

國科會生命科學研究推動中心

研討(習)會 結案報告

一、基本資料

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| 中文名稱   | 內容小體離子通道與疾病國際研討會 (ELiD 2025)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 英文名稱   | SYMPOSIUM ON ENDOLYSOSOMAL ION CHANNELS & DISEASES 2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 中文摘要報告 | <p>本次「內容小體離子通道與疾病國際研討會 (ELiD 2025)」延續去年的成功經驗，於 2025 年 10 月 25 日假國立臺灣大學醫學院舉行。會議聚焦於內容小體離子通道 (Endolysosomal Ion Channels) 在神經退行性疾病、免疫反應與病毒感染等生理與病理機制中的最新研究進展。</p> <p>本研討會由國立臺灣大學醫學檢驗暨生物技術學系主辦，臺灣基因體暨遺傳學會協辦，並獲得國家科學及技術委員會及教育部指導與支持。會議主席為陳政彰助理教授，榮譽主席為連正章教授 (國立陽明交通大學) 及國立臺灣大學醫學檢驗暨生物技術學系俞松良主任。</p> <p>本屆會議共邀請來自德國、法國、日本、美國及台灣的國際講者，包括德國柏林 FMP 的 Thomas Jentsch 院士、慕尼黑大學 (LMU) Martin Biel 院士與 Christian Wahl-Schott 教授、法國波爾多大學 (University of Bordeaux) Eric Boué-Grabot 教授、美國賓州大學 (UPenn) Dejian Ren 教授、德州大學 (UTHealth) Michael X. Zhu 教授，以及日本 NIPS 的下村拓史博士，另有 Nanion Technologies、Sophion、Threebrooks Biotech 等產業代表共同參與。</p> <p>議程上午由國立臺灣大學醫學院院長吳明賢及醫學檢驗暨生物技術學系主任俞松良致詞，開啟大會序幕。首場由 Thomas Jentsch 院士發表「TMEM9 proteins: New players in endosomal ion transport and neurological disorders」，探討 TMEM9 蛋白於神經疾病及內體離子平衡中的新角色。</p> <p>隨後，陳政彰助理教授報告「Targeting Endolysosomal Ion Channels by Electrophysiology」，介紹膜片鉗技術在解析 TRPML 與 TPC 通道活性調控之應用。接續由 Christian Wahl-Schott 教授發表「Regulation of TPC2 function in endosomes and lysosomes」，深入探討 TPC2 通道於胞內膜系統的功能調控。</p> <p>日本生理學研究所 (NIPS) 下村拓史博士則以「A switching role of the 2nd S4 helix in the voltage- and PIP2-dependence of Two-Pore channels」分享其電生理與結構分析成果，揭示雙孔通道的新型調控機制。</p> |

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|        | <p>午餐與海報展示於臺大醫學人文博物館舉行。下午場由中央研究院陳瑞華特聘研究員開場，發表「Bro1 proteins control lysosome and exosome fates of multivesicular bodies」，探討多泡體與腫瘤免疫間的關聯。隨後由饒梓明與林能裕教授與趙苔伶教授短講 TRPM8 與 TPC2 在代謝與病毒感染模型中的新發現。</p> <p>今年新增學生短講（Student Flash Talk），由王煊棣、林倩如、李家興三位博士生報告最新研究成果，主題涵蓋溶小體鈣離子訊號、TPC2 糖基化修飾及離子通道調控等。</p> <p>產業講者部分，Nanion Technologies 的 Markus Rapedius 博士發表「Approaching organelles with high-throughput electrophysiology methods」，展示高通量膜片鉗平台於內容小體通道藥物開發的潛力。</p> <p>下午壓軸由法國波爾多大學 Eric Boué-Grabot 教授發表「P2X4 Receptors at the Cell Surface and in Endolysosomes: Roles in Brain Health and Disease」主題演講。最終圓桌論壇“Crossing Frontiers in Ion Channel Research”由德州大學 Michael X. Zhu 教授主持，與 Martin Biel、Dejian Ren、Thomas Jentsch 等國際講者共同討論離子通道研究的前瞻方向。</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 英文摘要報告 | <p>The International Symposium on Endolysosomal Ion Channels and Disease (ELiD 2025) built upon the success of last year’s event and was held on October 25, 2025, at the College of Medicine, National Taiwan University. This year’s symposium highlighted the latest advances in understanding how endolysosomal ion channels contribute to physiological and pathological mechanisms, including neurodegenerative diseases, immune responses, and viral infections.</p> <p>The meeting was organized by the Department of Clinical Laboratory Sciences and Medical Biotechnology, NTU, co-organized by the Taiwan Society of Genomic Medicine, and supported by the National Science and Technology Council and the Ministry of Education. The symposium was chaired by Assistant Professor Cheng-Chang Chen, with Professor Cheng-Chang Lien (National Yang Ming Chiao Tung University) and Professor Sung-Liang Yu (NTU CLSMB) serving as honorary chairs.</p> <p>This year’s program brought together international speakers from Germany, France, Japan, the United States, and Taiwan, including:</p> <p>Academician Thomas Jentsch (FMP Berlin, Germany)</p> <p>Academician Martin Biel and Professor Christian Wahl-Schott (LMU Munich)</p> |

