

# 國科會生命科學研究推動中心

## 研討(習)會 結案報告

**中文名稱：**第十七屆國際生物催化暨農業生物技術研討會

**英文名稱：**17<sup>th</sup> International Symposium on Biocatalysis and Agricultural Biotechnology

### 中文摘要報告：

中興大學以農立校，長年以來致力於推動農業發展、架構產官學的協作平台。為提升台灣在生物催化及農業生物科技領域的學術能量、國際能見度及青年生技人才，中興大學協同國際生物催化暨農業生物技術學會，且聯合台灣傳統暨替代醫學協會，於中興大學圖書館國際會議廳及農業暨自然資源學院 10 樓舉辦「第 17 屆國際生物催化暨農業生物技術研討會」(112 年 11 月 08~10 日)，同時開設三個會場分別進行生物催化及應用生物科技、農業生物科技、功能性食品與營養保健品、人工智慧在補充劑和草藥生物技術中的應用等專題演講，以及年輕學子英文口頭報告競賽等競賽。本次研討會邀請 44 位來自加拿大、克羅埃西亞、香港、日本、韓國、沙烏地阿拉伯、斯洛伐克、美國和台灣的傑出科學家齊聚現場，分享他們寶貴的研究進度。這是在經歷了 COVID-19 大流行的長期痛苦之後，第一次恢復面對面的 ISBAB 研討會，聚集了多達 9 國重量級國際學者與頂尖產官學界專家，共 300 多位專家學者與學生現場參與許多精彩演講，討論踴躍且引發廣大迴響，盛況空前。為了鼓勵台灣年輕學術精英，培養其與世界學術水準接軌的能力，會中更安排了具國際會議高規格水準的論文報告競賽，總共有 16 位參與口頭報告競賽、53 位參與壁報論文競賽，所有參賽者表現優異，受到台美評審一致讚揚，擇優頒獎給 9 位口頭報告及 18 位壁報參賽者獲獎。ISBAB 國際研討會充分展現國內、外在生物催化及生技領域中的充沛研發活力，並且再次成功地讓世界看見台灣。

### 英文摘要報告：

National Chung Hsing University was founded on agriculture and has been committed to promoting agricultural development and building a collaboration platform between industries, governments, and academia for many years. In order to enhance Taiwan's academic energy, international visibility, and young talents in the field of biocatalysis and agricultural biotechnology, National Chung Hsing University collaborated with the International Society of

Biocatalysis and Agricultural Biotechnology and the Taiwan Association of Traditional and Alternative Medicine to host an international conference in the National Chung Hsing University Library. The "17th International Biocatalysis and Agricultural Biotechnology Symposium" (November 08-10, 2023) was held in the conference hall and on the 10<sup>th</sup> floor of the College of Agriculture and Natural Resources. Top scientists and experts of biocatalysis and agricultural biotechnology from 9 countries were gathered to share their updated progresses in this meeting. Besides, the competitions of oral or poster presentations in English were arranged for training of young talents as in the standard of the international conference. This conference themes included the most recent development in the fields of biocatalysis and applied biotechnology, agricultural biotechnology, functional foods and nutraceuticals, the application of artificial intelligence in supplements and herbal biotechnology, as well as competitions such as the English oral presentation competition for young students. Forty-four outstanding scientists from Canada, Croatia, Hong Kong, Japan, South Korea, Saudi Arabia, Slovakia, the United States and Taiwan gathered at this seminar to share their valuable research progress. This is the first face-to-face ISBAB seminar to resume after the long-term pain of the COVID-19 pandemic, bringing together heavyweight international scholars and top industry, government, and academia experts from 9 countries, a total of more than 300 experts, scholars, and students. In order to encourage Taiwan's young academic elites and cultivate their ability to connect with world academic standards, the conference also arranged a paper report competition with high standards for international conferences. A total of 16 people participated in the oral report competition and 53 people participated in the poster paper competition. All The outstanding performance of the contestants was unanimously praised by the Taiwan and American judges, and awards were given to 9 oral presentations and 18 poster submissions. In addition, as the main organizer of this international symposium, NCHU once again achieved to level-up the world-wide visibility for Taiwan.

