

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

中文名稱	第二屆台灣循環研究學會國際研討會-台灣生物醫學新知研討會
英文名稱	2nd Annual Meeting of Taiwan Circulation Research Society (TCRS) - Biomedical Advances
中文摘要報告	114 年 3 月 15 日假中研院生醫所 B1C 會議室，由本所、人類疾病誘導型多潛能幹細胞服務聯盟及台灣循環研究學會主辦，財團法人成大研究發展基金會、中華民國心臟學會、中華民國血脂及動脈硬化學會、Academy of Cardiovascular Research Excellence (ACRE)-Taiwan Chapter 及 Taiwan Science and Technology HUB at Stanford University 協辦，舉辦「第二屆台灣循環研究學會國際研討會-台灣生物醫學新知研討會」國際研討會。 本次邀請來自美國史丹佛大學、加州大學舊金山分校、加州大學聖地牙哥分校、加州大學戴維斯分校、南達科他大學、湯姆士傑佛遜大學、希望之城癌症醫學中心、德州醫學中心、日本東京大學、杜克-新加坡國立大學醫學院共 11 位國際級講者及 5 位台灣專家學者共同參與 2025 年 3 月 15 日由本學會主辦之「第二屆台灣循環研究學會國際研討會-台灣生物醫學新知研討會」，並邀請國內相關領域之佼佼者擔任致詞及會議

session 主持人。開幕式由 Dr. Joseph Wu (吳慶明院士)、Dr. Huey-Kang Sytwu (司徒惠康院士)、Dr. Yijuang Chern (陳儀莊) 共同主持及致詞，並於開幕式結束後邀請所有與會人士一同合影留念。

本次國際研討會特別邀請了來自全球頂尖學術機構的專家學者進行學術交流，其中包含：

Dr. Joseph Wu (吳慶明院士) - 心血管醫學、幹細胞與基因療法專家

Dr. Eldrin F. Lewis - 心血管醫學專家，專門治療晚期心力衰竭患者，國際公認的心臟移植專家

Dr. Zian Tseng - 主要研究心臟病猝死和室性心律不整，為導管消融術與心臟植入裝置專家

Dr. Issei Komuro - 研究心臟肥大和心衰竭的機制，發表超過 800 篇世界頂尖期刊論文

Dr. Yibin Wang - 研究心衰竭和代謝疾病的遺傳和分子機制，發表 260 多篇論文

其他知名學者如 Dr. Kai Wollert (Hannover, Germany)、Dr. Sean Wu (Stanford)、Dr. Yajing Wang (UAB)、Dr. Ian Chen (Stanford)、Dr. Patricia Nguyen (Stanford) 亦受邀參與。

會議報名參加者非常踴躍，參加人數約 280 人，包含國內外、本院及院外人士，演講後的問與答非常熱絡，現場與會者與國外來賓

	學術交流收穫頗多，此研討會對於提升國內的研究能量及獲得國外關鍵研究成果的第一手資訊更是助益良多。
英文摘要報告	On March 15, 2025, the “2nd Taiwan Society for Circulation Research (TCRS) International Symposium – Taiwan Biomedical Frontiers” was successfully held at Room B1C, Institute of Biomedical Sciences, Academia Sinica. This event was co-organized by the Institute of Biomedical Sciences, the Human iPSC Alliance, and the Taiwan Society for Circulation Research, with support from the National Cheng Kung University Research and Development Foundation, the Taiwan Society of Cardiology, the Taiwanese Society of Lipids and Atherosclerosis, the Academy of Cardiovascular Research Excellence (ACRE) - Taiwan Chapter, and the Taiwan Science and Technology HUB at Stanford University. The symposium featured 11 internationally renowned speakers from prestigious institutions including Stanford University, University of California San Francisco, University of California San Diego, University of California

Davis, University of South Dakota, Thomas Jefferson University, City of Hope National Medical Center, Texas Medical Center, University of Tokyo (Japan), and Duke-NUS Medical School (Singapore), along with five distinguished scholars from Taiwan. These experts were invited to join this landmark event, which also welcomed prominent local figures to deliver opening remarks and serve as session chairs.

The opening ceremony was jointly hosted and addressed by Dr. Joseph Wu (Academician), Dr. Huey-Kang Sytwu (Academician), and Dr. Yijuang Chern, followed by a group photo session with all attendees.