Professor Eric Boué-Grabot (University of Bordeaux, France)

Professor Dejian Ren (University of Pennsylvania, USA)

Professor Michael X. Zhu (UTHealth, USA)

Dr. Takashi Shimomura (NIPS, Japan)

Representatives from Nanion Technologies, Sophion, and Threebrooks Biotech also participated.

The symposium opened with welcoming remarks by Dean Ming-Shian Wu of NTU College of Medicine and Director Sung-Liang Yu of CLSMB. The first keynote was delivered by Academician Thomas Jentsch, titled “TMEM9 proteins: New players in endosomal ion transport and neurological disorders,” shedding light on emerging roles of TMEM9 proteins in neuronal dysfunction and endosomal ion homeostasis.

This was followed by Assistant Professor Cheng-Chang Chen presenting “Targeting Endolysosomal Ion Channels by Electrophysiology,” which showcased patch-clamp approaches for studying regulation of TRPML and TPC channel activity. Professor Christian Wahl-Schott then delivered “Regulation of TPC2 function in endosomes and lysosomes,” offering an in-depth discussion of TPC2 modulation within intracellular membrane systems.

From NIPS, Dr. Takashi Shimomura presented “A switching role of the 2nd S4 helix in the voltage- and PIP2-dependence of Two-Pore channels,” revealing new mechanistic insights from electrophysiological and structural studies of two-pore channels.

The lunch and poster session took place at the NTU Medical Humanities Museum. The afternoon program began with Distinguished Research Fellow Ruey-Hwa Chen (Academia Sinica) presenting “Bro1 proteins control lysosome and exosome fates of multivesicular bodies,” examining the interplay between multivesicular body dynamics and tumor immunity. Short talks followed, featuring Professors Tz-Ming Jao, Neng-Yu Lin, and Tai-Ling Chao, who shared new findings on TRPM8 and TPC2 in metabolic and viral infection models.

A new Student Flash Talk session was introduced this year, with doctoral students Shuan-Ti Wang, Chien-Ju Lin, and Chia-Hsing Lee presenting recent discoveries ranging from lysosomal calcium signaling to TPC2 glycosylation and ion channel regulation.

On the industry side, Dr. Markus Rapedius (Nanion Technologies) delivered “Approaching organelles with high-throughput electrophysiology methods,” demonstrating the potential of automated patch-clamp platforms for drug