**講員：**

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**研討(習)會目的、預期效益：**

生物催化是利用具有催化能力的酵素，將原料基質轉變成有用產品；

因酵素是天然的有機物質，無須高溫高壓即可進行反應，所以生物催化科技被視為可用於解決當前農業、生技醫療、工業、能源、環保等方面急迫的問題的現代化綠色無污染高科技，更是一項可達成永續經濟發展的新契機。而農業生物科技的主要任務除了增加糧食生產，餵飽全人類之外，亦著眼於以提高人類身心健康、改善生活品質、保護自然資源、增進人民福祉的各項發展。

聯合國所發布的「2030年永續發展目標(Sustainable Development Goals, 簡稱SDGs)」，總共制定了17項SDGs預期目標，其中「終結貧窮-結束任何形式的貧窮」，「終結飢餓-實現糧食安全和改善營養，促進永續農業」，「健全生活品質-確保所有年齡層級的人健康生活和促進其福祉」，「淨水及衛生」，「可負擔的潔淨能源」，「合適的工作及經濟成長」，位居前數大項目標，皆可經由生物催化及農業生技的發展與協作獲得助益。

International Society of Biocatalysis and Biotechnology (國際生物催化暨生物科技學會，簡稱ISBB) 成立於2006年11月6日。回顧2005年春天，當時任職國立中興大學校長的蕭介夫講座教授與美國農業部 Agricultural Utilization Research (國家農業利用研究中心，簡稱NCAUR)的資深研究員 Ching T. Hou (侯景滄博士)為促進國際交流並提升台灣生技研發的國際能見度，共同決定在國立中興大學舉辦“Biocatalysis and Biotechnology”國際研討會，廣邀美國農業部、日本農林水產省、韓國、加拿大等各國專家學者出席盛會。並於2006年“Biocatalysis and Biotechnology: Functional Foods and Industrial Products”國際研討會後決議成立ISBB國際學會，由侯景滄博士擔任會長，蕭介夫講座教授任副會長，黃永勝講座教授任秘書長。之後學會每年舉辦國際研討會推動國際生物科技產學研的交流與合作。隨著農業科重要性的提升，學會於2010年正式更名為“International Society of Biocatalysis and Agricultural Biotechnology” (ISBAB) (<http://www.isbab.org>)。學會成立歷經侯景滄博士及蕭介夫講座教授兩位前會長，目前由本校楊長賢終身國家講座教授擔任會長，葉錫東院士擔任副會長。本校多位教授參與該學會會務與 Biocatalysis and Agricultural Biotechnology (BAB) 該學會期刊編審的工作，為該學會之主要基石。ISBAB自2005年，每年舉辦國際研討會，在促進全球的生物催化與農業生技之研究、建立產學研合作平台、培育青年學子等方面，ISBAB積極扮演其推動的角色，並在國際上建立其不可撼動的地位。

中興大學爭取主辦此國際研討會預期目標之一為提升台灣在生物催化及農業生物科技的學術能量，並且將其研發成果推向國際舞台；本會議以實體方式舉行，聚集來自多達九個國家(包括: 加拿大、克羅埃西亞、香港、日本、韓國、沙烏地阿拉伯、斯洛伐克、美國和台灣)的頂尖專家學者進行交流。除生物催化、農業生技兩大主題外，今年特別聯合台灣傳統暨替代醫學協會共同舉辦本國際研討會，特別涵蓋生物催化及應用生物科技、

農業生物科技等四大主題；講題內容包含各領域中的基礎科學發展近況、應用面向的擴增趨勢及各種商業模式的走向。多元且豐富的議題，吸引多國產官學界專家學者共 436 人熱烈與會、超過 100 篇論文與海報在會場發表及展出，充分展現出國內、外在各主題領域中的充沛研發活力。

另一個預期目標之一為人才培育，除了培養年輕學子專業研發能力外，更重要的是養成具國際接軌及全球移動能力的農業生技人才；因此，本次會議特別安排論文競賽，提供獎狀獎金等鼓勵年輕研究人才(博後、研究助理、研究生)以國際語言進行口頭發表，並禮聘台美專家學者擔任評審，以國際會議規格訓練農業生技領域年輕學術精英，提供其學術交流、成果展示的舞台。總計共有 16 篇口頭論文、53 篇海報論文參與競賽。

本次研討會中 400 多位專家學者與學生參加，會中可以聆聽許多重量級國際學者與來自中研院、台大、成大、中興等學術機構的國內頂尖產官學界專家學者的精彩演講，除學會的傳統領域之外，更可聽到食品、人工智慧與醫療領域之專家精彩的報告，演講內容引起廣大迴響與踴躍討論，是國內難得一見的盛況，為近年來少見精彩且成功的研討會。

本研討會除了精彩的專家學者演講之外，更可以聽到高水準的口頭報告競賽，共有博士後、博士生與碩士生等 16 位，而在會場的壁報比賽數量眾多，堪稱是一場盛大的學術饗宴。大會在口頭與壁報比賽中，就博士組與碩士組的競賽分別頒發了金獎、銀獎、銅獎，以及多位優選與佳作的獎項，博士組口頭報告金獎獲得 15000 元高額獎金，參與得獎的同學也都獲得獎金及獎狀的鼓勵，成功地鼓動了台灣學子的學術魂。

