



2023 The 10th International Congress of Asian Society of Toxicology

Sustainable Development Goals, SDGs in Toxicology

07.17 (MON) — 07.20 (THU)

NTUH International Convention Center, Taipei

Programme



Program Book



Proceedings

Advisory Organization



Ministry of Health
and Welfare

Organizer



Toxicology Society
of Taiwan (TSTA)



The Asian Society
of Toxicology (ASIATOX)



Chi Mei
Medical Center



基因平台



RNA技術平台與基因操控核心設施
▶ 中研院 林淑端特聘研究員



國家基因體學臨床及產業應用發展中心
▶ 陽交大 楊慕華教授



國家基因體醫學研究中心
▶ 中研院 鄔哲源研究員



藥物基因體實驗室
▶ 臺大 俞松良教授

動物模式



基因轉殖鼠核心設施
▶ 臺大 林淑華教授



台灣斑馬魚技術與資源中心
▶ 國衛院 江運金副研究員



動物設施聯盟國家綜合小鼠表現型暨藥效分析中心
▶ 中研院 陳志成研究員

影像結構



同步輻射蛋白質結晶學核心設施
▶ 國輻 黃駿翔助理研究員



生醫光學影像核心平台
▶ 成大 邱文泰教授



生醫轉譯影像解構暨空間導引之單細胞分析平台
▶ 中研院 沈家寧研究員



臺灣冷凍電子顯微鏡聯盟
▶ 成大 吳尚蓉副教授

微菌相

建置國家人體微菌研究合作與技術服務核心設施計畫
▶ 陽交大 吳俊穎教授

生物資訊



國家生醫數位資料與分析運算雲端服務平台
▶ 國網 王聿泰研究員



生技醫藥生物資訊核心設施
▶ 國衛院 熊昭名譽研究員

BSL-3實驗室



P3實驗室：新興傳染病研究核心設施平台
▶ 國防 高治華研究員



BSL-3研究及檢驗實驗室
▶ 臺大 張淑媛教授



BSL-3實驗室核心設施
▶ 成大 柯文謙教授

人體資源



人類疾病誘導型多潛能幹細胞服務聯盟
▶ 中研院 謝清河特聘研究員



台灣地區肝細胞癌研究網及資料庫之建立和
台灣肺癌組織樣品資源資源中心
▶ 國衛院 黃秀芬醫師

生物資源



模式生物資源中心
▶ 臺大 丁照棟教授

台灣水稻突變種原庫及基因資料庫
之管理與加值利用
▶ 興大 賀端華院士

次世代藥物

一站式藥物早期研究 / 臨床前服務平台
▶ 國衛院 洪明秀研究員

次世代核酸藥物平台
▶ 清大 孫玉珠教授

核酸藥物材料核心設施服務平台
▶ 國衛院 劉士任研究員

2023 ASIATOX-X Program Book

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Welcome Address

Dear Friends and Colleagues,

The Covid-19 pandemic has separated people from meeting each other in person for almost three years. We hope every one of you stay safe and healthy. With the waning of the pandemic, we sincerely wish the normal life will be resumed soon.

The Toxicology Society of Taiwan (TSTA) is honored, jointly with the Asian Society of Toxicology (ASIATOX), to organize the 10th International Congress of Asian Society of Toxicology (ASIATOX-X) from July 17-20, 2023, in Taipei, Taiwan. The congress theme is “*Sustainable Development Goals, SDGs in Toxicology*”. On behalf of the ASIATOX and the TSTA, we warmly welcome you to attend the ASIATOX-X.

The ASIATOX was founded in 1994 and the first ASIATOX Congress was held in 1997 in Yokohama, Japan. Since then, nine Congresses have already been hosted in turn by the member societies of ASIATOX. In ASIATOX-VIII (2018, Thailand), the Council of ASIATOX has passed a resolution to change the interval time of organizing the International Congress of ASIATOX from every three years to two years. We will bring the ASIATOX family together again two years after the successful 2021 ASIATOX-IX held in Hangzhou, China. We believe that the 2023 ASIATOX-X in Taipei will provide an excellent platform to promote the prosperity and development of toxicological science & technology in Asia and foster scientific cooperation in Asia, the Pacific region, and the world.

Taipei is Taiwan’s largest city as well as its economic, political, and cultural center. It is a modern cosmopolitan metropolis with a lively and diversified face, filled with exuberance. Though a heavily populated city, Taipei is easily accessible because of its convenient transportation systems. Suburban areas are incredibly green. In fact, no matter where you are in Taiwan, between the busy cities there is always a lush tropical forest nearby. You may enjoy a bird’s-eye view of the capital from Taipei 101, Taiwan’s tallest building, visit National Palace Museum to appreciate historical objects, or take a walk on old streets in Jiufen, Tamsui, Yingge, and Sanxia to immerse in old-time charm. Taipei invites you into a world of fascinating contrasts - a mix of the modern and traditional, with a generous dash of energy and friendly smiles to make this one of your most memorable trips in Asia.

The cultural kaleidoscope of Taiwan’s main city pulses wherever you go. Incense-veiled temples dating back to dynastic times blend seamlessly with a neon street life of a decidedly more modern era. Taipei has dozens of world-class restaurants where gourmets can sample the best regional Chinese cuisine; and for the gourmand, there are plenty of night markets serving up

scrumptious evening snacks in an environment of chaotic excitement and fun. In addition, the blue sky and oceans, as well as soft gold sand beaches, plus all kinds of fun water facilities, await visitors to enjoy.

The academic activities of ASIATOX-X Congress will cover the latest research progress, frontier theory and technology, and future scientific development prospective in various aspects of toxicology, as well as the practical application of toxicological knowledge and technology in the fields of environmental and ecological safety, and human health. The Congress will offer once again a great atmosphere for discussion, scientific exchange, and sharing ideas to ensure further progress. We hope that you all enjoy the beautiful conference venue and take the opportunity to meet your old friends, interact with your colleagues, young scientists and students.

We wish to share with you an innovative and fruitful toxicology Congress in Taipei.

Welcome to ASIATOX 2023!



A handwritten signature in black ink, appearing to read 'Jih-Heng Li'.

Jih-Heng Li, Ph.D.

President, ASIATOX-X Organizing Committee
President, Asian Society of Toxicology



A handwritten signature in black ink, appearing to read 'Ying-Jan Wang'.

Ying-Jan Wang, Ph.D.

President, ASIATOX-X Organizing Committee
President, Toxicology Society of Taiwan
Secretary General, Asian Society of Toxicology

Congratulatory Address



President Jih-Heng Li of ASIATOX, President Ying-Jan Wang of TSTA, and all participants.

On behalf of the Ministry of Health and Welfare, I would like to express my heartfelt welcome to all the experts, scholars, exhibitors, and attendees from around the world who have gathered in Taipei for the 10th International Congress of Asian Society of Toxicology.

The theme of this conference is “Sustainable Development Goals in Toxicology,” which refers to the integration of sustainable development goals with the field of toxicology to promote the sustainable development of environmental safety and human health. The knowledge and insights shared by experts from different countries at this conference contribute to the continuous improvement of our understanding of the effects of toxic substances, as well as the development of effective risk management strategies. Allow me to take this opportunity to thank all the participants for their dedication to the field of toxicology.

We are committed to promoting reforms in the fields of health and welfare, ensuring the well-being of our people. We not only have strived to enhance healthcare quality with a particular focus on the prevention and management of chronic diseases, but also have continuously strengthened our surveillance of epidemics, and emergency response capabilities, actively promoting vaccination. We have also dedicated environmental protection and ensured food safety. These efforts are closely related to our understanding and management of toxic substances. We appreciate everyone’s support and assistance. Moving forward, we will continue our efforts to create a safer living environment for all.

Last, I wish the 10th International Congress of Asian Society of Toxicology a huge success.

Thank you very much.

A handwritten signature in black ink that reads "Jui-yuan Hsueh". The signature is written in a cursive, flowing style.

Jui-Yuan Hsueh, M.D., LL.M.

Minister, Ministry of Health and Welfare

Congratulatory Address



Good afternoon, ladies, and gentlemen,

Thank you for having me here, I am Dr. Hung-Jung Lin, the Superintendent of Chi Mei Medical Center. It's an honor for me to express my sincere gratitude to Taiwan Society of Toxicology and the opportunity for Chi Mei Medical Center to be involved in the ASIATOX-X. In addition, we are also organizing a Joint Conference at Chi Mei Medical Center on July 21 2023. I would like to extend my thanks to all the individuals involved in organizing ASIATOX-X and the Joint Conference by Chi Mei Medical Center.

Southern Taiwan is not only known as the granary of Taiwan and also houses a multitude of thriving high-tech industries. Chi Mei Medical Center has been deeply rooted in Southern Taiwan, close to the “Southern Taiwan Science Park” and several other Science Parks in Southern Taiwan. We also have set up a “Tainan Science-based Industrial Park Clinic” within the “Southern Taiwan Science Park”. As one of the top Medical Center in Taiwan, Chi Mei Medical Center hold a vital mission to advance the field of clinical toxicology and promote occupational health, particularly for workers in the high-tech industry.

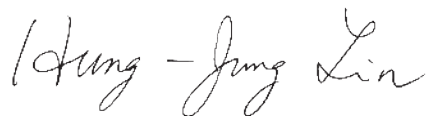
As we know that ASIATOX-X provides several sessions covering topics such as occupational health, risk management of chemicals, and clinical and advanced toxicology. Many experts have contributed their knowledge and experience to this conference. We are delighted to have this wonderful opportunity to engage with these experts, connect with ASIATOX-X and TSTA. In light of this, Chi Mei Medical Center will host an Offsite Joint Conference on July 21, 2023 at Che Mei Hospital in Tainan. The topic of this conference is “High Tech Industry Related Toxicants and Clinical Toxicology”. The primary objective of this conference is to foster collaboration and create links between ASIATOX-X, Chi Mei Medical Center, and the high-tech industries in southern Taiwan. We aim to facilitate the exchange of knowledge in occupational health research, worker safety protection, chemical risk management, and toxicity prevention. Through international interaction with scientists, medical professionals, and industrial staffs, we hope to establish Chi Mei Medical Center as a crucial platform for providing knowledge, techniques, and professional medical assistance to enhance occupational health, and promote advancements in

clinical toxicology.

Today, we gather here to discuss the crucial topics of toxicology in Asia. By doing so, we can develop strategies to mitigate risks, protect public health, and promote sustainable development. Furthermore, considering individuals spend a significant portion of their lives in the workplace, ensuring a safe and healthy occupational environment is of paramount importance. By addressing occupational health and clinical toxicology, we can protect the well-being of workers and create a productive and sustainable workforce.

In conclusion, I would like to express my appreciation once again to ASIATOX-X and TSTA for organizing this enlightening congress. The discussions and knowledge shared here, as well as in the Joint Conference of Chi Mei Medical Center, will undoubtedly contribute significantly to the progress of toxicology, occupational health, and medicine research in Asia and Taiwan. We are thrilled to foster continued collaboration with ASIATOX and TSTA in the future.

Thank you once again.



Lin, Hung-Jung, M.D.

Superintendent, Chi Mei Medical Center

Congress Organization

1-1. About Organizers

1-1-1. Organizers



Toxicology Society of Taiwan (TSTA)



The Asian Society of Toxicology (ASIATOX)



Chi Mei Medical Center

1-1-2. Advisory Organization



Ministry of Health and Welfare

1-1-3. Co-Organizers



National Science and Technology Council (NSTC)



The Bureau of Foreign Trade, MOEA (BOFT)



Toxic and Chemical Substances Bureau, Environmental Protection Administration (TCSB)



Occupational Safety and Health Administration, MOL (OSHA)



Taiwan Agricultural Chemicals and Toxic Substances Research Institute, Council of Agriculture



Department of Information and Tourism, Taipei City Government (TPEDOIT)



National Health Research Institutes (NHRI)



National Health Research Institutes/Institute of Biotechnology and Pharmaceutical Research (NHRI-IBPR)



National Health Research Institutes/Ministry of Health and Welfare-The New Southbound Project: Establishment of Asia-Pacific Snake Antivenom Research and Development Network



Academia Sinica



Taiwan Society of Nephrology



International Life Sciences Institute Taiwan (ILSI)

-  National Laboratory Animal Center (NLAC)
-  Office of International Affairs, National Taiwan University
-  Office of International Affairs, National Cheng Kung University
-  NCKU Precision Health Education Center for Medical Device Innovation and Commercialization
-  Ministry of Education Precision Health Industry Interdisciplinary Cultivation Program-National Taiwan University Food Innovation Partner School
-  The Pharmacological Society in Taiwan (PST)
-  Taiwan Environmental and Occupational Medicine Association
-  Taiwan Social Responsibility & Harm Reduction Association
-  Development Center for Biotechnology

1-2. Organizing Committee

1-2-1. Executive Committee

President

Jih-Heng LI (Taiwan)
Ying-Jan WANG (Taiwan)

Vice President

Chih-Kang CHIANG (Taiwan)
Chen-Chang YANG (Taiwan)
Hung-Jung LIN (Taiwan)

Secretary General

Ching-Chuan KUO (Taiwan)

Deputy Secretary General

Rong-Jane CHEN (Taiwan)
Ying-Chi LIN (Taiwan)
Hui-Wen CHIU (Taiwan)

Executive Secretary

Chia-Chi TSENG (Taiwan)
Yu-Hsuan LEE (Taiwan)
Yi-Shiou CHIOU (Taiwan)
Shine-Gwo SHIAH (Taiwan)
Kuo-Tai HUA (Taiwan)

Professional Congress Organizer

Helena CHENG, FUPRS International Ltd. (Taiwan)

1-2-2. Advisory Committee

Chair

Jou-Fang DENG (Taiwan)

Member (*Alphabetical Order*)

Rozaini binti ABDULLAH (Malaysia)
Chaniphun BUTRYEE (Thailand)

Wui Ling CHAN (Singapore)
Chunying CHEN (China)
Jingyuan CHEN (China)
Kyung-Chul CHOI (Korea)
Chang-Hung CHOU (Taiwan)
Young-Jin CHUN (Korea)
Li-Jie FU (China)
Akihiko HIROSE (Japan)
Ing-Kang HO (USA)
Rui-Xue HUANG (China)
Salmaan Hussain INAYAT-HUSSAIN (Malaysia)
Yi-Guo JIANG (China)
Toshiyuki KAJI (Japan)
Jaw-Jou KANG (Taiwan)
Keon Wook KANG (Korea)
Jun KANNO (Japan)
Donghak KIM (Korea)
Hyung Sik KIM (Korea)
Yoshito KUMAGAI (Japan)
Jih-Heng LI (Taiwan)
Hui-Kuan LIN (USA)
Rong-Yao LIN (Taiwan)
Shoei-Yn LIN-SHIAU (Taiwan)
Shing-Hwa LIU (Taiwan)
Chan Kok MENG (Malaysia)
Mamoru MUTAI (Japan)
Yasumitu OGRA (Japan)
R. PONAMPALAM (Singapore)
Sohil Equbal POTHIAWALA (Singapore)
Omid SABZEVARI (Iranian)
Tetsuo SATOH (Japan)
Shahin SHADNIA (Iranian)
Kambiz SOLTANINEJAD (Iranian)
Songsak SRIANUJATA (Thailand)
Keiko TAGUCHI (Japan)
Ying-Jan WANG (Taiwan)
Jen-Leih WU (Taiwan)
Chen-Chang YANG (Taiwan)
Hsin-Su YU (Taiwan)
Ping-Kun ZHOU (China)

1-2-3. Scientific Committee

Chair

Tsung-Yun LIU (Taiwan)

Member (*Alphabetical Order*)

Rozaini binti ABDULLAH (Malaysia)

Chaniphun BUTRYEE (Thailand)

Wui Ling CHAN (Singapore)

Chih-Kang CHIANG (Taiwan)

Ruixue HUANG (China)

Farahana KAMALUDIN (Malaysia)

Kyuhong LEE (Korea)

Te-Chang LEE (Taiwan)

Pinpin LIN (Taiwan)

Shing-Hwa LIU (Taiwan)

Yasumitu OGRA (Japan)

Jingbo PI (China)

Meei-Ling SHEU (Taiwan)

Keiko TAGUCHI (Japan)

Chen-Chang YANG (Taiwan)

Seok Joo YOON (Korea)

1-2-4. General Management Committee

Chair

Shing-Hwa LIU (Taiwan)

Member (*Alphabetical Order*)

Chia-Che CHANG (Taiwan)

Chia-Ter CHAO (Taiwan)

Huei-Wen CHEN (Taiwan)

Bo-Lin CHEN (Taiwan)

Hsiu-Mei CHIANG (Taiwan)

Yuan-Soon HO (Taiwan)

Sheng-Yow HO (Taiwan)

Dong-Zong HUNG (Taiwan)

Biing-Hui LIU (Taiwan)

Bour-Jr WANG (Taiwan)

Yuan-Hua WU (Taiwan)

Chin-Jui WU (Taiwan)

Ching-Chin YANG (Taiwan)

1-2-5. Abstract and Award Competition Reviewers

Biing-Hui LIU (Taiwan)
Chaniphun BUTRYEE (Thailand)
Chen-Chang YANG (Taiwan)
Cheng-Tien WU (Taiwan)
Chia-Che CHANG (Taiwan)
Chih-Kang CHIANG (Taiwan)
Ching-Hao LI (Taiwan)
Dan XU (China)
Farahana KAMALUDIN (Malaysia)
Ge LIN (Hong Kong)
Han Kiat HO (Singapore)
Hao KOU (China)
Hsing-Chen TSAI (Taiwan)
Hui WANG (China)
Hui-Wen CHIU (Taiwan)
I-Lun HSIAO (Taiwan)
Jingbo PI (China)
Keiko TAGUCHI (Japan)
Li-Ching CHEN (Taiwan)
Meei-Ling SHEU (Taiwan)
Na GUAN (China)
Ok-Nam BAE (Korea)
Pai-Shan CHEN (Taiwan)
Pinpin LIN (Taiwan)
Po-Lin LIAO (Taiwan)
Qian BIAN (China)
Rong-Jane CHEN (Taiwan)
Rozaini ABDULLAH (Malaysia)
Ruixue HUANG (China)
Shing-Hwa LIU (Taiwan)
Te-Chang LEE (Taiwan)
Tsung-Yun LIU (Taiwan)
Yasumitu OGRA (Japan)
Yi-Shiou CHIOU (Taiwan)
Yng-Tay CHEN (Taiwan)
Yu GUO (China)
Yu-Hsuan LEE (Taiwan)

戀職人送愛分心 開元百萬助學計畫

Janet



「戀職人送愛心 開元百萬助學計畫」幫助弱勢學子教育困境

開元食品從2009年至今投身公益十多年，已捐出超過30萬瓶鮮奶，並幫助超過1萬5千名弱勢學生。

開元食品、家扶基金會與愛心鮮奶公益店家，將持續關注教育與營養，一起來翻轉弱勢教育資源與營養不足問題，讓每位孩子有更好的成長與學習環境。

開元食品期許為餐飲的美味推手，
更期許為客戶、消費者、產業提供美好的
創新餐飲體驗。



官網



facebook

主辦單位 /

 開元食品
CREATION FOOD

捐助單位 /

 家扶基金會

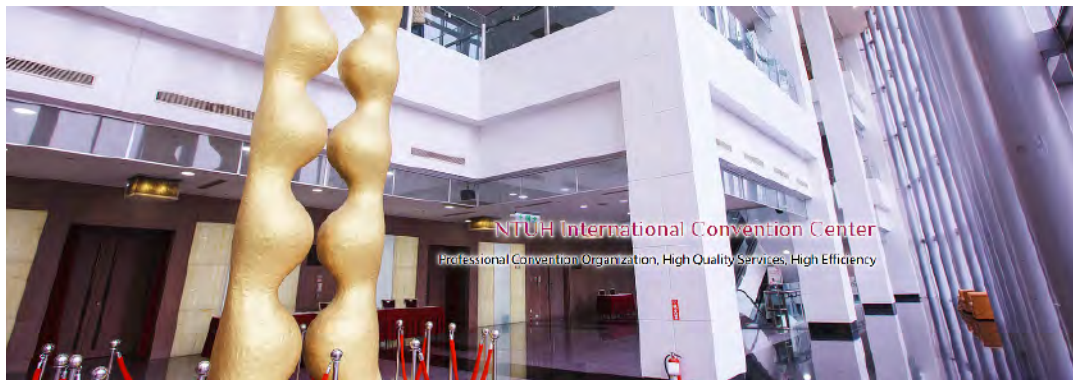
公益夥伴 /

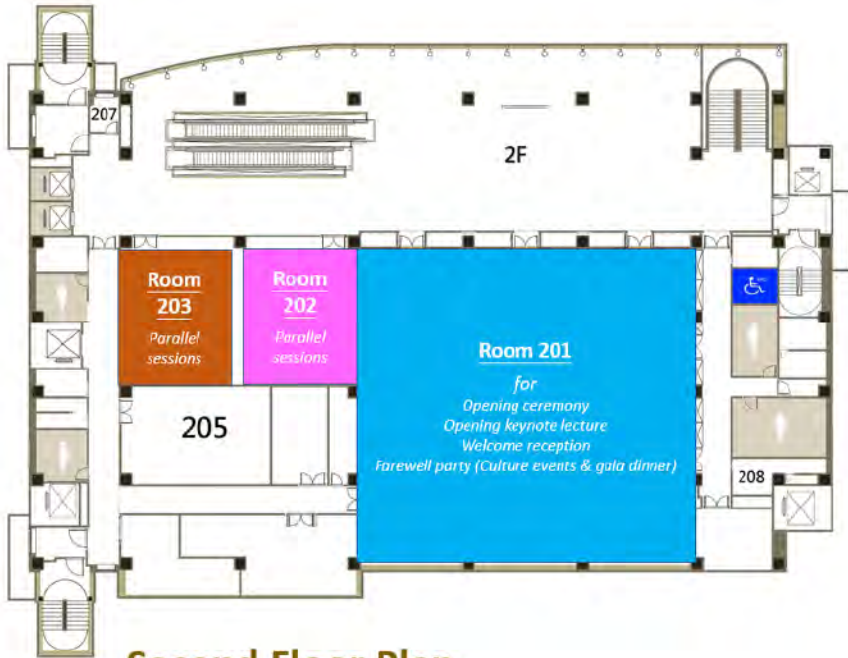

戀職人
愛心鮮奶
公益夥伴

Venue Layout

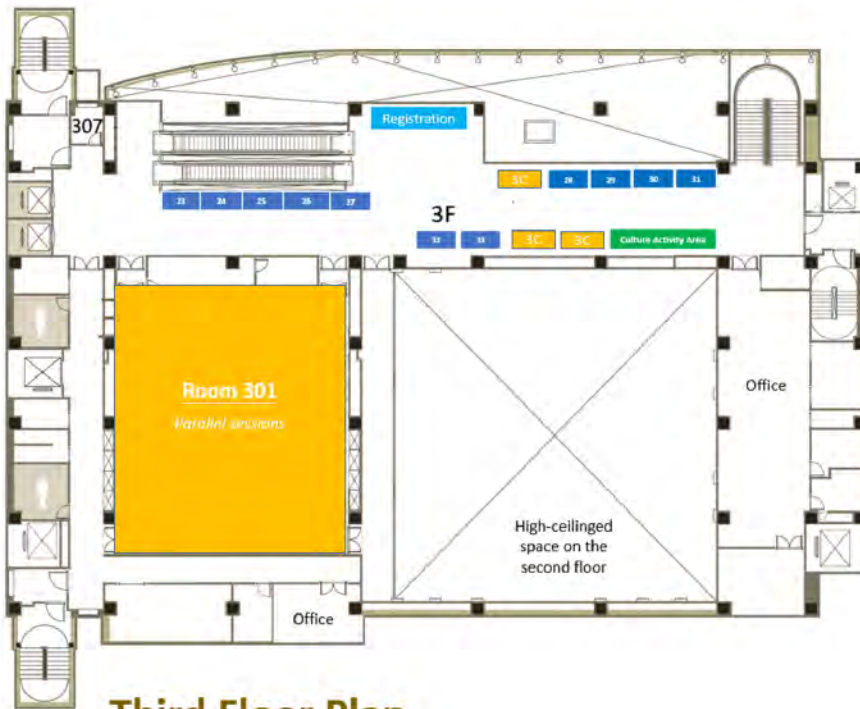
NTUH International Convention Center

No. 2, Xuzhou Road, Zhongzheng District 100, Taipei City, Taiwan

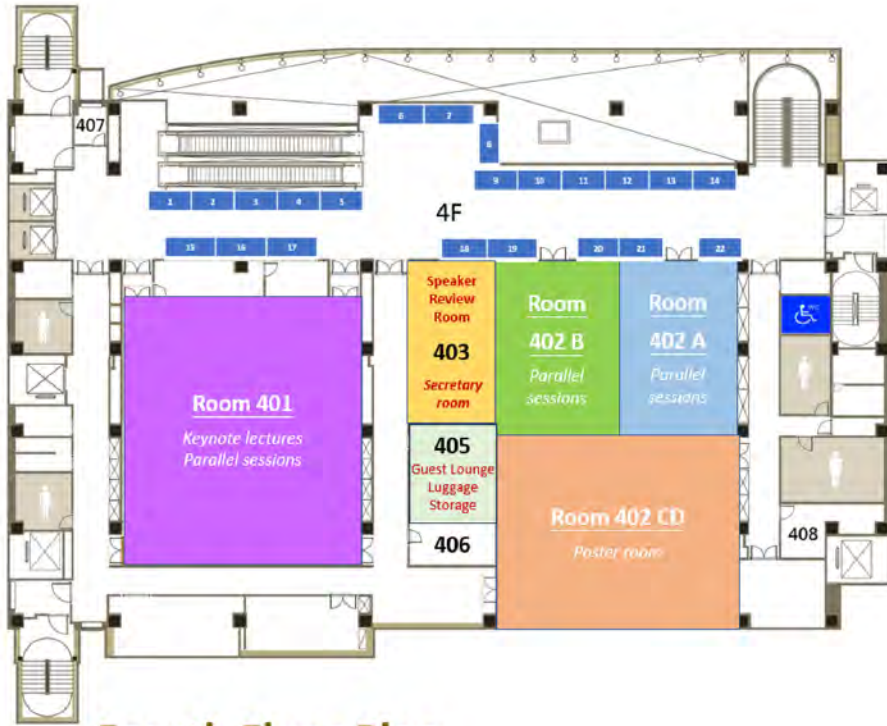




Second Floor Plan



Third Floor Plan



Fourth Floor Plan

Congress Information

from A to Z

Abstract

- All information in the abstract will be used in the congress publications.
- All authors named in this abstract have agreed to its submission for presentation at 2023 ASI-ATOX-X, and that the authors are responsible for the data and agree with the stated results.
- 2023 ASIATOX-X has the copyright to use the abstract in the conference for scientific purposes without any prior notice to the contributor/authors.