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|           | <p>discovery targeting endolysosomal channels.</p> <p>The final keynote was given by Professor Eric Boué-Grabot, “P2X4 Receptors at the Cell Surface and in Endolysosomes: Roles in Brain Health and Disease.” The symposium concluded with the roundtable discussion “Crossing Frontiers in Ion Channel Research,” moderated by Professor Michael X. Zhu, featuring Martin Biel, Dejian Ren, Thomas Jentsch, and other international experts discussing future directions in ion channel research.</p>                                                                                                                                                                                                                                                    |
| 研討(習)會目的  | <p>本次「內容小體離子通道與疾病國際研討會（ELiD 2025）」會議聚焦於內容小體離子通道（Endolysosomal Ion Channels）在神經退行性疾病、免疫反應與病毒感染等生理與病理機制中的最新研究進展。</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 參加對象(含人數) | <p><b>114 人</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 預期效益達成狀況  | <p><b>A. 會議成果</b></p> <ol style="list-style-type: none"> <li><b>推動跨國與跨領域合作：</b>此本屆新增法國、日本與德國產業界代表共同參與，促成跨國研究團隊與產業單位交流。陳政彰教授與 LMU Munich 的 Christian Wahl-Schott 教授及 Bordeaux University 的 Eric Boué-Grabot 教授已展開後續合作計畫。</li> <li><b>促進技術與產學連結：</b>德國 Nanion Technologies 與丹麥 Sophion 公司介紹高通量膜片鉗與溶小體通道藥物篩選新技術，並提供研究合作與設備試用機會。</li> <li><b>青年學者培育與學術活力：</b>學生海報與口頭報告共 13 件，涵蓋 TRPML2、TPC2、TRPM8、P2X4 等多項主題，激發青年學者與國際專家的互動，展現臺大與國內學界在此領域的研究能量。</li> <li><b>與會回饋摘要：</b>根據會後問卷調查，整體滿意度平均為 4.25 分（滿分 5 分）。其中，50% 的與會者給予「非常滿意」、25% 給予「滿意」、25% 給予「普通」。各項細目中，講者表現與議程安排滿意度均達 75% 以上。</li> </ol> <p>此外，多位國際講者（含 Christian Wahl-Schott、Eric Boué-Grabot、下村拓史、Markus Rapedius、Dejian Ren 等）皆於會後來信表達高度肯定，讚揚會議組織完善、學術內容豐富，並表示期待持續參與後續研討會與研究合作。</p> <p><b>B. 檢討與建議</b></p> |

本次研討會整體進行順利，獲得國內外與會者高度肯定。然而根據部分回饋，仍有若干可改進之處：

1. 宣傳期程可再提前，以利更多學生與年輕研究者報名參與與投稿海報。
2. 有與會者建議，由於國際講者層級高且人數眾多，未來可考慮延長為兩天議程，以利每位講者有更充分的時間展示研究內容（惟此需視經費支持情況而定）。
3. 部分回饋指出，可減少國內講者數量，改由學生自組主持與討論場次，讓青年學者之間有更多互動與交流機會。
4. 有建議指出，國際講者之主題演講時間可延長至一小時，以容納更完整的內容與問答。
5. 另有實務性建議指出，會場咖啡因飲品應適當準備，以提供與會者更佳的休息與交流環境。

整體而言，與會者普遍對本次研討會的議程安排、學術內容及國際講者組成表示高度滿意，並期待未來能以更長規模、更高層次的形式持續舉辦。

## 二、邀請主講人姓名及學經歷

| 姓名             | 學歷                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 經歷                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 現任                                                                                                                                                                                                                                                                                                                                                                                                  |
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| Thomas Jentsch | <p>➤ 1991：<br/>特許漢堡大學醫學中心<br/>細胞生物化學任教資格<br/>(Habilitation in Cell Biochemistry, University Medical Center Hamburg)</p> <p>➤ 1984：<br/>柏林自由大學臨床生理學研究所醫學博士(論文主題：pH 調節過程)，(M.D., Institute for Clinical Physiology, Freie Universität Berlin)</p> <p>➤ 1982：<br/>柏林弗里茨-哈伯研究所物理學博士(論文主題：場致電離)，(Ph.D., Fritz-Haber-Institute, Max-Planck-Society, Berlin)</p> <p>➤ 1974-1980：<br/>柏林自由大學物理學研究(FU Berlin)</p> <p>➤ 1972-1978：<br/>柏林自由大學醫學研究(FU Berlin)</p> | <p>➤ 2006-2023：<br/>柏林馬克斯-德爾布呂克分子醫學中心小組組長(Group Leader, Max-Delbrück-Centrum für Molekulare Medizin, Berlin)</p> <p>➤ 2006-2021：<br/>柏林夏里特醫科大學教授(Full Professor (W3), Charité-Universitätsmedizin Berlin)</p> <p>➤ 1995-1998 &amp; 2001, 2003：<br/>漢堡大學漢堡分子神經生物學中心主任(Director, Center for Molecular Neurobiology Hamburg, ZMNH, Hamburg University)</p> <p>➤ 1993-2006：<br/>漢堡分子神經生物學中心分子神經病理學教授暨系主任(Full Professor (C4), Director Dept. Molecular Neuropathology, ZMNH)</p> <p>➤ 1988-1993：<br/>漢堡分子神經生物學中心研究小組組長(Research group leader, ZMNH)</p> <p>➤ 1986-1988：<br/>麻省理工學院懷特海德生</p> | <p>➤ 2021 年迄今：<br/>柏林夏里特醫科大學名譽教授(Full Professor (W3), Charité - Universitätsmedizin Berlin)</p> <p>➤ 2006 年迄今：<br/>萊布尼茨分子藥理學研究所離子轉運生理學與病理學研究部門負責人(Leader of Research Unit 'Physiology and Pathology of Ion Transport', Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP))</p> <p>➤ 隸屬於：<br/>柏林夏里特醫科大學卓越神經治療集群(NeuroCure Cluster of Excellence, Charité Universitätsmedizin, Berlin)</p> |