經由不同學術背景及思考角度的切入，提出各種建議及問題於本會中相互激蕩產生了新的創意及合作契機。藉由舉辦此次國際研討會的經驗交流，來參加的各領域相關研究人員及產業從業人員，透過彼此經驗分享，更加瞭解彼此之需求，縮短學術與應用間之差距。此外，本研討會成為一個研究生物催化與發展新興農業生技所需要的資訊平台，尖端基礎研究與下游應用操作藉此平台得以串接，進而促成農業生技產業的大幅度整合。

#### **參加對象：**

研討會參加對象為國內外領域專家、生技領域專家、有意願參與生技研發之教師、研究人員、與各個大專院校之學生；以及所有對生技產業有興趣之各界人士。本次會議參與人數為下：講員 44 人；工作人員 40 人；學員 352 人；共 436 人。

#### **邀請主講人姓名及學經歷：**

姓名	學歷	經歷	現任
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Tsunehiro Aki	Doctor of Engineering, Hiroshima University	2014/09/01, 2019/03/31, Hiroshima University, Graduate School of Advanced Sciences of Matter, Professor 2019/04/01, Hiroshima University, Graduate School of Integrated Sciences for Life, Professor	Professor, Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan
Milan Čertík	Doctor of Philosophy, Slovak Technology University, Bratislava, Slovak Republic, 1992.	Researcher Biotika, Slovenska Lupca, Slovak Republic, 1985-1986. Head of fermentation division Research Institute Gerontology, Malacky, 1986- 1996. Scientist Slovak Technology University, Bratislava, since 1996, associate professor, since 2002.	Professor, Institute of Biotechnology, Faculty of Chemical and Food Technology, Slovak University of Technology, Bratislava, Slovak Republic
Ulrich Schörken	Ph.D.	Professor, TH Köln University of Applied Sciences, Koln, Germany	Professor, TH Köln University of Applied Sciences, Koln, Germany
Kazuo Miyahsita	Doctor (Agriculture)(Tohoku University)	Apr, 2014 - Present Vice Dean, Faculty of Fisheries Sciences, Hokkaido University Apr, 2005 - Present Professor, Faculty of Fisheries Sciences Apr, 2000 - Mar, 2005 Professor, Graduate School of Fisheries Sciences	Professor, Faculty of Fisheries Sciences, Hokkaido University.
Beom Soo Kim	Ph.D.	Professor, Department of Chemical Engineering, Chungbuk National University	Professor, Department of Chemical Engineering, Chungbuk National University
Sheau-Fang Hwang	PhD, Washington State University	Professor, Faculty of Agricultural, Life and Environmental Sci - Ag, Food & Nutri Sci Dept	Professor, Faculty of Agricultural, Life and Environmental Sci - Ag, Food & Nutri Sci Dept
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Anita Slavica	PhD in Technical Sciences – Technical Chemistry Graz University of Technology, Faculty of Technical Chemistry, Chemical & Process Engineering and Biotechnology	Associate Professor University of Zagreb, Faculty of Food Technology and Biotechnology Assistant Professor University of Zagreb, Faculty of Food Technology and Biotechnology Assistant University of Zagreb, Faculty of Food Technology and Biotechnology	Professor, Faculty of Food Technology and Biotechnology, University of Zagreb
Masashi Hosokawa	PhD	2017/04 - Today Hokkaido University Professor 2009 - 2017/03 Associate Professor, Graduate School of Fisheries Science, Hokkaido University	Professor, Faculty of Fisheries Sciences Marine Life Science Marine Bioresources Chemistry
Aman Ullah	PhD, University of Genova, Italy/ visiting research scholar Southern Methodist University, USA	Professor, Faculty of Agricultural, Life and Environmental Sci - Ag, Food & Nutri Sci Dept	Professor, Faculty of Agricultural, Life and Environmental Sci - Ag, Food & Nutri Sci Dept
Mee-Len Chye	PhD, Commonwealth Scholarship at the University of Melbourne	She received postdoctoral training in Plant Molecular Biology at the Rockefeller University (New York) and the Institute of Molecular and Cell Biology (Singapore). She joined the University of Hong Kong in 1993 and was promoted to Professor in 2005. Her administrative roles have included being appointed an Associate Dean (April 2010-April 2016) and Dean (May 2016-August 2019) of the Graduate School.	Wilson and Amelia Wong Professor, Plant Biotechnology and Professor, School of Biological Sciences, Faculty of Science, HKU
Soheil S. Mahmoud	PhD, University of Calgary in the area of plant biochemistry and molecular biology.	Postdoctoral fellow: Washington State University Assistant Professor: UBC Okanagan (formerly Okanagan University College)	Associate Professor, Biochemistry and Molecular Biology, University of Lethbridge, Canada
Wilhelm Gruissem	PhD	Before moving to Zurich, he was Professor of Plant Biology at the University of California at Berkeley from 1983-2000. He was Chair of the Department at UC Berkeley from 1993-1998 and Director of a collaborative research program with Novartis from	Professor, Plant Biotechnology at the ETH Zurich (Swiss Federal Institute of Technology)

