derived Macrophage Pyroptosis with Zingerone Ameliorates Post-Stroke Neuroinflammation 曾紀鏘, 郭金霖, 李婉寧, 潘妮妮, 孫羽佑 Chi-Chun Tseng, Chin-Lin Kou, Wan-Ning Li, Ni-Ni Pan, Yu-Yo Sun
PYP096	Enhanced Survival Signaling to Promote Chemoresistance in Ovarian Cancer By Cleaved ASAP3 葉子安, 莊鄉灝, Medha Kar, 許晉銓, 鄭伊佑
PYP097	Renal Denervation Attenuates Cardiorenal Syndrome by Suppressing Central SGK1 Expression and Sympathetic Overactivity 陳信宏, 李羽賀, 吳介任 Hsin-Hung Chen, Yu-He Li, Chieh-Jen Wu
PYP098	DYRK1B Drives Triple-Negative Breast Cancer Progression via the SNCG/ERK Pathway 劉佩芬, 周彥廷, 李政昕, 張永福, 王文慶 Pei-Feng Liu, Yan-Ting Chou, Cheng-Hsin Lee, Yung-Fu Chang, Wen-Ching Wang
PYP099	Radiation responses of miR-148a-3p delivery via exosomes derived from HEK293T cells, Wharton's Jelly mesenchymal stem cells, and bovine milk in head and neck cancer. 陳瑛科, 范皇添, 馬念涵 Anh-Khoa Tran, Hoang-Thien Pham, Nianhan Ma
PYP100	The Role of miR-636 in the Suppression of Cancer Stem Cells in Urothelial Carcinoma 黃品煊, 馮于甄, 羅浩倫, 馬念涵 Pin-Hsuan Huang, Yu-Chen Fung, Hao-Lun Luo, Nianhan Ma
PYP101	Characterization and Optimization of FXIII-Binding Aptamers 蔡呈昕, 馬蘊華 Cheng-Hsin Tsai, Yunn-Hwa Ma
PYP102	PEGylation-Modified Protein Profiles of the Nanoparticle Corona: Implication of Complement Activation and Innate Immune Response 董芳君, 余兆松, 沈家瑞, 馬蘊華 Fang Jyun Tung, Jau-Song Yu, Chia-Rui Shen, Yunn-Hwa Ma

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PYP104	EGCG inhibited insulin-stimulated growth of 3T3-L1 preadipocytes through the microRNA-let-7a/HMGA2 pathways. 許紫媿, 胥承佑, 古惠珍, 石麗珍, 蕭博仁, 郭芝君, 高永旭 Hsu, Tzu-Ti, Chen-Yu Hsu, Hui-Chen Ku, Li-Jane Shih, Po-Jen Hsiao, Chih-Chun Kuo, Yung-Hsi Kao
PYP105	Production of Potent Anti-melanogenesis Glucosides via Enzymatic Glycosylation of p-Hydroxyphenethyl Anisate 陳柔衣, 張德生, 丁慧如 Jou-Yi Chen, Te-Sheng Chang, Huei-Ju Ting
PYP106	Dietary Lipid Enrichment Alleviates Depressive-Like Behaviors Induced by Post-Weaning Social Isolation During Adolescence in Male Mice 吳秋莊, 傅敬婷, 曾淑芬 Thu Trang Ngo, Jing-Ting Fu, Shun-Fen Tzeng
PYP107	Effect of the Adenine-Induced Chronic Kidney Dysfunction on Hypothalamic Astrocyte Activation 林獻彬, 李宜臻, 鄭宇辰, 凌采絮, 張育誌, 曾淑芬 Hsien-Pin Lin, Yi-Chen Li, Yu-Chen Zheng, Tsai-Chieh Ling, Yu-Tzu, Chang, Shun-Fen Tzeng
PYP108	IgG Induces Changes of Mechanoinflammatory Responses in Mouse Kidney Progenitor Cells 宋昀潔, 湯銘哲 Yun-Jie Sung, Ming-Jer Tang
PYP109	The Role of IgG in the Pathogenesis of Pulmonary Fibrosis 黃仔廷, 湯銘哲 Yu Ting Huang, Ming Jer Tang
PYP110	Investigating the Effects of Rad23B on Mitochondrial Functions in Huntington's Disease 董家瑜, 楊尚訓
PYP111	Investigating the Role of Isg15 in the Ubiquitin-Proteasome System Pathway in Huntington's Disease 蘇靖淳, 楊尚訓 Ching Chun Su, Shang Hsun Yang
PYP112	miR-21-5p-mediated CDC25A Repression Enhances Autophagy in Endometriosis 侯奐慈, 吳孟興, 蔡少正 Huan-Tzu Hou, Meng-Hsing Wu, Shaw-Jenq Tsai



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PYP115	Pioglitazone Restores Adipocyte Lipid Handling and Mitochondrial Integrity in High-Fructose Diet-Induced Visceral Adipose Dysfunction 吳芎歷,劉文忠,吳志偉,蔡裴家,洪純瑛,陳怡君
PYP116	Fructose-Induced Metabolic Inflammation Activates ICAM-1 and Inflammasome Signaling in Human Valve Interstitial Cells 吳芎歷,張效煌,鄭敬俐,林宜君,蔡裴家,劉文忠,吳志偉,洪純瑛,李竹菀,陳怡君 Kay Li-Hui Wu, Hsiao-Huang Chang, Ching-Li Cheng, I-Chun Lin, Pei-Chia Tsai, Wen-Chung Liu, Chih-Wei Wu, Chun-Ying Hung, Chu-Wan Lee, I-Chun Chen
PYP118	Maternal High-Fructose Diet Disrupts the Butyrate-MCT4 Axis and Impairs Astrocytic Glycogen Metabolism in the Female Hippocampus 吳芎歷,傅睦惠,劉文忠,吳志偉,洪純瑛,洪碧蓮,陳怡君,蔡裴家,Hajime Hirase Kay Li-Hui Wu, Mu-Hui Fu, Wen-Chung Liu, Chih-Wei Wu, Chun-Ying Hung, Pi-Lien Hung, I-Chun Chen, Pei-Chai Tsai, Hajime Hirase
PYP119	Maternal Fructose Exposure Programs Age-Dependent Hypothalamic Mitochondrial Dysfunction and Synaptic Loss: Reversal by tert-Butylhydroquinone 吳芎歷,劉文忠,吳志偉,陳怡君,洪純瑛,蔡裴家,Monika M. Kaczmarek
PYP120	Probiotic-Derived Extracellular Vesicles as a Therapeutic Strategy to Ameliorate Ischemic Stroke Injury 黃璽元,沈昱秀,廖娟妙,黃相碩,林佳賢,王羿忻 Si-Yuan Huang, Yu-Hsiu Shen, Jiuan-Miaw Liao, Shiang-Suo Huang, Chia-Hsien Lin, Yi-Hsin Wang
PYP121	Protective Effects of Sodium-Glucose Cotransporter 2 Inhibitor Against Myocardial Ischemia-Reperfusion-Induced Multiorgan Injury in Diabetic Rats 丁于恩,何凡幼,廖娟妙,王羿忻,黃相碩 Yu-En Ting, Fan-You Ho, Jiuan-Miaw Liao, Yi-Hsin Wang, Shiang-Suo Huang
PYP122	SGLT2 Inhibitors Ameliorate Cardiorenal Dysfunction Induced by Chronic Heart Failure Following Myocardial Infarction 王若安,王羿忻,黃相碩,廖娟妙,林佳賢 Jo-An Wang, Yi-Hsin Wang, Shiang-Suo Huang, Jiuan-Miaw Liao, Chia-Hsien Lin
PYP123	RA Analog Promotes Neuroprotection by Activating Autophagy and Inhibiting Neuroinflammation in Huntington's Disease 黃羿蓁,朱自淳 Yi-Zhen Huang, Ju, Tz-Chuen
PYP124	Upregulation of Astrocytic GLT-1 via SUX and CA Mitigates Metabolic Hyperactivity in the Subthalamic Nucleus in a Rat Model of Schizophrenia 劉昀叡,潘得培,林庭亦,何應瑞 Yun-Jui Liu, Te-Pei Pan, Ting-Yi Lin, Ying-Jui Ho