Awards

The Congress Organizers are delighted to announce two best presentation awards at ASI-ATOX-X 2023 :

- **Trainee Presentation Awards:** This policy applies to postdoctoral researchers, graduate students, and research assistants only. The scientific committee had evaluated the abstracts in the initial stage to select candidates for oral presentations at the “**Trainee Award Competition Seminar**”. Subsequently, the final awards will be determined based on the on-site performance. Those who do not arrive at the venue on time will be regarded as voluntarily giving up the award. Awards are presented as follows:
 1. One Gold Medal Award: US\$500 prize
 2. One Silver Medal Award: US\$300 prize
 3. One Bronze Medal Award: US\$200 prize
 4. Five Judges’ Awards: US\$100 prize each.
- **Distinguished Poster Awards:** All participants who submit abstracts are eligible to compete for the “ **Distinguished Poster Awards.**” Distinguished Poster Awards will primarily be evaluated based on the content of the poster. It is crucial to ensure that your poster effectively communicates your research and findings. Please be aware that the evaluation committee may not have an opportunity to ask questions during your scheduled presentation time. Therefore, it is essential to present your work in a clear and concise manner, providing all necessary information within the poster itself. The Outstanding Poster Award will be presented to the top 10 contributors, with a prize of US\$100 each.

The award ceremony will take place before the closing ceremony of the conference on-site (July 20, 2023, 11:00~, R401). The “**Trainee Presentation Awards**” and “**Distinguished Poster Awards**” will be presented by announcing the names of the recipients. The winners must come on stage to receive their awards. If a winner is not present, it will be considered an automatic forfeiture, and no additional prize money or certificates will be issued.

Badges

Congress name badges need to be picked-up on-site at the registration desk upon arrival. All delegates must wear the congress' identification badge visibly at any time on-site at the venue. Entrance to the session rooms as well as to the poster and exhibition area will only be permitted to persons wearing the congress badge.

Certificate of Attendance

Certificate of attendance will be provided on-site at the registration desk when you arrive.

Congress Bag

Congress bags will be distributed at the registration area. After the registration, please redeem the bag with the coupon, which will be in the name badge.

Congress Secretariat

July 17 ~ July 20: 403 Room, NTUH International Convention Center (4F)

Ms. Helena CHENG

FUPRS International Ltd. (Taiwan)

Phone: (02) 2375-3165

FAX: (02) 2389-2090

Email: acdemy.taiwan@gmail.com

After Conference:

Ms. Chia-Chi Tseng

Phone: +886-6-2353-535 ext. 5804

Email: tsta.taiwan@gmail.com

Address: No. 138, Shengli Rd., North Dist., Tainan City 704302, Taiwan

3C Charging Zone

The 3C Charging Zone is a designated area specifically designed for charging electronic devices such as smartphones, tablets, and laptops. This area provides convenient access to power outlets or charging stations where attendees can recharge their 3C (Computer, Communication, Consumer Electronics) devices during the event. The 3C Charging Zone is located in the third-floor lobby.

Exhibition Area

The exhibition area is located in the lobbies on the third and fourth floors. It features various technology and innovation exhibit booths and also serves as a space for attendees to enjoy coffee and collect their lunch boxes during the event.

Exhibition Opening Hours

- Monday, July 17, 2023 16:00 – 19:00
- Tuesday, July 18, 2023 09:00 – 18:00
- Wednesday, July 19, 2023 09:00 – 18:00
- Thursday, July 20, 2023 09:00 – 12:00

International participants

International participants (except Taiwan residents) attending the conference will be presented with an EasyCard, allowing you to freely top up and explore Taipei. In addition, we will also provide you with four different cultural event experiences. Please refer to the Social Program for details.

Offsite Joint Conference after ASIATOX-X

To participate in the “Offsite Joint Conference after ASIATOX-X” please scan the QR code below to complete the registration (no registration fee required).



Joint Symposium by NHRI:
Alternatives to Animal Testing



Joint Symposium by Chi-Mei Medical Center:
High Tech Industry Related Toxicants and
Clinical Toxicology

Poster Session

Poster Sessions will be held in R402CD on the fourth floors. All presenters for Poster Sessions are responsible for mounting and removing their own posters on the designated poster board with the pins which will be available at the Poster Room. Any other equipment or electricity for use of image/video projection will not be provided.

Poster Hours

Session	Mounting Time	Setup Time	Presentation Time	Removal Time
A	July 18 (TUE) 8:00-9:00	July 18 (TUE) 9:00-17:00	July 18 (TUE)12:20-13:30	July 18 (TUE) 17:00-17:30
B	July 19 (WED) 8:00-9:00	July 19 (WED) 9:00-17:00	July 19 (WED) 12:20-13:30	July 19 (WED) 17:00-17:30

- Posters must remain on display during the poster hour.
- Presenter must be in attendance to answer questions about your abstract during your scheduled session presentation date and time.
- Any posters remaining after the designated removal time will be promptly removed and disposed of by the Secretariat.

Presentation Guideline

Oral Presentation

1. Please make sure to be in the session room and notify the conference staff at least 30 minutes before the session starts.
2. All speakers are kindly requested not to use their own laptop for presentations. The congress will provide a dedicated computer for presenters in each room.
3. All speakers are REQUIRED to bring a copy of their presentation file to the Congress and upload it in the Speaker Review Room (R403, 4F) no later than 90 min before their scheduled presentation time. This is necessary to avoid any delays during the presentation.
4. The session rooms are equipped with a Windows laptop PC and LCD projector on which Microsoft PowerPoint is installed (OS: Windows10, Software: Microsoft PowerPoint 2010, 2013, 2016)
5. A slide aspect ratio of 16:9 is recommended for presentations.

Poster Presentation

Poster will be displayed in the R402CD on the fourth floor. The Secretariat will not be held liable for any lost or damaged posters.

Registration Desk and Opening Hours

Registration will be open from July 17 to July 20, 2023 in the Lobby of NTUH International Convention Center (3F). For receiving your congress material or registering on-site, please contact the organizers at the registration desk. It will open as follows:

- Monday, July 17, 2023 13:30 – 19:00
- Tuesday, July 18, 2023 09:00 – 18:00
- Wednesday, July 19, 2023 09:00 – 18:00
- Thursday, July 20, 2023 09:00 – 12:00

Registration Fee

Overseas ¹		
Registration Type	Participant	Trainee ²
Online Early Bird Registration (March 1~June 15)	US\$450	US\$200
Online Regular Registration (June 16~July 10)	US\$500	US\$250
Onsite Registration	US\$800	US\$400
Welcome Reception	Free	
Banquet	US\$75	

¹ All overseas participants (Except for Taiwan residents) will receive an Easy Card (<https://www.easycard.com.tw/en/>) with a stored value of NT\$200 after signing in at the Congress Registration Desk, which is convenient for you to travel around Taipei City.

² Trainee: only for Postdoc, Research Associate, Graduate, Undergraduate.

台灣		
註冊形式	一般與會者	學生 / 助理 / 博後
會員早鳥優惠 (3月1日至6月15日)*	NT\$3,000	NT\$1,000
非會員早鳥優惠 (3月1日至6月15日)	NT\$5,000	NT\$2,000
一般註冊 (6月16日至7月10日)	NT\$6,000	NT\$2,500
現場註冊 (7月17日至7月20日)	NT\$8,000	NT\$3,000
歡迎酒會	免費入場	
大會晚宴	NT\$1500	

Registration Fee Includes

The above registration fees for participants include: Admission to all scientific sessions, welcome reception, exhibition, refreshments and congress bag including abstracts.

Smoking Policy

ASIATOX-X 2023 is a non-smoking congress. It is prohibited to smoke anywhere inside the congress area.

Speaker Review Room

The Speaker Review Room (R403) is located on the fourth floors. It will open as follows:

- Monday, July 17, 2023 15:00 – 19:00
- Tuesday, July 18, 2023 08:00 – 18:00
- Wednesday, July 19, 2023 08:00 – 18:00
- Thursday, July 20, 2023 08:00 – 12:00

Transportation

MRT (Mass Rapid Transportation)

- The red line (Danshui / Beitou) : get off at NTU Hospital Station, Exit 2
- The blue line : get off at Shandao Temple Station, Exit 2

Bus

- “Kainan High School of Commerce and Industry “ (near Xuzhou Road) : 0-South / 15 / 22 / 208 / 295 / 297 / 671
- “NTUH Hospital Station” : 22, 15, 615,227,648, 648Green, 208, 208 Direct,Zhongshan Line, Pinglin-Taipei,
- “Renai-Linsen Intersection” (Linsen South Road) : 295 / 297 / 15 / 22 / 671
- “Renai-Linsen Intersection” (Renai Road) : 245/261/37/249/270/263/621/651/630

Transport Information

- Taiwan High Speed Rail <http://www.thsrc.com.tw>
- Taipei Metro <https://english.metro.taipei/>
- Taipei Songshan Airport <http://www.tsa.gov.tw>
- Taiwan Taoyuan International Airport <https://www.taoyuan-airport.com/?lang=en>

Venue

NTUH International Convention Center (2F-4F), No. 2, Xuzhou Road, Zhongzheng District 100, Taipei City, Taiwan

<http://www.nthcc.com.tw/information/information4F?lang=en>

VIP Room Reservation

If you are interested in using the VIP room, please contact the secretary's office directly to make a reservation. They will provide you with the necessary booking information and assist you in scheduling your preferred time. Each time slot is one hour long, and the first hour of usage is free of charge. Starting from the second hour, there is a fee of \$50 per hour for using the VIP room. Even if the usage is less than one hour, the fee will still be calculated based on the full hour. If you require further details or have any other inquiries, we recommend reaching out to the secretary's office directly as they will provide you with more accurate and specific guidance. The available time slots for VIP room reservation are as follows:

(1) 8:45-9:45; (2) 10:00-11:00; (3) 11:15-12:15; (4) 12:30-13:30; (5) 13:45-14:45; (6) 15:00-16:00; (7) 16:15-17:15; (8) 17:30-18:30

WLAN

Wireless LAN access is available at the congress area free of charge for all congress delegates.

- Network: THCC-freewifi
- Password: 77240109

Official Program

Opening Ceremony

All registered participants are invited to attend the Opening Ceremony. We kindly request your presence as we celebrate the official commencement of ASIATOX-X 2023. Let us join together to mark this momentous occasion.

- Date & Time: July 17, 16:30-17:10
- Place: R201
- The agenda is as follows:

1. Welcome Address

- Jih-Heng Li, Ph.D. (President, ASIATOX-X Organizing Committee; President, Asian Society of Toxicology)
- Ying-Jan Wang, Ph.D. (President, ASIATOX-X Organizing Committee; President, Toxicology Society of Taiwan; Secretary General, Asian Society of Toxicology)

2. Congratulatory Address

- Jui-Yuan Hsueh, M.D., LL.M. (Minister, Ministry of Health and Welfare)
- Hung-Jung Lin, M.D. (Superintendent, Chi Mei Medical Center)

3. Introducing Distinguished Guests

- Ching-Chuan Kuo, Ph.D. (Secretary General, ASIATOX-X Organizing Committee and Toxicology Society of Taiwan)

4. Group photo

Council Meeting (I)

Councilors of ASIATOX member societies are invited to attend the Council Meeting.

- Date & Time: July 17, 15:00-16:20
- Place: R402B

Council Meeting (II)

Councilors of ASIATOX member societies are invited to attend the Council Meeting.

- Date & Time: July 20, 8:00-9:00
- Place: R402B

Presidents' Forum

All registered participants are invited to attend the Presidents' Forum. We encourage active participation to facilitate learning, interaction among society members, and foster future cooperation.

- Date & Time: July 20, 10:00-11:00
- Place: R401
- The agenda is as follows:

Chaired by Dr. Jih-Heng Li, President of Asiatox

Dr. Lijie Fu, Immediate Past President of Asiatox

Panelists Dr. Jun Kanno, Immediate Past President of IUTOX

Dr. Lijie Fu, CST representative

Dr. Mamoru Mutai, President of JSOT

Dr. Kyung-Chul Choi, President-Elect of KSOT

Dr. Rozaini binti Abdullah, President of MySOT

Dr. Chan Wui Ling, President of TSS

Dr. Songsak Srianujata, President of TST

Dr. Ying-Jan Wang, President of TSTA

President or representative of ISOT

Discussion Topics 1. Mutual recognition of certified toxicologists: qualification and professional necessity.

2. Collaborative research on green toxicology.

3. Reports of unique R & D advances in Member Societies.

Awarding & Closing Ceremony

All registered participants are invited to attend the award ceremony and closing ceremony, where we will congratulate the winners, celebrate the success of the conference, and witness the handover ceremony of the ASIATOX Congress.

- Date & Time: July 20, 11:00-12:00
- Place: R401
- The agenda is as follows:

1. The presentation of the “Trainee Presentation Awards” and “Distinguished Poster Awards.
2. The general assembly report of ASIATOX-X.
3. The handover ceremony for transferring the hosting rights of the ASIATOX congress from TSTA to MySOT.
4. Closing remarks.

Social Program

Welcome Reception

All registered participants and accompanying persons are invited. The welcome reception offers Taiwanese cuisine, snacks, fruits, beverages, cocktails, and beer for everyone to enjoy while socializing. In this joyful occasion, various celebratory activities will also take place, such as Award Ceremony of Young Scientists Travel Award by the Japanese Society of Toxicology (JSOT), and the KMU Pharmacy Alumni Foundation for Culture and Education sponsored students to participate in the ASIATOX-X Award Ceremony.

- Date & Time: July 17, 18:10-20:30
- Place: R201
- Free for Full Congress ticket holders

Farewell Banquet

Join us for a vibrant Taiwanese-Inspired Dinner Event featuring a captivating performance by the “Taste of Taiwan” Indigenous Dance Troupe and enchanting melodies of the DiZi (Chinese Bamboo Flute). At the event, Professor Shoei-Yn Lin-Shiau will be honored with the Lifetime Achievement Award of the Toxicology Society of Taiwan (TSTA). The talented choir, composed of Taiwanese pharmacists, will pay tribute to the diverse guests with a heartfelt medley of Taiwanese classics and international compositions. A skilled saxophonist will perform, followed by an electrifying live show by the HIGH Band.

- Date & Time: July 19, 18:00-20:30
- Place: R201
- Additional Purchase

Culture Event

We offer cultural activity vouchers for foreign guests to experience Taiwanese cultural activities such as paper-cutting, asparagus sugar, sugar painting, and painted fans. The activities will take place in the lobby on the 3rd floor on the afternoons of July 18th and 19th. Please find the activity details below:

Activity: Taiwanese Cultural Experience

Date: July 18th and 19th

Time: Start around noon

Location: Lobby, 3rd floor

Join us for an immersive experience of Taiwanese culture through various traditional activities. Our cultural activity vouchers allow you to participate in the following:

- **Paper-Cutting:** Learn the intricate art of paper-cutting, where you can create beautiful patterns and designs by cutting paper with scissors or knives.
- **Asparagus Sugar:** Discover the unique flavor of asparagus sugar, a special Taiwanese snack that is sweet yet not greasy. Experience the taste of this centuries-old delicacy.
- **Sugar Painting:** Try your hand at sugar painting, a traditional skill that uses boiled sugar to create intricate patterns and designs. Paint birds, people, animals, flowers, fruits, and vegetables with colorful edible “paint.”
- **Painted Fans:** Engage in the rich history of Chinese fans and indulge in the beauty of painted fans. Explore the intricate designs and exquisite taste displayed in high-quality Chinese fans.

Immerse yourself in the vibrant Taiwanese culture and take home unforgettable memories of your visit. Join us on July 18th and 19th in the lobby on the 3rd floor for these captivating cultural activities.

The cultural activities will commence around noon and last approximately four hours. Each activity has a limited capacity for participants, and registration will close once it reaches maximum capacity.

Scientific Program

2023 ASIATOX-X PROGRAM AT-A-GLANCE

Time	July 17 (Mon)	July 18 (Tue)	July 19 (Wed)	July 20 (Thu)
08:00		Registration (08:00~18:00)	Registration (08:00~18:00)	ASIATOX Council Meeting (08:00~09:00)
09:00		Keynote Lecture (09:00~10:00)	Keynote Lecture (09:00~10:00)	Keynote Lecture (09:00~10:00)
10:00		Coffee Break (10:00~10:20)	Coffee Break (10:00~10:20)	The Presidents' Forum (10:00~11:00)
10:20		Parallel Sessions (10:20~12:20)	Parallel Sessions (10:20~12:20)	
11:00				Awarding & Closing Ceremony (11:00~12:00)
12:20		Lunch Break/ Exhibition & Poster (12:20~13:30)	Lunch Break/ Exhibition & Poster (12:20~13:30)	
12:40		Luncheon Seminar (12:40~13:10)	Luncheon Seminar (12:40~13:10)	
13:30	Registration (13:30~19:00)	Parallel Sessions (13:30~15:30)	Parallel Sessions (13:30~15:30)	
15:00	ASIATOX Council Meeting (15:00~16:20)	Coffee Break (15:30~15:50)	Coffee Break (15:30~15:50)	
16:30	Opening Ceremony (16:30~17:10)	Parallel Sessions (15:50~17:50)	Parallel Sessions (15:50~17:50)	
17:10	Keynote Lecture (17:10~18:10)			
18:10	Welcome Reception (18:10~20:30)		Culture Event & Farewell Banquet (18:00~20:30)	

Offsite Joint Conference after ASIATOX-X

Joint Conference by NHRI
July 20 (THU) (13:10-17:00)

Joint Conference by Chi Mei Medical Center
July 21 (FRI) (09:00~12:30)

OVERVIEW OF DAILY AGENDA

July 17 (MOM)

13:30 ~	Registration
15:00-16:20	ASIATOX Council Meeting (R402B)
16:30-17:10	Opening Ceremony (R201) (40 min)
17:10~18:10	Keynote Lecture KL1 (R201) (60 min) Academician Bon-Chu CHUNG, Academia Sinica, Taiwan
18:10-20:30	Welcome Reception (R201)

July 18 (TUE)

08:00~	Registration
9:00~10:00	Keynote Lecture KL2 (R401) (60 min) Prof. Seiichiro HIMENO, Showa University, Japan
10:00-10:20	Coffee Break (20 min)
10:20-12:20	Paralle Symposiums (120 min) <u>Symposium S1 (R301)</u> Nanosafety and Nanotoxicology (JSOT) <u>Symposium S2 (R401)</u> Women in Toxicology (MySOT) <u>Symposium S3 (R402A)</u> Drug Discovery and Technology (TSTA) <u>Symposium S4 (R402B)</u> Green Toxicology and Ecological Sustainability (TSTA) <u>Symposium S5 (R202)</u> Target Organ Toxicity and Cancer Research (TSTA)
12:20~13:30	Poster/Exhibition/Lunch time (70 min) <u>Luncheon Seminar L1 (R301)</u> US Soybean Export Council (USSEC) (12:40~13:10)(30 min) <u>Luncheon Seminar L2 (R401)</u> Jello Biotech Inc. (12:40~13:10) (30 min) <u>Luncheon Seminar L3 (R402A)</u> Department Center for Biotechnology (DCB) (12:40~13:10)(30 min) <u>Luncheon Seminar L4 (R402B)</u> AB Sciex Pte. Ltd. (12:40~13:10) (30 min)"
13:30-15:30	Paralle Symposiums (120 min) <u>Symposium S6 (R301)</u> Clinical and Applicatoin of Snake Venom (TSTA) <u>Symposium S7 (R401)</u> Transcriptional Regulation by AhR or Nrf2 in Toxicology (JSOT) <u>Symposium S8 (R402A)</u> Nephrologist Toxicologist Cross Talk (TSTA) <u>Symposium S9 (R402B)</u> New Approach Methodologies (CST) <u>Short Oral Session SO1 (R202)</u> Occupational & Public Health Insights

15:30~15:50	Coffee Break (20 min)
15:50~17:50	Paralle Symposiums (120 min) <u>Symposium S10 (R301)</u> Food Safety and Functionality (TSTA) <u>Symposium S11 (R401)</u> Oil Disease in Japan and Taiwan - Retrospective and Prospective (JSOT) <u>Symposium S12(R402A)</u> Safety and Efficacy Evaluation of Botanical Products for consumers (TST) <u>Symposium S13 (R402B)</u> Sustainability and Chemical Stewardship (MySOT) <u>Short Oral Session SO2 (R202)</u> Nanotoxicology and Microplastic Toxicology

July 19 (WED)

08:00~	Registration
9:00~10:00	Keynote Lecture KL3 (R401) (60 min) Prof. Kyung-Chul Choi, Chungbuk National University, Korea
10:00-10:20	Coffee Break (20 min)
10:20-12:20	Paralle Symposiums (120 min) <u>Symposium S14 (R301)</u> Cytochrome P450 and Toxicology (KSOT) <u>Symposium S15 (R401)</u> Epigenetics and Toxicology (JSOT) <u>Symposium S16 (R402A)</u> Clinical Toxicology (TSS) <u>Symposium S17 (R402B)</u> Regulatory Toxicology (TSTA) <u>Symposium S18 (R202)</u> Substance Use and Health Disorders (TSTA) <u>Symposium S19 (R203)</u> In Silico Toxicology (TSTA)
12:20~13:30	Poster/Exhibition/Lunch time (70 min) <u>Luncheon Seminar L5 (R401)</u> QPS Custom-Built Research (12:40~13:10)(30 min) <u>Luncheon Seminar L6 (R402B)</u> Taiwan Earnnig Co. Ltd. (12:40~13:10)(30 min)
13:30-15:30	Paralle Symposiums (120 min) <u>Symposium S20 (R301)</u> Reproductive & Developmental Toxicology (CST) <u>Symposium S21 (R401)</u> Metal & Metalloid Toxicity (JSOT) <u>Symposium S22 (R402A)</u> Air Pollution Toxicology (TSTA)

	<p><u>Symposium S23 (R402B)</u> Safety Assessment and Management Improvement of Pesticides (TSTA)</p> <p><u>Trainee Award Competition Seminar TA1 (R202)</u></p> <p><u>Symposium 24 (R203)</u> Cosmetic Safety Assessment, from Local to Global, Today to Nex Generation (TSTA)</p>
15:30~15:50	Coffee Break (20 min)
15:50~17:50	<p>Paralle Symposiums (120 min)</p> <p><u>Symposium S25 (R301)</u> Occupational Safety and Toxicology (TSTA)</p> <p><u>Symposium S26 (R401)</u> Respiratory Toxicity of Chemicals (KSOT)</p> <p><u>Symposium S27 (R402A)</u> Cancer and Chemoprevention (TSTA)</p> <p><u>Symposium S28 (R402B)</u> Target Organ Toxicology & Mechanism (CST)</p> <p><u>Trainee Award Competition Seminar TA2 (R202)</u></p> <p><u>Short Oral Session SO3 (R203)</u> Computational Toxicology and Biological Models</p>
18:00~20:30	Culture Event & Farewell Banquet (R201)

July 20 (THU)

8:00~9:00	ASIATOX Council Meeting (R402B)
9:00~10:00	<p>Keynote Lecture KL4 (R401) (60 min) Dr. Joshua Xu, U.S. Food and Drug Administration, USA</p>
10:00~11:00	<p>The Presidents' Forum (R401) (60 min) For society members interaction and future cooperation</p>
11:00~12:00	<p>Awarding & Closing Ceremony</p> <ul style="list-style-type: none"> - Ceremony of the "Trainee Presentation Awards" and "Distinguished Poster Awards" - General Assembly report of ASIATOX-X - Transfer ASIATOX to MySOT

Offsite Joint Conference after ASIATOX-X (JS1)

Alternatives to Animal Testing
(Joint Conference by NHRI)
July 20 (THU) (13:10-17:00)

Offsite Joint Conference after ASIATOX-X (JS2)