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|                       |                                                                                                                                                                                                                                                                                                                                                                        | <p>物醫學研究所博士後研究員(Postdoctoral fellow , Whitehead Institute, MIT, Cambridge, Massachusetts)</p> <p>➤ 1981-1985 :</p> <p>柏林自由大學臨床生理學研究所科學家(Staff scientist , Institut für Klinische Physiologie, FU Berlin)</p>                                                                                                                                                                                                                                |                                                                                                                                                                                  |
| Christian Wahl-Schott | <p>➤ 2007 :<br/>特許慕尼黑大學藥理學任教資格, (Habilitation in Pharmacology , LMU Munich)</p> <p>➤ 2000 :<br/>醫學認證 (Approbation in Medicine)</p> <p>➤ 1995-1997 :<br/>弗萊堡阿爾伯特-路德維希大學醫學博士(Dr. med., Albert-Ludwigs-University Freiburg)</p> <p>➤ 1991-1998 :<br/>弗萊堡阿爾伯特-路德維希大學和海德堡魯普雷希特-卡爾斯大學醫學研究(Albert-Ludwigs-University Freiburg and Ruprecht-Karls-University , Heidelberg)</p> | <p>➤ 2018 年-2022 年 :<br/>漢諾威醫學院神經生理學研究所教授暨所長(Full Professor and Director Institute of Neurophysiology, Medizinische Hochschule Hannover)</p> <p>➤ 2012 :<br/>慕尼黑大學藥學系分子藥理學教授(W2 tenure , Department of Pharmacy, LMU Munich)</p> <p>➤ 2007 :<br/>慕尼黑大學分子藥學系藥理學教授 (W2 tenure track, Department of Pharmacy , LMU Munich)</p> <p>➤ 2000-2007 :<br/>慕尼黑大學藥學系藥理學研究助理 (Research Assistant, Department of Pharmacy, Pharmacology, LMU Munich)</p> | <p>➤ 2022 年迄今 :<br/>慕尼黑大學生物醫學中心心血管生理學與病理生理學研究所教授暨所長(Full Professor and Director, Institute for Cardiovascular Physiology and Pathophysiology, Biomedical Center, LMU Munich)</p> |