This international symposium brought together leading experts from around the globe for in-depth academic exchange. Notable invited speakers included:

Dr. Joseph Wu – A world-renowned expert in cardiovascular medicine, stem cell, and gene therapy

Dr. Eldrin F. Lewis – An internationally recognized specialist in advanced heart failure and cardiac transplantation

Dr. Zian Tseng – An expert in sudden cardiac death and ventricular arrhythmias, catheter ablation, and cardiac devices

Dr. Issei Komuro – A leading researcher on cardiac hypertrophy and heart failure mechanisms, with over 800 publications

Dr. Yibin Wang – Focused on the genetic and molecular mechanisms of heart failure and metabolic diseases, with over 260 publications

Other notable participants included Dr. Kai Wollert (Hannover, Germany), Dr. Sean Wu (Stanford), Dr. Yajing Wang (UAB), Dr. Ian Chen (Stanford), and Dr. Patricia Nguyen (Stanford).

	The symposium attracted an enthusiastic response with 296 participants, including domestic and international attendees, as well as representatives from Academia Sinica and other institutions. The Q&A sessions following each presentation were lively, providing an excellent platform for academic exchange. This event greatly contributed to enhancing Taiwan' s research capacity and offered valuable insights into cutting-edge international research developments.
研討(習)會目的	隨著年齡的增長，心血管疾病的風險隨之增加。為應對這一日益嚴峻的健康挑戰，全球對於心血管疾病的治療需求也在逐步攀升，這不僅要求預防醫學的創新，還需要在疾病治療及致病機轉的研究上有所突破。生物醫學作為現代醫學研究的核心領域之一，也成為推動心血管疾病研究發展的關鍵。基於此背景，本會旨在促進台灣心血管及生物醫學研究的進步，並強化國際學術合作，以解決全球健康問題。 台灣循環研究學會作為台灣第一個、也是唯一針對心血管基礎研究進行資源整合的團隊，致力於推動心血管疾病研究和生物醫學技術的應用。為此，學會自成立以來，不僅積極促進國內心血管疾病研

	究，也致力於加強台灣研究者與國際學術界的合作。
參加對象(含人數)	共_296__人 (含國外專家學者_22_人、產業界_30__人、 大學校院教授/研究員 100_人、大學校院學生/助理_100_人、其他 _44_人)
預期效益達成狀況	會議過程順利及圓滿，獲得國內外與會者讚譽迴響。 本次會議共有來自超過 15 個國家有 296 位的國內外研究學者 專家與國內外研究人士參與此一盛會，對於增進我國臨床轉譯 研究之國際能見度以及促進我國研究人員之國際學術交流目 的，爾後，希望能利用這股研究能量增進我國對於相關研究之 邁進，進而帶動循環研究之提升。 本次會議獲得國內外與會者的高度評價，認為此次研討會的學 術內容豐富、交流機會多元，對於提升台灣研究能量及掌握國 際最新研究動向大有助益。 會議已成功達成以下目標： 1. 拓展國內研究人員的國際視野，並獲得國際最新研究成 果。 2. 提供國內外學者交流研究成果的平台，促進學術合作。 3. 促進國外講者對台灣學術環境與文化的認識，並提升台灣 的國際學術形象。 4. 強化台灣在心血管研究與生物醫學領域的全球影響力。

	5. 促進學術與臨床轉譯應用，推動研究成果進入臨床應用，改善患者健康與生活品質。 6. 鼓勵年輕學者與學生投入心血管及生醫研究，培育未來研究人才。
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二、邀請主講人姓名及學經歷

姓名	學歷	經歷	現任
Dr. Joseph Hill	M.D. Duke University School of Medicine Durham, North Carolina Ph.D. Department of Pharmacology, Duke University Durham, North Carolina	1. Professor, Departments of Internal Medicine and Molecular Biology, University of Texas Southwestern Medical Center 2. Member, Hamon Center for Regenerative Science and Medicine, University of Texas Southwestern Medical Center	Member, Simmons Comprehensive Cancer Center, University of Texas Southwestern Medical Center
Dr. Eldrin F. Lewis	M.P.H., Clinical Effectiveness, Harvard School of Public Health	Associate Professor of Medicine, Harvard Medical School, Boston, MA	Chief, Division of Cardiovascular Medicine, Stanford University School of Medicine, Stanford, CA
Dr. Yung-Hsin Yeh (葉勇信)	M.D. Medical School, Yang-Ming University, Taipei, Taiwan	Attending Physician, Chang Gung Memorial Hospital's Department of Cardiovascular Department	Deputy Director, Chang Gung Memorial Hospital's Department of Internal Medicine