High Tech Industry Related Toxicants and
Clinical Toxicology
(Joint Conference by Chi Mei Medical Center)
July 21 (FRI) (09:00~12:30)

Proposed Association:

(Listed in alphabetical order)

CST: Chinese Society of Toxicology

JSOT: The Japanese Society of Toxicology

KSOT: Korean Society of Toxicology

MySOT: Malaysian Society of Toxicology

TSTA: The Toxicology Society of Taiwan

TST: Thai Society of Toxicology

TSS: Toxicology Society (Singapore) TSS

6-3. Keynote Lecture

Keynote Lecture 1

July 17th (MON) 17:10-18:10 Place: R201 (2F)

Chaired by
Prof. Ying-Jan WANG (National Cheng Kung University, Taiwan)

KL1. Zebrafish Model for Research

Prof. Bon-chu CHUNG (Academia Sinica and China Medical University, Taiwan)

Keynote Lecture 2

July 18th (TUE) 09:00-10:00 Place: R401 (4F)

Chaired by
Prof. Hsin-Su YU (Kaohsiung Medical University, Taiwan)

KL2. Effects of arsenic exposure on hypertension, atherosclerosis, and diabetes in humans

Prof. Seiichiro HIMENO (Showa University, Japan)

Keynote Lecture 3

July 19th (WED) 09:00-10:00 Place: R401 (4F)

Chaired by
Prof. Bon-chu CHUNG (Academia Sinica and China Medical University, Taiwan)

KL3. Detrimental effects of endocrine disrupting chemicals on the progression and migration of steroid receptor expressing cancers

Prof. Kyung-Chul CHOI (Chungbuk National University, Korea)

Keynote Lecture 4

July 20th (THU) 09:00-10:00 Place: R401 (4F)

Chaired by
Prof. Jih-Heng LI (Kaohsiung Medical University, Taiwan)

KL4. The FDA's efforts to advance alternative methods development for drug safety assessment

Dr. Joshua XU (U.S. Food and Drug Administration, USA)



Bon-Chu Chung

Current Position

Distinguished Visiting Chair, Academia Sinica, Taiwan
Chair Professor, China Medical University, Taiwan

Education/Training

PhD, University of Pennsylvania/ Biochemistry

Professional and Research Experience

Academia Sinica, Associate, full, to distinguished research fellow

Awards and Honors

2020: Elected Member, The World Academy of Sciences (TWAS)

2018: Elected Member, Academia Sinica, Taiwan

2012: For Women in Science Award, L'OREAL & CS Wu Foundation, Taiwan

2006: Academic Award of Ministry of Education, Taiwan

1989-2003: Outstanding Research Award (four times) and Merit Award (two times),
National Science Council, Taiwan

Selected Publications:

1. Kolas V, Bandonil JSA, Wali N, Hsia K-C, Shie J-J, Chung B-c, "A synthetic pregnenolone analog promotes microtubule dynamics and neural development" *Cell & Biosci*, 12, 190 (2022). (<https://doi.org/10.1186/s13578-022-00923-2>)
2. Vignet C, Joassard L, Lyphout L, Guionnet T, Goubeau M, Le Menach K, Brion F, Kah O, Chung B-c, Budzinski H, Bégout M-L, Cousin X, "Exposures of zebrafish through diet to three environmentally relevant mixtures of PAHs produce behavioral disruptions in unexposed F1 and F2 descendant" *Environ Sci Pollut Res*, 22:16371-83 (2015).
3. Weng J-H, Liang M-R, Chen C-H, Tong S-K, Huang T-C, Lee S-P, Chen Y-R, Chen C-T, and Chung B-c, "Pregnenolone activates CLIP-170 to promote microtubule growth and cell migration" *Nature Chem Biol*, 9, 636-642 (2013).
4. Diotel N, Le Page Y, Mouriec K, Tong S-K, Pellegrini E, Vaillant C, Anglade I, Brion F, Pakdel F, Chung B-c, Kah O, "Aromatase in the brain of teleost fish", *Front Neuroendocrin*, 31, 172-192 (2010).
5. Vosges M, Le Page Y, Chung B-c, Combarrous Y, Porcher JM, Kah O, Brion F, "17 α -ethinylestradiol disrupts the ontogeny of the forebrain GnRH system and the expression of brain aromatase during early development of zebrafish" *Aquat Toxicol*, 99, 479-491 (2010).

Zebrafish Model for Research

Bon-chu Chung

Institute of Molecular Biology, Academia Sinica, Taiwan
And Graduate Institute of Biomedical Sciences, China Medical University, Taiwan

Abstract

Zebrafish has become a popular research model organism because it offers many excellent research tools. It is amenable to genetic tools such as generation of mutant fish and transgenic fish with fluorescence at desired places. The transparent embryos plus the advanced imaging tools enable detailed cell or gene tracing over time and space. Furthermore, its large clutch size provides easy access of materials for studies. This aspect is especially useful for toxicological studies.

Using zebrafish as a model, we have tested the possibility of detecting endocrine disrupting chemicals in the environment. We generated a transgenic fish line that expresses GFP under the control of *cyp19a1b* (AromB) promoter. The embryos of this fish line do not express GFP under normal situation, but their brain become fluorescent when estrogenic steroids are present. In collaboration with Francois Brion and Olivier Kah, we find that this response is very sensitive, with EC_{50} in the nM range for most estrogenic compounds. For example, 0.05 nM (14.8 ng/L) of EE2 can be easily detected. But it does not detect non-estrogenic compounds such as 11-ketotestosterone. The test can be easily expanded to 96-well format because zebrafish embryos are easily available. Finally the test is very reproducible, and people from different laboratories can get similar results. This assay, now called EASZY, has been approved by OECD as an official test for the detection of endocrine active substances.

Keywords: *endocrine disruptors, zebrafish, estrogenic compounds*



Seiichiro Himeno

Current Position

Visiting Professor, Showa University, School of Pharmacy, Japan

Education/Training

1989: Ph.D. of Public Health, The University of Tokyo, Graduate School of Medicine

1980 – 1985: The University of Tokyo, Graduate School of Medicine

1980: Graduated from The University of Tokyo, School of Medicine, Faculty of Public Health.

Professional and Research Experience:

2020 – present: Showa University, School of Pharmacy, Visiting Professor,

2003 – 2020: Tokushima Bunri University, Faculty of Pharmaceutical Sciences, Professor

1996 – 2003: Kitasato University, School of Pharmaceutical Sciences, Associate Professor

1993 – 1994: Vanderbilt University School of Medicine, Visiting Researcher

1985 – 1996: Kitasato University, School of Pharmaceutical Sciences, Assistant Professor

Awards and Honors:

JSIT Award, The Japanese Society of Immunotoxicology (2022)

Pfizer Award, The Japanese Society of Toxicology (2022)

President, The 46th Annual Meeting of The Japanese Society of Toxicology (2019)

Mochizuki Award, The Japanese Society of Toxicology (2018)

Selected Publications:

Himeno, S. and Hossain, K., *Metallomics Res.*, 1(1), rev31-rev46. (2021)

Mondal, V. et al., *Environ. Int.*, 143, 105890. (2020)

Paul, S. K. et al., *Sci. Total Environ.*, 668, 1004-1012. (2019)

Karim, M. R. et al., *Toxicol. Sci.*, 135(1), 17-25. (2013)

Hossain, E. et al., *Toxicol. Appl. Pharmacol.*, 259(2), 187-194. (2012)

Effects of arsenic exposure on hypertension, atherosclerosis, and diabetes in humans

Seiichiro Himeno

Showa University, School of Pharmacy, Division of Health Chemistry

Abstract

Previous studies have shown that arsenic exposure is associated with common metabolic diseases such as hypertension, atherosclerosis, and diabetes. However, since multiple factors are involved in developing these metabolic diseases, the actual contribution of arsenic remains to be determined. We have conducted cross-sectional surveys in western areas of Bangladesh and demonstrated that the prevalence of hypertension and diabetes was higher in arsenic-polluted areas than in non-polluted areas. Generally, obesity is the most critical risk factor for hypertension and diabetes, but the average BMI among our study participants in rural areas in Bangladesh is about 21. To test whether arsenic directly affects the body systems controlling blood pressure, atherosclerosis, and blood glucose, we determined various biomarkers in the serum of the participants. We found that arsenic exposure dose-dependently altered serum levels of several biomarkers; increased Big endothelin-1, a precursor of vasoconstrictor endothelin-1, decreased nitric oxide, a vasodilator, increased oxidized LDL, decreased HDL, and increased adhesion molecules such as soluble ICAM-1 and VCAM-1. These results suggest that arsenic-induced vascular dysregulation is involved in developing hypertension and atherosclerosis. We also found that arsenic-induced insulin resistance rather than pancreatic dysfunction is involved in developing diabetes. Notably, arsenic exposure decreased skeletal muscle mass markers, such as serum creatinine and LBM, and the reductions of these markers are associated with increased insulin resistance, suggesting an involvement of muscle mass reduction in developing insulin resistance. Thus, our human studies have indicated that arsenic is a vascular and muscular toxicant causing hypertension, atherosclerosis, and diabetes even without obesity.

Keywords: *arsenic, hypertension, atherosclerosis, diabetes, Bangladesh*



Kyung-Chul Choi

Current Position

Director and Professor, Companion Animal-based Translational Cancer Center, Lab of Veterinary Biochemistry and Immunology, College of Veterinary Medicine Chungbuk National University Cheongju, Chungbuk 28644 Republic of Korea

Education/Training

2002 Cornell University, NY, USA Postdoctoral fellow

2001 University of British Columbia, Canada PhD in Cancer Biology/
Molecular Endocrinology

1992 Seoul National University, Republic of Korea MS in Veterinary Public Health

1990 Seoul National University, Republic of Korea BS in Veterinary Medicine

Professional and Research Experience

2017-2023 Director Companion Animal-based Translational Cancer Center

2018-2020 Dean College of Veterinary Medicine, Chungbuk Natl University

2008-present Associate/Full Professor College of Veterinary Medicine,
Chungbuk Natl University

2010-2012 Department Head Department of Preveterinary Med, Chungbuk Natl University

2002-2008 Assistant Professor University of British Columbia (CANADA)

Awards and Honors

2021 Academic Achievement Award Korean Society for Alternative to
Animal Experiments

2021 Best Citations Award Biomolecules and Therapeutics

2018 Academic Achievement Award Korean Society of Toxicology (KSOT)

2018 Basic Research Award International Conference of Cancer Research

Selected Publications:

1. Lee HK, Nam MW, Go RE, Koo J, Kim TH, Park JE, Choi KC 2022 TGF- β 2 antisense oligonucleotide enhances T-cell mediated anti-tumor activities by IL-2 via attenuation of fibrotic reaction in a humanized mouse model of pancreatic ductal adenocarcinoma. *Biomed Pharmacother* 2023 159: 114212
2. Lee HK, Kim CW, Ahn D, Go RE, Choi Y, Choi KC 2022 Next-generation antisense oligonucleotide of TGF- β 2 enhances T cell-mediated anticancer efficacy of anti-PD-1 therapy in a humanized mouse model of immune-excluded melanoma. *Cancers* 2022 Oct 14(21): 5220
3. Go RE, Lee HK, Kim CW, Kim S, Choi KC A fungicide, fenhexamid, is involved in the migration and angiogenesis in estrogen receptor-expressing breast cancer cells. *Life Sci* 2022 Sep-15, 305: Article 120754
4. Ahn D, Kim CW, Go RE, Choi KC Evaluation of mitochondrial toxicity in mammalian cardiomyocytes by determining the highly reproducible and reliable increase in mitochondrial superoxides after exposure to therapeutic drugs. *Toxicol In Vitro* 2022 Sep 83(9) 105393

Detrimental effects of endocrine disrupting chemicals on the progression and migration of steroid receptor expressing cancers

Kyung-Chul Choi, D.V.M., Ph.D.

Laboratory of Biochemistry and Immunology, College of Veterinary Medicine
Chungbuk National University, Cheongju, Republic of Korea

Abstract

We have recently put forward a research application to verify the mechanisms of endocrine disrupting chemicals (EDCs) in reproductive tissues compared to endogenous steroid hormones. EDCs are environmental chemicals that interfere with the endocrine systems and adversely affect hormone balance or disrupt normal function in the organs that hormones regulate or modulate, leading to detrimental effects in the reproductive and developmental processes. Of particular relevance to women and children are EDCs which are associated with an increased risk and incidence of reproductive dysfunction, breast cancer, and ovarian cancers. Fenhexamid and fludioxonil are antifungal agents (pesticides) used for agriculture, and are present at measurable amounts in fruits and vegetables. In this study, the effects of these pesticides on cancer cell viability, epithelial-mesenchymal transition (EMT) and metastasis were examined in breast cancer cells with estrogen receptors (ERs). In addition, tumour progressive effects of these pesticides were evaluated in xenografted mouse models injected with human breast cancers. Taken together, these results imply that fenhexamid and fludioxonil may have estrogenic and disruptive effects on ER-expressing breast cancer cells by inducing alterations in the expression of cell cycle- and EMT-related genes via an ER dependent pathway.

Keywords: *endocrine disrupting chemicals, steroid receptors, breast cancers, pesticides, xenograft mouse models*



Joshua Xu

Current Position

Branch Chief, Research-to-Review Division of Bioinformatics and Biostatistics, National Center for Toxicological Research (NCTR)/US Food and Drug Administration (FDA), USA

Education/Training

Texas A&M University, Ph.D. in Electrical Engineering, 1999

Professional and Research Experience

2018-present, Branch Chief, US FDA/NCTR, Jefferson, Arkansas, USA

2012-2018, Mathematical Statistician, US FDA/NCTR, Jefferson, Arkansas, USA

2007-2012, Senior Bioinformatician, ICF International, Jefferson, Arkansas, USA

2000-2007, Software Engineer, Texas Center for Applied Technology, College Station, Texas, USA

Awards and Honors:

FDA Chief Scientist Publication Award for Basic, Translational or Applied Science in 2022

Selected Publications

1. IW Deveson, B Gong, K Lai, JS LoCoco, ..., J Xu (co-corresponding author). Evaluating the analytical validity of circulating tumor DNA sequencing assays for precision oncology. *Nature biotechnology*. 2021, 39 (9), 1115-1128
2. L Wu, R Huang, IV Tetko, Z Xia, J Xu, W Tong. Trade-off predictivity and explainability for machine-learning powered predictive toxicology: An in-depth investigation with Tox21 data sets. *Chemical research in toxicology*. 2021, 34 (2), 541-549
3. J Xu, S Thakkar, B Gong, W Tong. The FDA's experience with emerging genomics technologies—past, present, and future. *The AAPS journal*. 2016, 18 (4), 814-818
4. C Wang, B Gong, PR Bushel, J Thierry-Mieg, D Thierry-Mieg, J Xu, et. al. The concordance between RNA-seq and microarray data depends on chemical treatment and transcript abundance. *Nature biotechnology*. 2014, 32 (9), 926-932
5. J Xu, R Kelly, G Zhou, et. al. SNPTrackTM: an integrated bioinformatics system for genetic association studies. *Human Genomics*. 2012, 6 (1), 1-3

The FDA's efforts to advance alternative methods development for drug safety assessment

Joshua Xu

US Food and Drug Administration

Abstract

FDA has had a long-standing commitment to promote the development and use of new alternative methods to better predict human and animal responses to substances relevant to its regulatory mission. The recent legislation (Modernization Act 2.0) furthers the commitment to develop the regulatory framework and guideline to advance New Approach Methods (NAMs) in regulatory application. This talk will briefly introduce some of these programs such as the Innovative Science and Technology Approaches for New Drugs (ISTAND) Pilot Program. The talk will then focus on AI4TOX, a regulatory science research program that aims to apply the most advanced AI methods to develop new tools to support FDA regulatory science and strengthen the safety review of FDA-regulated products. The program consists of 4 initiatives and two of them will be presented in this talk.

- AnimalGAN: To predict animal toxicology data for untested chemicals through learning models that leverage existing animal data in support of the 3Rs approach (replace, reduce, and/or refine animal studies) in the safety evaluation of FDA-regulated products.
- SafetAI: To develop novel deep learning methods for toxicological endpoints that are critical to the safety review of drug candidates before entering clinical trials.

The products from these research endeavors will undergo evaluation with a focus on their potential suitability to support regulatory decision-making at FDA.

Keywords: *alternative methods, safety assessment, predictive toxicology, artificial intelligence, regulatory science*

6-4. Symposium

Symposium S1: Nanosafety and Nanotoxicology

July 18th (TUE) 10:20-12:20 Place: R301 (3F)

Chaired by:

Prof. Jun KANNO (National Institute of Health Sciences, Japan)

Prof. Ying-Jan Wang (National Cheng Kung University, Taiwan)

10:20-10:45

S1-1: Polypropylene nanoplastic exposure leads to lung inflammation through p38-mediated NF- κ B pathway

Prof. Kyuhong LEE (Korea Institute of Toxicology, Korea) (20 min + 5 min Q&A)

10:45-11:10

S1-2: Assessing developmental toxicity of polystyrene nanoplastics using zebrafish embryos

Prof. Wittaya PIMTONG (National Science and Technology Development Agency, Thailand) (20 min + 5 min Q&A)

11:10-11:35

S1-3: The possible role of autophagy in nanomaterials safety assessment-related alternative testing strategies: Take the Ag/ZnO NPs for example

Prof. Ying-Jan WANG (National Cheng Kung University, Taiwan) (20 min + 5 min Q&A)

11:35~12:00

S1-4: Basic lung responses to multiwall carbon nanotubes monitored in mouse whole body inhalation studies

Prof. Jun KANNO (National Institute of Health Sciences, Japan) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S2: Women in Toxicology

July 18th (TUE) 10:20-12:20 Place: R401 (4F)

Chaired by:

Prof. Rozaini binti ABDULLAH (Universiti Putra Malaysia, Malaysia)

Prof. Keiko TAGUCHI (The University of Tokyo, Japan)

10:20-11:10

S2-1: Risk assessment of natural genotoxic and carcinogenic chemicals from herbal products and plant food supplements

Prof. Rozaini binti ABDULLAH (Universiti Putra Malaysia, Malaysia) (8 min)

S2-2: Woman toxicologists in Japan

Prof. Keiko TAGUCHI (The University of Tokyo, Japan) (8 min)

S2-3: Intestinal efflux of aflatoxin B1 via breast cancer resistant protein: effects of green tea catechins

Prof. Supatra PORASUPHATANA (Khon Kaen University, Thailand) (8 min)

S2-4: Lactobacillus rhamnosus GG ameliorates radiation-induced lung fibrosis via lncRNASNHG17/PTBP1/NICD axis modulation

Prof. Ruixue HUANG (Central South University, China) (8 min)

S2-5: Polystyrene-Nanoplastics may induce RBC dysregulation and thrombotic risk (research and education by women in toxicology in Korea)

Prof. Ok-Nam BAE (Hanyang University, Korea) (8 min)

S2-6: Zebrafish as a vertebrate model to study the developmental toxicity of mycotoxins

Prof. Biing-Hui LIU (National Taiwan University, Taiwan) (8 min)

11:10-12:35

Discussion: Challenges as Women in Toxicology

11:10-12:35

Discussion: The Way forward for Women in Toxicology

Symposium S3: Drug Discovery and Technology

July 18th (TUE) 10:20-12:20 Place: R402A (4F)

Chaired by:

Prof. Ming-Shiu HUNG (National Health Research Institutes, Taiwan)

Prof. Chun-Wei TUNG (National Health Research Institutes, Taiwan)

10:20-10:45

S3-1: Multitask learning for addressing low data issues in predicting chemical bioactivity and toxicology

Prof. Chun-Wei TUNG (National Health Research Institutes, Taiwan) (20 min + 5 min Q&A)

10:45-11:10

S3-2: Modernizing drug discovery using organ-on-a-chip technology

Prof. Lorna EWART (Emulate Bio, USA) (20 min + 5 min Q&A)

11:10-11:35

S3-3: Exploring tyrosine kinase inhibitors as pharmacological agents in treating drug- and diet-induced steatosis

Prof. Han Kiat HO (National University of Singapore, Singapore) (20 min + 5 min Q&A)

11:35-12:00

S3-4: From drug discovery to target deconvolution of cannabinoid receptors

Prof. Ming-Shiu HUNG (National Health Research Institutes, Taiwan) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S4: Green Toxicology and Ecological Sustainability

July 18th (TUE) 10:20-12:20 Place: R402B (4F)

Chaired by:

Prof. Chang-Hung CHOU (Academia Sinica, Taiwan)

Prof. Yong-Chien LING (National Tsing Hua University, Taiwan)

10:20-10:45

S4-1: The Role of Allelochemicals in the Ecological Sustainability of SDGs

Prof. Chang-Hung CHOU (Academia Sinica, Taiwan) (20 min + 5 min Q&A)

10:45-11:10

S4-2: Weed suppression and crop growth promotion by allelopathic cover crops and identification of allelochemicals in action

Prof. Yoshiharu FUJII (Tokyo University of Agriculture and Technology, Japan) (20 min + 5 min Q&A)

11:10-11:35

S4-3: Root-secreted metabolites as biostimulants and bioherbicides

Prof. Louis GRILLET (National Taiwan University, Taiwan) (20 min + 5 min Q&A)

11:35~12:00

S4-4: Retrospective study of green chemistry towards ecological sustainability in Taiwan

Prof. Yong-Chien LING (National Tsing Hua University, Taiwan) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S5: Target Organ Toxicity and Cancer Research

July 18th (TUE) 10:20-12:20 Place: R202 (2F)

Chaired by:

Prof. Shing-Hwa LIU (National Taiwan University, Taiwan)

Prof. Meei-Ling SHEU (National Chung Hsing University, Taiwan)

10:20-10:40

S5-1: Aryl hydrocarbon receptor deficiency augments dysregulated microangiogenesis and diabetic retinopathy

Prof. Meei-Ling SHEU (National Chung Hsing University, Taiwan) (15 min + 5 min Q&A)

10:40-11:00

S5-2: A brief talk on reproductive and developmental toxicity evaluation for health food in Taiwan

Prof. Cheng-Tien WU (China Medical University, Taiwan) (15 min + 5 min Q&A)

11:00-11:20

S5-3: Advances in toxicological role of advanced glycation end-products in metabolic diseases

Prof. Shing-Hwa LIU (National Taiwan University, Taiwan) (15 min + 5 min Q&A)

11:20~11:40

S5-4: Immunomodulation of Annexin A1 on Clinacanthus Nutans-treated 4T1 tumor-bearing mice

Prof. Nor Fadilah RAJAB (Universiti Kebangsaan Malaysia, Malaysia) (15 min + 5 min Q&A)

11:40~12:00

S5-5: Antioxidant, anti-inflammatory, and genomic stability enhancement effects of zinc l-carnosine: a potential cancer chemopreventive agent?