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PYP126	GFAP-associated Astrocytic Responses Across Schizophrenia-relevant Brain Regions Under NMDAR Hypofunction 潘得培,林庭亦,劉昀睿,何應瑞
PYP127	Mapping WWOX expression across molecularly defined inhibitory interneurons Tehreem Saif, Tania Ghosh, 鄧薏賢, 吳東川 Tehreem Saif, Tania Ghosh, I-Hsien Teng, Dong Chuan Wu
PYP128	Promoting the Developmental Competence of Porcine Oocytes by MitoQ 顏紫芸,張為芳,唐品琦 Zih-Yun Yan, Wei-Fang Chang, Pin-Chi Tang
PYP129	Poly-GR Induces DNAJC10 Upregulation in Microglia and Membrane Hyperexcitability in Neurons in C9orf72-associated ALS 張喻翔,王紹銘,翁鳳如 Yu-Hsiang Chang, Shao-Ming Wang, Eddie Feng-Ju Weng
PYP130	The Mechanism of Intercellular Transmission of Dipeptide Repeat Proteins Poly-PR and Poly-GR in C9orf72 ALS Mouse Models Phan Thi Ngoc Lan, 蔡兆衣, 王紹銘, 翁鳳如 Phan Thi Ngoc Lan, Chao-Yi Tsai, Shao-Ming Wang, Eddie Feng-Ju Weng
PYP131	Inaccurate Presentation of Active Neuronal Ensembles leads to Hallucinations in Schizophrenia 陳潔西,翁鳳如,Anthony Shon Jesse, Eddie Feng-Ju Weng, Anthony Shon
PYP132	Sigma-1 Receptor Attenuates Poly-GR-Induced Oxidative Stress in C9orf72-Associated ALS 蔡兆衣,王紹銘,翁鳳如 Chao Yi Tsai, Shao-Ming Wang, Feng-Ju Weng
PYP133	Targeting Lipid Metabolism for Chemosensitivity and Progression in Epithelial Ovarian Cancer 蘇鈺婷,馬文隆
PYP134	Alkyl-Glycerol Phosphate Synthase and Ether-Linked Phosphatidyl-Ethanolamine/Plasmalogen Increase Solubility of α B-Crystallin in Lens Epithelial Cell 黃煜修,廖珮吟, Farhat Bibi, 馬文隆 Yu Hsiu Huang, Pei-Yin Liao, Farhat Bibi, Wen-Lung Ma
PYP135	Pre-clinical Evaluation of Targeting Lipoprotein Receptors for Solid Tumors Therapeutics: Epithelial Ovarian Cancer 徐睿思, Wen-Lung Ma Shiraz Mehmood, Wen-Lung Ma



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PYP137	Study of functional domains of nuclear respiratory factor 1 盧惠萍 Hui-Pin Lu
PYP138	Irisin Gene Therapy Ameliorates Polyuria and Glucosuria in Akita Mice Associated with Altered Renal Glucose and Water Transporter Expression 謝東廷, 呂文斌, 戴明泓 Tung-Ting Hsieh, Wen-Bin Lu, Ming-Hong Tai
PYP139	Hepatoma-Derived Growth Factor Regulates Tumor Microenvironment Remodeling and Radiotherapy Response in Melanoma 沈政勸, 林裕為, 戴明泓 Cheng-Jui Shen, Yu-Wei Lin, Ming-Hong Tai
PYP140	Altered lipid availability and suppressed de novo lipogenesis in T1DM Akita Mice. 黃凱揚, 呂文斌, 戴明泓
PYP141	Role of miR-511-3p in Urothelial Carcinoma Progression via YAP1-Dependent Hippo Signaling 林庭羽, 薛元碩 Ting-Yu Lin, Yuan-Shuo Hsueh
PYP142	PAK Inhibition Suppresses Malignant Phenotypes in CDKN2A-Deficient Gastrointestinal Stromal 許芷寧, 薛元碩 Chihning Hsu, Yuan-Shuo Hsueh
PYP143	Melatonin Protects Against Diabetic Retinopathy via AhR-Glyoxalase Activation 葉宜綸, 許美鈴 Yi-Lun, Ye, Meei-Ling Sheu
PYP144	KDELRL1-Mediated Regulation of MAT2A Localization and Proteostasis on Breast Cancer Progression 陳柏銘 Po-Ming Chen
PYP145	Irisin Ameliorates Palmitic Acid-induced Hepatic Lipid Accumulation by Suppressing Inflammasome Activation and Endoplasmic Reticulum Stress. 詹詠婕, 羅佳雯, 陳暉雯, 蔡秀純, 陳智傑 Yung Chieh Chan, Chia-Wen Lo, Haw-Wen Chen, Shiow-Chwen Tsai, Chih-Chieh Chen
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PYP148	Protective effects of L-Theanine on lipopolysaccharide-induced depressive-like behavior in rats: involvement of the endogenous cannabinoid pathway 葉桂鶯, 葉千鈺 Kuei-Ying Yeh, Chien-Yu Yeh
PYP149	Examination of the Effects of Acute and Repeated Dizocilpine Treatment on a Time-Based Operant Behavior in Male Rats 廖瑞銘, 李駿, 林郁琄, 黎紫矜, 洪浩璋, 王映茹, 蕭霽瑄, 林鈺潔 Ruey-Ming Liao, Chun Li, Yu-Chun Lin, Zi-Ling Li, Hao-Wei Hung, Ying-Ju Wang, Pei-Xuan Xiao, Yu-Jie Lin
PYP150	Epigallocatechin-3-Gallate Attenuates Airborne Microplastics-Induced Inflammation and Cellular Stress in Human Lung Epithelial A549 Cells 孫名廷, 賴財春 Ming-Ting Sun, Tsai-Chun Lai
PYP151	Particulate Matter-Induced Mitochondrial Oxidative Stress Impairs Autophagy and Blood-Testis Barrier Function in Sertoli Cells 翁緯翔, 賴財春 Wei-Xiang Weng, Tsai-Chun Lai
PYP152	Microplastics Promoted Intestinal Inflammation and Barrier Dysfunction in C2BBel Cells- the Protective Roles of EGCG 張芹瑄, 賴財春 Chin-Hsaun Chang, Tsai-Chun Lai
PYP153	Combined Exposure to Microplastics and Particulate Matter Enhances Senescence and Inflammation through the cGAS-STING Pathway in A549 Cells 黃翊晴, 賴財春 Yi Ching Huang, Tsai-Chun Lai
PYP154	Lysosomal Membrane Remodeling in Hyperactive Two-Pore Channel 2 Mutant 林倩如, 林能裕, 陳政彰
PYP155	TRPML2 Interact with Rab4 in Endolysosomal Trafficking and Fungal Early-stage Invasion 王煊棣, 顧子奇, 蔡雨寰, 陳政彰 Hsuan-Ti Wang, Zi-Qi Gu, Yu-Huan Tsai, Cheng-Chang (Maxo) Chen
PYP156	CXCL5 Suppresses Osteoclastogenesis and Protects Against LTA-Induced Bone Loss by Modulating PLC γ 2 and c-Fos Signaling in Gram-Positive Periprosthetic Joint Infection 吳佳芸, 張毓翰, 姜沛恆, 徐永衡, 施起進, 翁文能, 陳美鳳 Chia-Yun Wu, Yuhuan Chang, Pei-Heng Jiang, Yung-Heng Hsu, Kee-Chin Sia, Steve Wen-Neng Ueng, Mei-Feng Chen



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PYP157	Timing of intra-articular injection of adipose-derived mesenchymal stem cells affects cartilage integrity and IL-18 expression in spontaneous osteoarthritis: A preclinical study 吳佳芸, 張毓翰, 徐永衡, 林郁智, 胡志堅, 邱于恬, 翁文能, 陳美鳳 Chia-Yun Wu, Yuhan Chang, Yung-Heng Hsu, Yu-Chih Lin, Chih-Chien Hu, Yu-Tien Chiu, Steve Wen-Neng Ueng, Mei-Feng Chen
PYP158	Therapeutic blockade of platelet-derived growth factor receptor-like protein attenuates cartilage degeneration and modulates cytokines in a spontaneous osteoarthritis mouse model 吳佳芸, 翁文能, 徐永衡, 林郁智, 胡志堅, 邱于恬, 張毓翰, 陳美鳳
PYP159	Monocytic IL-34 Modulates Disease Progression in Tauopathy and Alzheimer's Disease 林明璇, 葛一樊, 徐嘉琳, 陳虹如 Min-Hsuan Lin, Ivan Dzhalgalov, Chia-Lin Hsu, Hong-Ru Chen
PYP160	Recombinant GMI Driven Monocyte Immunomodulation Confers Neuroprotection following Neonatal Ischemic Stroke 陳珈諺, 張程駿, 賀譽灃, 蔡育晉, 孫羽佑, 林東毅, 陳虹如 Chia-Yen Chen, Cheng-Chun Chang, Yu-Yun Ho, Yu-Jin Tsai, Yu-Yo Sun, Tung-Yi Lin, Hong-Ru Chen
PYP161	Exploring the Biomolecular Mechanisms Behind Remyelination and Therapeutic Effect of MSC-FGF21 in Traumatic Brain Injury (TBI) Mice Model Gabriella Jeanne Mulia, 陳凱筠, 吳忠哲, 康碩珍, 陳燕華, 黃啟宗
PYP162	Spexin-2 Modulates Electrophysiological Properties along with Sodium and Calcium Homeostasis in the Pulmonary Veins 許寶方, 劉順鑫, 林豐智, 劉正哲, 陳亦仁, 陳耀昌 Pao-Fang Syu, Shuen-Hsin Liu, Fong-Jhih Lin, Cheng-Che Liu, Yi-Jen Chen, Yao-Chang Chen
PYP163	Dissecting the Neural Circuits Underlying Observational Fear Learning 黎英舒, 黃貽瑤, 黃佳瑜 Le Ngoc Anh Thu, Yi-Chun Huang, Chia-Yu Huang
PYP164	CCL5 Drives Inflammation-Associated Male Reproductive Dysfunction in a SARS-CoV-2 ssRNA Mouse Model 張巧忻, 吳豫宣, 黃奕樂, 張原翊 Chiao-Hsin Chang, Yu-Xuan Wu, I-Shen Huang, Yuan-I Chang
PYP165	Molecular Mechanism of the Methylglyoxal-Induced Neurotoxicity: Surge of Reactive Oxygen Species Is the Pivotal Determinant for Mitochondrial Permeability Transition Pore Opening 王昱棠, 林彥呈, 鍾鴻春, 唐聿玄, 黃春霖 Wang Yu Tang, Yen-Cheng Lin, Hong-Chun Chung, Yu-Hsuan Tang, Chuen-Lin Huang