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|      |                                                                                                                                                                                                                                                                                                                                 | <p>➤ 1999-2000：<br/>慕尼黑大學醫學院醫學部<br/>研究助理 (Research<br/>Assistant, Department of<br/>Medicine I, Medical School,<br/>LMU Munich)</p>                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                     |
| 下村拓史 | <p>➤ 2006~2011：<br/>京都大學理學研究科博士(Ph.D., Graduate<br/>School of Science, Kyoto<br/>University)</p> <p>➤ 2002~2006：<br/>京都大學理學部學士<br/>(B.S., Faculty of Science,<br/>Kyoto University)</p>                                                                                                                                         | <p>➤ 2012~2015：<br/>名古屋大學細胞與結構生<br/>理學研究所博士後研究員<br/>(Postdoctoral fellow ,<br/>Cellular and Structural<br/>Physiology Institute<br/>(C e S P I), N a g o y a<br/>University)</p> <p>* 2011~2012：<br/>京都大學理學研究科博士<br/>後研究員 (Postdoctoral<br/>fellow , Graduate School of<br/>Science, Kyoto University)</p>                          | <p>➤ 2015 年迄今：<br/>自然科學研究機構 (NINS) 轄下<br/>生理學研究所 (NIPS) 生物物理<br/>學與神經生物學部門助理教授<br/>(Assistant professor, Division of<br/>Biophysics and Neurobiology,<br/>National Institute for<br/>Physiological Sciences)</p>                                                                                                                                                                    |
| 陳瑞華  | <p>➤ 1987-1991：<br/>密西根州立大學生化學<br/>博 士 ( P h . D . ,<br/>Biochemistry, Michigan<br/>State University)</p> <p>➤ 1983-1985：<br/>國立臺灣大學生化學碩<br/>士 (M.S., Biochemical<br/>Science, National Taiwan<br/>University)</p> <p>➤ 1979-1983：<br/>國立臺灣大學農業化學<br/>學士 (B.S., Agricultural<br/>Chemistry, National<br/>Taiwan University)</p> | <p>➤ 2011 年 8 月-2013 年 8<br/>月：<br/>中央研究院生物化學研究<br/>所副所長 (Deputy Director,<br/>Institute of Biological<br/>Chemistry, Academia<br/>Sinica)</p> <p>➤ 2006 年 8 月-2012 年 7<br/>月：<br/>中央研究院生物化學研究<br/>所研究員 (Research Fellow,<br/>Institute of Biological<br/>C h e m i s t r y ,<br/>Academia Sinica)</p> <p>➤ 2003 年 8 月-2006 年 7</p> | <p>➤ 2012 年 7 月迄今：<br/>中央研究院生物化學研究所特<br/>聘研究員 (Distinguished<br/>Research Fellow, Institute of<br/>Biological Chemistry, Academia<br/>Sinica)</p> <p>➤ 2015 年 1 月迄今：<br/>中國醫藥大學癌症生物學研究<br/>所 兼任講座教授 (Adjunct Chair<br/>Professor, Graduate Institute of<br/>Cancer Biology, China Medical<br/>University)</p> <p>➤ 2007 年 8 月迄今：<br/>國立臺灣大學生化科學研究所<br/>兼任教授 (Adjunct Professor,</p> |