Prof. Razinah SHARIF (Universiti Kebangsaan Malaysia, Malaysia) (15 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S6: Clinical and Application of Snake Venom

July 18th (TUE) 13:30-15:30 Place: R301 (3F)

Chaired by:

Prof. Tur-Fu HUANG (National Taiwan University, Taiwan)

Prof. Wen-Guey WU (National Tsing Hua University, Taiwan)

13:30-13:55

S6-1: Effectiveness of antivenom for snakebite-related local injuries in Taiwan: a clinical perspective

Prof. Cheng-Hsuan HO (Tri-Service General Hospital, Taiwan) (20 min + 5 min Q&A)

13:55-14:20

S6-2: Snakebite management by using small molecule inhibitors targeting the evolutionary conserved purinergic signaling venom proteins

Prof. Wen-Guey WU (National Tsing Hua University, Taiwan) (20 min + 5 min Q&A)

14:20-14:45

S6-3: The potential application of disintegrins in arterial thrombosis and ischemic inflammatory diseases

Prof. Tur-Fu HUANG (National Taiwan University, Taiwan) (20 min + 5 min Q&A)

14:45~15:10

S6-4: Design of integrin-specific drugs for cancer and ischemia infarction

Prof. Woei-Jer CHUANG (National Cheng Kung University, Taiwan) (20 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S7: Transcriptional Regulation by AhR or NRF2 in Toxicology

July 18th (TUE) 13:30-15:30 Place: R401 (4F)

Chaired by:

Prof. Keiko TAGUCHI (The University of Tokyo, Japan)

Prof. Mi-Kyoung KWAK (Catholic University of Korea, Korea)

13:30-13:55

S7-1: NRF2-activated cancers and toxicology

Prof. Keiko TAGUCHI (The University of Tokyo, Japan) (20 min + 5 min Q&A)

13:55-14:20

S7-2: Role of miR-144-3p/NRF2 in kidney injury

Prof. Mi-Kyoung KWAK (Catholic University of Korea, Korea) (20 min + 5 min Q&A)

14:20-14:45

S7-3: Constitutive AhR activation in atopic dermatitis

Prof. Tomohiro EDAMITSU (Tohoku University, Japan) (20 min + 5 min Q&A)

14:45~15:10

S7-4: Dioxin-induced lysosomal SLC46A3 modulates hepatic cytosolic copper homeostasis resulting in triglyceride accumulation

Prof. Jung-Hwan KIM (Gyeongsang National University, Korea) (20 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S8: Nephrologist Toxicologist Cross Talk

July 18th (TUE) 13:30-15:30 Place: R402A (4F)

Chaired by:

Prof. Tzung-Hai YEN (Chang Gung Memorial Hospital, Taiwan)

Prof. Chih-Kang CHIANG (National Taiwan University, Taiwan)

13:30-13:55

S8-1: Detoxification protocol for paraquat poisoning

Prof. Tzung-Hai YEN (Chang Gung Memorial Hospital, Taiwan) (20 min + 5 min Q&A)

13:55-14:20

S8-2: The utilization of synchrotron-based absorption spectroscopy in assessment of lead and aristolochic acid on kidneys

Prof. Mei-Ching YU (Lin-Kou Chang Gung Memorial Hospital, Taiwan) (20 min + 5 min Q&A)

14:20-14:45

S8-3: Health Impact of Exposure to Organophosphate Flame Retardants (OPFRs)

Prof. Kai-Fan TSAI (Kaohsiung Chang Gung Memorial Hospital, Taiwan) (20 min + 5 min Q&A)

14:45~15:10

S8-4: Low-cost bio/chemical sensors development for medical applications and toxin monitoring

Prof. Yi-Kuang YEN (National Taipei University of Technology, Taiwan) (20 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S9: New Approach Methodologies (NAMs)

July 18th (TUE) 13:30-15:30 Place: R402B (4F)

Chaired by:

Prof. Dan XU (Wuhan University, China)

Prof. Pinpin LIN (National Health Research Institutes, Taiwan)

13:30-13:55

S9-1: Integrated assessment and testing approach (IATA) using NAMs to meet regulatory requirement for chemical management

Dr. Na GUAN (Dow Chemical China Investment CO., Ltd, China) (20 min + 5 min Q&A)

13:55-14:20

S9-2: Big data-based toxicity pathways: from mechanisms revealing to toxicity testing

Prof. Dianke YU (Qingdao University, China) (20 min + 5 min Q&A)

14:20-14:45

S9-3: Microfluidic chip for cell spheroids culture

Prof. Chia-Hsien HSU (National Health Research Institutes, Taiwan) (20 min + 5 min Q&A)

14:45~15:10

S9-4: Screening of key toxicity endpoints on human and environment of sugar-based surfactants using the OECD QSAR Toolbox

Prof. A'edah ABU BAKAR (Petroliam Nasional Berhad (PETRONAS), Malaysia) (20 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S10: Food Safety and Functionality

July 18th (TUE) 15:50-17:50 Place: R301 (3F)

Chaired by:

Prof. Ting-Jang LU (National Taiwan University, Taiwan)

Prof. Pinpin LIN (National Health Research Institutes, Taiwan)

15:50-16:15

S10-1: Chemopreventive effect of natural dietary compounds on xenobiotic-induced carcinogenesis

Prof. Min-Hsiung PAN (National Taiwan University, Taiwan) (20 min + 5 min Q&A)

16:15-16:40

S10-2: Toxicological assessment of GM crops and newly expressed proteins

Prof. Andrew BARTHOLOMAEUS (BartCrofts Scientific Services Pty Ltd, Australia) (20 min + 5 min Q&A)

16:40-17:05

S10-3: Safety and sustainability in seawater-based mycoprotein research: finding the balance

Dr. Tsung-Ju LI (Grape King Bio Biotech Research Institute, Taiwan) (20 min + 5 min Q&A)

17:05~17:30

S10-4: Challenges and safety assessment of the cultured meat

Dr. Yu-Wei LIN (ESCO ASTER Pte. Ltd., Singapore) (20 min + 5 min Q&A)

Dr. Yuh-Ting HUANG (Medgaea Life Science Ltd., Taiwan)

17:30-17:50

General Discussion

Symposium S11: Oil Disease in Japan and Taiwan - Retrospective and Prospective

July 18th (TUE) 15:50-17:50 Place: R401 (4F)

Chaired by:

Prof. Wei-Shan CHIN (National Taiwan University, Taiwan)

Prof. Takeshi NAKANO (Osaka University, Japan)

15:50-16:05

S11-1: Introduction of Kanemi-Yusho in Japan and Taiwan-Yucheng oil diseases caused by PCBs and dioxins

Prof. Toshikazu FUJIWARA (Japan-Taiwan Yusho Information Center, Japan) (10 min + 5 min Q&A)

16:05-16:20

S11-2: Environmental monitoring of chiral PCBs: Enantioselective analysis and metabolism

Prof. Takeshi NAKANO (Osaka University, Japan) (10 min + 5 min Q&A)

16:20-16:35

S11-3: Health effects in Yucheng cases as compared to unexposed controls

Prof. Wei-Shan CHIN (National Taiwan University, Taiwan) (10 min + 5 min Q&A)

16:35-16:50

S11-4: Care of Yucheng cases: regulations and practice

Prof. Hsueh-Ching WU (Hsin Sheng Junior College of Medical Care and Management, Taiwan) (10 min + 5 min Q&A)

16:50-17:05

S11-5: Symptoms in children of the second and third generations of Kanemi Yusho patients

Prof. Tadashi FUJINO (Kikuyo Hospital, Japan) (10 min + 5 min Q&A)

17:05-17:20

S11-6: Transgenerational epigenetic inheritance in "Kanemi Yusho"

Prof. Tohru SHIBUYA (Laboratory of Environmental Epigenetics, Japan) (10 min + 5 min Q&A)

17:20-17:35

S11-7: Perinatal polychlorinated biphenyls and polychlorinated dibenzofurans exposure are associated with DNA methylation changes in aryl hydrocarbon receptors repressor

Prof. Yue Leon GUO (National Taiwan University, Taiwan) (10 min + 5 min Q&A)

17:35-17:50

General Discussion

Symposium S12: Safety and Efficacy Evaluation of Botanical Products for Consumers

July 18th (TUE) 15:50-17:50 Place: R402A (4F)

Chaired by:

Prof. Songsak SRIANUJATA (Thailand Risk Assessment Center and Mahidol University, Thailand)

Prof. Chaniphun BUTRYEE (Mahidol University, Thailand)

15:50-16:15

S12-1: Regulatory guidelines and safety and efficacy evaluation of herbal health products

Prof. Songsak SRIANUJATA (Thailand Risk Assessment Center and Mahidol University, Thailand) (20 min + 5 min Q&A)

16:15-16:40

S12-2: The importance of mapping herbal product development to the regulation

Prof. Ami Fazlin SYED MOHAMED (National Institutes of Health, Malaysia) (20 min + 5 min Q&A)

16:40-17:05

S12-3: Social implementation taking advantage of borderline of pharmaceuticals to non-pharmaceuticals-diosgenin improves cognition in Alzheimer's disease model mice and humans

Prof. Chihiro TOHDA (University of Toyama, Japan) (20 min + 5 min Q&A)

17:05-17:30

S12-4: Efficacy and safety evaluations of black garlic: a randomized placebo controlled trial in abdominal fatness

Prof. Chaniphun BUTRYEE (Mahidol University, Thailand) (20 min + 5 min Q&A)

17:30-17:50

General Discussion

Symposium S13: Sustainability and Chemical Stewardship

July 18th (TUE) 15:50-17:50 Place: R402B (4F)

Chaired by:

Prof. Salmaan H INAYAT-HUSSAIN (Petroleum Nasional Berhad (PETRONAS), Malaysia)

Prof. Ken LIU (Keng-Yen LIU) (Environmental Resources Management, Taiwan)

15:50-16:15

S13-1: Chemical stewardship through sustainability lenses

Prof. Salmaan H INAYAT-HUSSAIN (Petroleum Nasional Berhad (PETRONAS), Malaysia) (20 min + 5 min Q&A)

16:15-16:40

S13-2: EU Chemical Strategy for Sustainability – Safe and sustainable by design

Dr. Christoffer PAULSSON (Perstorp AB, Sweden) (20 min + 5 min Q&A)

16:40-17:05

S13-3: Product stewardship: from toxicology to scientific & social impact

Dr. Ken LIU (Keng-Yen LIU) (Environmental Resources Management, Taiwan) (20 min + 5 min Q&A)

17:05-17:30

S13-4: Ecological risk assessment and management of chemicals and plastics for the sustainable development goals

Prof. Hiroshi YAMAMOTO (National Institute for Environmental Studies, Japan) (20 min + 5 min Q&A)

17:30-17:50

General Discussion

Symposium S14: Cytochrome P450 and Toxicology

July 19th (WED) 10:20-12:20 Place: R301 (3F)

Chaired by:

Prof. Donghak KIM (Konkuk University, Korea)

Prof. Chul-Ho YUN (Chonnam National University, Korea)

10:20-10:45

S14-1: Human cytochrome P450 2A allelic variant enzymes and their metabolic outcomes

Prof. Donghak KIM (Konkuk University, Korea) (20 min + 5 min Q&A)

10:45-11:10

S14-2: The pharmacokinetic interaction and benefit/risk of the combination use of Shengmai-San and nifedipine

Prof. Yune-Fang UENG (National Research Institute of Chinese Medicine, Taiwan) (20 min + 5 min Q&A)

11:10-11:35

S14-3: Species and individual differences of drug oxygenations mediated by polymorphic human cytochrome P450 enzymes

Prof. Hiroshi YAMAZAKI (Showa Pharmaceutical University, Japan) (20 min + 5 min Q&A)

11:35~12:00

S14-4: Roles of human Liver P450 enzymes in tenatoprazole metabolism and production of the human metabolites by bacterial P450 enzymes

Prof. Chul-Ho YUN (Chonnam National University, Korea) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S15: Epigenetics and Toxicology

July 19th (WED) 10:20-12:20 Place: R401 (4F)

Chaired by:

Prof. Ryuichi ONO (National Institute of Health Sciences, Japan)

Prof. Shau-Ping LIN (National Taiwan University, Taiwan)

10:20-10:45

S15-1: Epigenomic modulation in germ cells and beyond

Prof. Shau-Ping LIN (National Taiwan University, Taiwan) (20 min + 5 min Q&A)

10:45-11:10

S15-2: Analysis using organoids derived from colorectal cancer patients and paired CAFs

Prof. Mie NARUSE (National Cancer Center Research Institute, Japan) (20 min + 5 min Q&A)

11:10-11:35

S15-3: Microenvironmental interfaces on epigenetic modification for cell homeostasis and regeneration

Prof. Josh Chia-Ching WU (National Cheng Kung University, Taiwan) (20 min + 5 min Q&A)

11:35-12:00

S15-4: Liquid biopsy using cfDNA methylation and EV-associated miRNA as a toxicity biomarker

Prof. Ryuichi ONO (National Institute of Health Sciences, Japan) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S16: Clinical Toxicology

July 19th (WED) 10:20-12:20 Place: R402A (4F)

Chaired by:

Prof. Wui Ling CHAN (Khoo Teck Puat Hospital, Singapore)

Prof. Chen-Chang YANG (National Yang Ming Chiao Tung University, Taiwan)

10:20-10:45

S16-1: Club drug medicine in Singapore – the new and the old

Prof. Wui Ling CHAN (Khoo Teck Puat Hospital, Singapore) (20 min + 5 min Q&A)

10:45-11:10

S16-2: Situations and current trends before and after kratom and cannabis legalization in Thailand: ramathibodi poison center's experience

Prof. Satariya TRAKULSRICHAJ (Mahidol University, Thailand) (20 min + 5 min Q&A)

11:10-11:35

S16-3: Addiction, abuse, and overdose of over-the-counter drugs in Japan

Prof. Yoshito KAMIJO (Saitama Medical University, Japan) (20 min + 5 min Q&A)

11:35~12:00

S16-4: Patterns and trends of drug abuse related poisonings in Taiwan

Prof. Chen-Chang YANG (National Yang Ming Chiao Tung University, Taiwan) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S17: Regulatory Toxicology

July 19th (WED) 10:20-12:20 Place: R402B (4F)

Chaired by:

Prof. Jaw-Jou KANG (National Yang Ming Chiao Tung University, Taiwan)

Prof. Tsung-Yun LIU (National Yang Ming Chiao Tung University, Taiwan)

10:20-10:45

S17-1: Incorporating high-throughput screening data in regulatory decision-making

Prof. Yu-Syuan LUO (National Taiwan University, Taiwan) (20 min + 5 min Q&A)

10:45-11:10

S17-2: The impact of cosmetic regulation to industry in Taiwan

Prof. Hsiu-Mei CHIANG (China Medical University, Taiwan) (20 min + 5 min Q&A)

11:10-11:35

S17-3: Comparison of the chemical composition of aerosols from heated tobacco products and traditional cigarette smoke and their pulmonary toxicity using a three-dimensional (3D) organotypic bronchial epithelial culture model

Prof. Hsiang-Tsui WANG (National Yang Ming Chiao Tung University, Taiwan) (20 min + 5 min Q&A)

11:35~12:00

S17-4: Applications of new approach methodologies in food safety assessment of bisphenols

Prof. Yi-Jun LIN (National Yang Ming Chiao Tung University, Taiwan) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S18: Substance Use and Health Disorders

July 19th (WED) 10:20-12:20 Place: R202 (2F)

Chaired by:

Prof. Yu-Li LIU (National Health Research Institutes, Taiwan)

Prof. Hsien-Yuan LANE (China Medical University, Taiwan)

10:20-10:40

S18-1: Sodium benzoate, a food preservative, enhances treatment of mental disorders

Prof. Hsien-Yuan LANE (China Medical University, Taiwan) (15 min + 5 min Q&A)

10:40-11:00

S18-2: Investigating the endocrine-disrupting and reproductive toxicity of nanoparticles and food contaminants through alternative test methods

Prof. Rong-Jane CHEN (National Cheng Kung University, Taiwan) (15 min + 5 min Q&A)

11:00-11:20

S18-3: Prediction models for neurotoxins

Prof. Ying-Chi LIN (Kaohsiung Medical University, Taiwan) (15 min + 5 min Q&A)

11:20~11:40

S18-4: Unintentional ingestion of recreational drugs in paediatric patients

Prof. Gene ONG (KK Women's and Children's Hospital, Singapore) (15 min + 5 min Q&A)

11:40-12:00

S18-5: Objective bioindicators assisted diagnosis for substance use disorders – potential applications in patient-centered physiological diagnosis

Prof. Yu-Li LIU (National Health Research Institutes, Taiwan) (15 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S19: In Silico Toxicology

July 19th (WED) 10:20-12:20 Place: R203 (2F)

Chaired by:

Prof. Tsong-Long HWANG (Chang Gung University, Taiwan)

Prof. Chiung-Tong CHEN (National Health Research Institutes, Taiwan)

10:20-10:45

S19-1: Enhanced utility of AI/ML methods during lead optimization by inclusion of 3D ligand information

Dr. Yuji TAKAOKA (Dassault Systèmes K.K, Japan) (20 min + 5 min Q&A)

10:45-11:10

S19-2: Novel CXCR4 atherosclerotic imaging tracer: from computer simulation design to pre-clinical toxicology research

Dr. Chien-Chung HSIA (Institute of Nuclear Energy Research, Taiwan) (20 min + 5 min Q&A)

11:10-11:35

S19-3: Make the organic synthesis work more efficient for your chemical needs

Dr. Jie-Ming HUANG (RDD LAB, Inc, Taiwan) (20 min + 5 min Q&A)

11:35~12:00

S19-4: Reduce and prevent the drug toxicity with multi-objective optimization methods

Dr. Kuan-Wen CHEN (Genetics Generation Advancement Corp, Taiwan) (20 min + 5 min Q&A)

12:00-12:20

General Discussion

Symposium S20: Reproductive and Developmental Toxicology

July 19th (WED) 13:30-15:30 Place: R301 (3F)

Chaired by:

Prof. Hui WANG (Wuhan University, China)

Prof. Bu-Miin HUANG (National Cheng Kung University, Taiwan)

13:30-13:55

S20-1: Glucocorticoid programming mechanism underlying developmental toxicities of xenobiotics and its early intervention techniques

Prof. Hui WANG (Wuhan University, China) (20 min + 5 min Q&A)

13:55-14:20

S20-2: Intrauterine programming mechanism, early warning & prevention of hippocampal developmental toxicity

Prof. Dan XU (Wuhan University, China) (20 min + 5 min Q&A)

14:20-14:45

S20-3: Development toxicity of pyrrolizidine alkaloids: multi-organ impairment, sex difference, and long-term effect

Prof. Yu GUO (Wuhan University, China) (20 min + 5 min Q&A)

14:45~15:10

S20-4: Development of hepatic insulin resistance in offspring exposed to caffeine prenatally and its intrauterine programming mechanism

Prof. Hao KOU (Zhongnan Hospital of Wuhan University, China) (20 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S21: Metal and Metalloid Toxicology

July 19th (WED) 13:30-15:30 Place: R401 (4F)

Chaired by:

Prof. Hitomi FUJISHIRO (Tokushima Bunri University, Japan)

Prof. Takashi TOYAMA (Tohoku University, Japan)

13:30-13:55

S21-1: Alterations in calcium and phosphate excretion in a model of renal injury induced by administration of cadmium-metallothionein complex in mice

Prof. Hitomi FUJISHIRO (Tokushima Bunri University, Japan) (20 min + 5 min Q&A)

13:55-14:20

S21-2: A new aspect of se-mercuration of selenoprotein P associated with selenium and mercury metabolisms

Prof. Takashi TOYAMA (Tohoku University, Japan) (20 min + 5 min Q&A)

14:20-14:45

S21-3: Investigation of the mechanism for the toxicity of organotins by focusing on nuclear receptors

Prof. Youhei HIROMORI (Suzuka University of Medical Science, Japan) (20 min + 5 min Q&A)

14:45~15:10

S21-4: Arsenic-associated carcinogenesis through tumor cell-induced platelet aggregation

Prof. Keunyoung KIM (Kangwon National University, Korea) (20 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S22: Air Pollution Toxicology

July 19th (WED) 13:30-15:30 Place: R402A (4F)

Chaired by:

Prof. Te-Chang LEE (Academia Sinica, Taiwan)

Prof. Jen-Leih WU (Academia Sinica, Taiwan)

13:30-13:50

S22-1: Taiwan biobank: a valuable biospecimens and information database in toxicology research

Prof. Hou-Wei CHU (Academia Sinica, Taiwan) (15 min + 5 min Q&A)

13:50-14:10

S22-2: Air pollution and clinical health outcomes in Taiwan

Prof. Chih-Wen WANG (Kaohsiung Medical University, Taiwan) (15 min + 5 min Q&A)

14:10-14:30

S22-3: Ambient PM_{2.5} and chemical constituents in Taiwan used for lung toxicity studies: progress and findings

Prof. Yu-Cheng CHEN (National Health Research Institutes, Taiwan) (15 min + 5 min Q&A)

14:30~14:50

S22-4: Oxidative potential and toxicity of ultrafine particles in urban area

Prof. Ta-Chih HSIAO (National Taiwan University, Taiwan) (15 min + 5 min Q&A)

14:50~15:10

S22-5: Exposure to PM_{2.5} collected from Kaohsiung induces prenatal oxidative stress and fetal brain developmental alternation in the SD rat model

Prof. Ming-Wei CHAO (Chung Yuan Christian University, Taiwan) (15 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S23: Safety Assessment and Management Improvement of Pesticides

July 19th (WED) 13:30-15:30 Place: R402B (4F)

Chaired by:

Prof. Shing-Hwa LIU (National Taiwan University, Taiwan)

Prof. Chen-Chang YANG (National Yang Ming Chiao Tung University, Taiwan)

13:30-13:55

S23-1: Restricting highly hazardous pesticides to prevent suicide: evidence from Taiwan, South Korea, Japan, Malaysia, and India

Prof. Shu-Sen CHANG (National Taiwan University, Taiwan) (20 min + 5 min Q&A)

13:55-14:20

S23-2: Application of risk indicators in Taiwan's pesticide reduction policy

Dr. Hsin-Yi LU (Taiwan Agricultural Chemicals and Toxic Substances Research Institute, Taiwan) (20 min + 5 min Q&A)

14:20-14:45

S23-3: Pesticide exposure dose estimation model for greenhouse application in Taiwan

Dr. Yueh-Yi LEE (Taiwan Agricultural Chemicals and Toxic Substances Research Institute, Taiwan) (20 min + 5 min Q&A)

14:45~15:10

S23-4: Androgen receptor plays a vital role in reproductive and developmental toxicity and endocrine disrupting activity induced by carbendazim in rats

Dr. Shui-Yuan LU (Taiwan Agricultural Chemicals and Toxic Substances Research Institute, Taiwan) (20 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S24: Cosmetic Safety Assessment, from Local to Global, Today to Next Generation

July 19th (WED) 13:30-15:30 Place: R203 (2F)

Chaired by:

Prof. Ying-Jan WANG (National Cheng Kung University, Taiwan)

Chief's Remark:

Prof. Ying-Jan Wang (National Cheng Kung University, Taiwan) (5 min)

Distinguished Guest's Remark:

Prof. Hansheng CHIEN (Taiwan Food and Drug Administration, Taiwan) (5 min)

13:40-14:10

S24-1: Effectiveness and safety evaluation of functional cosmetics

Prof. Hsiu-Mei CHIANG (China Medical University, Taiwan) (25 min + 5 min Q&A)

14:10-14:40

S24-2: Launching Cosmetic Products to US. A significant reform of cosmetic requirement ever have

Dr. Queenie TSE (SGS Global, Technical Service Manager, Hong Kong) (25 min + 5 min Q&A)

14:40-15:10

S24-3: The safety evaluation of the local plant extraction ingredients with tests and view of SCCS note of guidance

Dr. Ching-Chin YANG (SGS Taiwan, Supervisor, Taiwan) (25 min + 5 min Q&A)

15:10-15:30

General Discussion

Symposium S25: Occupational Safety and Toxicology

July 19th (WED) 15:50-17:50 Place: R301 (3F)

Chaired by:

Prof. Jou-Fang DENG (Taipei Veterans General Hospital, Taiwan)

Prof. Hung-Yi CHUANG (Kaohsiung Medical University, Taiwan)

15:50-16:15

S25-1: The health effects of heavy metals and its susceptibility

Prof. Hung-Yi CHUANG (Kaohsiung Medical University, Taiwan) (20 min + 5 min Q&A)

16:15-16:40

S25-2: Mechanism of 1,2-dichloropropane-induced cholangiocarcinoma

Prof. Gaku ICHIHARA (Tokyo University of Science, Japan) (20 min + 5 min Q&A)

16:40-17:05

S25-3: Occupational lead poisoning in Thailand

Prof. Kate CHAIVATCHARAPORN (Samut Prakan Hospital, Thailand) (20 min + 5 min Q&A)

17:05~17:30

S25-4: The challenge of emergency medical response in chemical splashes

Prof. Jou-Fang DENG (Taipei Veterans General Hospital, Taiwan) (20 min + 5 min Q&A)

17:30-17:50

General Discussion

Symposium S26: Respiratory Toxicity of Chemicals

July 19th (WED) 15:50-17:50 Place: R401 (4F)

Chaired by:
Prof. Kyuhong LEE (Korea Institute of Toxicology, Korea)

15:50-16:15

S26-1: Molecular mechanism of chloromethylisothiazolinone and methylisothiazolinon (CMIT/MIT)-induced lung injury

Dr. Mi-Kyung SONG (Korea Institute of Toxicology, Korea) (20 min + 5 min Q&A)

16:15-16:40

S26-2: Molecular mechanisms of action of polyhexamethylene guanidine phosphate

Prof. Ha Ryong KIM (Daegu Catholic University, Korea) (20 min + 5 min Q&A)

16:40-17:05

S26-3: Humidifier disinfectant induced lung injuries: a long-term follow-up study

Prof. Sang Hoon JEONG (Korea University of Ansan Hospital, Korea) (20 min + 5 min Q&A)

17:05~17:30

S26-4: Mitochondrial dysfunction and dynamic imbalance by CMIT/MIT

Prof. Ok-Nam BAE (Hanyang University, Korea) (20 min + 5 min Q&A)

17:30-17:50

General Discussion

Symposium S27: Cancer and Chemoprevention

July 19th (WED) 15:50-17:50 Place: R402A (4F)

Chaired by:

Prof. Shoei-Yn LINSIAU (Chung Shan Medical University, Taiwan)

Prof. Yuan-Soon HO (China Medical University, Taiwan)

15:50-16:15

S27-1: Tumor targeting and therapeutic assessments of RNA nanoparticles carrying $\alpha 9$ -nAChR aptamer and anti-miR-21 on triple-negative breast cancers

Prof. Yuan-Soon HO (China Medical University, Taiwan) (20 min + 5 min Q&A)

16:15-16:40

S27-2: Dipyridamole targets oncogenic nuclear SLC29A2 in human hepatocellular carcinoma

Prof. Yuh-Shan Jou (Academia Sinica, Taiwan) (20 min + 5 min Q&A)

16:40-17:05

S27-3: Novel regimens of phytopolyphenols, repurposing drugs and metals for prevention and management of chronic diseases

Prof. Shoei-Yn LINSIAU (Chung Shan Medical University, Taiwan) (20 min + 5 min Q&A)

17:05-17:30

S27-4: Glucuronidation homeostasis in colorectal cancer: mechanistic insights, new drugs discovery and precision medicine

Prof. Ru YAN (University of Macau, Macau) (20 min + 5 min Q&A)

17:30-17:50

General Discussion

Symposium S28: Target Organ Toxicology and Mechanism

July 19th (WED) 15:50-17:50 Place: R402B (4F)

Chaired by:

Prof. Quan Jun WANG (SAFE Pharmaceutical Services Corp, China)