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PYP166	Investigating the Role of the Ubiquitin-Specific Protease 14 in Mediating Paraquat-Induced Cell Model of Parkinson's Disease 盧雪珍,黃春霖,黃乃瑰 Hsueh Chen Lu, Chuen-Lin Huang, Nai-Kuei Huang
PYP167	Comparative Trends of Common Respiratory Viruses in the Chung Li Area Before and After the COVID-19 Pandemic: A Retrospective Study 黃雅妮,鄭雅綺,李淑玲,徐少偉,林慶元 Huang Ya-Ni, Cheng Ya-Chi, Lee Shu-Ling, Hsu shao-wei, Lin Ching-Yuan
PYP168	The Potential Role of ATAD1 in Regulating Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD) 彭成宇,邱智賢,黃謙
PYP169	Potential Role of the MMP-9 Hemopexin Domain in Depot-Specific Adipose Tissue Expansion during Obesity 錢彥廷,黃謙,邱智賢 Yen Ting Chien, Chien Huang, Chih-Hsien Chiu
PYP170	Regulation of cell cycle checkpoint physiology by IL-1/IRAK signaling through control of WEE1, UBE2N, and BARD1 expression 林惠仙,劉芷君,許凱程,潘秀玲,莊健盈 Enrica Angelina Salim, Jr-Jiun Liu, Kai-Cheng Hsu, Shiow-Lin Pan, Jian-Ying Chuang
PYP171	Elucidating ROS-Mediated Signaling Pathways Underlying Impaired Myogenesis in Dysferlinopathy 潘佩儀 Pei Yi Pan
PYP172	BAT-Derived Batokines Tune Selective Hepatic Insulin Resistance and Implicate a WDR6-CYP Program 邱威誠,黃鈺婷,鄭美玲,郁兆蘭 Wei-Cheng Chiu, Yu-Ting Huang, Mei-Ling Cheng, Chao-Lan Yu
PYP173	The Effect of Raspberry Ketone on the Amyloid Precursor Protein Dysregulation in Tumor Necrosis Factor- α -Stimulated Adipocytes 王芊芊,楊翔宇,鄭寶雲 Chien Chien Wang, Hsiang-Yu Yang, Pao-Yun Cheng
PYP174	Substrate-Independent Depletion of tRF-19-V47PU9J8 Defines a Functionally Validated Tumor-Suppressive Axis in Basal-like Breast Cancer 黃鈺涵,劉家銘,賴亮全 YU-HAN,HUANG, Chia-Ming Liu, Liang-Chuan Lai
PYP175	Comprehensive CircRNA Profiling Elucidates the Pro-Migratory Role of CircLIN54 in Breast Cancer 周楷軒,賴亮全



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PYP176	MiR-210-5p Increases Neuronal Ferroptosis by Enhancing xCT/SLC7A11 Ubiquitination through Dysregulation of Redox Homeostasis 吳依璇, 吳逸如, 謝喜龍 Yi-Hsuan Wu, Yih-Ru Wu, Hsi-Lung Hsieh
PYP177	The Role of FKBP5 in Regulating Hypoxic Stress Responses in iPSC-derived Vessel Organoids 劉怡辰, 李怡萱, 簡千栩 Yi-Chen Liu, Yi-Hsuan Lee, Chian-Shiu Chien
PYP178	Dyskerin (DKC1)-Mediated Pseudouridine Modification Regulates Cardiomyocyte Senescence in an Aging Cardiomyopathy Model 官長慧, 簡千栩 Chang-Hui Kuan, Chian-Shiu Chien
PYP179	Establishing Novel In vitro and In Vivo Models to Evaluate Doxorubicin-Induced Cardiotoxicity in Breast Cancer 張芸珊, 簡千栩
PYP180	Targeting mechanosensitive cannabinoid receptor 1 with isoflavone prodrugs attenuates atherosclerotic endothelial dysfunction 鍾岱融, 許宸, 蘇南維, 魏子堂 Dai-Jung Chung, Chen Hsu, Nan-Wei Su, Tzu-Tang Wei

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PH001	Molecular Mechanisms Underlying Extracellular Vesicle-Mediated Regulation of Gemcitabine Resistance in Bladder Cancer 黃晟碩, 何嘉益, 于大雄, 江士昇, 吳穎義, 于承平 Cheng-Shuo Huang, Jar-Yi Ho, Dah-Shyong Yu, Shih Sheng Jiang, Ying-Si Wu, Cheng-Ping Yu
PH002	Optimizing Cinnamophilin Delivery via SNEDDS for Enhanced Anti-melanogenic Activity: A Comprehensive Evaluation of Skin Safety, Permeability, and Tyrosinase Inhibition 陳禹臻, 陳宜芳, 游新雅, 林家璿, 劉宛怡, 張訓碩, 吳育澤, 柯宏慧 Chen, Yu-Chen, Yih-Fung Chen, Hsin-Ya Yu, Chia-Hsuan Lin, Wan-Yi Liu, Hsun-Shuo Chang, Yu-Tse Wu, Horng-Huey Ko
PH003	Caffeic Acid Derivative MPMCA Inhibits Prostate Cancer EMT and Metastasis by Regulating Transcription Factors Snail and Slug 林若瑜, 林殿璜, 黃元勵, 賴朝陽, Trung-Loc Ho, 蔡俊灝, 馮逸卿, 吳錫金, 張安辰, 郭悅雄, 胡松林, 湯智昕 Jo Yu Lin, Tien-Huang Lin, Yuan-Li Huang, Chao-Yang Lai, Trung-Loc Ho, Chun-Hao Tsai, Yi-Chin Fong, Hsi-Chin Wu, An-Chen Chang, Yueh-Hsiung Kuo, Sung-Lin Hu, Chih-Hsin Tang
PH004	Targeting fibroblast TXNDC5 resolves tumor desmoplasia and PD1 resistance in colorectal cancer with mesenchymal traits 程凱琳, 楊鎧鍵
PH005	SLC6A14 Drives Mitochondrial Fusion and Oxidative Phosphorylation to Promote Cancer Stemness and Early-Onset of Breast Cancer 胡玳瑋, 黃至豪, 何宥豪, 魏雅鈴, 胡書瑋, 鄭方茹, Thanh Kieu Huynh, 陳柏融, 王柏樟, 關立麒, 李德彥, 葉明煥, 張雅貞, 劉良智, 洪明奇, 黃偉謙 Dai-Wei Hu, Chih-Hao Huang, Yu-Hao He, Ya-Ling Wei, Shu-Wei Hu, Fang-Ju Cheng, Thanh Kieu Huynh, Bo-Rong Chen, Bo-Wei Wang, Li-Chi Kuan, Der-Yen Lee, Ming-Hsin Yeh, Ya-Jen Chang, Liang-Chih Liu, Mien-Chie Hung, Wei-Chien Huang
PH006	Sigma-1 receptor counteracts non-cell-autonomous poly-PR-induced astrocytic oxidative stress in C9orf72 ALS 吳軒誠, 王紹銘 Hsuan-Cheng Wu, Shao-Ming Wang
PH007	Mitochondria-ER contact sites restrain ER Ca ²⁺ refilling by dismantling ER-plasma membrane junctions and sequestering STIM1 林鈺喬, 蔡丰喬 Yu-Chiao Lin, Feng-Chiao Tsai