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|  |  | <p>月：</p> <p>國立臺灣大學醫學院分子醫學研究所教授<br/>(Professor, Institute of Molecular Medicine, College of Medicine, National Taiwan University)</p> <p>➤ 1996 年 2 月-2003 年 7 月：</p> <p>國立臺灣大學醫學院分子醫學研究所副教授<br/>(Associate Professor, Institute of Molecular Medicine, College of Medicine, National Taiwan University)</p> <p>➤ 1995 年 10 月-1996 年 2 月：</p> <p>舊金山加州大學生長與發育學系助理生化學家<br/>(Assistant Biochemist, University of California at San Francisco)</p> <p>➤ 1992 年 1 月-1995 年 9 月：</p> <p>舊金山加州大學生長與發育學系博士後研究員<br/>(Postdoctoral Fellow, University of California at San Francisco)</p> <p>➤ 1985 年 9 月-1987 年 8 月：</p> <p>國立臺灣大學醫院臨床研</p> | <p>Institute of Biochemical Science, National Taiwan University)</p> <p>➤ 2006 年 8 月迄今：</p> <p>國立臺灣大學醫學院分子醫學研究所兼任教授 (Adjunct Professor, Institute of Molecular Medicine, College of Medicine, National Taiwan University)</p> |
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|                  |                                                                                                                                                                            | 究部研究助理 (Research Assistant, National Taiwan University Hospital)                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Eric Boué-Grabot | <p>➤ 1994 年 10 月-1997 年 12 月：</p> <p>波爾多大學神經科學與藥理學博士 (Ph.D in Neurosciences and Pharmacology, Université de Bordeaux)</p>                                                  | <p>➤ 2000 年 10 月 1 日-2014 年 1 月 1 日：</p> <p>法國國家科學研究中心研究員 (CNRS researcher)</p> <p>➤ 1998 年 1 月 2 日-2000 年 11 月 1 日：</p> <p>麥吉爾大學蒙特婁神經學研究所博士後研究員 (Post-doctoral researcher, Montreal Neurological Institute, Université McGill)</p> | <p>➤ 現任職務：</p> <p>「嘌呤介導的神經炎症與腦部疾病」研究團隊負責人 (head of the research Team "Purinergic mediated inflammation and brain disorders")</p> <p>➤ 2022 年 3 月 1 日迄今：</p> <p>波爾多大學/法國國家科學研究中心神經退化性疾病研究所副所長 (Deputy director of Institut des Maladies Neurodégénératives (IMN), CNRS - University of Bordeaux)</p> <p>➤ 2014 年 1 月 2 日迄今：</p> <p>法國國家科學研究中心研究主任 (Research Director, CNRS)</p> <p>➤ 2011 年 1 月 1 日迄今：</p> <p>法國國家科學研究中心神經退化性疾病研究所團隊負責人 (Institute for Neurodegenerative disease, CNRS UMR 5293)</p> |
| Martin Biel      | <p>➤ 1996：</p> <p>特許慕尼黑工業大學醫學院藥理學與毒理學任教資格 (Habilitation in Pharmacology and Toxicology (Dr. med. habil.), Medical School, TU München)</p> <p>➤ 1990：</p> <p>薩爾蘭大學自然科學博</p> | <p>➤ 2010-2022：</p> <p>慕尼黑大學藥學系主任 (Director, Department of Pharmacy, LMU München)</p> <p>➤ 2009-2011：</p> <p>慕尼黑大學化學與藥學學院院長 (Dean, Faculty of Chemistry and Pharmacy, LMU München)</p> <p>➤ 2007-2009：</p>                          | <p>➤ 1999 年迄今：</p> <p>慕尼黑大學藥學系教授 (Full professor, Department of Pharmacy, LMU München)</p> <p>➤ 2021 年迄今：</p> <p>巴伐利亞科學院學部主任兼副院長 (Section Head and Vice President Bavarian Academy of Sciences)</p> <p>➤ 2017 年迄今：</p>                                                                                                                                                                                                                                                                              |

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|            | <p>士 (Dr. rer. nat., Saarland University)</p> <p>➤ 1988 :<br/>藥 學 認 證<br/>(Approbation in Pharmacy)</p> <p>➤ 1987-1990 :<br/>薩爾蘭大學醫學院生理化學研究所研究生<br/>(Graduate research, Saarland University)</p> <p>➤ 1983-1987 :<br/>薩爾蘭大學藥學科學培訓 (Pharmaceutical Sciences training, Saarland University, Saarbrücken)</p> | <p>慕尼黑大學化學與藥學學院副院長 (Vice Dean, Faculty of Chemistry and Pharmacy, LMU München)</p> <p>➤ 2004-2006 :<br/>慕尼黑大學藥學系主任<br/>(Director, Department of P h a r m a c y , L M U München)</p> <p>➤ 1996-1999 :<br/>慕尼黑工業大學藥理學與毒理學研究所助理教授 (小組負責人) (Assistant Professor (group leader), Institute of Pharmacology and Toxicology, TU München)</p> <p>➤ 1991-1996 :<br/>慕尼黑工業大學藥理學與毒理學研究所博士後研究員 (Postdoctoral Fellow, Institute of Pharmacology and Toxicology, TU München)</p> | <p>ViGeneron GmbH 共同創辦人<br/>(Co-Founder ViGeneron GmbH)</p>                                                                                                                                  |
| Dejian Ren | <p>➤ 1990-1997 :<br/>紐約州立大學布法羅分校生理學與生物物理學博士(Ph.D., Physiology and Biophysics , State University of New York at Buffalo)</p>                                                                                                                                                                                | <p>➤ 2019 年 :<br/>賓夕法尼亞大學生物學研究生課程代理主席 (Acting Chair, Biology Graduate Group, University of Pennsylvania)</p> <p>➤ 2010-2015 :<br/>賓夕法尼亞大學生物學副教授 (Associate Professor,</p>                                                                                                                                                                                                                                                                                           | <p>➤ 2023 年迄今 :<br/>賓夕法尼亞大學生物學研究生課程主席 (Chair, Biology Graduate Group, University of Pennsylvania)</p> <p>➤ 2015 年迄今 :<br/>賓夕法尼亞大學生物學系教授 (Professor, Department of Biology, University of</p> |