		1998-2000. In 2008 he started the company Nebion. From 2006 to 2010 he was President of the European Plant Science Organization (EPSO) and in 2012 he was elected Chair and Acting President of the Global Plant Council for which he served until 2015.	
Lu-Hai Wang 王陸海	University of California at Berkeley Molecular Biology Ph.D.	China Medical University Graduate Institute of Basic Medical Science Co-Hiring Chair Professor Graduate Institute of Integrated Medicine Chair Professor National Health Research Institutes Investigator Emeritus National Health Research Institutes Institute of Molecular and Genomic Medicine Distinguished Investigator and Director	Chair Professor, China Medical University Graduate Institute of Basic Medical Science
Ming-Hon Hou 侯明宏	PhD, Institute of Biochemical Sciences, National Taiwan University	2023/08 - present Director, Biotechnology Center, NCHU 2023/08 - present Director, Ph.D. Program in Microbial Genomics, NCHU 2022/10 - present Board of Director, Ping An Elite Education Foundation (財團法人平安菁英教育基金會), Taichung, Taiwan 2022/08 - present Director, Ph.D. Program in Medical Biotechnology, NCHU 2022/08 - 2023/08 Associate Dean, College of Life Sciences, NCHU 2022/08 - 2023/08 CEO, International Affairs in College of Life Sciences, NCHU 2022/08 - present National Committee member, Crystallographic Committee, Academia Sinica, R.O.C (Taiwan)	Director Biotechnology Center, Distinguished Professor, Institute of Genomics and Bioinformatics Director, Ph.D. Program in Medical Biotechnology, Director, Ph.D. Program in Microbial Genomics, National Chung Hsing University
Wei-Li Hsu 徐薇莉	PhD from Glasgow University, UK.	2014.2-2014.8 Prof. Peter Palese 實驗室短期研究 (Icahn School of Medicine at Mount Sinai, USA) 2004.8-2005.8 Dr. Laurence Tiley 實驗室博士後研究員 (University of Cambridge, UK)	Distinguished Professor and Director, Graduate Institute of Microbiology & Public Health National Chung-Hsing University



		2002.6-2004.8 Dr. James R. Smiley 實驗室博士後研究員 (University of Alberta, Canada)	
En-Pei Isabel Chiang 蔣恩沛	美國塔芙茲 (Tufts) 大學 Biochemical & Molecular Nutrition(博士)	2003/08~2007/07 國立中興大學食品暨應用生物科技學系-助理教授 2007/08~2011/07 國立中興大學食品暨應用生物科技學系-副教授 2011/08~迄今 國立中興大學食品暨應用生物科技學系-教授	國立中興大學食品暨應用生物科技學系-教授
Kuo-Chen Yeh 葉國楨	博士 Plant Biology Graduate Group, University of California, Davis, USA	主任(2019.1.16 至今) 代理主任 (2016.10.1-2019.1.15) 學程召集人 中研院國際研究生院 分子及生物農業科學 博士班學程(2015-2020)	中研院農業生物科技中心主任
Ching-Lin Wu 巫錦霖	PhD, Loughborough University, UK	Professor and Director of the Institute of Sports and Health Management, National Chung Hsing University Professor, Institute of Sports and Health Management, National Chung Hsing University (2012.8-present) Associate Professor, Institute of Sports and Health Management, National Chung Hsing University (2008.8-2011.7) Associate Professor, Department of Sports and Health Sciences, National Taiwan Institute of Physical Education (2006.2-2008.7)	Professor, Chairman, The graduate institute of sports and health management, NCHU
Hong-Hwa Chen 陳虹樺	密西根州立大學微生物系博士	2007/08-迄今 特聘教授 國立成功大學 生命科學系 2009/12-迄今 主任 國立成功大學 蘭花研究中心 2009/08-2012/07 所長 國立成功大學 熱帶植物科學研究所	國立成功大學 生命科學系特聘教授
Shih-Shun Lin 林詩舜	博士	國立台灣大學生物科技研究所教授	國立台灣大學生物科技研究所教授
Shu-Hsing Wu 吳素辛	Ph.D., Plant Biology, University of California, Davis, USA	Distinguished Research Fellow and Director, Institute of Plant and Microbial Biology, Academia Sinica Research Fellow, Institute of Plant and Microbial Biology, Academia Sinica	Distinguished Research Fellow, Director, Institute of Plant and Microbial Biology, Academia Sinica