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PH008	Tumor-Stroma Crosstalk: CCL2-CCR2-Driven Chitinase-3-Like-1 Expression Shapes a Fibrotic and Immunosuppressive Microenvironment in Pancreatic cancer and Reveals Therapeutic Opportunities. 蘇珮嘉, 侯雅琴, 廖寶琦, 沈延盛, 王憶卿 Pei-Chia Su, Ya-Chin Hou, Pao-Chi Liao, Yan-Shen Shan, Yi-Ching Wang
PH009	Flavonoid-rich Phyla nodiflora fraction promotes Keap1 degradation and Nrf2/HO-1 activation to attenuate particulate matter-induced oxidative stress in human keratinocytes 林家璿, 吳瑾燁, 顧家瑋, 吳和澄, 陳宜芳, 柯宏慧 Chia-Hsuan Lin, Jin-Ye Wu, Andrea Gu, Ho-Cheng Wu, Yih-Fung Chen, Horng-Huey Ko
PH010	Dual prophylactic and therapeutic potential of iPSC-based vaccines and neoantigen discovery in colorectal cancer 卓思涵, 黃襄國, 李心慈, 陳少芄, 陳麗愉, 劉品蓉, 王懷謙, 林志萱, 柯俊榮, 李丞鈺, 王俊皓, 歐陽小明, 王霖, 魏子堂 Si-Han Jwo, Shang-Kok Ng, Chin-Tzu Li, Shao-Peng Chen, Li-Yu Chen, Pin-Jung Liu, Huai-Jie Wang, Jr-Shiuan Lin, Chun-Jung Ko, Cheng-Fan Lee, Chun-Hao Wang, Xiaoming Ouyang, Lin Wang, Tzu-Tang Wei
PH011	Equilibrative Nucleoside Transporter 2 Modulates Inosine Catabolism to Influence Astrocyte Metabolism and Reactivity 張雅晶, 林心荃, 張敬邦, 賴幸琳, 陳惠美, 黃崢寧, 張沛容, 吳靖雯, 何景瑞, 楚婷, 林君榮, 陳儀莊
PH012	Small Extracellular Vesicles Engineered Using ClickChemistry to Express Chimeric Antigen Receptors Show Enhanced Efficacy in Acute Liver Failure 陳姿妤, 呂彥葦, 林信宏, 陳雅紋, 林郁修, Duy-Cuong Le, 黃彥華, 王惠鈞, 李政忠, 林泰元 Tzu-Yu Chen, Yen-Ting Lu, Hsin-Hung Lin, Ya-Wen Chen, Yu-Xiu Lin, Duy-Cuong Le, Yen-Hua Huang, Andrew H.-J. Wang, Cheng-Chung Lee, Thai-Yen Ling
PH013	Ugonin Inhibits Chondrosarcoma Metastasis through Suppressing Cathepsin V via Promoting miR-4799-5p Expression Nguyen Bao Tran, 張定國, Nguyen Duong Phuong Chi, 賴冠瑛, 陳賢德, 馮逸卿, 廖志中, 湯智昕 Nguyen Bao Tran, Ting-Kuo Chang, Nguyen Duong Phuong Chi, Kuan-Ying Lai, Hsien-Te Chen, Yi-Chin Fong, Chih-Chuang Liaw, Chih-Hsin Tang
PH014	Formononetin protects against oxaliplatin-induced peripheral neurotoxicity via Nrf2/HO-1 antioxidant pathway without impairing anticancer efficacy 張揚晨, 林宛萱, 柯宏慧, 羅怡卿, 張訓碩, 林惠菁, 陳宜芳 Yang-Chen Chang, Wan-Hsuan Lin, Horng-Huey Ko, Yi-Ching Lo, Hsun-Shuo Chang, Hui-Ching Lin, Yih-Fung Chen

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PH016	Irritability-like Behavior in Cc2d1a Conditional Knockout Mice is Associated With Reduced Hypothalamic Oxytocin Expression 程冠翔, 洪毓傑, 凌斌, 許桂森 Kuan-Hsiang Cheng, Yu-Chieh Hung, Pin Ling, Kuei-Sen Hsu
PH017	Glucagon-like Peptide-1 Receptor Signaling Regulates Mossy Cell Activity and Anxiety-Like Behavior 謝沂祐, 許桂森 Hsieh Yi-Yu, Kuei-Sen Hsu
PH018	Investigating the Therapeutic Efficacy of Umbilical Cord Mesenchymal Stem Cell-Derived Extracellular Vesicles in Chronic Stress-Induced Cognitive Impairment 陳怡蓁, 蕭雅心
PH019	CASK mediates methylglyoxal-induced mitochondrial calcium overload and dysfunction in retinal Müller cells through the ROS-p38-ER stress-SOCE signalling pathway 黃婷茵, 楊峻松, 黃婉嬪, 彭阿魯, 陳志明, 林琬琬 DHuang, Chuin Shung Yeoh, Wan-Chen Huang, Ponarulselvam Sekar, Chi-Ming Chan, Wan-Wan Lin
PH020	NLRX1 Mediates Oxidative Stress-Induced Prostate Cancer Cell Death via PARP1-Dependent Mitochondrial And Lysosomal Dysfunction 李軒慈, 林琬琬 Hsuan-Tzu Li, Wan-Wan Lin
PH021	Establishment of Ensemble AI Models for Predicting Kinase Inhibitors 詹堉丞, 陳俊鴻, 潘秀玲, 許凱程 Yu-Cheng Chan, Jun-Hong Chen, Shiow-Lin Pan, Kai-Cheng Hsu
PH022	Mechanistic Investigation of a Novel DDR1 Inhibitor Targeting Parental and Temozolomide-resistant Glioblastoma 林士捷, 謝興邦, 許凱程, 潘秀玲 Shih-Chieh Lin, Hsing-Pang Hsieh, Kai-Cheng Hsu, Shiow-Lin Pan
PH023	Soluble IL-2 receptor α as a circulating biomarker linking immune dysregulation to skeletal muscle metabolic impairment in colorectal cancer-associated cachexia 何盈瑩, 陳少芄, 林志萱, 張立群, 張浩哲, 魏子堂, 蘇芷琳 Yin-Ying Ho, Shao-Peng Chen, Jr-Shiuan Lin, Li-Chun Chang, Hao-Che Chang, Tzu-Tang Wei, Chih-Lin Su
PH024	Cooperative Regulation of YAP Activity by STK40 and CDK7 in Cancer Progression 李佩儀, 陳怡親, 蔡丰喬 Pei-Yi Li, Yi-Chin Chen, Feng-Chiao Tsai



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PH026	The CCL2-CCR2 Axis Links Systemic Inflammation to Skeletal Muscle Wasting in Colorectal Cancer-associated Cachexia 劉家妤, 陳少荊, 魏子堂 Chia-Yu Liu, Shao-Peng Chen, Tzu-Tang Wei
PH027	Aldehyde Dehydrogenase 2 Mitigates Acrolein-Driven Ferroptosis to Preserve Kidney Function 郭育銘, 楊惠閔, 李玠臻, 王湘翠 Yu Ming Kuo, Hui-Min Yang, Chieh-Chen Lee, Hsiang-Tsui Wang
PH028	Splicing Regulation of IL33 is Associated with Malignancy of Lung Cancer and Esophageal Cancer 陳品璇, 何孟亭, 劉薰, 蘇五洲, 張維倫, 王憶卿 Pin-Hsuan Chen, Meng-Ting Ho, Hsun Liu, Wu-Chou Su, Wei-Lun Chang, Yi-Ching Wang
PH029	FcyRIIB as a Regulatory Checkpoint in T Cell-Independent Antibody Responses 高翊齡, 陳婕穎, 鍾佳瑜, 曾賢忠 I-Lin Kao, Jie-Ying Chen, Kassandra Chang, Shiang-Jong Tzeng
PH030	Distinct Arrhythmogenic Mechanisms Of Novel SCN5A and CAV3 Compound Mutations: Toward Precision Antiarrhythmic Therapy. 張書銘, 吳雅婷, 陳文彬 Shu-Ming Zhang, Ya-Ting Wu, Wen-Pin Chen
PH031	Target-Conditioned Proteochemometric Modeling for Kinase Bioactivity Prediction 陳俊鴻, 潘秀玲, 許凱程 Jun-Hong Chen, Shiow-Lin Pan, Kai-Cheng Hsu
PH032	Development of IDO1 and ABCB1 Dual-Targeting Polypharmacological Agents for Overcoming Immunosuppression and Multidrug Resistance in Cancer 何昀芸, 張雋曦, Suat Sari, Euphemia Leung, Johannes Reynisson
PH033	Targeting the FGF19/FGFR4 Axis with Lenvatinib Potentiates Sotorasib Response in KRAS-Mutant Colorectal Cancer 吳芊佑, 王湘翠, 鄧豪偉 Chian-You Wu, Hsiang-Tsui Wang, Hao-Wei Teng
PH034	Immunoregulatory mechanisms of Muscari comosum extract and its therapeutic potential in inflammatory disease models 莊晉惠, 黃綉文, 許銘仁 Chin Hui Chuang, Shiu-Wen Huang, Ming-Jen Hsu
PH035	Ugonin W Attenuates NLRP3 Inflammasome Activation and IL-1 β Secretion by Reducing ROS Production in Human Osteoarthritis Synoviocytes. 卓佳宜, 湯智昕, 廖志中 Chia-Yi Cho, Chih-Hsin Tang, Chih-Chuang Liaw

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PH037	Reprogramming the Immunologically Cold Colorectal Cancer Microenvironment via ER-Targeted Nanomedicine 許萱綾, 李璟瑤, 黃若涵, 蘇昌平, 駱雨利 Yi Chieh Hsu, Ching-Yao Li, Ruo-han Huang, Chang-Ping Su, Yu-Li Lo
PH038	DEPP1 Regulates Protein Synthesis, Myogenic Differentiation, and Redox Homeostasis in Skeletal Muscle 唐煒祐, 陳韻雯 Wei Yu Tang, Yun-Wen Chen
PH039	Establishment of Stable ITG Knockdown Cells to Elucidate STAg-associated Lung Tumor Progression Mechanism 許華翔, 王博玄, 廖皎君
PH040	Impaired Phosphorylation of CBP Promotes a p53-dependent Akkermansia-enriched Gut Microbiota That Exacerbates Intestinal Inflammation 林怡亭, 陳青周 Yi-Ting Lin, Ching-Chow Chen
PH041	CXCL13 Promotes Metastatic Dissemination in Oral Squamous Cell Carcinoma Through a CXCR5-JNK-NF- κ B-MMP9 Signaling Cascade 張琮銘, 孫瑛穗, 林士森, 張繼仁, 劉如芳 Tsong Ming Chang, Ying-Sui Sun, Shih-Sen Lin, Chi-Jen Chang, Ju-Fang Liu
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PH043	Dehydroleucodine Suppresses Proliferation and Chemoresistance in Osteosarcoma Cells 俞明瑾, 劉如芳 Ming-Jing Yu, Ju-Fang Liu
PH044	Acute Ketamine Disrupts Context-dependent Gating of Social-emotional Cues 林佳慧, 張綺晴, 林庭瑋, 彭鈺翔, 林郁婷 Chia Hui Lin, Chia-Chi Chang, Ting-Wei Lin, Yu-Hsiang Peng, Yu-Ting Lin
PH045	Mutant Troponin T induced left ventricular non-compaction cardiomyopathy via epigenetic perturbation mechanism. 李宥苙, 高華苓, 吳雅婷, 邱舜南, 陳文彬 You-Yi Li, Hua-Ling Kao, Ya-Ting Wu, Sheunn-Nan Chiu, Wen-Pin Chen
PH046	Impact of Dapagliflozin on Insulin Signaling and Neuronal Survival in Stretch-Induced Traumatic Brain Injury model 鄭珮玟, 吳懿宗, 葉同成