Dr. Jianyi (Jay) Zhang	Ph.D. Biomedical Engineering, University of Minnesota, Minneapolis, MN, USA	Professor of Medicine (tenured), Cardiovascular Division, University of Minnesota, Minneapolis, MN, USA	Professor of Medicine (tenured), Chairman of the Department of Biomedical Engineering, School of Medicine and School of Engineering, The University of Alabama at Birmingham, USA
Dr. Zian H. Tseng (曾煥然)	M.D. UCSF School of Medicine, University of California, San Francisco	Principal Investigator, Postmortem Systematic Investigation of Sudden Death in the Young Registry, CDC-funded	Murray Davis Endowed Professor, University of California, San Francisco (UCSF)
Dr. Yibin Wang	Ph.D. Human Genetics and Cell Biology, Baylor College of Medicine, Houston, Texas, USA	Professor, Division of Molecular Medicine, Departments of Anesthesiology, Physiology and Medicine, Molecular Biology Institute, Cardiovascular Research Laboratories, UCLA, CA, USA	1. Professor & Programme Director, Cardiovascular and Metabolic Disorders (CVMD), Duke-NUS Medical School, Singapore 2. Co-Director, National Heart Research Institute of Singapore 3. Emeritus Professor, David Geffen School of Medicine, UCLA, USA
Dr. Chin-Sheng Lin (林錦生)	Ph.D. National Defense Medical Center, Taipei, Taiwan	Physician Educator, Tri-Service General Hospital, Taipei, Taiwan	Director, Department of Medical Education, Tri-Service General Hospital, Taipei, Taiwan
Dr. Kai-Chien Yang (楊鎧鍵)	Ph.D. Molecular Genetics and Genomics, Washington University in St. Louis, St. Louis, MO, USA	Associate Professor, Department and Graduate Institute of Pharmacology, National Taiwan University, Taipei, Taiwan	1. Professor, Department and Graduate Institute of Pharmacology, National Taiwan University, Taipei, Taiwan 2. Joint Associate Research Fellow, Division of Cardiovascular and Metabolic Diseases, Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan
Dr. Chloe Wilson	B.S. Surgery MBChB , University of Bristol	1. General Practice Registrar, Cwm Taf Morgannwg 2. Otolaryngology Senior House	Senior Medical Editor & Cardiology Ambassador, The <i>Lancet</i>

		Officer, Cwm Taf Morgannwg 3. Specialty Doctor, Cystic Fibrosis, Cardiff and Vale	
Dr. Issei Komuro (小室一成)	M.D. University of Tokyo	1. Professor, Department of Cardiovascular Medicine, Chiba University Graduate School of Medicine 3. Appointed Professor, Department of Cardiovascular Medicine, Osaka University Graduate School of Medicine	Professor and Chairman, Department of Frontier Cardiovascular Science, The University of Tokyo Graduate School of Medicine, Tokyo, Japan
Dr. Hung-I Yeh (葉宏一)	Ph.D. National Heart and Lung Institute, Imperial College, London, United Kingdom	1. Chair, Cardiology, Department of Life Science, Ministry of Science and Technology 2. President, Taiwan Society of Geriatric Emergency and Critical Care Medicine	1.High commissioner, MacKay Memorial Hospital, Taipei, Taiwan 2.Attending Cardiologist, MacKay Memorial Hospital 3.Honorary Director, Taiwan Society of Lipids and Atherosclerosis 4.Honorary Director, Taiwan Society of Geriatric Emergency and Critical Care Medicine
Dr. John Y-J. Shyy	Ph.D. Biochemistry, Department of Chemistry, The Ohio State University	1. Charter Member, VCMB study section, NIH 2. Chair, VCMB study section, NIH 3. Member and Co-Chair, HTBT study section, NIH	Professor of Medicine, Department of Medicine/Division of Cardiology , University of California, San Diego
Dr. Yang Kevin Xiang	Ph.D. Oregon Health Science University, Portland, OR, USA	1. Shanghai Eastern Scholar, Shanghai, China 2. AHA Established	1. Professor, University of California at Davis, USA 2. Research Pharmacologist, Sacramento, USA