<p>Hung-Rong Yen 顏宏融</p>	<p>長庚大學 臨床醫學研究所 醫學博士</p>	<p>林口長庚兒童醫院小兒科 住院醫師、研究醫師 林口長庚紀念醫院中醫部 住院醫師、總醫師、主治 醫師 美國約翰霍普金斯大學醫 學院免疫學科博士後研究 員</p>	<p>中國醫藥大學附設醫 院 中西醫結合科 主 任</p>
<p>Yang-Chang Wu 吳永昌</p>	<p>高雄醫學大學 醫學研 究所 (基礎醫學) 博士</p>	<p>高雄醫學大學 天然藥物研 究所 講座教授 高雄醫學大學 天然藥物暨 新藥開發研究中心 主任 中國醫藥大學 校長室 副校 長</p>	<p>中國醫藥大學附設醫 院 中醫藥研究發展 中心 中心主任</p>
<p>Yu-Liang Yang 楊 玉良</p>	<p>PhD Graduate Institute of Pharmaceutical Science, Kaohsiung Medical University</p>	<p>2009-2011 PDF Skaggs School of Pharmacy and Pharmaceutical Science, University of California, San Diego 2004-2008 PDF Institute of Biological Chemistry, Academia Sinica</p>	<p>中研院農業生物科技 中心副主任</p>
<p>Ching-Hsiu Tsai 蔡慶修</p>	<p>Ph.D Oregon State University, Genetics</p>	<p>副教授 國立中興大學遺傳 工程中心(1993) 副教授 國立中興大學農業 生物科技學研究所(1998) 教授 國立中興大學生物科 技學研究所(2002~NOW)</p>	<p>國立中興大學生物科 技學研究所教授</p>
<p>Hao-Jen Huang 黃浩仁</p>	<p>Department of Biochemistry, Oxford University 博士</p>	<p>2012.8 – 2015.8 系主任兼 所長 國立成功大學 生命科 學系 2015.8 – present 所長 國立 成功大學 熱帶植物科學研 究所 2016.8 – present 副院長 國 立成功大學 生物科學與科 技學院</p>	<p>國立成功大學生物科 學與科技學院教授</p>
<p>Yen-Wei Chu 朱 彥煒</p>	<p>PhD NCTU, Department of Computer Science</p>	<p>Professor NCHU, Institute of Genomics and Bioinformatics 2019/08 - present Associate Professor NCHU, Institute of Genomics and Bioinformatics 2019/07 Assistant Professor NCHU, Institute of Genomics and Bioinformatics 2012/07 Advisory Committee Member ROC, Ministry of Health and Welfare 2006 – present</p>	<p>Distinguished Professor, Institute of Genomics and Bioinformatics, National Chung Hsing University</p>

		Assistant Professor Asia University, Department of Bioinformatics and Medical Engineering 2012	
Sun-Chong Wang 王孫崇	PhD, New York University	Associate Professor, Institute of Systems Biology & Bioinformatics, National Central University Assistant Professor, Institute of Systems Biology & Bioinformatics, National Central University	Professor, Chairman, Department of Biomedical Sciences and Engineering, National Central University
Pei-Fen Liu 劉佩 茶	Purdue University (USA) Department of Medicinal Chemistry and Molecular Pharmacology (Ph.D)	2011/06~2013/06 Duke University (USA)- Postdoctoral Research Fellow 2013/08~2021/07 National Chung Hsing University- Assistant Professor 2021/08/01~迄今 National Chung Hsing University- Associate Professor	Associate Professor, Department of Food Science and Biotechnology of National Chung Hsing University
I-Chun Pan 潘怡 君	PhD Institute of Biotechnology, National Cheng Kung University	2020-Present Associate Professor, Department of Horticulture, National Chung Hsing University 2014-2020 Assistant Professor, Department of Horticulture, National Chung Hsing University 2012-2014 Postdoctoral Associate, Institute of Plant and Microbial Biology, Academia Sincia	Associate Professor, Department of Horticulture, National Chung Hsing University
Jer-An Lin 林哲 安	PhD, Department of Food and Applied Biotechnology, National Chung Hsing University	Academic Affairs Office, National Chung Hsing University - Team Leader (2021-2023), National Chung Hsing University Food and Livestock Products Testing Center - Technical Director (2021~)	Assistant Professor, Graduate Institute of Food Safety, National Chung Hsing University
Li-Ching Hsieh 謝立青	國立中央大學物理學 博士	國立中興大學基因體暨生物資訊所副教授 2020/08 – 迄今 國立中興大學基因體暨生物資訊所助理教授 2011.2-2020.07 美國芝加哥大學生態演化系訪問學者 2004.12-2005.11	國立中興大學基因體暨生物資訊所副教授
Ying-Chung Jimmy Lin 林盈仲	美國北卡州立大學博 士	國立台灣大學植物科學研究所副教授	國立台灣大學植物科學研究所副教授