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PH048	SARS-CoV-2 3CL Protease Antagonizes Interferon Signaling and Airway Homeostasis via Cleavage of IRAK1 and CFTR 莊婷莉, 石智元, 梁峰銘, 蘇秉驊 Ting-Li Zhuang, Chi-Won Suk, Feng-Ming Liang, Bing-Hua Su
PH049	Investigate the Effect of Cues on Memory Expression 陳玉茹, 姜學誠* Yu Ru Chen, Chiang Hsueh Cheng
PH050	Transcriptomic Recovery from dsRNA-Induced Acute Lung Injury by NR1H2 Exceeds Dexamethasone through Immune Dampening and Metabolic Reprogramming 沈郁強, 王雅惠, 魏紋析, 蘇奕彰, 劉國同 Yuh-Chiang Shen, Yea-Hwey Wang, Wen-Chi, Wei, Yi-Chang, Su, Kuo-Tong Liou
PH051	Identification of Novel MAPKAPK2 Inhibitor Using Structure-Based Drug Screening Tony Lin, 吳逸文, 潘秀玲, 許凱程 Tony Lin, Yi-Wen Wu, Shiow-Lin Pan, Kai-Cheng Hsu
PH052	Targeting APLN-LncRNA-ceRNA Axis to Interrupt Autophagy-Driven Progression in Bladder Cancer 林彥佑, 黃一勝, 蔡德甫, 仇光宇, 何肇晏, 劉秀雯, 邱昱琦 Yen-You Lin, Thomas I-Sheng Hwang, Te-Fu Tsai, Kuang-Yu Chou, Chao-Yen Ho, Hsiu-Wen Liu, Yu-Chi Cui
PH053	Aberrant Gastric Vagal Sensory Signaling to The Hippocampus Contributes to Cognitive Impairment in a Mouse Model of Colitis 張又予, 宋婷涵, 陳晉豪, 張芳嘉, 許桂森
PH054	Andro Mitigates Neurodegeneration and Behavioral Deficits in MPTP-Induced Parkinson's Disease 張哲嘉, 嚴錦城, 沈郁強 Cher-Chia Chang, Jiin-Cherng Yen, Yuh-Chiang Shen
PH055	The Effect of Combining Weak and Strong Stimuli on Memory Formation in Drosophila. 賴芍均, 姜學誠 Shao-Jyun Lai, Hsueh-Cheng Chiang
PH056	Glycolytic Reprogramming Reinforces TGF- β Signaling and Epithelial-to-Mesenchymal Transition in Chronic Respiratory Diseases 許銘仁, 黃綉文, 陳琇珍, 彭思媛, 莊晉惠 Ming-Jen Hsu, Shiu-Wen Huang, Hsiu-Chen Chen, Ssu-Yuan Peng, Chin-Hui Chuang

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PH062	Discovery of a Novel GPx4 Inhibitor for Treating Colorectal Cancer 陳舜華, 李宜臻, 陳柏任 Shun-Hua Chen, Yi-Chen Lee, Po-Jen Chen
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PH097	Critical Role of BMI1-Mir-26B-5p Axis in Regulating Epithelial-Mesenchymal Transition in Head And Neck Cancer 蕭安晴, 嚴鈞賢, 廖彩岑 An-Ching Hsiao, Chun-Hsien Yen, Tsai-Tsen Liao

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PH117	HMGCR-dependent cholesterol metabolism controls ergostatrien-3 β -ol-blocked breast cancer osteolytic bone metastasis Haritha, Wei-Cheng Chen, Yueh-Hsiung Kuo, Chih-Ying Wu, Hsiao-Chi Tsai, Yi-Chin Fong, Tzu-Min Huang, Shun-Fa Yang, Chih-Hsin Tang

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PH127	The Natural Compound DBA Protects against Blue Light-Induced Retinal Degeneration through ERK/AKT-Dependent Activation of Nrf2 Signaling 劉一謙, 郭悅雄, 吳亮寰, 何昭德, 李青濤, 楊志豪, Ahmad Dzulfikri Nurhan, 黃治翔, 鄭幼文, 蕭哲志 Yi-Chien Liu, Yueh-Hsiung Kuo, Liang-Huan Wu, Jau-Der Ho, Ching-Hao Li, Chih Hao Yang, Ahmad Dzulfikri Nurhan, Chih-Hsiang Huang, Yu-Wen Cheng, George Hsiao



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PH146	Kansuine A alleviates high glucose-induced ferroptosis-like injury in pancreatic β cells through suppression of oxidative stress and lipid peroxidation. 許慈芳, 潘柏毅, 陳芳玉, 沈明毅 Tzu-Fang Hsu, Bo-Yi Pan, Fang-Yu Chen, Ming-Yi Shen
PH147	Pauciflorol B Suppresses Chondrosarcoma Lung Metastasis via ADAM8-Mediated TGF- β Signaling Nguyen Ngoc Gia Bao, 廖志中, 湯智昕 Nguyen Ngoc Gia Bao, Chih-Chuang Liaw, Chih-Hsin Tang
PH148	Protective Effects of Flavonoid-B Against UVB-Induced Oxidative Damage and Cellular Dysfunction in Human Skin Fibroblasts 謝思璇, 林聖謙, 江晨郁, 關宇翔, 李宣信 Sih-Syuan Hsieh, Sheng-Chien Lin, Chen-Yu Chiang, Yu-Hsiang Kuan, Shiuan-Shinn Lee



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IMM2629	LUNG-36-SPECTRA: An Image-Enabled 36-Color Spectral Flow Cytometry Platform for High-Dimensional Immune Profiling of the NSCLC Tumor Microenvironment 王昱婷, 黃才旺, 宋柏儀 Yu-Ting Wang, Tsai-Wang Huang, Bo-Yi Sung



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IMM2632	Molecular Hydrogen as an Adjuvant Therapy in Systemic Lupus Erythematosus: A Case Report with Sustained Clinical and Serologic Improvement 林宏杰, 鄭文隆, 劉峰誠
IMM2633	TGF- β -Induced Secretory Autophagy Promotes ACE2 Membrane Trafficking to Facilitate SARS-CoV-2 Infection 葉令涵, 藍昇輝, 吳珊瑩 Lin Han Yeh, Sheng-Hui Lan, Shan-Ying Wu
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IMM2635	3,3'-Diindolylmethane Induces Tolerogenic Dendritic Cells via AhR to Restore Treg/Th2 Balance in Allergic Asthma 廖于萱, 黃瀚霆, 戴佳珍, 李岳倫 Yu-Hsuan Liao, Han-Ting Huang, Chai-Chen Tai, Yueh-Lun Lee
IMM2636	Evaluation of Heclin as a Potential Therapeutic Agent for Sepsis and Acute Lung Injury: A Preclinical Drug Development Study 林郁旋, 石馥嘉, 林珮筠, 陳嘉玲
IMM2637	Regulatory T Cell Instability and Intestinal Inflammation in XIAP Deficiency 陳欣如, 林玟亭, 張仲廷, 魏沛怡, 謝琬甄 Hsin Ju Chen, Wen-Ting Lin, Chung-Ting Chang, Pei-Yi Wei, Wan-Chen Hsieh
IMM2638	Akkermansia muciniphila Alleviates Intestinal Inflammation in XIAP-Deficient Mice and Modulates Colonic Regulatory T Cell Populations 林玟亭, 陳欣如, 張仲廷, 魏沛怡, 謝琬甄, 楊秉喻 Wen-Ting Lin, Hsin-Ju Chen, Chung-Ting Chang, Pei-Yi Wei, Wan-Chen Hsieh, Ping-Yu Yang
IMM2639	Fusobacterium nucleatum-Induced Neutrophil Extracellular Traps Activate Treg and Enhance Its Suppressive Function to Promote Colorectal Cancer Progression 嚴尹玟, 張仲廷, 黃宥傑, 謝琬甄