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|                |                                                                                                                                       | <p>Department of Biology, University of Pennsylvania)</p> <p>➤ 2003-2010 :</p> <p>賓夕法尼亞大學生物學系助理教授 (Assistant Professor, Department of Biology, University of Pennsylvania)</p> <p>➤ 1997-2002 :</p> <p>哈佛醫學院波士頓兒童醫院霍華德休斯醫學研究所博士後研究員</p> <p>(Postdoctoral Research Fellow, Howard Hughes Medical Institute, Boston Children's Hospital, Harvard Medical School)</p> <p>➤ 1992-1997 :</p> <p>紐約州立大學布法羅分校生物化學藥理學系研究生研究助理 (Graduate Research Assistant , Department of Biochemistry and Pharmacology, State University of New York College at Buffalo)</p> | Pennsylvania)                                                                                                                                                                 |
| Michael X. Zhu | <p>➤ 1991 :</p> <p>休斯頓大學生化學博士 (Ph.D., Biochemistry, University of Houston)</p> <p>➤ 1988 :</p> <p>休斯頓大學生化學碩士 (M.S., Biochemistry,</p> | <p>➤ 2007-2010 :</p> <p>俄亥俄州立大學生物物理學研究生課程共同主任 (Co-director, Biophysics Graduate Program, Ohio State University)</p> <p>➤ 2003-2010 :</p> <p>俄亥俄州立大學神經科學</p>                                                                                                                                                                                                                                                                                                                                                                                            | <p>➤ 2010 年迄今 :</p> <p>德州大學健康科學中心休斯頓分校 醫學院整合生物學與藥理學系教授 (Professor, Department of Integrative Biology and Pharmacology, The University of Texas Medical School at Houston)</p> |

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|  | <p>University of Houston)</p> | <p>系與分子神經生物學中心<br/>副教授 (Associate Professor, Department of Neuroscience and Center for Molecular Neurobiology, Ohio State University)</p> <p>➤ 2000-2003 :<br/>俄亥俄州立大學神經科學系與神經生物技術中心助理教授 (Assistant Professor, Department of Neuroscience and Neurobiotechnology Center, Ohio State University)</p> <p>➤ 1997-2000 :<br/>俄亥俄州立大學藥理學系與神經生物技術中心助理教授 (Assistant Professor, Department of Pharmacology and Neurobiotechnology Center, Ohio State University)</p> <p>➤ 1994-1997 :<br/>洛杉磯加州大學麻醉學系信號傳導實驗室助理研究員 (Assistant Researcher, Signal Transduction Laboratory, Department of Anesthesiology, University of California at Los Angeles)</p> <p>➤ 1991-1994 :<br/>貝勒醫學院細胞生物學系博士後研究員/研究助理</p> | <p>➤ 2006 年迄今 :<br/>細胞生理學期刊副主編 (Associate Editor , Journal of Cellular Physiology)</p> <p>➤ 2012 年迄今 :<br/>分子藥理學編輯委員會成員 (Editorial Board Member, Molecular Pharmacology) 。</p> |
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|  |  | <p>( P o s t d o c t o r a l<br/>Fellow/Research Associate,<br/>Department of Cell Biology,<br/>Baylor College of Medicine)</p> <p>➤ 1991 :</p> <p>休斯頓大學生化與生物物<br/>理科學系博士後研究員<br/>(Postdoctoral Fellow,<br/>Department of Biochemical<br/>and Biophysical Sciences,<br/>University of Houston)</p> |  |
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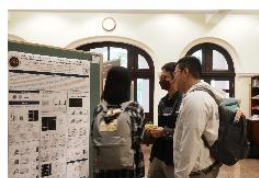
### 三、議程