Ming-Jung Liu 劉明容	博士	中央研究院農業生物科技 研究中心副研究員	中央研究院農業生物 科技研究中心副研究 員
K.J. Senthil Kumar	PhD	Assistant Professor, Center for General Education, Bachelor Program of Biotechnology, National Chung Hsing University	Assistant Professor, Center for General Education, Bachelor Program of Biotechnology, National Chung Hsing University
Li Hung Chen 陳禮弘	美國 加州大學戴維斯 分校 植物病理系 博士	國立中興大學植物病理學 系助理教授	國立中興大學植物病 理學系助理教授
Shu-Heng Chang 張書恆	博士	國立中興大學 生物科技發 展中心博士後研究員	國立中興大學 生物 科技發展中心博士後 研究員
Yu-Ling Lin 林于 鈴	PhD, Institute of Molecular Medicine and Bioengineering, National Chiao Tung University	2019. 01 – present Assistant Research Fellow, Agricultural Biotechnology Research Center, Academia Sinica 2013. 09 – 2018 .12 Assistant Research Fellow, Center for Bioinformatics Research, National Chiao Tung University	Assistant Research Fellow, Agricultural Biotechnology Research Center, Academia Sinica
Han Tang 唐涵	PhD	Postdoctoral researcher, Jiri Friml group, Plant development laboratory, Institute of Science and Technology Austria (ISTA)	Assistant professor, Graduate Institute of Biochemistry, National Chung Hsing University
Ramya Kumar	PhD	Project Assistant Research Fellow, Department of Biotechnology and Bioindustry Sciences, National Cheng Kung University, Tainan, Taiwan	Project Assistant Research Fellow, Department of Biotechnology and Bioindustry Sciences, National Cheng Kung University, Tainan, Taiwan
Chih-Cheng Lin 林致成	PhD	Project Assistant Professor, NCKU-AS Graduate Program in Translational Agricultural Sciences, National Cheng Kung University	Project Assistant Professor, NCKU-AS Graduate Program in Translational Agricultural Sciences, National Cheng Kung University
Chi-Jung Tai 戴 志融	PhD, Graduate Institute of Natural Products, Kaohsiung Medical University Bachelor, School of Medicine, Kaohsiung Medical University	Division of Family Medicine, Visiting Staff Department of Family Medicine, Assistant Professor	Director, Department of Family Medicine, Kaohsiung Medical University Hospital, KMU

Yu-Ching Huang 黃裕清	PhD, Institute of Health Policy and Management, National Taiwan University	Postdoctoral fellow, National Health Research Institutes Postdoctoral fellow, Taiwan Centers for Disease Control	Assistant Research Fellow, National Research Institute of Chinese Medicine, Ministry of Health and Welfare
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議程：

**November 8, 2023**

Time	Programs			
08:30-09:00	<b>Registration</b> Place: Library International Conference Hall			
09:00-09:30	<b>Opening Ceremony</b> Place: Library International Conference Hall			
09:30-10:20	<p align="center"><b>Keynote Speech I:</b>  <b>Wilhelm Gruissem</b>            Chair: Chang-Hsien Yang            Place: Library International Conference Hall</p>			
10:20-10:40	<p align="center"><b>Refreshments and Group Photo Taking</b></p>			
10:40-11:20	<p align="center"><b>Keynote Speech II:</b>  <b>Anita Slavica</b>            Chair: Shyi-Dong Yeh            Place: Library International Conference Hall</p>			
11:20-12:10	<p align="center"><b>Keynote Speech III:</b>  <b>Lu-Hai Wang</b>            Chair: Lie-Fen Shyur            Place: Library International Conference Hall</p>			
12:10-13:20	<p align="center"><b>Lunch</b></p>			
13:20-15:00	<p><b>Sec I: Biocatalysis and Applied Biotechnology I</b></p> <p>Place: AESB 10F Room A /10B05            Chair: Chieh-Chen Huang            Speaker            Milan Čertik            Kazuo Miyashita            Beom Soo Kim</p>	<p><b>Sec II: Agricultural Biotechnology I</b></p> <p>Place: AESB 10F Room B / Hall            Chair: Sheau-Fang Hwang            Speaker            Aman Ullah            Hao-Jen Huang            Shih-Shun Lin            Soheil S. Mahmoud</p>	<p><b>Sec IV: AI Application in Complementary and Herbal Medicine Biotechnology I</b></p> <p>Place: AESB 10F Room C /10D07            Chair: Jacqueline Whang-Peng, Jaung-Geng Lin            Speaker            Hung-Rong Yen            Chi-Jung Tai            Sun-Chong Wang            Yu-Ching Huang</p>	<b>Poster presentation</b>
15:00-15:30	<p align="center"><b>Refreshments</b></p>			
15:30-16:50	<p><b>Sec I: Biocatalysis and Applied Biotechnology II</b></p> <p>Place: AESB 10F Room A /10B05            Chair: Milan Čertik            Speaker            Ming-Hon Hou            Wei-Li Hsu            Tatiana Klemková</p>	<p><b>Sec II: Agricultural Biotechnology II</b></p> <p>Place: AESB 10F Room B / Hall            Chair: Aman Ullah            Speaker            Sheau-Fang Hwang            Ming-Jung Liu            Chih-Cheng Lin            Shu-Heng Chang</p>	<p><b>Sec IV: AI Application in Complementary and Herbal Medicine Biotechnology II</b></p> <p>Place: AESB 10F Room C /10D07            Chair: Tsong-Long Hwang            Speaker            Yen-Wei Chu            Yu-Liang Yang</p>	
17:00-18:00	<p align="center"><b>Calligraphy creation exhibition</b>            Art Center of National Chung Hsing University            Library 7F</p>			
18:30-	<p align="center"><b>Symposium Banquet</b></p>			