		Investigator Award, USA 3. Research Career Scientist Award, DOD VA merit program, USA	3. Chair of Education, Academy of Cardiovascular Research Excellence (ACRE)
Dr. Xuejun Wang	Ph.D. Anatomy and Structural Biology, USD School of Medicine, Vermillion, SD, USA	1. Tenured, USD Sanford School of Medicine, Vermillion, SD, USA 2. Professor, USD Sanford School of Medicine, Vermillion, SD, USA 3. Director of the Physician Scientists Program, USD Sanford School of Medicine, Vermillion, SD, USA	1. Professor and Director, The Physician Scientists Program, University of South Dakota (USD) Sanford School of Medicine, Vermillion, SD, USA 2. President, Academy of Cardiovascular Research Excellence (ACRE)
Dr. Zhao V. Wang	Ph.D. obesity and diabetes, Albert Einstein College of Medicine	1. Associate Professor with tenure, Division of Cardiology, Department of Internal Medicine, the University of Texas Southwestern Medical Center. 2. Adjunct Associate Professor with tenure, Division of Cardiology, Department of Internal Medicine, the University of	1. Adjunct Associate Professor, Division of Cardiology, Department of Internal Medicine, the University of Texas Southwestern Medical Center, Dallas, Texas, USA 2. President, Academy of Cardiovascular Research Excellence (ACRE)

		Texas Southwestern Medical Center, Dallas, Texas, USA.	
Dr. Po-Hsun Huang (黃柏勳)	Ph.D. Institute of Clinical Medicine, National Yang Ming Chiao Tung University	Chief, Cardiovascular Research Center, National Yang Ming Chiao Tung University	1. Professor, Institute of Clinical Medicine, National Yang Ming Chiao Tung University & Chief, Cardiovascular Research Center, National Yang Ming Chiao Tung University. 2. Chief, Coronary Critical Care Unit, Taipei Veterans General Hospital.
Dr. Jiang Chang	Ph.D. Physiology, Texas A&M University, College Station, Texas, USA	1. Assistant Professor (tenure-track), Texas A&M University, Houston, TX, USA 2. Associate Professor(tenured), Texas A&M University, Houston, TX, USA 3. Full Professor, Texas A&M University, Houston, TX, USA	1. Professor, Chancellor EDGES Fellow, Texas A&M University 2. Deputy Director, Center for Genomic and Precision Medicine, Institute of Biosciences and Technology (IBT), Texas A&M University

三、議程

日期	議程時間	議程講員	議題主題
114 年 3 月 15 日	08:30-09:00	Dr. Joseph Hill	Cardiology on high beam: obstacles and opportunities
	09:00-09:30	Dr. Eldrin Lewis	Transforming HF care in 2025 - integration of quality of life and technology

	09:30-09:50	Dr. Yung-Hsin Yeh (葉勇信)	Endothelial-to-mesenchymal transition: mechanisms and therapeutic opportunities in AF cardiomyopathy and AVF dysfunction
	09:50-10:10	Dr. Jay Zhang	Remuscularization of injured ventricle in large animals
	10:30-10:50	Dr. Zian Tseng	Molecular phenotyping of sudden cardiac death
	10:50-11:10	Dr. Yibin Wang	Metabolic mechanism and therapeutic targets for HFpEF
	11:10-11:30	Dr. Chin-Sheng Lin (林錦生)	AI-ECG in action: clinical trials and future perspectives at TSGH
	11:30-11:50	Dr. Kai-Chien Yang (楊鎧鍵)	Heal the broken heart: myocyte renewal, fibrosis and inflammation
	11:50-12:10	Dr. Chloe Wilson	Medical publishing: challenges and opportunities
	13:30-13:50	Dr. Issei Komuro	Mechanisms of heart failure revealed by genomic and