Prof. Ge LIN (The Chinese University of Hong Kong, Hong Kong)

15:50-16:15

S28-1: Proteomics unite traditional toxicological assessment methods to evaluate the toxicity of iron oxide nanoparticles

Prof. Quan Jun WANG (SAFE Pharmaceutical Services Corp, China) (20 min + 5 min Q&A)

16:15-16:40

S28-2: Circular RNA circrest regulates manganese induced cell apoptosis effect via MMU-MIR-6914-5P/EPHB3 axis

Prof. Yunfeng ZOU (Guangxi Medical University, China) (20 min + 5 min Q&A)

16:40-17:05

S28-3: A study on the roles of non-coding RNA in pulmonary injuries induced by polystyrene microplastics

Prof. Qian BIAN (Jiangsu Provincial Center for Diseases Control and Prevention, China) (20 min + 5 min Q&A)

17:05~17:30

S28-4: Pyrrolizidine alkaloids (PA)-induced liver injury: PA exposure, underlying mechanism to cause hepatotoxicity, development of mechanism-based biomarkers, and clinical diagnosis

Prof. Ge LIN (The Chinese University of Hong Kong, Hong Kong) (20 min + 5 min Q&A)

17:30-17:50

General Discussion

6-5. Short Oral Session

S01: Occupational & Public Health Insights

July 18th (TUE) 13:30-15:30 Place: R202 (2F)

Chaired by:

Prof. How-Ran GUO (National Cheng Kung University, Taiwan)

Prof. Min-Hsiung Pan (National Taiwan University, Taiwan)

13:30-13:55

S01-1: Idiopathic environmental intolerance attributed to electromagnetic field

Prof. How-Ran GUO (National Cheng Kung University, Taiwan) (20 min + 5 min Q&A)

13:55-14:07

S01-2: Biosurveillance of the Portuguese wildland Firefighters in fire stations: looking at cytogenetic effects in non-combat settings

Dr. Solange COSTA (National Institute of Health/ Universidade do Porto, Portugal) (10 min + 2 min Q&A)

14:07-14:19

S01-3: The toxicity and impacts of pharmaceutical pollutants on non-target aquatic organisms

Prof. Jinping CHENG (The Education University of Hong Kong, Hong Kong) (10 min + 2 min Q&A)

14:19~14:31

S01-4: Novel strategies to improve snakebite treatment

Dr. Chein-Chun LIU (Chang Gung University, Taiwan) (10 min + 2 min Q&A)

14:31~14:43

S01-5: Alterations in healthcare utilization and mortality of patients with opioid use disorder after methadone maintenance treatment

Dr. Chieh-Liang HUANG (China Medical University/Ministry of Health and Welfare, Taiwan) (10 min + 2 min Q&A)

14:43~14:55

S01-6: Impact of endocrine disrupting chemicals to induce transgenerational epigenetic inheritance in future human generations - "Kanemi Yusho" and Beyond

Prof. Tohru SHIBUYA (Laboratory of Environmental Epigenetics, Japan) (10 min + 2 min Q&A)

14:55~15:07

S01-7: The role of gut microbiota in reproductive toxicity caused by fluoride and arsenic exposure

Prof. Xiaoyan YAN (Shanxi Medical University, China) (10 min + 2 min Q&A)

15:07-15:30

General Discussion

S02: Nanotoxicology and Microplastic Toxicology

July 18th (TUE) 15:50-17:50 Place: R202 (2F)

Chaired by:

Prof. Jungshan Chang (Taipei Medical University, Taiwan)

Prof. Chuang-Rung Chang (National Tsing Hua University, Taiwan)

15:50-16:02

S02-1: Silver nanoparticles suppress forskolin-induced syncytialization in BeWo cells

Dr. Kazuma HIGASHISAKA (Osaka University, Japan) (10 min + 2 min Q&A)

16:02-16:14

S02-2: Dermal toxicity of ZnONPs combined with UVR: the interplay of inflammasome-autophagy-exosomal pathway

Dr. Yu-Ying CHEN (National Cheng Kung University, Taiwan) (10 min + 2 min Q&A)

16:14-16:26

S02-3: Developmental toxicity, reproductive toxicity and transgenerational effects of microplastics in zebrafish (*Danio rerio*)

Prof. Jinping CHENG (The Education University of Hong Kong, Hong Kong) (10 min + 2 min Q&A)

16:26-16:38

S02-4: Assessing the ecotoxicity of novel cellulose nanocrystalline glitters and conventional polyethylene terephthalate glitter on springtail (*Folsomia candida*)

Mr. Po-Hao CHEN (The University of Melbourne, Taiwan) (10 min + 2 min Q&A)

16:38-17:00

S02-5: Sub-chronic exposure to microplastics induced microbiota dysbiosis, gut barrier damage, and neurotoxicity in mice

Prof. Sheng-Han LEE (National Sun Yat-Sen University, Taiwan) (10 min + 2 min Q&A)

17:00-17:12

S02-6: Effects and mechanisms of ferroptosis in hippocampal neurons induced by silver nanoparticles

Dr. Shuyan NIU (Southeast University, China) (10 min + 2 min Q&A)

17:12-17:24

S02-7: PINK1/parkin-mediated mitophagy and Nrf2/Keap1/ARE signaling pathway attenuates NLRP3 inflammasome activation induced by Ag₂Se QDs in BV2 cells

Dr. Yongshuai YAO (Southeast University, China) (10 min + 2 min Q&A)

17:24-17:36

S02-8: Blood clearance, distribution, transformation, excretion, and toxicity of Quantum Dots MPA-CdTe in mice

Dr. Zhihui WANG (Southeast University, China) (10 min + 2 min Q&A)

17:36-17:50

General Discussion

S03: Computational Toxicology and Biological Models

July 19th (WED) 15:50-17:50 Place: R203 (2F)

Chaired by:

Prof. Chia-Che Chang (National Chung Hsing University, Taiwan)

Prof. Tsung-Lin Tsai (National Cheng Kung University, Taiwan)

15:50-16:02

S03-1: Development and validation of a novel computational system for predicting zebrafish phenotypes associated with chemical exposure

Dr. Hung-Lin KAN (National Health Research Institutes, Taiwan) (10 min + 2 min Q&A)

16:02-16:14

S03-2: Application of Computational Toxicology Methods in Global Chemical Regulation and Case Studies

Ms. Yuchen LIU Hangzhou Jireh Standard Co., Ltd., China) (10 min + 2 min Q&A)

16:14-16:26

S03-3: Establishment of carMet-lead, an alternative platform of heavy metal lead toxicology testing

Dr. Yu-Fen CHANG (LumiSTAR Biotechnology, Taiwan) (10 min + 2 min Q&A)

16:26-16:38

S03-4: Critical role of sulfane sulfur species in the formation of elemental tellurium nanorods in mammalian culture cells

Prof. Yu-ki TANAKA (Chiba University, Japan) (10 min + 2 min Q&A)

16:38-17:00

S03-5: Antioxidants prevent Pb(II)-elicited impairment of de novo protein synthesis-dependent long-term memory in *Drosophila*

Mr. Cheng Tzu HSU (National Tsing-Hua University, Taiwan) (10 min + 2 min Q&A)

17:00-17:12

S03-6: Environmentally relevant levels of chronic di(2-ethylhexyl) phthalate exposure leads to immunosenescence in *C. elegans*

Dr. Pei-Ling YEN (National Taiwan University, Taiwan) (10 min + 2 min Q&A)

17:12-17:24

S03-7: Exploring Pb-induced methylation changes in the aging brain with the zebrafish model

Dr. Chia-Chen WU (National Yang Ming Chiao Tung University, Taiwan) (10 min + 2 min Q&A)

17:24-17:36

S03-8: The intestinal toxicity of gelsenicine on the model organism *Caenorhabditis elegans*

Prof. An ZHU (Fujian Medical University, China) (10 min + 2 min Q&A)

17:36-17:50

General Discussion

6-6. Trainee Award Competition Seminar

Trainee Presentation Awards

July 19th (WEN) 13:30-15:30 Place: R202 (2F)

Chaired by:
Prof. Hui-Wen CHIU (Taipei Medical University, Taiwan)

TA1-1: BPR2P001S0, a novel angelicin derivative, targets cancer metabolic metabolism to suppress human squamous cell carcinoma growth

Li-Hsuan LI (National Tsing Hua University, Taiwan) (10 min + 5 min Q&A)

TA1-2: Tim4, a macrophage phosphatidylserine receptor, recognizes polystyrene microplastics via the extracellular aromatic cluster

Miki KUROIWA (Ritsumeikan University, Japan) (10 min + 5 min Q&A)

TA1-3: Novel tellurium metabolite in broccoli identified by inorganic and organic mass spectrometers

Shohei TAKADA (Chiba University, Japan) (10 min + 5 min Q&A)

TA1-4: Nε-(1-Carboxymethyl)-L-lysine promotes osteosarcoma metastasis and cancer stemness through RAGE pathway

Ting-Yu CHANG (National Taiwan University, Taiwan) (10 min + 5 min Q&A)

TA1-5: Peripheral immune alterations after carbon monoxide poisoning are associated with gut microbiota changes and the corresponding metabolites

Tzu-Hao CHEN (National Cheng Kung University, Taiwan) (10 min + 5 min Q&A)

TA1-6: Pterostilbene prevents chlorothalonil induced allergic contact dermatitis: The interaction of oxidative stress and inflammasome activation

Yung-Hsuan CHENG (National Cheng Kung University, Taiwan) (10 min + 5 min Q&A)

TA1-7: N6-Methyladenosine-modified circSAV1 triggers ferroptosis in COPD through recruiting YTHDF1 to facilitate the translation of IREB2

Haibo XIA (Southeast University, China) (10 min + 5 min Q&A)

TA1-8: Toxicity evaluation of engineered exosomes and targeted cartilage delivery in the treatment of osteoarthritis

Wenjing YAN (Southeast University, China) (10 min + 5 min Q&A)

Trainee Presentation Awards

July 19th (WEN) 15:50-17:50 Place: R202 (2F)

Chaired by:
Prof. Yu-Hsuan LEE (China Medical University, Taiwan)

TA2-1: Knockdown of KLF10 Increase Lipogenesis and Aggravate NAFLD in High Sucrose Diet Fed Mice and the Liver Damage is Reversed by Pterostilbene

Heng-Hsuan HSU (National Cheng Kung University, Taiwan) (10 min + 5 min Q&A)

TA2-2: Effect of compounds with anti-progestogenic activity on the aquatic vertebrates

Michal PECH (University of South Bohemia in České Budějovice, Czech Republic) (10 min + 5 min Q&A)

TA2-3: PM2.5 triggered significant neurovascular unit (NVU) damage under hypoxia by dysregulating autophagy

Donghyun KIM (Hanyang University, Korea) (10 min + 5 min Q&A)

TA2-4: Non-target analysis of migration test from plastics food contact materials and application of the threshold of toxicological concern (TTC) concept to the safety assessment

Chiu-Chin CHEN (National Cheng Kung University, Taiwan) (10 min + 5 min Q&A)

TA2-5: 3-MCPD and glycidol act as potential endocrine disruptors and induce male testicular cell toxicity through mitophagy

Ssu-Ning CHEN (National Cheng Kung University, Taiwan) (10 min + 5 min Q&A)

TA2-6: The effect of environmental estrogenic hormones-regulated CARMN on cervical cancer pathogenesis and development and the underlying mechanisms

Xing ZHANG (Southeast University, China) (10 min + 5 min Q&A)

TA2-7: Role of cross-talk between piRNA and smoking on bladder cancer

Fang GAO (Southeast University, China) (10 min + 5 min Q&A)

TA2-8: Early-life perfluorooctanoic acid exposure induces obesity in male offspring and the intervention role of chlorogenic acid

Wentao SHAO (Southeast University, China) (10 min + 5 min Q&A)

6-7. Luncheon Seminar

Luncheon Seminar L1

US SOYBEAN EXPORT COUNCIL (USSEC)

July 18th (TUE) 12:40-13:10 Place: R301 (3F)

Chaired by
Mr. Bob SUEN (Corteva Agriscience Taiwan Co., Ltd., Taiwan)

LS1: Gene Editing – An Innovative Technology for Unleashing Genetic Potential and Achieving Sustainability

Academician Tuan-Hua David HO (Academia Sinica, Taiwan)

Luncheon Seminar L2

JelloX Biotech Inc.

July 18th (TUE) 12:40-13:10 Place: R401 (4F)

Chaired by
Prof. Yung-Ho HSU (Taipei Medical University, Taiwan)

LS2: Innovative 3D Pathology Imaging with AI-enabled Analysis for Precision Drug Development

Dr. Margaret Dah-Tsyr CHANG (JelloX Biotech Inc., Taiwan)

Luncheon Seminar L3

Department Center for Biotechnology (DCB)

July 18th (TUE) 12:40-13:10 Place: R402A (4F)

Chaired by
Dr. Chiao-Wen CHEN (Development Center for Biotechnology, Taiwan)

LS3: Introduction to the Drug Development Platform of the Institute Drug Evaluation Platform

Dr. Yi-Yu KE (Development Center for Biotechnology, Taiwan)

Dr. Pei-Yi TSAI (Development Center for Biotechnology, Taiwan)

Luncheon Seminar L4

AB Sciex Pte. Ltd.

July 18th (TUE) 12:40-13:10 **Place: R402B (4F)**

Chaired by
Mr. Steven LIAO (AB SCIEX Private Ltd., Taiwan)

KL4: Overcome PFAS challenges using SCIEX LC-MS/MS systems

Mr. Steven LIAO (AB SCIEX Private Ltd., Taiwan)

Luncheon Seminar L5

QPS CUSTOM-BUILT RESEARCH

July 19th (WED) 12:40-13:10 **Place: R401 (4F)**

Chaired by
Dr. Alexander CHAO (Quest Pharmaceutical Service Taiwan Co. Ltd., Taiwan)

LS5: Introduction of New Pharmacology Services and Our Experiences in Productions of SEND Packages

Dr. Meiling HOU (Quest Pharmaceutical Service Taiwan Co. Ltd., Taiwan)
Mr. Yasuo Mori (Quest Pharmaceutical Service Taiwan Co. Ltd., Taiwan)

Luncheon Seminar L6

TAIWAN EARNING CO., LTD

July 19th (WED) 12:40-13:10 **Place: R402B (4F)**

Chaired by
Mr. Miko HS WEN (EARNING, Co., Ltd., Taiwan)

LS6: Comparative Medicine- The Engine of Translational Medicine and Research

Mr. Miko HS WEN (EARNING, Co., Ltd., Taiwan)

6-8. Offsite Joint Conference after ASIATOX-X

Offsite Joint Conference: Joint Symposium by NHRI: Alternatives to Animal Testing

Special Topic 1

July 20th (Thu) 13:15-14:05

Place: Lecture Hall 101, College of Public Health of National Taiwan University

Chaired by

Prof. Hsian-Jean CHIN (National Applied Research Laboratories, Taiwan)

ST1. Current stage of developmental neurotoxicity (DNT) assessment using non-animal new approach methodologies (NAMs)

Dr. Helena HOGBERG (National Toxicology Program, United States)

Special Topic 2

July 20th (Thu) 14:05-14:55

Place: Lecture Hall 101, College of Public Health of National Taiwan University

Chaired by

Prof. Tsung-Yun LIU (National Yang Ming Chiao Tung University, Taiwan)

ST2. Organoid research in toxicology

Prof. Seokjoo YOON (Korea Institute of Toxicology, Korea)

Special Topic 3

July 20th (Thu) 15:10-16:00

Place: Lecture Hall 101, College of Public Health of National Taiwan University

Chaired by

Prof. Pinpin LIN (National Health Research Institutes, Taiwan)

ST3. Organ-on-a-chip models for cancer drug screening and safety assessment in vitro

Prof. Fan-Gang TSENG (National Tsing-Hua University, Taiwan)

Special Topic 4

July 20th (Thu) 16:00-16:50

Place: Lecture Hall 101, College of Public Health of National Taiwan University

Chaired by

Prof. Pinpin LIN (National Health Research Institutes, Taiwan)

ST4. Case study on using NAMs and NGRA to predict skin sensitization and systemic toxicity

Dr. Tairan XING (L'Oréal, Shanghai, China)

Offsite Joint Conference: Joint Symposium by Chi-Mei Medical Center: High Tech Industry Related Toxicants and Clinical Toxicology

Special Topic 1

July 21st (Fri) 8:40-9:10

Place: 5th Floor, International Conference Hall, No.5 Medical Building, Chi Mei Hospital

Chaired by

Prof. Hung-Jung LIN (Chi Mei Medical Center, Taiwan)

ST1. Mechanism of 1,2-dichloropropane-induced cholangiocarcinoma

Prof. Gaku ICHIHARA (Tokyo University of Science, Japan)

Special Topic 2

July 21st (Fri) 9:10-9:35

Place: 5th Floor, International Conference Hall, No.5 Medical Building, Chi Mei Hospital

Chaired by

Prof. Tain-Junn CHENG (Chi Mei Medical Center, Taiwan)

ST2. THE ACUTE HEALTH EFFECT OF TETRAMETHYLAMMONIUM HYDROXIDE AND ITS TOXICOLOGICAL MECHANISM

Prof. How-Ran GUO (National Cheng Kung University, Taiwan)

Special Topic 3

July 21st (Fri) 9:35-10:00

Place: 5th Floor, International Conference Hall, No.5 Medical Building, Chi Mei Hospital

Chaired by

Prof. Jih-Heng LI (Kaohsiung Medical University, Taiwan)

ST3. The Challenge of Emergency Medical Response in Chemical Splashes

Prof. Jou-Fang DENG (Taipei Veterans General Hospital, Taipei, Taiwan)

Special Topic 4

July 21st (Fri) 10:30-11:00

Place: 5th Floor, International Conference Hall, No.5 Medical Building, Chi Mei Hospital

Chaired by

Prof. Khee Siang CHAN (Chi Mei Medical Center, Taiwan)

ST4. OCCUPATIONAL LEAD POISONING IN THAILAND

Prof. Kate CHAIVATCHARAPORN (Samut Prakan Hospital, Thailand)

Special Topic 5

July 21st (Fri) 11:00-11:25

Place: 5th Floor, International Conference Hall, No.5 Medical Building, Chi Mei Hospital

Chaired by

Prof. Hsing-Tao KUO (Chi Mei Medical Center, Taiwan)

ST5. Uncovering the systemic effects of carbon monoxide poisoning: from bedside study to big data analysis to bench research

Prof. Chien-Cheng HUANG (Chi Mei Medical Center, Taiwan)

Special Topic 6

July 21st (Fri) 11:25-11:50

Place: 5th Floor, International Conference Hall, No.5 Medical Building, Chi Mei Hospital

Chaired by

Prof. Hsiu-Chin CHEN (Chi Mei Medical Center, Taiwan)

ST6. INDIUM TOXICOLOGY: UNDERSTANDING THE HAZARDS AND IMPLICATIONS FOR HUMAN HEALTH

Dr. Wan-Yin KUO (Chi Mei Medical Center, Taiwan)

Poster Session

7-1. Poster Session Schedule

July 18 (TUE) 09:00-17:00

Code	Poster No.	Category
P1	P001 ~ P016	Alternative Toxicology Testing
P2	P017 ~ P035	Nanotoxicology and Microplastic Toxicology
P3	P036 ~ P067	Environmental Toxicology
P4	P068 ~ P092	Food Safety and Toxicology
P5	P093 ~ P106	Clinical Toxicology
P6	P107 ~ P113	Metal and Metalloid Toxicology

July 19 (WED) 09:00-17:00

Code	Poster No.	Category
P7	P114 ~P125	Chemoprevention of Phytochemicals
P8	P126 ~P129	Inhalation Toxicity & Safety
P9	P130 ~P140	Target Organ Toxicology and Mechanism
P10	P141 ~ P147	Reproductive and Developmental Toxicology
P11	P148 ~ P169	Drug Discovery and Regulation
P12	P170 ~ P173	Safety and Efficacy Evaluation of Botanical Consumer Product
P13	P174 ~ P200	Molecular Toxicology & Carcinogenesis
P15	P201 ~ P207	Regulatory Toxicology
P15	P208 ~ P228	Others

7-2. Poster Presented on July 18

July 18 (TUE)

Category	No.	Presenter	Correspondence
	Paper Title		
Alternative Toxicology Testing	P001	Ki-Suk Kim	Ki-Suk Kim
	Assessment of Neurotoxicity on Neurite Outgrowth in Human Induced Pluripotent Stem Cell-derived Neurons using High-content Screeningw		
	P002	Yu Chi Ho	Pinpin Lin
	Integrated alternative approaches for assessing potential embryonic toxicity of food contact materials - thiram as an example		
	P003	Zong-Keng Kuo	Szu-Hsiu Liu
	An in vitro alternative method for skin sensitizers using a THP-1-based reporter cell line, ITRI-54M		
	P004	Hung-Jin Huang	Hui-Wen Chiu
	The alternative methods to animal experimentation in the identification of non-hazardous drugs for chronic kidney disease by targeting prostaglandin E2 receptor		
	P005	Jui-Chun Kuo	Jui-Chun Kuo
	Using New Approach Methodologies (NAMs) to Establish Nonpolar Narcosis Substance in Integrated Testing Strategy (ITS) for Ecotoxicity		
	P006	Jing-Yu Lu	Jing-Yu Lu
	Establishment of a high-throughput nanotoxicity testing model using autophagy in zebrafish		
	P007	Tzu-Ning Li	Ying-Jan Wang
	Exploring the predictability of tiered alternative tests in fish acute toxicity		
	P008	Yuhji Taquahashi	Yuhji Taquahashi
	Improved acute toxicity study incorporating vital signs; a less invasive method for measuring biopotential in laboratory animal using CNT yarn		
P009	Yu Chen Hsieh	Yu-Chen Hsieh	
Comparison of Acute Toxicity of Phenthoate to Juvenile and Embryonic Stages of Zebrafish			
P010	Yen-Ling Lee	Ying-Jan Wang	
A novel integrated testing strategy (ITS) for evaluating acute fish toxicity with zebrafish and OECD QSAR Toolbox			
P011	Cih-Yu Jheng	Cih-Yu Jheng	
An innovative toxicology testing method of lead using FRET-based biosensors			

Category	No.	Presenter	Correspondence
	Paper Title		
Alternative Toxicology Testing	P012	Tian Lin	Lin Tian
	Exosomes derived from three-dimensional cultured human umbilical cord mesenchymal stem cells ameliorate pulmonary fibrosis in a mouse silicosis mode		
	P013	Lorna Ewart	Lorna Ewart
	Performance assessment and economic analysis of a human Liver-Chip for predictive toxicology		
	P014	Chunlin Liao	Chun-Lin Liao
	Development of in vitro 3D models to imitate human and canine atopic dermatitis for the therapeutics assessment of herbal formulatio		
	P015	Thang Cao Luong	Chih-Hsin Hung
	TowerAssayAnalyzer: A Python-Based Application for Accelerating and Streamlining Multiple Aquatic Animals Behaviors Data Processing		
	P016	Po-Yu Yen	Wen-Che Hou
Development of machine learning-based quantitative structure-activity relationships (QSAR) models to predict aquatic acute toxicity			
Nanotoxicology and Microplastics	P017	In Hae Park	Min-Kyeong Yeo
	Nano-TiO ₂ toxicity reduction using Jellyfish extract at immunity reaction		
	P018	Yuya Haga	Yuya Haga
	Cellular uptake and distribution after intranasal administration of amorphous silica nanoparticle		
	P019	Sota Manabe	Yuya Haga
	The mechanisms of autophagy-dependent cell toxicity caused by degraded microplastics		
	P020	Ting-An Lin	Vivian Hsiu-Chuan Liao
	Sulfate-modified nanopolystyrene accelerates memory decline via ionotropic glutamate receptors and the cAMP-response element binding protein (CREB) in <i>Caenorhabditis elegans</i>		
	P021	Kyung-Ku Kang	Kilsoo Kim
	A Study on the 13-Week Repeated Toxicity and Biodistribution of Secondary Polyethylene Microplastics		
	P022	Chuan-Ho Tang	Chuan-Ho Tang
	A lipidomic profile indicates an immuno-effect of microplastics on coral		
	P023	Xiaoquan Huang	Meng Tang
	Size and content of silver affect pulmonary toxicity of silver-loaded nano-titanium dioxide photocatalysts and the optimization of these two parameters		
	P024	Xiaoquan Huang	Meng Tang
Ag/TiO ₂ nano hybrids induce fibrosis-related epithelial-mesenchymal transition in lung epithelial cells and the influences of silver content and silver particle size			