## November 9, 2023

Time	Programs		
09:00-09:40	<p align="center"><b>Keynote Speech IV:</b> <b>Masashi Hosokawa</b> <b>Chair: Jei-Fu Shaw</b> Place: AESB 10F Room B /Hall</p>		
09:40-10:00	<p align="center"><b>Refreshments</b></p>		
10:00-12:00	<p><b>Sec III: Functional Food and Nutraceutical I</b> Place: AESB 10F Room A /10B05 Chair: Young-Sheng Huang Speaker Yang-Chang Wu Tsunehiro Aki En-Pei Isabel Chiang Pei-Fen Liu Jer-An Lin</p>	<p><b>Sec II: Agricultural Biotechnology III</b> Place: AESB 10F Room B / Hall Chair: Shaw-Yhi Hwang Speaker Mee-Len Chye Shu-Hsing Wu Hong-Hwa Chen Ching-Hsiu Tsai Ying-Chung Jimmy Lin</p>	<p>Oral Presentation (MS/PhD) Competition I Place: AESB 10F Room C /10D07 Chair: Shih-Shun Lin OM01: Chia-Chi Yeh OM02: Naila Husnayain OM03: Jessalyn Parco OM04: Chun-Sheng Wang OM05: Shu-Rong Wang OM06: Yu-Lan Chen OM07: Ling-Chen Chang OD01: Jian You Wang</p>
12:00-12:30	<p align="center"><b>Lunch</b></p>		
12:00-13:30	<p align="center"><b>Poster Competition</b> Place: AESB 10F</p>		
13:40-15:00	<p><b>Sec III: Functional Food and Nutraceutical II</b> Place: AESB 10F Room A /10B05 Chair: En-Pei Isabel Chiang Speaker Ching-Lin Wu K.J. Senthil Kumar Yu-Ling Lin</p>	<p><b>Sec II: Agricultural Biotechnology IV</b> Place: AESB 10F Room B / Hall Chair: Hong-Hwa Chen Speaker Kuo-Chen Yeh Han Tang I-Chun Pan Ramya Kumar</p>	<p>Oral Presentation (PhD) Competition II (13:40-15:10) Place: AESB 10F Room C /10D07 Chair: Thomas A. McKeon OD02: Jian-Hau Peng OD03: Wei-Chen Wang OD04: Yi-Ching Chiu OD05: Smruti R. Sahoo OD06: Dai-Keng Hsieh OD07: Md Suzauddula</p>
15:00-15:20	<p align="center"><b>Refreshments</b></p>		
15:20-16:20		<p><b>Sec II: Agricultural Biotechnology IV</b> Place: AESB 10F Room B / Hall Chair: Shu-Hsing Wu Speaker Salim Al-Babili Li-ching Hsieh Li-Hung Chen</p>	<p>Oral Presentation (MS) Competition III Place: AESB 10F Room C /10D07 Chair: Chih-Cheng Lin OD08: Cheng-Yu Kuo OD09: Yi-Feng Zheng Determine the winners 16:50-16:10</p>
16:30-17:30	<p align="center"><b>Closing Ceremony</b> Place: AESB 10F Room B /Hall</p>		
18:30-	<p align="center"><b>Speakers' Night (Invited Only)</b></p>		