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IMM2640	Mechanistic Insights into the Antioxidant Potential of Gui-Pi-Tang: A Traditional Chinese Medicine with Prospects for Barrier-Immune Support 吳季芸, 林麗娟 Ji-Yun Wu, Li-Jen Lin
IMM2641	Spatiotemporal regulation of RIG-I-like receptor signaling by endosomes 徐祐凱, 陳建銘, 李冠葳, 凌斌 Yu-Kai Hsu, Chien-Ming Chen, Kuan-Wei Lee, Pin Ling
IMM2642	WW Domain-Containing Oxidoreductase as a Modulator of T Cell Programming During Activation and Differentiation 王逸祐, 余冠韻, 徐麗君 Yi-yu Wang, Kuan-Chieh Yu, Li-Jin Hsu
IMM2644	TLR2 Modulates CD4 ⁺ T Cell Activation Landscapes Rather Than Lineage Specification in the Tumor Microenvironment 賴宥橙, 陳惠珊, 王建能, 劉昭麟, 沈家瑞 You Cheng Lai, Hui-Shan Chen, Chien-Neng Wang, Chao-Lin Liu, Chia-Rui Shen
IMM2645	Oral Commensal Haemophilus parainfluenzae Modulates T Cell Immune Responses via Toll-like Receptor 2 in Autoimmune Disease 許尚恩, 吳淑芬 Shang-En Hsu, Shu-Fen Wu
IMP2601	Mechanistic Insights into the Anti-Inflammatory Activities of Tranexamic Acid 盧學彥, 潘威丞, 陳俊任
IMP2602	Sex-Dependent Regulation of Tissue-Resident Macrophage Programs by Saa3 Shapes Antibacterial Immunity 葉育真, 周姿吟, 張書蓉, 林建達 Yu-Zhen Ye, Tzu-Yin Chou, Shu-Jung Chang, Jian-Da Lin
IMP2603	Adenylate Kinase 4-Mediated Mitochondrial DNA Synthesis Controls Macrophage Anti-Bacterial Activity 秦偉堯, 吳靖彤, 劉淦光, 林志萱, 繆希椿 Wei-Yao Chin, Ching-Tung Wu, Gunn-Guang Liou, Jr-Shiuan Lin, Shi-Chuen Miaw
IMP2604	Galectin-9 Upregulation in Matured Type 2 Conventional Dendritic Cells (cDC2) in Psoriatic Lesions is Linked to MHC Class II Trafficking and T Cell Anergy 林峰任, 劉扶東 Feng-Jen Lin, Fu-Tong Liu
IMP2605	Decoding the Effect of Hypoxia on Tumor Infiltrating Lymphocytes Functionality in Non-Small Cell Lung Cancer 程泓儒, 黃才旺, 宋柏儀 Hong-Ru Chang, Tsai-Wang Huang, Bo-Yi Sung



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IMP2607	An AI-Driven Virtual Cell Framework for Evaluating Adjunctive System-Level Modulation of Systemic Lupus Erythematosus by <i>Rhodiola rosea</i> and Molecular Hydrogen 鄭文隆, 劉峰誠, 王光毅 Wun-Long Jheng, Feng-Cheng Liu, Kuang-Yih Wang
IMP2608	Taiwan Chingguan Yihau-NRICM101 Stimulates Monocyte Proliferation, Cell Cycle Propagation and Migration 張簡芝穎, 林怡萱, 陳滢, 劉峰誠
IMP2609	Synchronized Recovery of KLRG1-expressing Effector Memory CD8+ T Cells as an Immunophenotypic Signature of Disease Remission in Systemic Lupus Erythematosus: A Longitudinal Biomarker Study 陳映辰, 趙恩, 劉峰誠 En Chao, Feng-Cheng Liu
IMP2610	Morphotype-Specific Fungal Sensing Drives Eosinophils-Mediated Mucus Exclusion of Virulent Fungal Pathobiont in the Gut 陳瑋箴, 曾國堯, 王維樂, 蔡雨寰 Wei-Lin Chen, Kuo-Yao Tseng, Wei-Le Wang, Yu-Huan Tsai
IMP2611	Exosomal Communication Drives Stromal Resistance and Limits BiTE Efficacy in Patient-Derived 3D PDAC Tumoroids 向碧達, 劉冠萬, 江季霖, 張牧新 Hsiang BiDa, Guan-Wan Liu, Chi-Ling Chiang, Peter Mu-Hsin Chang
IMP2612	Mechanisms of Maintaining Thymic Macrophages to Promote T Cell Tolerance 馬語謙, 葛一樊
IMP2613	CCR8/CCL1 and CXCR3/CXCL10 axis-mediated memory T-cell activation in patients with recalcitrant drug-induced Hypersensitivity 張正守, 王壯維, 鐘文宏 Jeng-Shou Chang, Chuang-Wei Wang, Wen-Hung Chung
IMP2614	Functional study of the Presenilin-1 signaling pathway in the regulation of brain immune response and neuroprotection after <i>Angiostrongylus cantonensis</i> infection 林宜萱, 陳光耀 Yi Hsuan Lin, Kuang-Yao Chen
IMP2615	CD147 Signaling Facilitates Pro-inflammatory Polarization and PANoptosis in Lipid-Laden Monocytes and Atherosclerotic Plaque Instability 洪于蘋, 林秋烽

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IMP2617	Signatures of Dysfunction and Senescence: Distinct Natural Killer Lymphoid Cell Profiles in Rheumatic Diseases, Including Systemic Lupus Erythematosus, Rheumatoid Arthritis, and Psoriatic Arthritis 張家維, 詹天明, 蘇昱日 Tien-Ming Chan, Yu-Jih Su
IMP2618	The E3 Ligase KLHL20-Mediated Ubiquitination Regulates PD-1 Protein Stability and Shapes Immune Activity 凌倫翎, 陳冠宇, 王憶卿 Ling Lun Ling, Kuan-Yu Chen, Yi-Ching Wang
IMP2619	Interleukin-24 Aggravates Pathological Inflammation and Epithelial Remodeling in Asthmatic Mouse Models 吳乙柔, 邱巧絨, 許育祥 Yi-Rou Wu, Chiao-Juno Chiu, Yu-Hsiang Hsu
IMP2620	KRAS-Associated Immune Reprogramming in Endometriotic Lesions Kishan Raju, Jau-Ling Suen
IMR2601	Peli1 Limits Antitumor Immunity by Driving Terminal Exhaustion of CD8 ⁺ T Cells 林孟筠, 連理惠, 紀昊辰, 柯俊榮 Meng-Yun Lin, Li-Hui Lien, Hao-Chen Chi, Chun-Jung Ko
IMR2602	In Vitro Study of Cytotoxicity of Undaria Pinnatifida Fucoidan Against Human Prostate Pancer PC-3 Cells 李承芸, 劉捷語, 阮翊晴, 劉銘
IMR2603	Assembly of NLRP3 inflammasome by TAPE adaptor and its asso-ciated organelles 吳文碩, 張卉玟, 凌斌 Wen-Shuo Wu, Hui-Wen Zhang, Pin Ling
IMR2604	Consistent Recovery of Regulatory B Cells as a Hallmark of Immune Rebalancing in Systemic Lupus Erythematosus Treated With Adjunctive Molecular Hydrogen 劉峰誠, 陳映辰, 盧正偉, 何宜蓉 Feng-Cheng Liu, Ying-Chen Chen, Jeng-Wei Lu, Yi-Jung Ho
IMR2605	From Ukraine to Taiwan: Case-Based Immunophenotyping Uncovers Ethnic Differences in PD-1, Treg and Breg Profiles 劉峰誠, 陳映辰, 盧正偉, 何宜蓉, 安娜 Feng-Cheng Liu, Ying-Chen Chen, Jeng-Wei Lu, Yi-Jung Ho, Anna Blyzniuk
IMR2606	To Investigate the Regulatory Role of Siglec-7 in Mitochondrial Modulation during Megakaryocyte Differentiation and Platelet-Like Particle Release 林子瑜, 涂玉青 Tzu-Yu Lin, Yuh-Ching Twu



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IMR2608	Impact Of Co-exposure To Indoor Air Pollutants Arsenic And Acrylamide On The Exacerbation Of Allergic Lung Inflammation In Murine Models 林暉倫, 孫昭玲 Wei Lun Lin, Jau Ling Suen
IMR2609	The Roles of Protein "X" and Endosomal Adaptor TAPE in the Regulation of Pyroptosis and Sepsis. 廖本懷, 吳承穎, 顧哲旭, 謝宜庭, 凌斌
IMR2610	MST3 Modulates Actomyosin-Dependent Integrin-Talin Remodeling to Control YAP Localization 陳彥蓉, 陸德齡 Yen Jung Chen, Te-Ling Lu
IMR2611	MST3 Regulates Tension-Dependent Talin Cleavage in MDCK Cell 陳沛妤, 陸德齡 Pei Yu Chen, Te-Ling Lu
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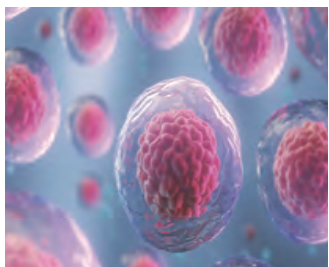
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全基因體定序 ----- 2,003筆
全基因體甲基化晶片 ----- 2,468筆
人類白血球組織抗原分型---1,096筆
血液代謝體資料-----4,210筆
尿液塑化劑含量-----1,799筆
尿液三聚氰胺含量-----1,350筆



追蹤醫學影像

靜態心電圖
腹部超音波
頸動脈超音波
甲狀腺超音波
DXA全身骨密度

26,514筆



生物檢體

DNA----- 2,194萬 µg
Plasma ----- 逾 169萬 管
Urine ----- 逾 100萬 管



中央研究院 · 臺灣人體生物資料庫
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Taiwan View



釋出管理系統



User Facebook



動物實驗 3R 科學埕

3R Curriculum

動物實驗 3R 科學埕是匯聚動物實驗專業教育資源的平台，以「專業職能再造 3R 落地生根」為願景目標，依循跨部會人才培育分工，規劃建構動物實驗科學職能導向的繼續教育課程模組與試證體制，並透過課程審查與學習時數認列的方式，串接國科會、教育部、農業部的教育課程，匯集跨部會教育能量共同組建動物實驗 3R 科學埕，持續完備與擴充教育資源。