			single cell analysis - from mice to humans
	13:50-14:10	Dr. Hung-I Yeh (葉宏一)	Fluorescent gold nanoclusters interfere the binding of KEAP1 to NRF2 and possess multiple actions against atherosclerosis
	14:10-14:30	Dr. John Shyy	The two-pronged phosphorylation of ACE2 determines vascular health and disease
	14:30-14:50	Dr. Kevin Xiang	Intracellular GPCR signaling in HFrEF and HFpEF
	15:10-15:30	Dr. Xuejun Wang	The proteasome functional insufficiency (PFI) hypothesis of heart failure
	15:30-15:50	Dr. Zhao Wang	Stress response in pathological cardiac remodeling and heart failure
	15:50-16:10	Dr. Po-Hsun Huang (黃柏勳)	Obstructive sleep apnea-induced endothelial dysfunction is mediated by

			miR-210
	16:10-16:30	Dr. Jiang Chang	Transcriptional errors in the heart: Mechanisms and clinical significance

四、活動照片和影片

- 照片(至少 10 張，請填寫照片說明)



圖一、開幕式學者大合照



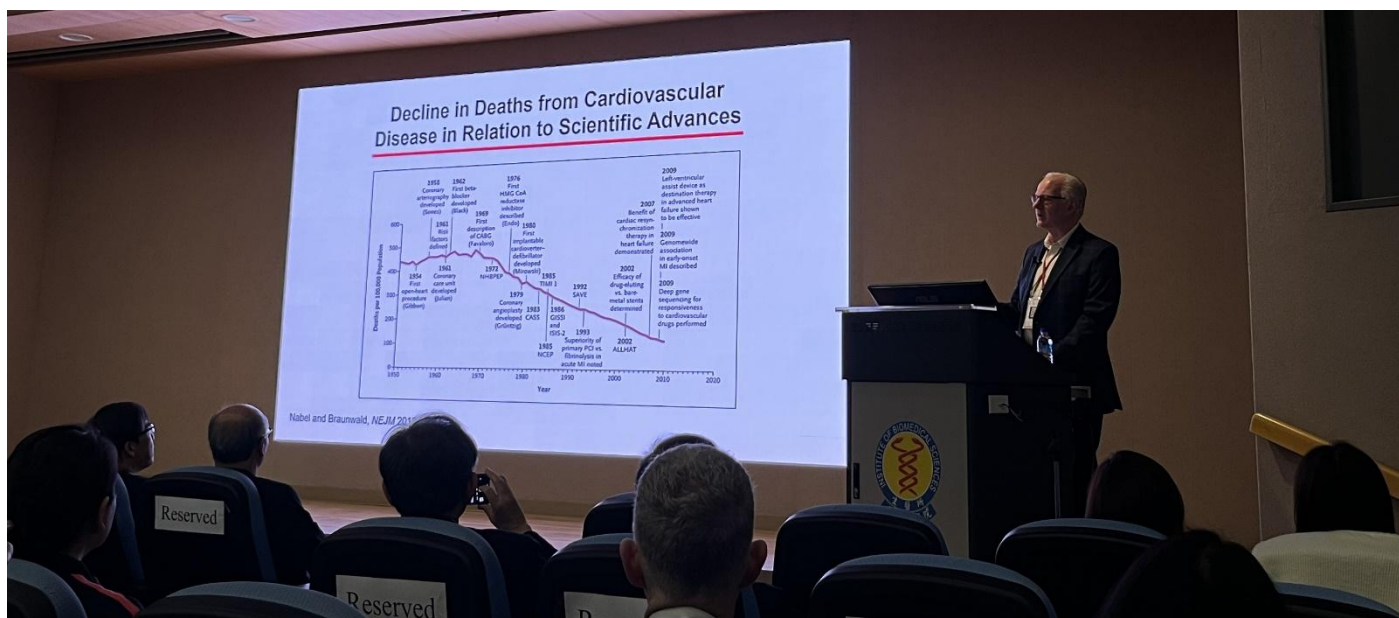
圖二、謝清河理事長及吳華林教授介紹伍焜玉院士演講



圖三、特別講者：吳慶明院士演講



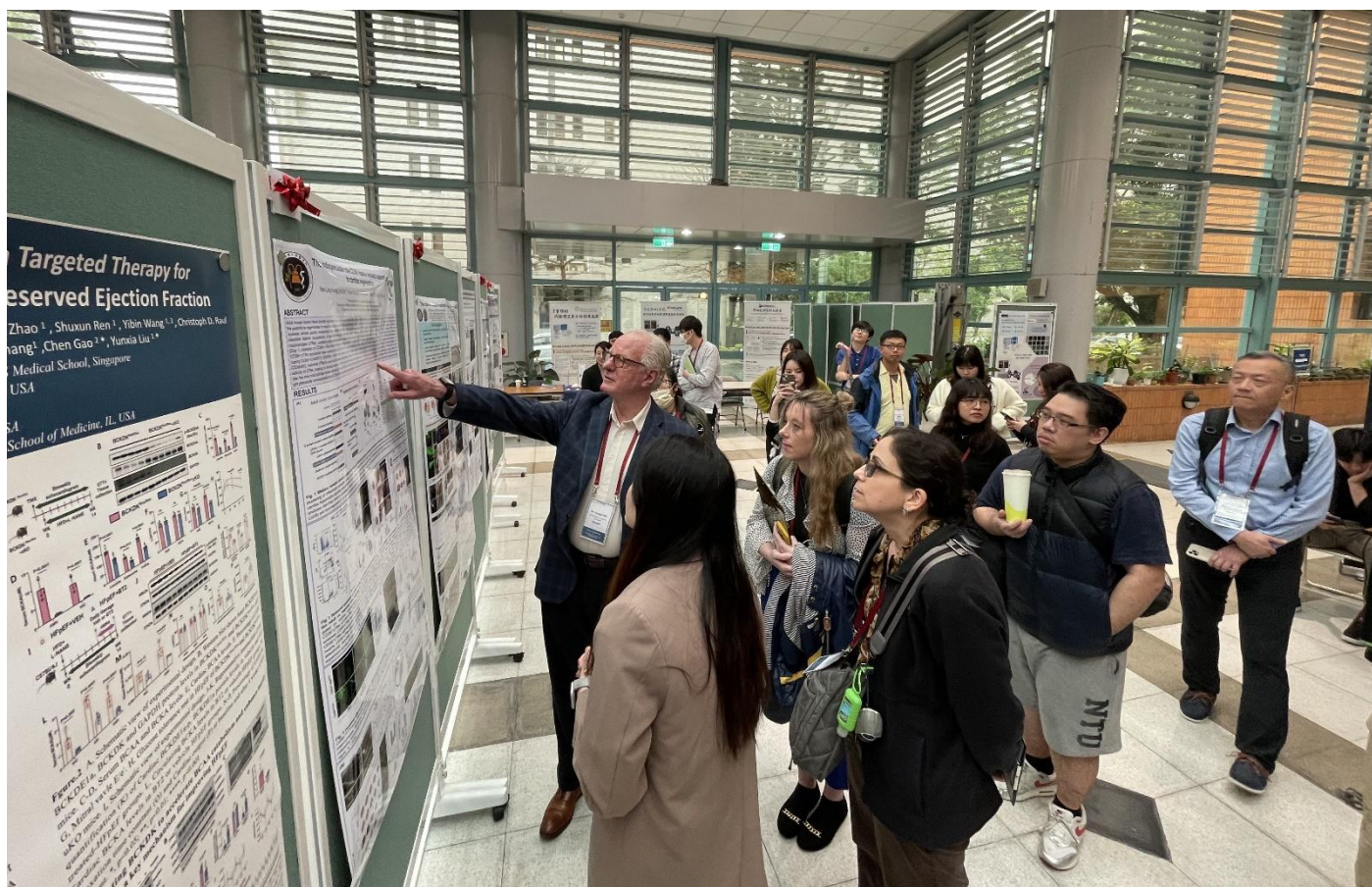
圖四、Science 期刊編輯演講



圖五、Circulation 期刊編輯演講



圖六、Lancet 期刊編輯演講



圖七、國外編輯嚴選壁報得獎者



圖八、學者與三大期刊編輯進行意見交流



圖九、伍焜玉院士獲頒終身成就獎



圖十、楊鎧鍵教授獲頒年度最佳論文獎



圖十一、壁報論文獎-前 5 名合照

- 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