Category	No.	Presenter	Correspondence
	Paper Title		
Nanotoxicology and Microplastics	P025	Katsuhide Fujita	Katsuhide Fujita
	Pulmonary toxicity following the intratracheal instillation of cellulose nanofibrils and multi-walled carbon nanotubes in rats		
	P026	Pei-Li Huang	Pei-Li Huang
	A novel insight into mechanism of derangement of coagulation balance: interactions of quantum dots with coagulation-related proteins		
	P027	Wei Cheng	Wei Cheng
	The microplastics induced hepatocytotoxicity and lipotoxicity in the liver organoids in an aging-dependent manner		
	P028	Minkyong Sung	KilSoo Kim
	Toxicity study of repeated oral administration of Polypropylene in ICR mice		
	P029	Olivia Lautan	Rong-Jane Chen
	Assessment of Potential Liver and Renal Toxicity of Nanoparticles as Food Substances using Alternative Test Methods		
	P030	Takamitsu Miyayama	Takamitsu Miyayama
	Combined use of AgNPs and salubrinal promote cell death by modulating endoplasmic reticulum stress/autophagy in SH-SY5Y human neuroblastoma cells		
	P031	Rosita Pranata	Rong-Jane Chen
	Alternative methods for genotoxicity testing of nanoparticles in food products		
	P032	Akira Onodera	Akira Onodera
	Cellular immunity response of dendritic cells is reduced by intracellular accumulation of suspended particulate matter		
	P033	Akihiko Hirose	Akihiko Hirose
	Comparison of tumorigenesis of MWCNT by intratracheal instillations and inhalation		
	P034	Yu-Hsuan Lee	Yu-Hsuan Lee
The role of autophagy in zinc oxide nanoparticle-induced skin damage under UVB irradiation			
P035	Yu-Tung Jhang	I-Lun Hsiao	
Effects of food contact material-related nanoplastics on 3T3-L1 cell differentiation and lipid metabolism			
Environmental Toxicology	P036	Salim Arrokhman	Pinpin Lin
	Additive effect on cardiotoxicity induced by bisphenols mixture in zebrafish embryos: the role of calcium ion pump and channel		
	P037	RuiJia Zhang	Ruijia Zhang
Metabolomics analysis of perfluorooctanoic acid-treated 3D L-02 cells			

Category	No.	Presenter	Correspondence
	Paper Title		
Environmental Toxicology	Po38	Jia-Yu Jiang	Chia-Cheng Wei
	Comparing the effect of per/polyfluoroalkyl substances (PFASs) on lipid accumulation through disrupting lipogenesis in <i>Caenorhabditis elegans</i>		
	Po39	Michael Edbert Suryanto	Chung-Der Hsiao
	Chronic Exposure to Tricyclic Antidepressant of Amitriptyline Can Reduce Anxiety, Predator Avoidance and Social Interaction Behaviors in Zebrafish		
	Po40	Ching-Hsin Yang	Pei-Jen Chen
	Establishing high-throughput assays for screening of sex disrupting chemicals		
	Po41	Chan-Hao Hsu	Pei-Jen Chen
	Lethal and sub-lethal toxicity of benzophenones and related derivatives in medaka fish		
	Po42	Zuqiang Fu	Aihua Gu
	Air pollution, genetic factors and the risk of depression		
	Po43	Yu-Hsuan Kuo	Vivian Hsiu-Chuan Liao
	Jointed ecotoxicity and ecological risk of ethinylestradiol and sulfamethoxazole in groundwater disturb the energy budget in <i>Caenorhabditis elegans</i>		
	Po44	Chenglong Ma	Wu Dong
	Study on the reproductive toxicity of zebrafish caused by residual tetracycline hydrochloride and its mechanism		
	Po45	Chna-Wei Yu	Vivian Hsiu-Chuan Liao
	Long-term ibuprofen exposure inhibits TGF- β signaling to impair spermatogenesis and reduce reproductive capacity in <i>Caenorhabditis elegans</i>		
	Po46	Atsushi Morimoto	Takashi Uehara
	Physiological mechanism of methyl vinyl ketone via covalent modification of PI3K		
	Po47	Pin-Ju Chiang	Pai-Shan Chen
	Monitoring Prevalence of Abuse Drugs in Sewage during the COVID-19 pandemic in North Taiwan		
Po48	Ryeo-Eun Go	Kyung-Chul Choi	
Fludioxonil induces cell apoptosis by mitochondrial stress in cardiomyocytes			
Po49	Ryeo-Eun Go	Kyung-Chul Choi	
Fludioxonil induced the migration and stemness by the transformation to multinucleation of MDA-MB-231 triple-negative breast cancer cells			
Po50	Hsuan-I Wu	Ying-Jan Wang	
Repeated exposure of chlorothalonil combine with UVR induced skin aging through the interplay of NLRP3 inflammasome and autophagy			

Category	No.	Presenter	Correspondence
	Paper Title		
Environmental Toxicology	P051	Donghyun Kim	Ok-Nam Bae
	Estimation of the benchmark dose (BMD) for the cytotoxicity induced by humidifier disinfectant (HD) substances based on a literature review of in vitro mechanism studies		
	P052	Chang-Hoon Shin	KilSoo Kim
	Rodent behavioral analysis for assessing microplastic effects of long-term ingestion on live mouse tracking system		
	P053	Heeyeon Chae	Kyungho Choi
	Adverse Effects of Synthetic Musk Compounds on Aquatic organisms: Mortality, Malformation, Thyroid, and Neurodevelopmental Disruption		
	P054	Chun Yi Shih	Cheng-Tien Wu
	Proteomics analysis of a food contaminant, bisphenol A and its metabolite 4-methyl-2,4-bis(4-hydroxyphenyl)pent-1-ene (MBP), induced cerebrum adverse effects of mice: in vitro and in vivo study		
	P055	Jiajin Wu	Meilin Wang
	Tobacco carcinogens-related signature: A promising prognosis model characterizes cancer-associated fibroblasts-induced epithelial mesenchymal transition and immune evasion for bladder cancer		
	P056	De-Mei Hsu	Pei-Yu Jiang
	Research on application of pesticide to predict groundwater concentration in Taiwan using PRZM-GW model with domestic local scenario parameters.		
	P057	Yi-Chi Chen	Yi-Chi Chen
	Accumulation and toxicokinetics of Tamiflu metabolites, Oseltamivir Ethylester and Oseltamivir Carboxylate, in water exposures with Daphnia magna		
	P058	Suen Yui (Deejay) Mak	Deejay Suen-yui Mak
	A preliminary investigation into chloroxylenol, a popular antimicrobial ingredient in hygiene and disinfection products, in rivers of Hong Kong		
	P059	Vincent Laiman	Hsiao-Chi Chuang
	Iron-Dependent Neutrophilic Lung Inflammation by Particulate Air Pollution		
	P060	Xiangzi Jin	Zuguang Li
	Nanoconfined liquid phase extraction based on a natural deep eutectic solvent for analysis of multiclass pesticide residues in water		
P061	Yilin Zou	Donghao Li	
A new strategy for rapid analysis of persistent organic pollutants—— Nanoconfined Liquid Phase Nanoextraction			
P062	Wei-Chen Chuang	Shao-Kai Lin	
New thinking on the control of pesticide residues in agricultural products			

Category	No.	Presenter	Correspondence
	Paper Title		
Environmental Toxicology	Po63	Yukiharu Horiya	Yukiharu Horiya
	Transgenerational epigenetic inheritance and epigenetic disruption of H19/IGF2 gene in "Kanemi Yusho"		
	Po64	Yu-Chi Hung	Yu-Chi Hung
	Effects of exposure to organophosphate pesticides on renal function and metabolomic signatures of patients with chronic kidney disease		
	Po65	Hsin-Yi Lu	Hsin-Yi Lu
	In Vitro Cell Transformation Assays on Fungicide Iprodione, Insecticide Fenoxycarb, and Their Toxicologically Relevant Metabolites		
	Po66	Tzu-Hsin Yen	Ching-Yu Lin
Metabolic Responses of Perfluorooctanesulfonic Acid Exposure in Rats			
Food Toxicology and Safety	Po68	Yi-Chen Lee	Yi-Chen Lee
	Determination of the Bacterial Community of Mustard Pickle Products and its Microbial and Chemical Quality		
	Po69	Yi-Chen Lee	Yung-Hsiang Tsai
	Substitution of High-hydrostatic-pressure Processing for Sulfite Addition to Quality of Mustard Pickle Products and Delay Quality Deterioration During Storage		
	Po70	Yan-Zhen Dai	Jiunn-Wang Liao
	The study of <i>Antrodia cinnamomea</i> fruiting body ethanol extract in ovary and adrenal gland cell lines from different species		
	Po71	Tetsushi Hirano	Tetsushi Hirano
	Assessment of combined neurotoxic effects of pesticides using adverse outcome pathway (AOP)-based approach		
	Po72	Jui-Feng Tsai	Biing-Hui Liu
	Mycotoxin citrinin and cancer? Potential carcinogenic effects in vitro		
	Po73	Shih-Han Sun	Yi-Jun Lin
	Mixture risk assessment of dietary exposure to bisphenols from plant-origin foods in Taiwan.		
	Po74	Ya-Chin Chan	Chia-Cheng Wei
	The obesogenic effect of long-term mycotoxin zearalenone exposure in <i>Caenorhabditis elegans</i>		
Po75	Chieh-Yun Liu	Yu-Chen Hou	
The effects of mogroside V on systemic and hepatic immune cells in hyperglycemic mice			
Po76	Yu-Ting Chen	Yu-Chen Hou	
Dietary exposure to fipronil affects immune cells and skin inflammation in mouse with psoriasis-like dermatitis			

Category	No.	Presenter	Correspondence
	Paper Title		
Food Toxicology and Safety	Po77	Szu-Yu Kuo	Chin-Chu Chen
	Subchronic toxicity of submerged fermentation-derived <i>Antrodia</i> GK (<i>Antrodia cinnamomea</i> mycelium powder)		
	Po78	Satoshi Kitajima	Satoshi Kitajima
	Recent trends in regulatory systems in other countries regarding the safety assurance of new food products including so-called cultured meat		
	Po79	Ssu-Ning Chen	Ssu-Ning Chen
	3-MCPD-induced nephrotoxicity occurs via mitophagy and is reversed after ceasing exposure		
	Po80	Olivia Lautan	Rong-Jane Chen
	Food processing contaminant glycidol-induced renal toxicity via DNA damage and mitophagy in vivo and in vitro		
	Po81	Komei Aoki	Komei Aoki
	Exploration of novel histone lysine acyl modifications induced by carboxylic acids from the living environment		
	Po82	Hong-Tao Chen	Biing-Hui Liu
	Safety evaluation of ractopamine on embryonic zebrafish, an aquatic vertebrate model		
	Po83	Byungkyung Do	Hoonjeong Kwon
	Screening of in vitro toxicity of various commercial <i>Monascus</i> red.		
	Po84	Tomohisa Nagayama	Tomohisa Nagayama
	Amatoxin poisoning caused by <i>Galerina sulciceps</i> , a species with no prior record of identification in Japan: a case report		
	Po85	Wei-Hong Tai	Feng-Yih Yu
	Developing of an aptamer against moniliformin and its application to aptamer-based assay		
	Po86	Xin-Jie Lin	Feng-Yih Yu
	Selection of aptamer and development of aptamer-based assay for Fusaric acid		
	Po87	Yu Syuan Chen	Cheng-Tien Wu
	Protective effects of phillygenin on renal inflammatory, pyroptosis and fibrosis in a unilateral ureteral obstructive mouse model.		
	Po88	Shih-Wei Wu	Feng-Yih Yu
Production of Antibody/Aptamer and Development of Rapid Immunoassay for Citrinin			
Po89	Je-Chiuan Ye	Je-Chiuan Ye	
The Role of Polyphenol Content in Green and Black Tea for Optimal Health Benefits and Minimizing Toxicity			

Category	No.	Presenter	Correspondence
	Paper Title		
Food Toxicology and Safety	P090	Yun Rong Tsai	Yi-Shiou Chiou
	Mutagenicity of Traditional Chinese Medicine Bamboo Bee Extract by Ames test		
	P091	Chao Ming Tsen	Chao-Ming Tsen
	Feasibility Assessment of ELISA Kit for Detection of Ciguatoxin in Groupers		
	P092	Razinah Sharif	Razinah Sharif
	Association between Diet-related Behaviour and Risk of Colorectal Cancer: A Scoping Review		
Clinical Toxicology	P093	Chi Syuan Pan	Chun-Hung Chen
	Cause of poisoning patients presented to an emergency department: a 1-year experience in a university hospital		
	P094	Han-Wei Mu	Dong-Zong Hung
	The outcome of N-acetylcysteine used in prevention of delayed neurological sequelae caused by carbon monoxide poisoning		
	P095	Tung-Hsia Liu	Yu-Li Liu
	Neurofilament light chain in alcohol dependence		
	P096	Tomohiro Seki	Tomohiro Seki
	Simultaneous screening of multiple drugs using detector tubes		
	P097	Chih-Hui Wang	Yu-Li Liu
	Development of a FOPPR technique for neurotoxic indicator neurofilament light chain analysis		
	P098	Sheau-Chung Tang	Sheau-Chung Tang
	Genistein inhibits collagen synthesis and induces apoptosis in keloid fibroblasts and human keloids tissues		
	P099	Hirozumi Okuda	Hirozumi Okuda
	Fatal Poisoning due to Ingestion of Boiled Oleander Leaf Extract: A Case Report		
	P100	Chaniphun Butryee	Chaniphun Butryee
Safety evaluation of Thai black garlic strains: a randomized controlled-placebo clinical trial in healthy volunteers			
P101	Kengo Hatanaka	Kengo Hatanaka	
Effectiveness of multiple-dose activated charcoal in lamotrigine poisoning: a case series.			
P102	Te-Yu Chiu	William Chih-Wei Chang	
Improving patient safety with UPLC-MS/MS-based therapeutic drug monitoring for nine tyrosine kinase inhibitors and their active metabolites			

Category	No.	Presenter	Correspondence
	Paper Title		
Clinical Toxicology	P103	Daisuke Kobashi	Daisuke Kobashi
	Severe caffeine poisoning successfully treated with high flow continuous hemodialysis.		
	P104	Hsin-Chien Wu	Chen-Chang Yang
	Predictors of Severe Complications in Patients with Venomous Snakebites in Taiwan		
	P105	I Tien Tang	Chen-Chang Yang
	The trend of drug abuse recorded from phone consultation in Poison Control Centre of Taiwan for 30 years since establishment		
	P106	Bo-Hao Zhong	Jiang-Huei Jeng
	Areca nut extract and arecoline stimulated IL-1 α and IL-1 β mRNA, protein expression/production in oral mucosal cells		
Metal and Metalloid Toxicity	P107	Yuta Iijima	Yuta Iijima
	Methylmercury induces ER stress and subsequent activation of apoptosis pathway leading to neuronal cell death in the mouse brain		
	P108	Orish E. Orisakwe	Orish E. Orisakwe
	Selenium and zinc protect against heavy metal mixture-induced memory impairment, olfactory bulb and hippocampal oxidative stress by augmenting antioxidant capacity and activation of Nrf2-Hmox-1 signaling in male albino rats.		
	P109	Yo Shinoda	Yo SHINODA
	Neurodegeneration and neurogenesis in methylmercury exposed rat dorsal root ganglion		
	P110	Hiroki Taguchi	Hiroki Taguchi
	Ferroptosis involved in cisplatin vulnerability of proximal tubule S3 segment-derived immortalized cells		
	P111	Tsung-Lin Tsai	Shu-Li Wang
	Childhood Exposure to Metals and Declined Kidney Function in Children		
	P112	Chuang Ma	Hisao Haniu
	Safety evaluation and cellular response of osteoblasts to nano-ferrite particles for 3D artificial autogenous bone		
P113	Gi-Wook Hwang	Gi-Wook Hwang	
Elucidation of the molecular mechanisms involved in methylmercury toxicity caused by induction of OSM expression			

7-3. Poster Presented on July 19

July 19 (WED)

Category	No.	Presenter	Correspondence
	Paper Title		
Chemoprevention of Phytochemicals	P114	Chun-Han Chang	Min-Hsiung Pan
	Pterostilbene recovery effects on 2-Amino-1-methyl-6-phenylimidazo(4,5-b)pyridine interrupted circadian rhythm in <i>Caenorhabditis elegans</i>		
	P115	Te-Sheng Chang	Te-Sheng Chang
	Anti-melanoma activity of corylin from <i>Psoralea corylifolia</i>		
	P116	Yen-Min Huang	Wen-Wei Chang
	Ovatodiolide displays anti-cancer stem cell activity in endometrial cancer through the induction of reactive oxygen species		
	P117	Yen-Min Huang	Li-Sung Hsu
	Ampelopsin attenuated migration and invasion in glioblastoma cells through inhibition of matrix metalloproteinases and AKT pathway		
	P118	Pei Huan Chen	Pei-Huan Chen
	The potential effects of Calebin-A on antioxidation and ameliorating Parkinsonian symptoms in <i>Caenorhabditis elegans</i>		
	P119	Sunyi Lee	Joohee Jung
	Role of aldehyde dehydrogenase 3A2 on the anticancer effect of policosanol in gastric cancer		
	P120	Wen-Chyi Dai	Chia-Che Chang
	Fucoxanthin, a carotenoid derived from algae, exerts its anti-melanoma effect by inhibiting the pro-survival signaling pathway mediated by STAT3		
	P121	Yu-Kang Chang	Chia-Che Chang
	Exploring the anti-bladder cancer effect and underlying mechanisms of Tanshinone I, a pharmacological component of Danshen (<i>Salvia miltiorrhiza</i>)		
	P122	Pin-Yu HO	Min-Hsiung Pan
Chemopreventive efficacy and molecular mechanisms of piceatannol in benzo[a]pyrene/dextran sodium sulfate induced colitis-associated colorectal cancer development in mice			
P123	Han-Sheng Chang	Yuan-Soon Ho	
Quercetin Alleviates Trastuzumab Resistance by Inhibiting t-DARPP and Down-regulating HER2-ICD Activation			
P124	Haruna Nagayoshi	Haruna Nagayoshi	
A metabolite analysis for identifying the P450 family involved in chemical oxidation-Case study of chiral PCBs and flavonoids			
P125	Thatsani Sripho	Ratsada Praphasawat	
Evaluation of Anticancer Activity of Cannabidiol on Colorectal Cancer Cells			

Category	No.	Presenter	Correspondence
	Paper Title		
Inhalation Toxicity & Safety	P126	Seonghoon Yoon	Kyuhong Lee
	Transcriptome analysis to identify the molecular mechanism of death by inhalation exposure of CMIT/MIT		
	P127	Hsiao-Ching Chen	Hsiao-Ching Chen
	Comparison of sampling and analysis methods for inhalation exposure concentration of mixture to clarify the risk management for pesticide		
	P128	Xiaoqing Chi	Qinjie Weng
	Estimation of Clinical Initial Dose of Inhalation Preparations		
	P129	Tzu-Chun Hsu	Hsiao-Chi Chuang
HMGB1 involved in DCLK1 regulated Hippo signaling pathway on the apoptosis of type 2 alveolar epithelial cells in acute respiratory distress syndrome			
Target Organ Toxicology and Mechanism	P130	Ting-Yu Chang	Shing-Hwa Liu
	The role of advanced glycation end-products in declining renal function in D-galactose-induced aging mice		
	P131	Ferry Saputra	Ferry Saputra
	Effect of Pyrethroid Pesticide Fenpropathrin on the Cardiac Performance of Zebrafish and the Potential Mechanism of Toxicity		
	P132	Sheng Ta Lee	Shen-Ta Lee
	Shikonin promoted apoptosis in renal cancer cells through downregulation of		
	P133	Li-Ting Tsai	Shing-Hwa Liu
	Indoxyl sulfate induces renal tubular cell senescence by impairing autophagy though the production of reactive oxygen species		
	P134	Takahito Nishiyama	Takahito Nishiyama
	Stability and reactivity of 4-(hydroxymethylnitrosamino)-1-(3-pyridyl)-1-butanone glucuronide		
	P135	Lin Xu	Dianke Yu
	N, N-dimethylformamide exposure induced liver abnormal mitophagy by targeting miR-92a-1-5p-BNIP3L pathway in vivo and vitro		
	P136	Hyung Sik Kim	Hyung Sik Kim
	Dendropanoxide ameliorates cadmium-induced hepatotoxicity via anti-inflammatory activities in Sprague-Dawley rats		
	P137	Hee Jung Kwon	Joohee Jung
The anticancer effect of GPER agonist via G2/M phase arrest in liver cancer cells			
P138	Seonyong Lee	Joohee Jung	
Comparison of cytotoxic effects of anticancer agents with and without p53 expression			
P139	Yuki Tomitsuka	Yuki Tomitsuka	
Gene deletion of long-chain acyl-CoA synthetase 4 attenuates paraquat-induced lung injury via the suppression of lipid peroxidation			

Category	No.	Presenter	Correspondence
	Paper Title		
Target Organ Toxicology and Mechanism	P140	Changuk Kim	Jun-Won Yun
	Knockout of Dact2 protects kidneys from cisplatin-induced injury by modulating the Igf1-MAPK pathway axis		
Reproductive and Developmental Toxicology	P141	Chin-Ching Lu	Rong-Jane Chen
	Using alternative test methods to investigate the potential endocrine disruption and reproductive toxicity of nanoparticles often used in food		
	P142	Izatus Shima Taib	Izatus Shima Taib
	Paternal Exposure of Fenitrothion on Fertility Status and Its Risk Toward First Generation Progeny of Male Sprague–Dawley Rats		
	P143	Asma' 'Afifah Shamhari	Izatus Shima Taib
	The Toxicity Mechanisms of BPF toward Spermatogenesis in Sprague-Dawley Rat Stimulating the Hormonal Disturbance and Damaging the Seminiferous Tubules via Histology Analysis		
	P145	Asuka Kaizaki-Mitsumoto	Asuka Kaizaki-Mitsumoto
	Paternal exposure to methylphenidate induces ADHD-like behavioral phenotypes and altered gene expressions in mouse offspring		
	P146	Ryota Ojira	Makoto Shibutani
	Similar effects of glyphosate and glyphosate-based herbicide on brain development after developmental exposure to rats		
	P147	Zih-An Liao	Hsiao-Chi Chuang
Hippo signaling pathway regulated branching morphogenesis of fetal lung under hypoxia			
Drug Discovery and Regulation	P148	Ching-Chuan Kuo	Ching-Chuan Kuo
	Utilizing an ARE-driven reporter platform to discover NRF2 modulators for chemoprevention and cancer therapy		
	P149	Geng-Yu Lin	Kun-Yi Hsin
	PatherDB: A network pharmacology-based database for molecular bioactivity investigation		
	P150	Naoki Imaizumi	Naoki Imaizumi
	Bidens pilosa extract increases nitric oxide production in human vascular endothelial cells		
	P151	Wei Lun Hsu	Yueh-Hsia Luo
	Blockage of Nrf2 and Autophagy by L-selenocystine Induces Selective Death in Nrf2-addicted Colorectal Cancer Cells through p62-Keap-1-Nrf2 Axis		
	P152	Yun Ning Kuo	Pai-Shan CHEN
Drug surveillance in high-risk population based on analytical confirmation, questionnaires, and criminal investigations: a longitudinal study in Taiwan between 2014 and 2018			

Category	No.	Presenter	Correspondence
	Paper Title		
Drug Discovery and Regulation	P153	Bu-Miin Huang	BU-MIIN HUANG
	Arsenic compounds induce apoptosis through caspase pathway activation in MA-10 Leydig tumor cells		
	P154	Bu-Miin Huang	Bu-Miin Huang
	Arsenic compounds activate the MAPK and caspase pathways to induce apoptosis in OEC M1 gingival epidermal carcinoma		
	P155	Yung Cheng Jair	Pai-Shan Chen
	Risk Factors for Drug Abuse in Northern Taiwan: Insights from Clinical and Chemical Analyses		
	P156	Pai-Shan Chen	Pai-Shan Chen
	Hidden community ketamine users often have co-occurring psychiatric disorders and patterns of multiple drug use		
	P157	Shin Yu Wan	Shin-Yu Wan
	Honokiol Inhibits Migration and Invasion of Gastric Cancer Cells Through Suppression of Epithelial to Mesenchymal Transition and BDKRB2 Signaling		
	P158	Hsin-Huei Chang	Ching-Chuan Kuo
	Discovery of a NRF2/ARE inhibitor for chemo-sensitization by reducing the NRF2/ABCC1 axis in cancer cells resistant to topoisomerase II poison		
	P159	Yuan-Hua Wu	Yuan-Hua Wu
	Cisplatin-Loaded Nanomedicine Enhances Radiosensitivity by Inducing Ferroptosis and Autophagy Dysfunction via Impairment of Lysosomes in Triple-Negative Breast Cancer		
	P160	Sheng-Yow Ho	Sheng-Yow Ho
	Carbon Monoxide (CO) Nano-drug Delivery System for Cancer Radiodynamic Therapy via Affecting Mitochondrial Function		
	P161	Ya-Chu Tang	Ching-Chuan Kuo
	Promising anti-tumor effects of BPR1J481, a novel multi-targeted kinase inhibitor, on colorectal cancer patient-derived tumor xenograft models		
	P162	Jing-Hua Lin	Dong-Zong Hung
	Development of a novel immunochromatography strip for screening synthetic cathinones in urine		
P163	Ami Fazlin Binti Syed Mohamed	Ami Fazlin Syed Mohamed	
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P164	Yi-Shiou Chiou	Peter E. Lobie	
Developing an orally bioavailable inhibitor of BAD Ser99 phosphorylation for triple-negative breast cancer therapy			