我們將動物實驗科學梳理成 8 大主題課程模組，制定 7 項專業職能檢定考試，其中「實驗動物飼育員」、「動物試驗技術員」及「實驗動物專科獸醫師」將於 2026 年 9 月辦理第一次職能檢定考試，有興趣報考的夥伴們，記得累積符合報考資格的學習時數，並留意科學埕相關通知。



實驗動物飼育員

報考之繼續教育學習時數需求

法規倫理 2 小時、替代科技 1 小時、
動物照護 8 小時、操作技術 2 小時、
設施運作 3 小時



動物試驗技術員

法規倫理 2 小時、替代科技 2 小時、
動物照護 2 小時、操作技術 6 小時、
實驗管理 1 小時、設施運作 3 小時



實驗動物專科獸醫師

需先取得臺灣獸醫實驗動物專科
醫學會(TCLAM)會員資格，並完成
47 小時指定主題之基礎課程、任選
9 小時自選主題之進階課程

歡迎參與動物實驗的夥伴們一起加入科學埕，開始規劃自己的學習計畫，透過持續學習、提升職能、瞭解最新趨勢，為自己的職涯加分升級！



相關資訊詳見
科學埕網站



科學埕
YouTube 頻道



創建個人
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Journal of Food and Drug Analysis



Call for Papers

Aim and Scope

The *Journal of Food and Drug Analysis (JFDA)* is the official peer-reviewed publication of the Food and Drug Administration, Taiwan (TFDA). It is published quarterly by Elsevier in March, June, September and December. The Journal aims to publish original research and review papers on the analysis of food, medicine, traditional Chinese medicine, toxicology, medical devices, drugs, and cosmetics as well as related disciplines that are of topical interest to the public health profession.

Indexed in: Scopus, Embase, PubMed, PubMed Central

Abstracting: Biochemistry & Biophysics Citation Index MEDLINE®, EMBASE, FSTA (Food Science and Technology Abstracts), Research Alert, BIOSIS Previews, ScienceDirect, Chemical Abstracts Service, Scopus, Science Citation Index Expanded, Abstracts of Chinese Medicines

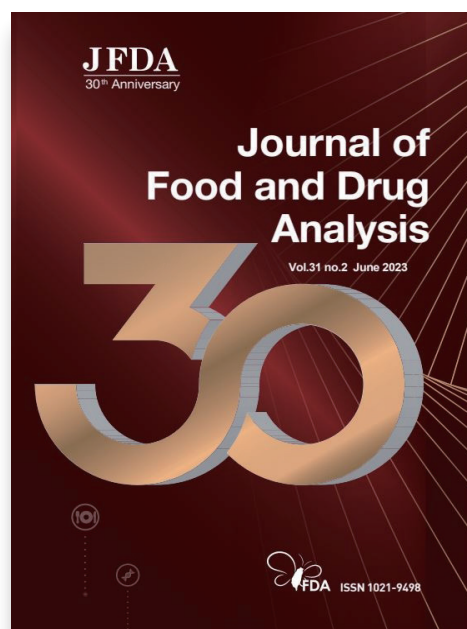
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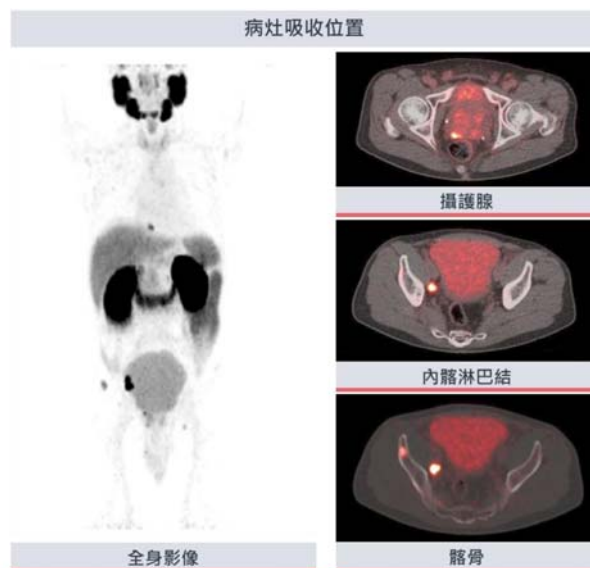


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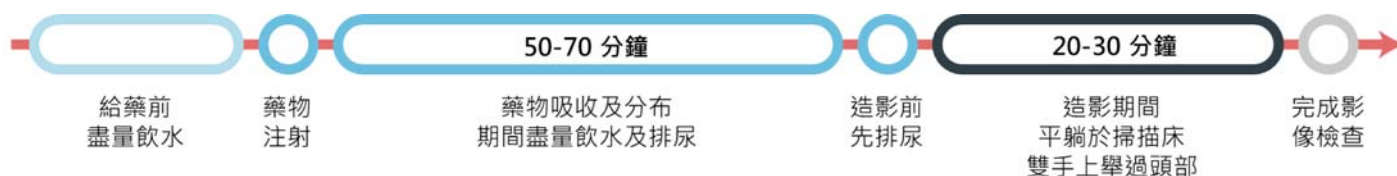
POSLUMA[®]
flotufolastat F 18 injection

- 美國於2023年，臺灣於2025年核准上市
- 主要作為正子斷層掃描(PET)造影劑，適用於檢測以下攝護腺癌男性成人病人的攝護腺特異性膜抗原(PSMA)陽性病灶，以作為輔助診斷工具：
 1. 懷疑存在轉移病灶，且適合初次決定性治療(initial definitive therapy)的病人。
 2. 基於血清攝護腺特異性抗原(PSA)濃度升高而懷疑復發的病人。

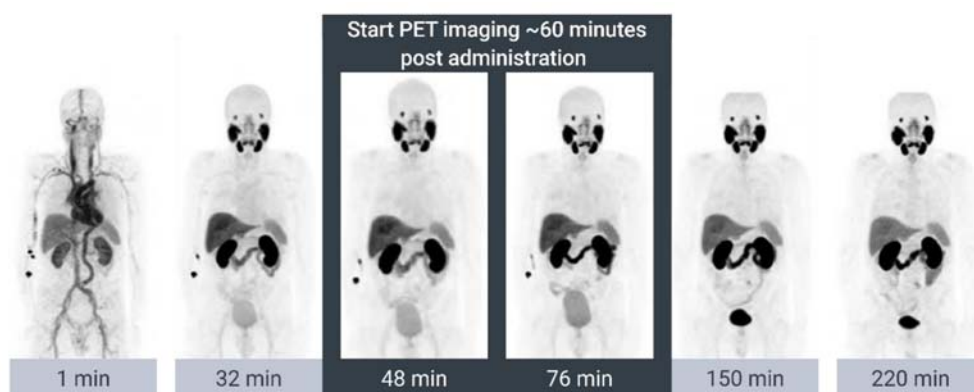


- 病人一開始接受的傳統影像檢查中，沒有發現淋巴結或遠端轉移的跡象。
- 使用 POSLUMA injectio 正子掃描診斷，發現以下部位有癌症相關的異常訊號：攝護腺內、內髖淋巴結、多處骨骼病灶。

造影流程



藥物分布



注意事項



建議劑量8 mCi · IV注射



給藥前後盡量補充水分，
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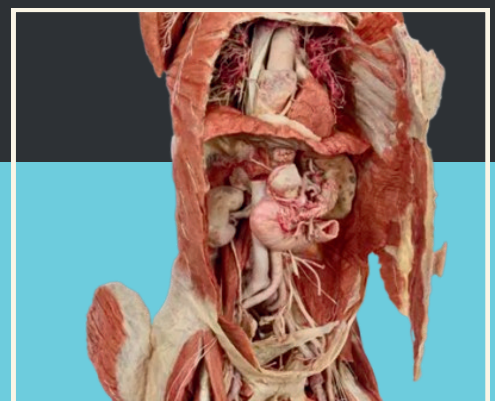
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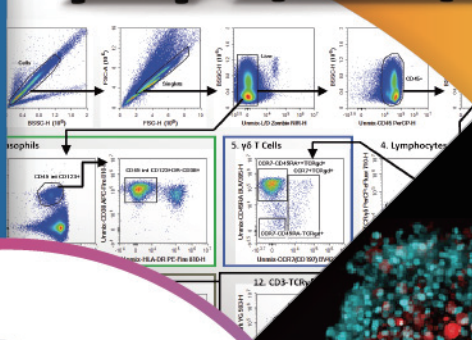
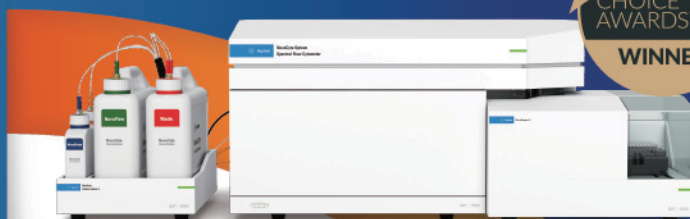
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2D to 3D Analysis