| 日期         | 議程時間        | 議程講員                              | 議題主題                                                                                                                                                        |
|------------|-------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025/10/25 | 08:45–09:00 | —                                 | 報到 & 海報布置                                                                                                                                                   |
| 2025/10/25 | 09:00–09:10 | 吳明賢、俞松良<br>(主持：郭靜穎)               | 開幕致詞                                                                                                                                                        |
| 2025/10/25 | 09:10–09:50 | Thomas Jentsch<br>(主持：連正章)        | TMEM9 proteins: New players in endosomal ion transport and neurological disorders<br>( <b>Keynote</b> )                                                     |
| 2025/10/25 | 09:50–10:05 | 陳政彰<br>(主持：連正章)                   | Targeting Endolysosomal Ion Channels by Electrophysiology                                                                                                   |
| 2025/10/25 | 10:05–10:20 | —                                 | 茶歇                                                                                                                                                          |
| 2025/10/25 | 10:20–11:00 | Christian Wahl-Schott<br>(主持：徐嘉琳) | Regulation of TPC2 function in endosomes and lysosomes ( <b>Keynote</b> )                                                                                   |
| 2025/10/25 | 11:00–11:30 | 下村拓史<br>(主持：陳美如)                  | A switching role of the 2nd S4 helix in the voltage- and PIP2-dependence of Two-Pore channels revealed by voltage clamp fluorometry ( <b>Guest speech</b> ) |
| 2025/10/25 | 11:30–13:00 | —                                 | 午餐 & 海報展示                                                                                                                                                   |
| 2025/10/25 | 13:00–13:30 | 陳瑞華<br>(主持：姚季光)                   | Bro1 proteins control lysosome and exosome fates of multivesicular bodies for regulating tumor immunity and metastasis ( <b>Guest speech</b> )              |
| 2025/10/25 | 13:30–13:45 | 饒梓明<br>(主持：楊雅倩)                   | TRPM8 Attenuates ADPKD Progression through Mitochondrial Reprogramming                                                                                      |
| 2025/10/25 | 13:45–14:00 | 林能裕<br>(主持：張淑媛)                   | Outside-In Signaling: C1GALT1- Mediated O-Glycosylation Regulates TPC2 Calcium Channel Activation                                                           |
| 2025/10/25 | 14:00–14:15 | 趙苔伶<br>(主持：張淑媛)                   | Development and Mechanistic Exploration of SARS-CoV-2 Antiviral Agents                                                                                      |
| 2025/10/25 | 14:15–14:25 | 王煊棣<br>(主持：蔡雨寰)                   | Student Flash Talk #1                                                                                                                                       |
| 2025/10/25 | 14:25–14:35 | 林倩如<br>(主持：蔡雨寰)                   | Student Flash Talk #2                                                                                                                                       |

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| 2025/10/25 | 14:35–14:45 | 李家興<br>(主持：蔡雨霏)                                                | Student Flash Talk #3                                                                                                     |
| 2025/10/25 | 14:45–15:00 | Markus Rapedius<br>(主持：陳政彰)                                    | Approaching organelles with high-throughput electrophysiology methods to allow early drug discovery from native lysosomes |
| 2025/10/25 | 15:00–16:10 | —                                                              | 茶歇 & 海報展示                                                                                                                 |
| 2025/10/25 | 16:10–16:50 | Eric Boué-Grabot<br>(主持：劉雅雯)                                   | P2X4 Receptors at the Cell Surface and in Endolysosomes: Roles in Brain Health and Disease ( <b>Keynote</b> )             |
| 2025/10/25 | 16:50–17:30 | Martin Biel, Dejian Ren, Thomas Jentsch<br>(主持：Michael X. Zhu) | Keynote Panel Discussion – Crossing Frontiers in Ion Channel Research ( <b>Keynote</b> )                                  |
| 2025/10/25 | 17:30       | —                                                              | 海報競賽頒獎及閉幕致詞                                                                                                               |

#### 四、活動照片和影片

➤ 照片(至少 10 張，請填寫照片說明)



本系列照片包括：大合照、講者演講畫面、與會者提問情形，海報競賽問答環節以及獲獎紀錄。

➤ 影片(1-2 分鐘精華短片，請上傳至結案報告專區，並提供檔案名稱

上傳完成，檔案名為 ELiD2025 Video。