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	Evaluation of anti-skin-aging and antimutagenic activities of glucosamine-based formulations		
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	ITIH4 involved in Hippo signaling pathway-regulated apoptosis on type 2 alveolar epithelial cells of acute respiratory distress syndrome		
	P167	Tzu-Chun Cheng	Yuan-Soon Ho
	Histamine-N-methyltransferase as an auxiliary marker for precise identification of breast cancer responders to trastuzumab therapy		
	P168	Wang-Chou Sung	Wang-Chou Sung
	A cost-effective immunization strategy for developing cobra antivenom with broad spectrum potency		
	P169	Chang-Shen Lin	Chang-Shen Lin
	Immune regulation by the DNA damage agents cisplatin and ATM kinase inhibitor in cancer		
Safety and Efficacy Evaluation of Botanical Consumer Product	P170	Yune-Fang Ueng	Yune-Fang Ueng
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	P171	Heng Hsuan Hsu	Rong Jane Chen
	The anti-lung cancer mechanisms and safety study of Croton tonkinensis Gagnep. purified compound by in vitro and in vivo lung cancer model induced by food contaminant urethane		
	P172	Zhe-Wei Lian	Yu-Hsuan Lee
	Naringin regulated macrophage differentiation to promote wound healing by affecting the expression of CMPK2		
	P173	Ami Fazlin Binti Syed Mohamed	Hussin Muhammad
	Maternal hepatic drug metabolism gene profiles in Sprague Dawley rats treated with standardized Ficus deltoidea var kunstleri extract		
Molecular Toxicology & Carcinogenesis	P174	Natsuko Kitamoto	Yuya Haga
	Investigation of the mechanisms of benzopyrene-induced cellular senescence in breast cancer		
	P175	A-Mei Huang	A-Mei Huang
	Mutational Profiles of Urothelial Carcinoma post Kidney Transplantation: The role of NTRK3 in the Regulation of Tumorigenicity		
	P176	I-Lun Hsin	Jiunn-Liang Ko
β -catenin inhibitor ICG-001 suppress cell proliferation and induce protective autophagy in endometrial cancer cells			

Category	No.	Presenter	Correspondence
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	Exposure to nickel chloride induces epigenetic modification on detoxification enzyme glutathione S-transferase M2		
	P178	Ruo-Yu Chen	Liang-Yi Hung
	Centrosomal P4.1-associated protein (CPAP) promotes cancer stemness-mediated sorafenib resistances in HCC by regulating Wnt/ β -catenin/CD24 signaling axis		
	P179	Tzu-Han Hung	Kou-Tai Hua
	Evaluation of the role of PHF2 in the aggressiveness of clear cell renal cell carcinoma.		
	P180	Wei-Ting Yang	Chia-Che Chang
	Exploring the anti-bladder cancer effect and underlying mechanisms of Sertindole, an antipsychotic drug		
	P181	Ke-Fan Pan	Kuo-Tai Hua
	Naa10p promotes cell invasiveness of esophageal cancer by coordinating the c-Myc and PAI1 regulatory axis		
	P182	Wei-Ju Huang	Chang Chia-Che
	Exploring the anti-colorectal cancer effect and underlying mechanisms of Linagliptin, a diabetes medication		
	P183	Ya Ting Jhan	Liang-Yi Hung
	CPAP promotes innate immune checkpoint via enhancing the don't eat me signaling in HCC		
	P184	Ming Ern Wong	Liang-Yi Hung
	Don't eat me signalling contributes to the malignancy of diffuse large B cell lymphoma (DLBCL)		
	P185	Jing-Quan Zheng	Yuan-Feng Lin
	The NEDD8-mediated neddylation of the TGF- β type II receptor triggers the metastatic progression in lung adenocarcinoma		
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Epigenetic dysregulation via covalent modification by 1,2-naphthoquinone, an environmental electrophile			
P188	Kin Long Chou	Meei-Ling Sheu	
Honokiol Thwarts Epithelial-Mesenchymal Transition and Peritoneal Dissemination by Regulating of B-cell lymphoma 6			
P189	Ying-Tzu Huang	Biing-Hui Liu	
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	Investigation of the nicotine receptor single nucleotide polymorphisms induced oncogenic properties and molecular mechanisms of breast cancer cell.		
	P191	Li-Ching Chen	Li-Ching Chen & Yuan-Soon Ho
	Curcumin suppresses the growth and metastasis of triple-negative breast cancer by inhibiting salt-induced kinase 3 expression		
	P192	Huu Nhat Binh Doan	Li-Ching Chen & Yuan-Soon Ho
	STARD3 regulates HER2 and is a potential biomarker in HER2-positive breast cancer		
	P193	Ching-Chuan Kuo	Ching-Chuan Kuo
	The Role and Regulatory Mechanisms of Mast Cells in Head and Neck Cancer Cells		
	P194	Wei-Chun Chang	Wei-Chun Chang
	The potential mechanisms of emodin-induced phototoxicity via apoptosis pathway in human epidermal keratinocytes		
	P195	Ruei-Chen Hung	Yuan-Feng Lin
	4-iodobutyl acetate selectively kills triple-negative breast cancer by incorporating into Cys137 residue of HSPB1		
	P196	Wan-Chuen Liao	Jiang-Huei Jeng
	Camphorquinone and BisGMA stimulated NQO1, but not NQO2 expression in human dental pulp cells		
	P197	Yoshinori Okamoto	Yoshinori Okamoto
	Chemo-preventive effect of Ki16425 a lysophosphatidic acid receptor inhibitor on estrogen-induced breast cancer in female ACI rats		
	P198	Tzyh-Chyuan Hour	Tzyh-Chyuan Hour
	Molecular Cytotoxicity and Characterization of Olaparib in Prostate Cancer Cells		
	P199	Yao-Pang Chung	Shing-Hwa Liu
Indoxyl Sulfate: Unveiling its Role in Chondrocyte Senescence and Iron-Dependent Ferroptosis			
P200	ChiaYun Huang	Chia-Yun Huang	
Exosome miR-421 Derived from Oral squamous cell carcinoma Promotes Angiogenesis			
Regulatory Toxicology	P201	Jaesuk Yun	Jaesuk Yun
	Evaluation of dependence potential of new psychoactive substance		
	P202	Yi-Qi Chen	Meei-Ling Sheu
	Melatonin suppresses LPS-induced neuroinflammatory responses in BV2 microglial cells and wild-type mice		
	P203	Chun-Lin Liao	Chun-Lin Liao
The assessment and retrospective analysis of residue definition in livestock products for pesticide			

Category	No.	Presenter	Correspondence
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Regulatory Toxicology	P204	Ruby Yang	Ruby Yang
	Toxicology and Regulatory Considerations for DNA Vaccines		
	P205	Hui-Yuan Cheng	Hui-Yuan Cheng
	Evaluation of pesticide residue definition for enforcement in plant commodities		
	P206	Seok Kwon	Seok Kwon
	Read-across work group in Korea		
	P207	Shi-Liang Li	Min Song
Embracing Non-Testing Methods in Regulatory Frameworks: Focus on China's Chemicals, Cosmetics, and Pharmaceuticals Industries			
Others	P208	Liao Chen Chen	Hwei-Hsien Chen
	Extinction and reinstatement of methamphetamine-induced conditioned place preference in zebrafish		
	P209	Whei-Fen Wu	Whei-Fen Wu
	Identification of the degradation pathway of di-2-ethylhexyl phthalate, a hormone disruptor, by a bacterium <i>Pseudomonas</i> sp. A25 isolated from soils with an esterase activity		
	P210	Kuo Ching Huang	Rong-Jane Chen
	Chondroitin sulfate oligosaccharide ameliorates osteoarthritis via NLRP3 inflammasome inactivation		
	P211	Minkyung Sung	KilSoo Kim
	Altered expression of miRNA in neuronal exosomes as potential of stress biomarkers in rodent studies		
	P212	Yi Chin Hsieh	Wen-Che Hou
	Dissolution Behaviors of Soluble Nanoparticles at Environmentally Relevant Concentrations in the Aquatic Environment: Zinc Oxide Nanoparticles		
	P213	Mengmeng Yang	Xinye Ni
	Preparation of high Mg-loaded amorphous calcium phosphate with osteogenic and angiogenic properties		
	P214	Yenlin Chen	Jia-Ching Shieh
	Candida albicans JHD2 controls histone H3 lysine 4 tri-demethylation for virulence		
	P215	Takashi Ashino	Takashi Ashino
	Inhibitory role of reactive sulfur species in PDGF-induced vascular smooth muscle cell migration		
	P216	NAVYAMOL C D	CHUANG RUNG CHANG
Dissecting The Effects of Curcumin/Curcuminoids on Mitochondrial Dynamics and Apoptosis			
P217	Chia-I Lin	Chia-I Lin	
The association between gut microbiota, metabolome and kidney function decline			

Category	No.	Presenter	Correspondence
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Others	P218	Makoto Izumiya	Hisao Haniu
	Which in vitro conditions reflect in vivo bone formation and calcification? Towards international standardization of functional evaluation		
	P219	Ching Yu Tu	Chia-Yu Hsieh
	Safety evaluation of anti-parasitic drug emamectin benzoate with oral administration on perch and grouper		
	P220	Yu-Wei Chiang	Derek Yu-Wei Chiang
	Comparison of Venom Protein Variation in Protobothrops mucrosquamatus from Northern and Southeastern Taiwan and its Correlation with Human Envenomation		
	P221	Yali Men	Fengming Yue
	Safety evaluation and cell responsiveness of barramundi fish skin extract collagen		
	P222	Wan-Wan Lin	Wan-Wan Lin
	Spatiotemporal Roles of AMPK in PARP-1- and Autophagy-Dependent Retinal Pigment Epithelial Cell Death Caused by UVA		
	P223	Jia-Hua Jhuang	Shing-Hwa Liu
	Indoxyl sulfate inhibits myoblast differentiation/myogenesis by affecting iron metabolism		
	P224	Liang Liu	Hui Wang
	Circular RNA Gtdc1 protects against adult-onset osteoarthritis induced by prenatal prednisone exposure by regulating SRSF1-Fn1 signaling		
	P225	Yi Liu	Liaobin Chen
	Paternal mixed exposure to nicotine/ethanol/caffeine leads to reduced cartilage quality in paternal/offspring rats and its differential glucocorticoid regulation mechanisms		
	P226	Mingcui Luo	Dan Xu
IUGR-induced reduction of cholesterol efflux from hippocampal astrocytes via ABCG1 contributes to neuronal synaptic damage and neurobehavioral alterations			
P227	Songdi Wang	Ying Ao	
The hypermethylation of Plagl1 mediates proximal tubule dysfunction in female offspring rats induced by paternal pre-pregnancy caffeine exposure			
P228	Xiaoqian Lu	Hui Wang	
Epigenetic programming mediates abnormal gut microbiota and susceptibility to cholestatic liver injury in female offspring with prenatal dexamethasone exposure			

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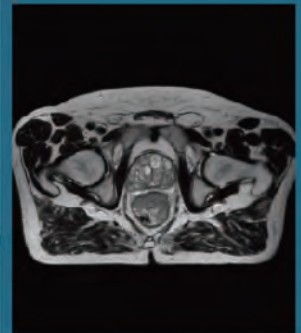
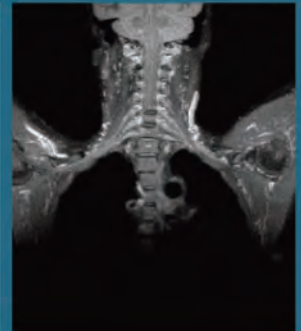
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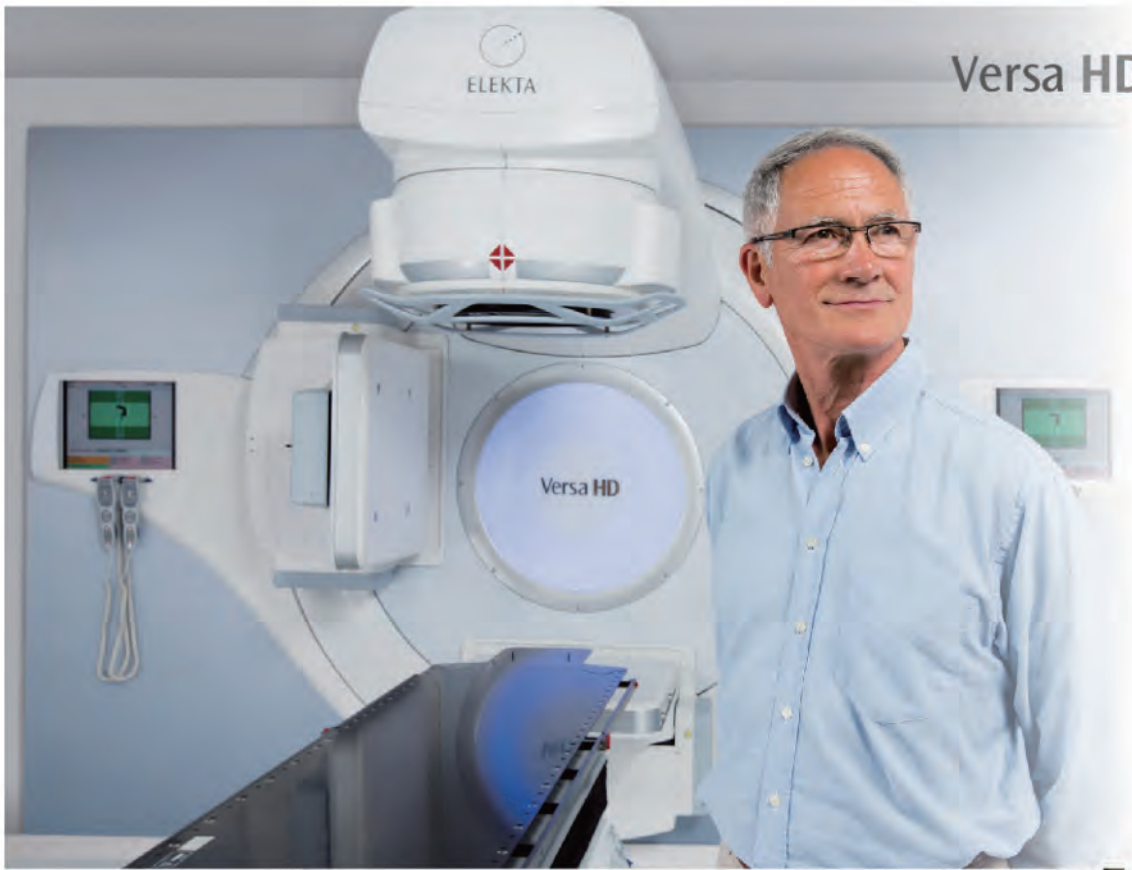
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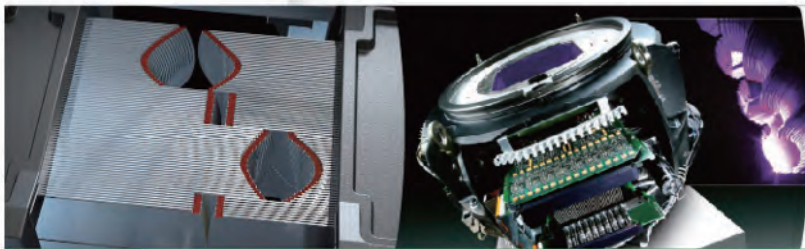
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2022 期刊文獻

Title	Journal
Cultivation and functional characterization of 79 planctomycetes uncovers their unique biology	Nature Microbiology
Evaluation of the in vitro antitumor effect of the association between doxorubicin and crodamine toxin	Bio-Manguinhos
Cells use molecular working memory to navigate in changing chemoattractant fields	Physics of Living Systems
Effect Assessment of Aurantio-Obtusin on Novel Human Renal Glomerular Endothelial Cells Model Using a Microfluidic Chip	Nutrients
Construction and Application of Hepatocyte Model Based on Microfluidic Chip Technique in Evaluating Emodin	Nutrients
Growth-mediated negative feedback shapes quantitative antibiotic response	Molecular Systems Biology
In Vitro Cancer Models: A Closer Look at Limitations on Translation	Bioengineering
Cells use molecular working memory to navigate in changing chemoattractant fields	Cambridge
Optimization and Application of A Bionic System of Dynamic Co-Culture with Hepatocytes and Renal Cells Based on Microfluidic Chip Technique in Evaluating Materials of Health Food	Nutrients



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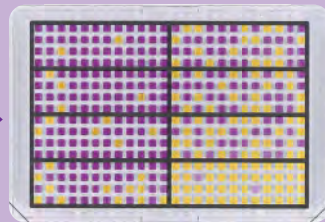
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Ames II (TA98, TAMix) Ames MPF 98/100 (TA98/TA100)	初期快速大量篩選	ICH M7
Ampes MPF 98/100 Aqua	水樣本專用毒性檢測	ISO 11350 Water quality

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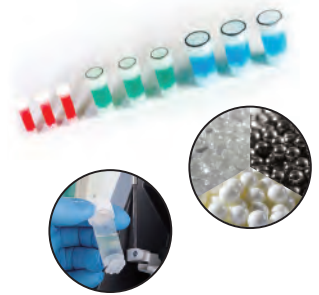
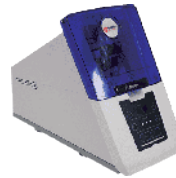


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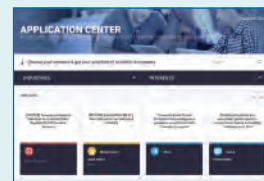


Applications

- DNA/ RNA Extraction
- Protein Extraction
- Metabolite/ Drug Extraction

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ML230



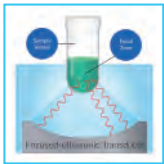
S220



R230



M220



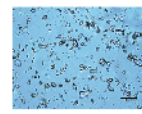
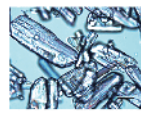
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(AFA) technology

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- ✓ Single-tube operation to prevent cross-contamination
- ✓ Standardized workflow for condition/ particle size control
- ✓ Less sample processing time
- ✓ Less organic solvents usage
- ✓ Uniform solubility in hydrophobic / lipid-rich chemicals

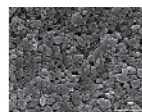
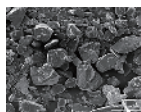
Applications

- Micronization
- Nanosuspension
- Crystallization
- AFA-Liposome, Nanoparticle Formation
- AFA-Nanoemulsion Formulation

Micronization



Nanosuspension



Crystallization





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暨安全評估服務**
**Toxicological Risk
and Safety Assessment
Services**



評估項目及測試項目

評估項目(Review Services):

- 成分評估(Ingredient Review)
- 標籤評估(Labelling Review)
- Product Information Files (PIF)
- Toxicity Risk Assessment (TRA)
- COSMETIC PRODUCT SAFETY REPORT (CPSR)

測試項目(Testing Services)

- 替代測試方法(Alternative test methods)
 - OECD 439 人體皮膚模型試驗 (Reconstructed human epidermis (RhE) test)
 - OECD 442 C 直接胜肽反應試驗 (Direct peptide reactivity assay (DPRA))
 - OECD 442 D ARE-Nrf2 螢光酶試驗 (ARE-Nrf2 luciferase test method (eg, KeratinoSens™ assay))
 - OECD 442 E 人體細胞株活化試驗 (Human cell line activation test (h-CLAT))
 - OECD 432 3T3 NRU 光毒性試驗(3T3 NRU phototoxicity test)
 - OECD 492 重建人類角膜上皮細胞試驗 (Reconstructed human cornea-like epithelium (RhCE) test method (eg, EpiOcular™))
 - OECD 428 體外擴散法 (In vitro diffusion method)
- 重金屬(Heavy Metals)
- 微生物(Microorganism)
- 產品包裝相容性檢測 (Packaging test)--- 遷移性試驗(溶出試驗)
- 產品安定性試驗(Stability Test)
- 防腐效力測試(Antimicrobial Effectiveness Testing)
- 甲醛(Formaldehyde)
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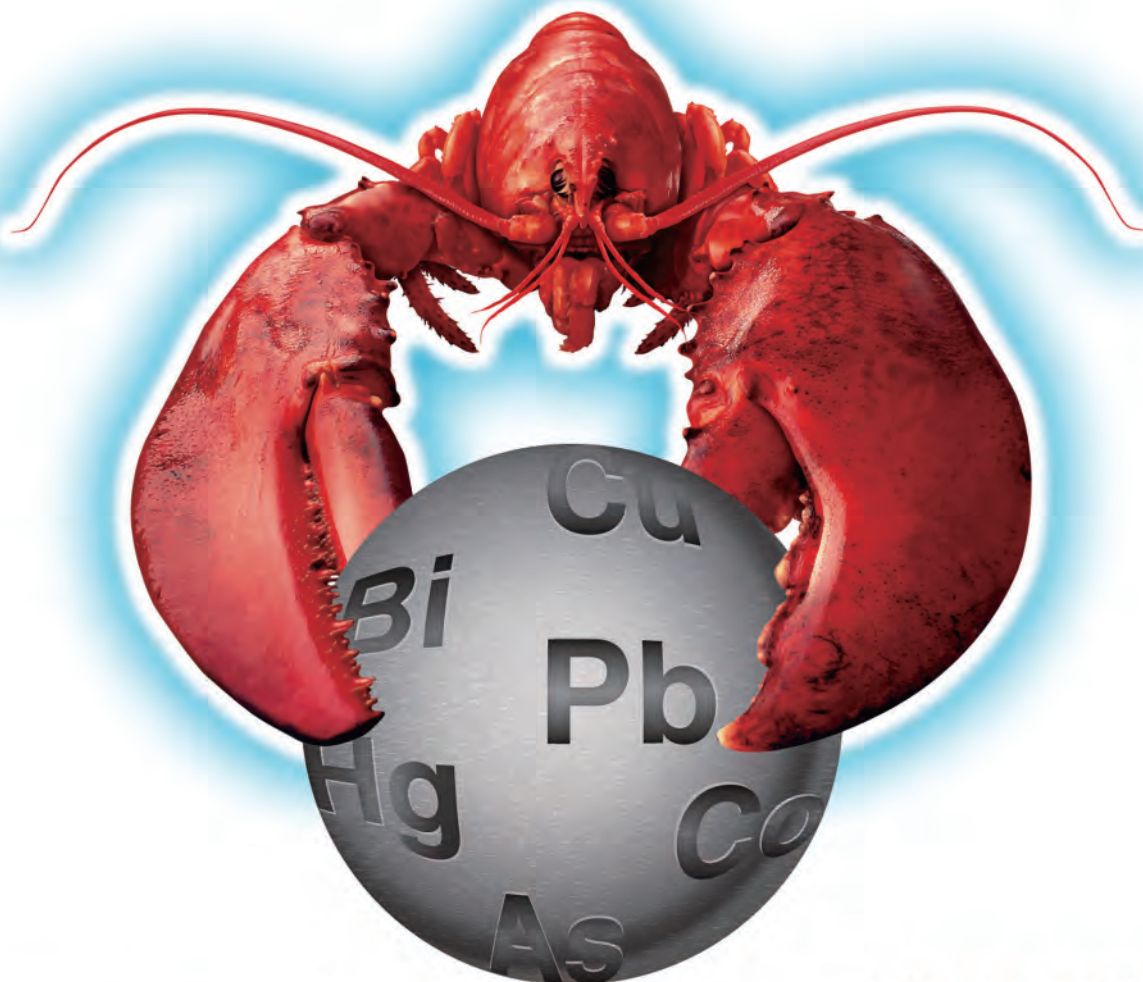
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· 使用前詳閱說明書警語及注意事項 · 僅供專業醫事人員參考

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DMPK

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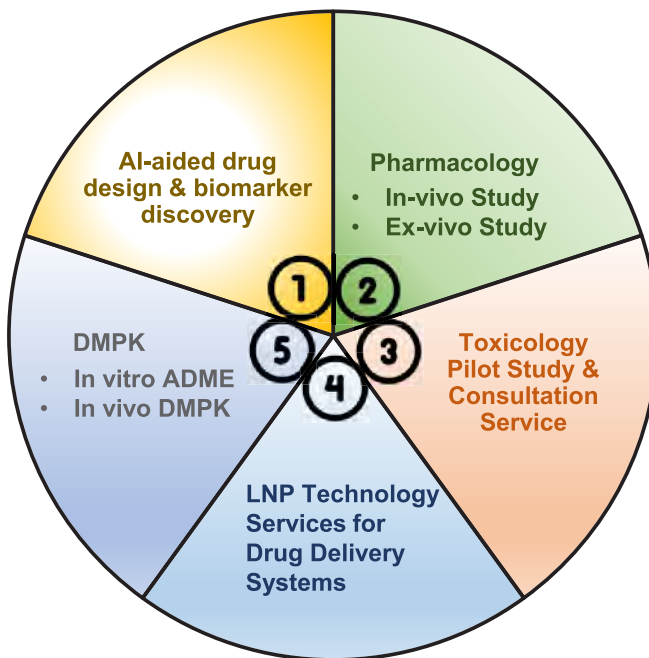


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 - ✓ Drug target identification
 - ✓ New indication identification
 - ✓ Clinical trial data analysis
- 2** • **Efficacy Evaluation**

 - ✓ Oncology
 - ✓ Metabolism Disorders
 - ✓ Immune-Related Disorders
 - ✓ Other Models

• **MOA / Biomarker Discovery**

 - ✓ Serum cytokine analysis
 - ✓ Immune cell polarization
 - ✓ Histopathological analysis
- 3** • **Toxicology Pilot Study & Design of GLP Toxicology Program**

• **Non-Clinical Safety Studies for Cell/Gene Therapy Drugs**
- 4** • **Lipid-Based Nanoparticle (LNP) Formulation Services**