Agilent 全光譜流式細胞分析儀

Novocyte Opteon

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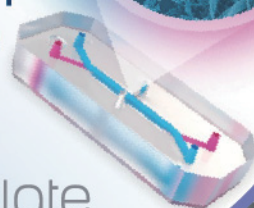
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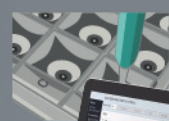
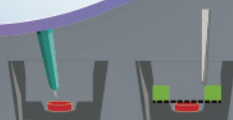
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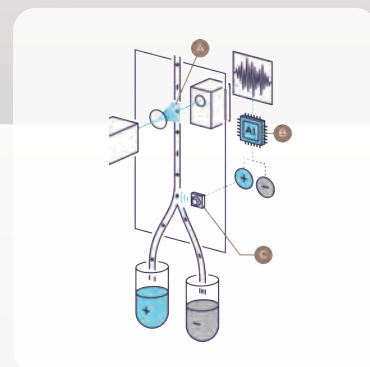
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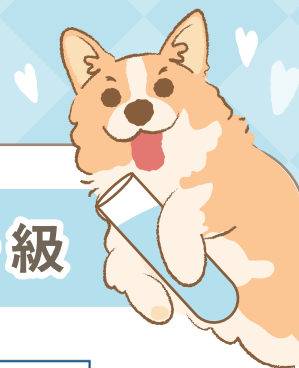
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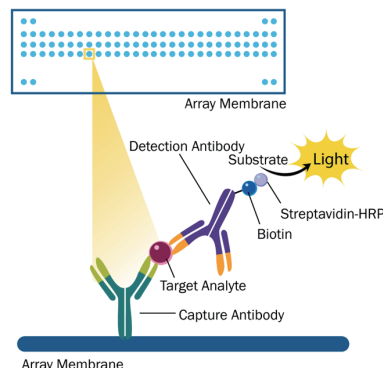
易於使用，節省時間和經費



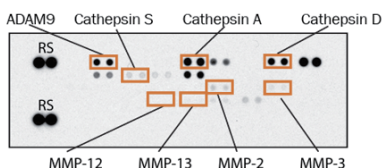
無需專用機器



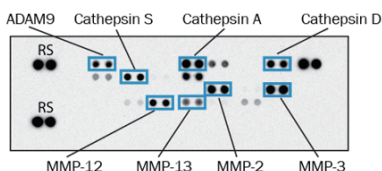
所需樣本量較一般WB少



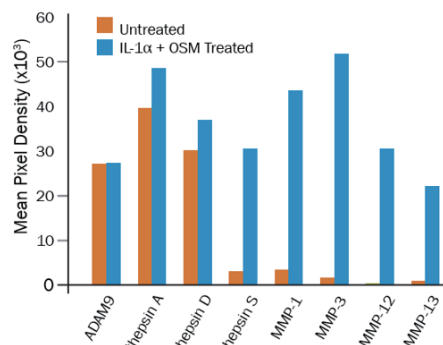
A. Untreated



B. IL-1α + OSM Treated



C. Untreated vs IL-1α + OSM Treated

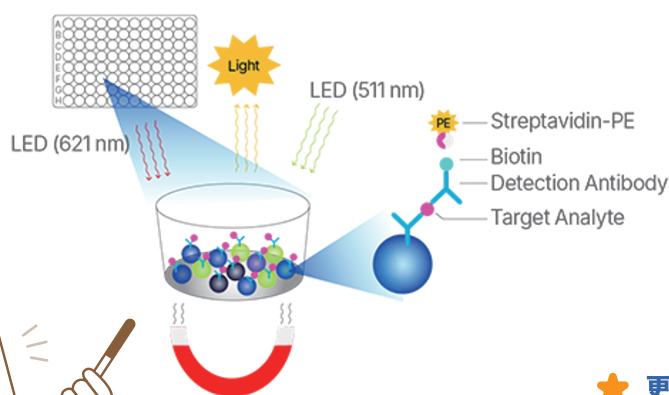


同時檢測多種蛋白酶：使用 Proteome Profiler 人類蛋白酶抗體陣列 (#ARY021B) 同時分析IL-1α與Oncostatin M (OSM) 處理後蛋白酶表現的變化。



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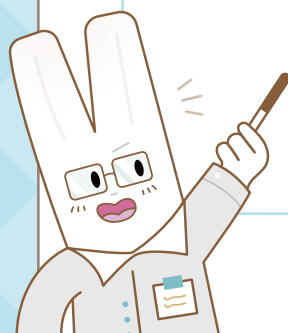
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References:

1. Gisslinger H, Klade C, Georgiev P, et al. Ropeginterferon alfa-2b versus standard therapy for polycythaemia vera (PROUD-PV and CONTINUATION-PV): a randomised, non-inferiority, phase 3 trial and its extension study. *Lancet Haematol.* 2020;7(3):e196-e208. doi:10.1016/S2352-3026(19)30236-4
2. 百斯瑞明仿單. PharmaEssentia Corporation.

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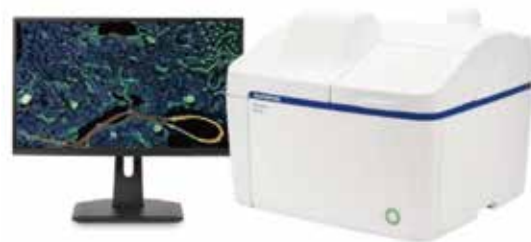
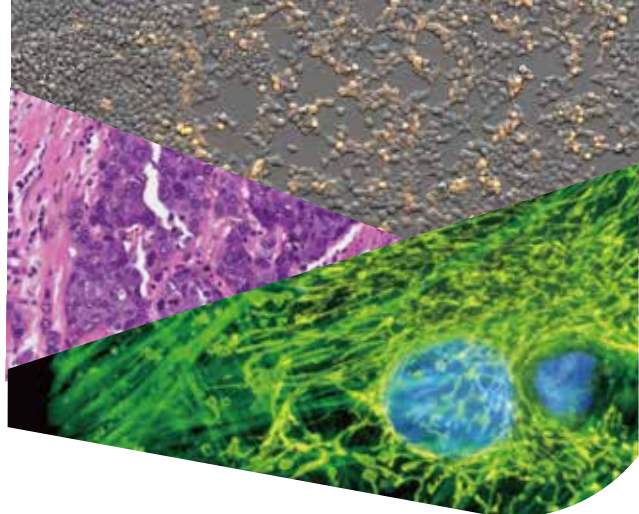
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詳細資訊

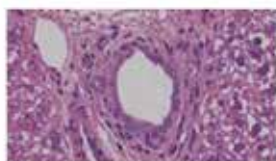


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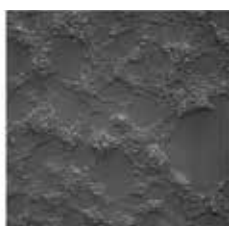


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具立體感且高對比的穿透光影像

傳承百年歷史，誕生全新觀察法

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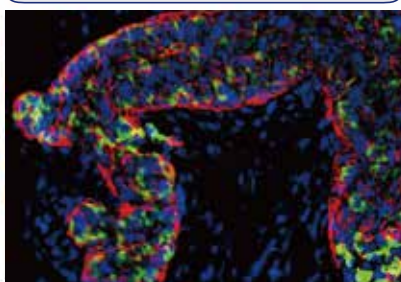
HEK293細胞

無需暗房，自由設置

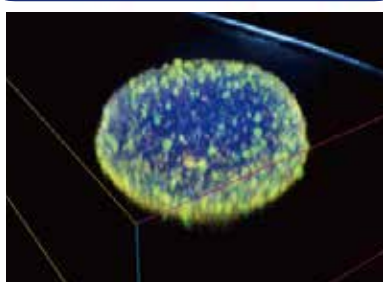


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大範圍無接縫拼圖功能



Colocalization of NeuN and γ -H2AX in Monkey Brain. Stain: Immunocytochemistry.
 圖像データのご提供: Rui Han, Lab of Prof. Xiaojang-Li, Guangdong-HongKong-Macao Institute of CNS Regeneration, JINAN University.



UG-05

放射性藥品 自動分注投藥裝置

- 屏蔽防護 | 有效降低輻射暴露風險
- 自動高效 | 精準分注取代人工抽藥

許可證字號：衛部醫器輸字第 037481 號 (儀器)、第 038714 號 (耗材)

放射性藥品 自動分注投藥裝置 UG-05

設備簡介

UG-05 實現藥品分注與投藥全自動化，精確作業並大幅節省人力。設備內建鎢罐以及鉛製屏蔽總計 80mm，最高可處理 37GBq 高活度藥劑。即便於最大活度下持續 8 小時，累計輻射僅 4 μ Sv，單次分注投藥輻射洩漏僅 0.25 μ Sv。另外整合不斷電備援系統，即便電力中斷，防護與精準分注依然持續，確保醫護人員在任何極端環境下，皆享有極低輻射暴露的安全職場。



放射性藥品原液置於防護鎢罐



操作流程圖像化



即時操作畫面顯示



高經濟效益一次性耗材

設備特點



● 高活度下的極致防護



● 精準分注投藥



● 對應不同臨床需求



● 高經濟效益一次性耗材



● 操作簡單



● 內建緊急供電電池



● 智能全自動原液分注



● 多模態分注投藥



● 投藥資料可追溯性

本設備為醫療器材，需定期對其進行維護管理。

維護管理需要專門的知識和技術，請聯絡本公司進行維護作業。