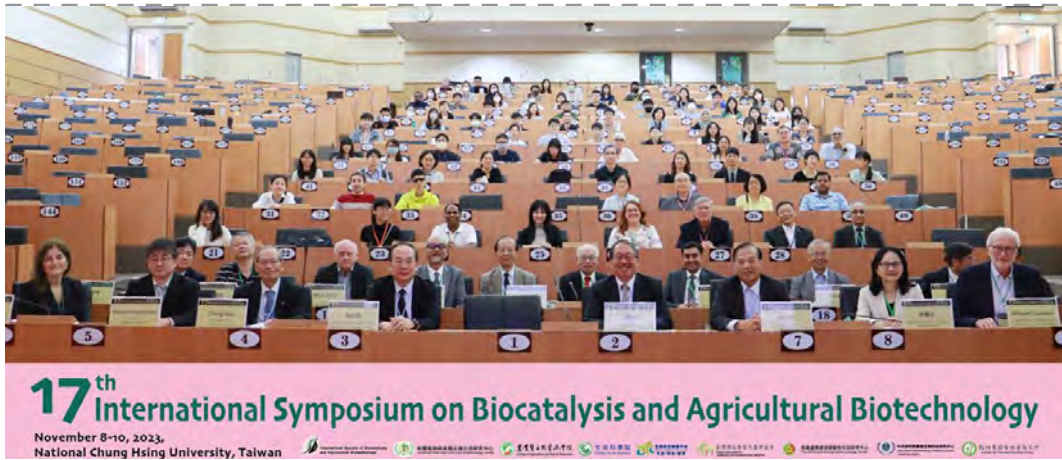
Poster presentation

## November 10, 2023

Time	Programs
09:00-20:00	<b>Study Tour (Biotechnology Industry Visit and Practical Workshop)</b>

活動照片:(至少 10 張，請填寫照片說明)

編號1. 攝於 112 年11 月 8 日, 照片內容簡述：開幕式團體照



編號2. 攝於112 年11 月 8 日, 照片內容簡述：開幕式張照勤校長致詞



編號3. 攝於 112 年11 月 8 日, 照片內容簡述：特邀講者玉山學者 Wilhelm Gruissem 演講





編號4. 攝於 112 年11 月 8 日, 照片內容簡述：特邀演講問答交流



編號5. 攝於 112 年11 月 8 日, 照片內容簡述：特邀演講 Dr. Anita Slavica 演講



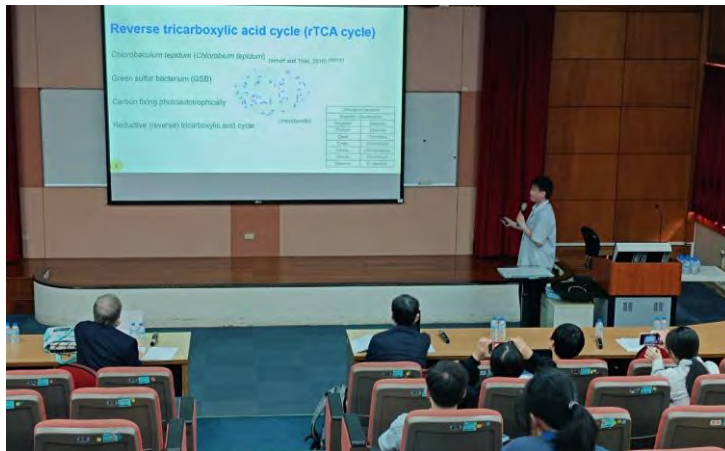
編號6. 攝於 112 年11 月 8 日, 照片內容簡述：特邀演講王陸海院士演講



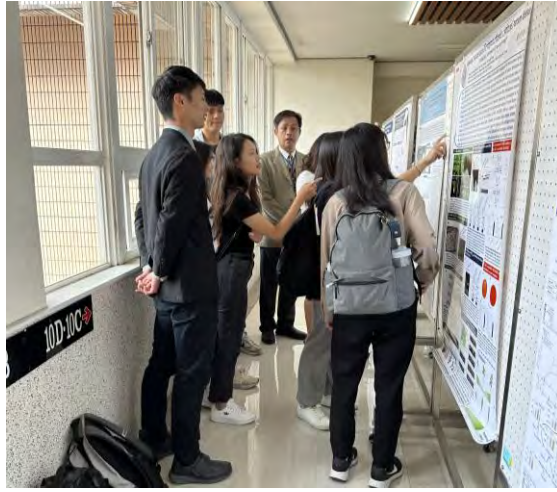
編號7. 攝於112年11月9日, 照片內容簡述：特邀講者 Dr. Masashi Hosokawa 演講



編號8. 攝於112年11月9日, 照片內容簡述：口頭論文競賽



編號9. 攝於112 年11 月 9 日, 照片內容簡述：海報論文競賽



編號10. 攝於112 年11 月 9 日, 照片內容簡述：論文競賽頒獎





編號11. 攝於112年11月10日, 照片內容簡述: Study Tour-至台大蘭園參觀



編號12. 攝於112年11月10日, 照片內容簡述: Study Tour-至蘑菇部落參觀