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 - ✓ Pre-formulation
 - ✓ Formulation Development / Product Design
 - **Lipid Nanoparticles**
 - ✓ Physical/Chemical Characterization for API & Excipients
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 - ✓ Plasma protein binding
 - ✓ Metabolic stability assay of Microsomes (Phase I metabolism) & Hepatocytes (Phase I & II metabolism)
 - ✓ Metabolite profiling & identification

• **DMPK**

 - ✓ Bioavailability (BA)
 - ✓ *In vivo* metabolite identification
 - ✓ *In vivo* drug-drug interaction evaluation
 - ✓ Toxicokinetics (TK)
 - ✓ Allometric PK scaling



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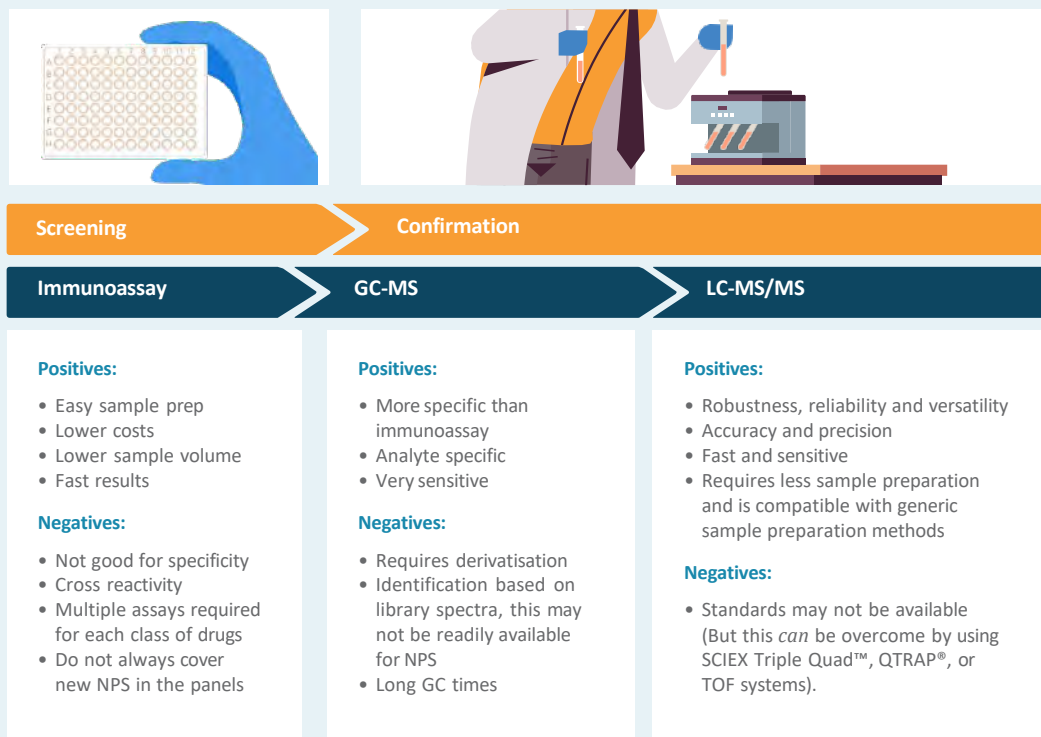


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亮宇生物科技成立於2011年，並於2018年結合VOLER翔宇生技顧問團隊、COSMOS上海京宇諮詢，積極參與產、官、學、研以期擴大服務能量銜接客戶研發需求。京翔亮團隊以專業的ISO 17025、GLP認證實驗室和優良的品質管理系統，和國際知名檢測機構長期合作，為優良外包實驗室與產學界的專業顧問平台。

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多項認證測試項目

- 細胞毒性試驗
- 皮膚敏感試驗
- 皮膚 / 皮內刺激試驗
- 眼 / 黏膜刺激試驗
- 急性毒性試驗
- 亞急 / 亞慢 / 慢毒毒性試驗
- 基因毒試驗
- 植入試驗
- 血液相容性試驗
- 醫療器材產品包裝材測試
- 滅菌確效 (Steam滅菌服務、EO / Gamma滅菌諮詢)
- 可重複使用醫材之清潔消毒確效
- ISO 10993材料化學表徵 / 毒理學評估
- BEP / BER生物相容性風險評估報告
- 客製化功能性試驗

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- 產品註冊規劃及測試雙軌服務
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細胞與藥物毒性評估工具



伯森生技【細胞與藥物毒性測試產品】具有豐富文獻紀錄，優質可靠，可減少動物實驗，提高藥物研發效率！以下列出數款熱門商品，完整產品明細請掃描右方 QR code 或洽詢伯森業務專員。



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- 多款毒性相關小分子藥物庫，可作為器官毒性評估測試之標準品。
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Product	Contents	Cat. No.
Cardiotoxicity Library	130 compounds	BML-2850
Hematopoietic Toxicity Library	115 compounds	BML-2852
Hepatotoxicity Library	238 compounds	BML-2851
Myotoxicity Library	60 compounds	ENZ-LIB101
Nephrotoxicity Library	86 compounds	ENZ-LIB100

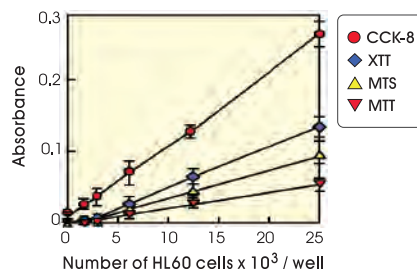


Cell Counting Kit-8 (CCK-8) Cat. No. ALX-850-039

- 比 MTT, MTS, XTT, WST-1 試驗更靈敏、簡單、快速，讓您迅速精確地完成細胞毒性評估！
- 高溶解度，不需 DMSO 回溶步驟，省時高效，同時避免回溶不完全導致的誤差。
- 低細胞毒性，降低實驗干擾因素。



更多產品效能數據
與發表文獻

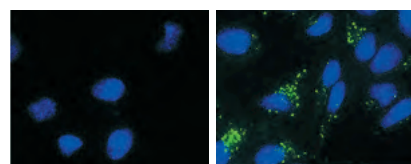


CYTO-ID® Autophagy detection kit Cat. No. ENZ-51031

- 訊號清晰：**本產品所含綠色螢光染劑可專一性偵測 Pre-autophagosomes, Autophagosomes, Autolysosomes，穩定精確的染劑使 Lysosome 干擾訊號降到最低。
- 高效便利：**無需進行細胞轉染即可觀察細胞自噬現象，可避免轉染效率不佳導致結果誤判。
- 彈性偵測：**螢光顯微鏡、流式細胞儀、螢光微量盤讀取儀皆可偵測。



更多產品效能數據
與發表文獻



Control

Starvation

CYTO-ID® Autophagy kit eliminates the need for a 350 nm UV laser for live cell analysis, and is compatible for use with Hoechst dyes for co-labeling in microscopy applications.



組織均質機

Product Information

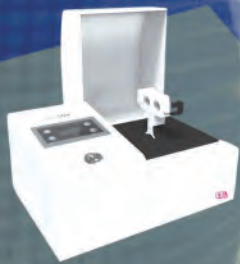


低溫型

常規型



桌上型

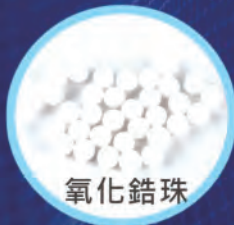


--均質機專用研磨珠

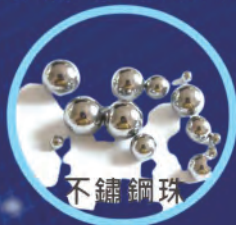
4

只需 4 步驟，輕鬆完成樣品製備

1. 將樣品與研磨珠放入離心管內
2. 將離心管放入機塊內 (如有低溫需求，可將機塊浸入液態氮數分鐘)
3. 將機塊放入研磨機 **start**
4. **finished**
→ DNA
→ RNA
→ 蛋白質



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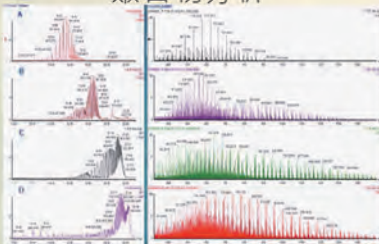
化學品分析服務 (特用化學品、光電化學品)

- 化學品純度及成份分析
- 微量金屬元素分析
- 化學品成份差異性比對
- 未知物分析 ■ 分子量分析
- 導電漿料分析
- 關注(危害)物質分析

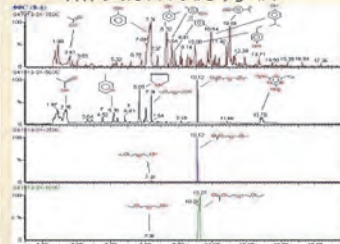
合成(藥)品、化妝品、 萃取物鑑定分析服務

- 萃取物純度及成份分析
- 微量元素分析
- 有效成份差異性比對
- 副產物、未知物成份鑑定
- 分析方法建立

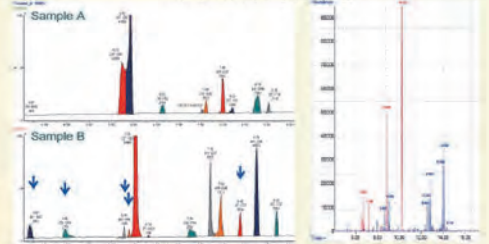
聚合物分析



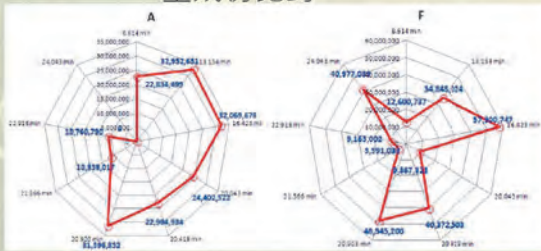
熱裂解成份分析



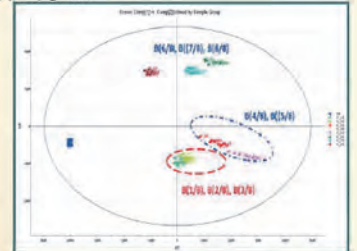
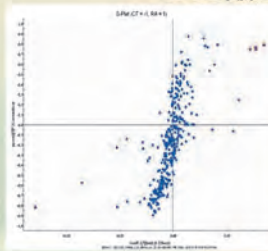
未知成份鑑定



主成份比對



多變數差異性分析



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結案



諮詢



報告



數據解析

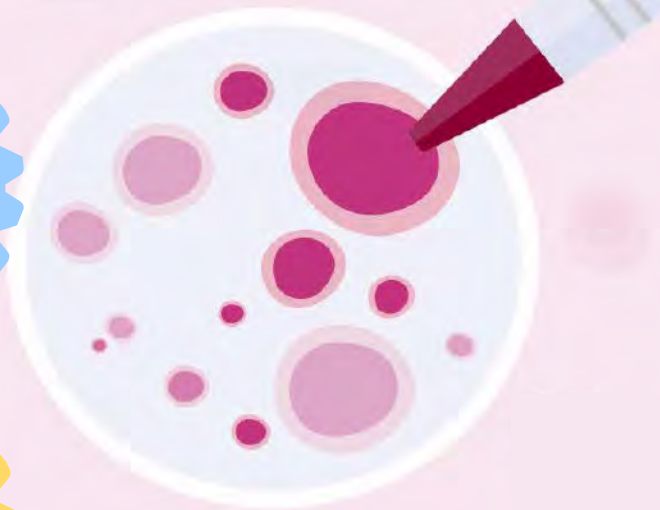
進階分析

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肝組織

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APPLICATIONS, INC.

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of Authenticated
Cell Cultures

ADME
/Tox



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Bio-Tracker™



細胞/胞器/
組織染色



3D & 2D 培養
各式耗材



Tanon[®]



嚴選熱門機型



超微量分光光譜儀



試管振盪器



酵素免疫分析儀

Thermo LabServ



微孔盤分析儀



四片式垂直電泳槽



核酸電泳槽



超微量分光光度計



生物安全櫃



二氧化碳培養箱



垂直電泳槽



轉漬電泳槽



四片式轉漬電泳槽



梯溫基因擴增儀



電源供應器



雙槽乾浴器



迷你離心機



中業科技有限公司
REALTEC TECHNOLOGY CO., LTD

台中市武漢街112號1F (04)2295-1789

rex.lan@msa.hinet.net 0958-817322

Allegra V-15R
桌上型冷凍離心機



3.0 L 最大容量
13,500 rpm/分
20,412 X g
搭配 10 種轉子
以最大速度運行僅 ≤ 55 dBA 可低溫運行

Allegra X-30
高速桌上型離心機



儀器最大容量 1.6 L
轉速可達 18,000 rpm
相對離心力可達 29,756 X g
擁有同類產品中最大轉速和相對離心力
簡潔快速的運行設置
廣泛靈活的轉子選擇 · 適用於多項應用領域
設計精簡 - - 僅 46 cm 寬
採用無刷式三相驅動系統以及自動轉子過速
識別系統

Microfuge 20R
多功能高速離心機



製冷型離心機
核酸和蛋白製備
萃取 / 純化 / 濃縮
液相分離和受體結合
蛋白質沉澱、顆粒和細胞碎片快速沉澱

Microfuge 16
桌上型微量離心機



轉速：200至14,800 rpm
相對離心力：16,163 X g
可設鄧時間為 10 秒至 99 分鐘
在溼度受控的冷室中 · 環境溫度為 4°C
至 40°C
傾斜安裝控制面板 · 包刮處碰鍵和封閉
式 LCD 螢幕 · 便於查看

BioMate™ 蛋白質電泳與轉漬系統



vPAGE 蛋白質二片膠電泳槽系統

含10孔齒梳 x 3、15孔齒梳 x 3、厚玻片 x 3、短玻片 x 5、製膠基座 x 2、製膠支架 x 2、密封防漏膠墊 x 3、電極芯、電泳槽替代檔板、剝膠鏟、10孔上樣托架、垂直電泳槽上蓋(帶電纜線)、下槽

對應膠片厚度可選：0.75 / 1.0 / 1.5 mm

貨號	內容物
VPAGE2G075	搭配 0.75mm 帶邊條厚玻片與齒梳
VPAGE2G100	搭配 1.0 mm 帶邊條厚玻片與齒梳
VPAGE2G150	搭配 1.5 mm 帶邊條厚玻片與齒梳

*隨貨贈玻璃晾乾架/離心管架各一組



vPAGE 蛋白質四片膠電泳槽系統

含10孔齒梳 x 5、15孔齒梳 x 5、厚玻片 x 5、短玻片 x 10、製膠基座 x 4、製膠支架 x 4、密封防漏膠墊 x 5、電極芯、共用電極芯、電泳槽替代檔板、剝膠鏟、10孔上樣托架、垂直電泳槽上蓋(帶電纜線)、下槽

對應膠片厚度可選：0.75 / 1.0 / 1.5 mm

貨號	內容物
VPAGE4G075	搭配 0.75mm 帶邊條厚玻片與齒梳
VPAGE4G100	搭配 1.0 mm 帶邊條厚玻片與齒梳
VPAGE4G150	搭配 1.5 mm 帶邊條厚玻片與齒梳

*隨貨贈玻璃晾乾架/離心管架各一組



vBLOT₂ 二片膠轉漬系統

含轉漬槽電極架、三明治夾板 x 2、海綿墊 x 5、冰盒 x 2、垂直電泳槽上蓋(帶電纜線)、下槽

對應膠片尺寸：7.5 x 10 cm

貨號	VBLOT2G
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vBLOT₄ 四片膠轉漬系統

含轉漬槽電極架、三明治夾板 x 4、海綿墊 x 10、冰盒 x 2、垂直電泳槽上蓋(帶電纜線)、下槽

對應膠片尺寸：8 x 9.6 cm

貨號	VBLOT4G
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*隨貨贈玻璃晾乾架/離心管架各一組



瑞柏
官方帳號上線
ID: rainbowbio



瑞柏生物科技股份有限公司
RAINBOW BIOTECHNOLOGY CO.,LTD.
0800-086-555 rainbow@rainbowbiotech.com.tw

北區 02-2811-8200
桃竹苗 03-666-0116
中區 04-2315-2922
南區 07-550-0680





ZEBRAFISH INNOVATION BIO-SERVICE

www.zebrafish.com.tw

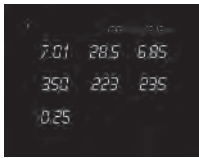
GENDANIO

www.gendanio.com

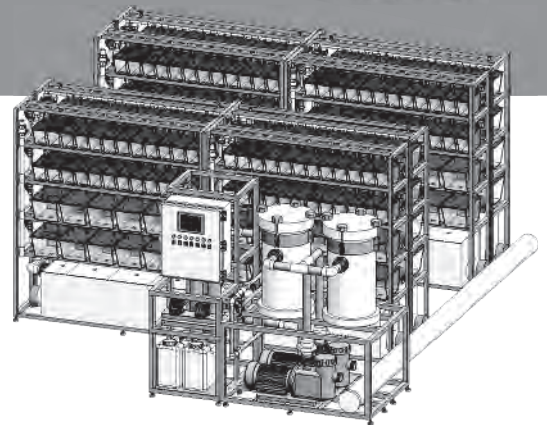
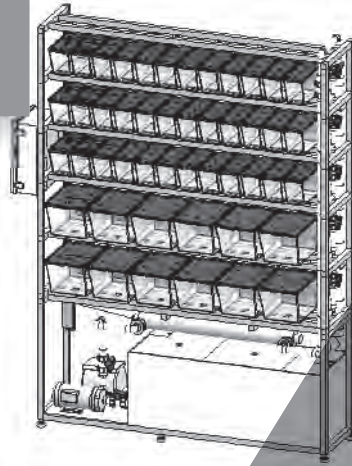
Region Distributor Are Wanted.

We sincerely invite you who are interested in becoming partner with GENDANIO BIOTECH INC. If you need further information, please email as below and our company will contact you.

EMAIL : service@gendanio.com



Real-time recorder with pH, EC, DO, Temp. sensor



01

Research total solution

- Zebrafish housing / Aquaculture research system
- Multifunctional water quality control system

02

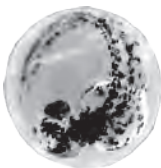
Products for zebrafish exp.

- Wild type zebrafish
- Embryos
- Tanks, Breeding Tank
- Feeds
- Filter



03

Zebrafish test service



- OECD 236 (Fish Embryo Acute Toxicity (FET) Test)
- OECD 203 (Fish, Acute Toxicity Test)
- ISO 15088 (Water quality-Determination of the acute toxicity of waste water to zebrafish eggs (Danio rerio))
- Bio-fuctional Test

斑馬魚生物檢測服務
水生動物實驗整合服務

群達海洋科技有限公司
TEL : +886 226-069-803





f 全球實驗魚@superazoo 🔍

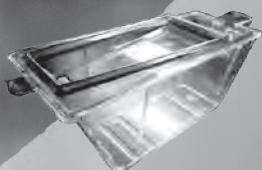
免費諮詢熱線09-0670-1979



生物實驗大量快篩系統

SPF 微型實驗室Micro Lab

多樣性 生物毒理/藥理檢測 (同時進行4-8組實驗)



新型滴流上蓋

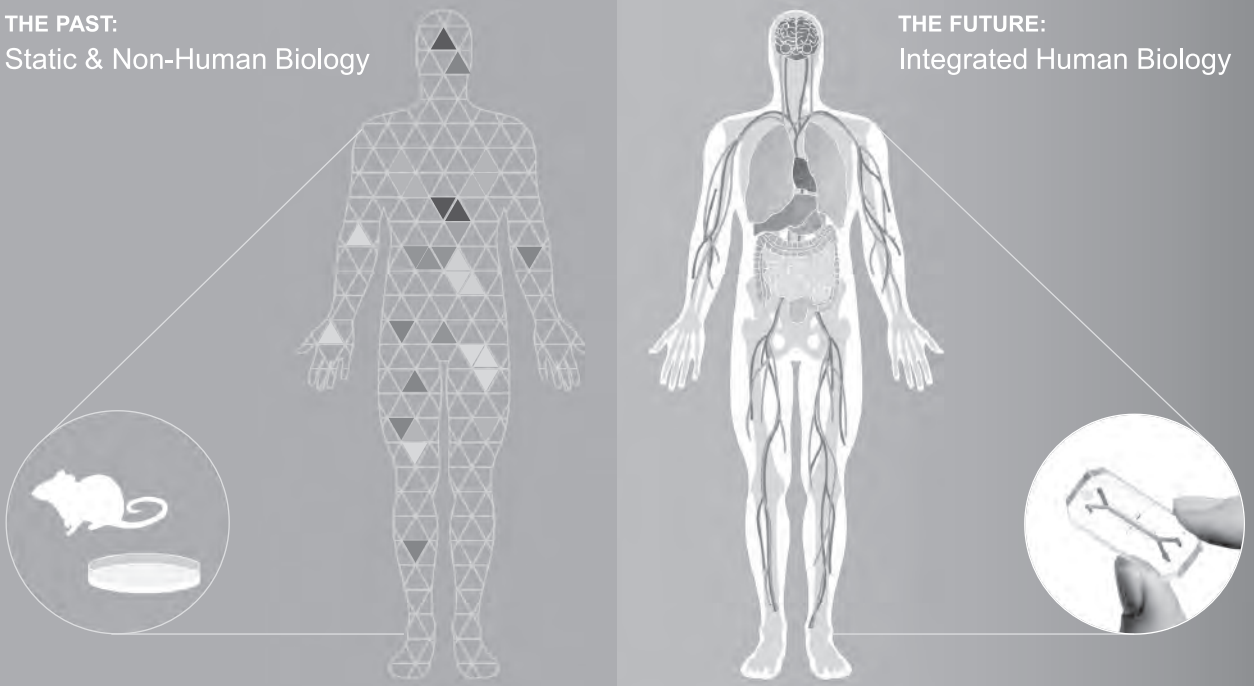


可高壓滅菌食品級PC材質
斑馬魚專用產卵配對盒



THE PAST:
Static & Non-Human Biology

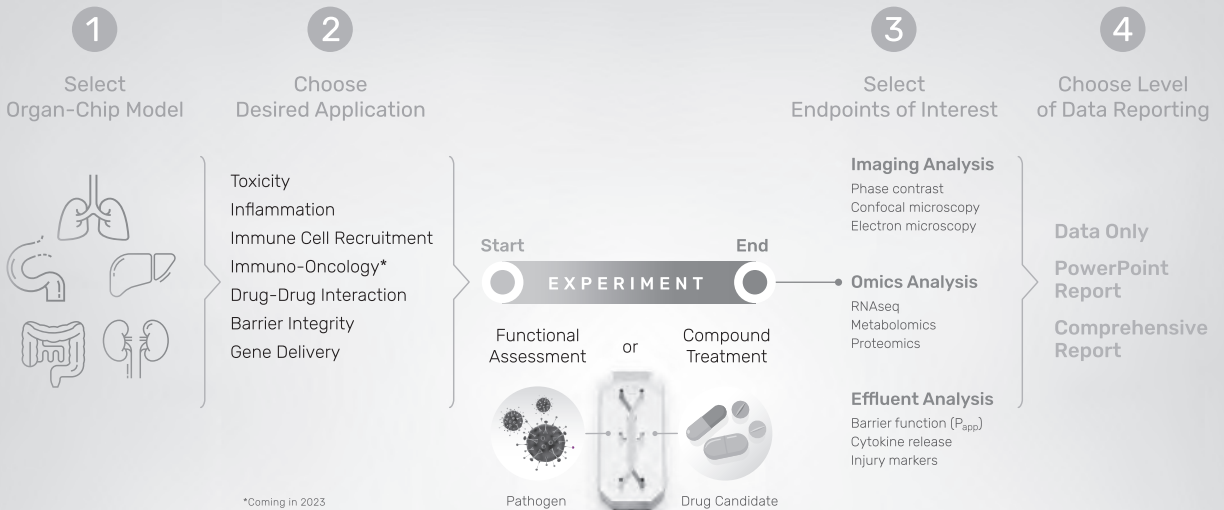
THE FUTURE:
Integrated Human Biology



進階生技 提供多國查核通過—臨床前GLP毒理服務

以及 **FDA現代化法案2.0** 非動物性替代方案

 **emulate** 人體擬真器官晶片系統





Reduced freshwater and arable land usage as well as carbon footprint

FungGiTM meet

2023.7.18 (TUE) 15:50~17:50 (R301)

Food Safety and Functionality



Clean Process



Muscle-like Texture



Less Carbon



Free-Beany Flavor



Juicy



Mycoprotein

—An Alternative Sustainable Protein Source



GRAS

Fusarium venenatum



Utilizing freshwater as well as seawater for production



Flavored/ Colored final product : Whole cuts of variable thickness



Advantages with GK Mycoprotein

Reduce Resources

Reduce land, water usage pollution and carbon emissions



Controlled-Environment

In-house controlled-environment agriculture system not affected by climates



Contaminants free

Free of toxic that may retain and accumulate along the food chain



High Nutrition

High protein content (50%) and high dietary fiber (25%) (Dry powder)



Less Processing

Juicy, neutral flavor with an intrinsic meat-like texture so no need for extrusion



Reasonable Price

Stabled prices to support food shortages during wartime



Overcome traditional Plant/Soy-based Protein

Extract and isolate protein with large amount of water and acid-base solution

Large Waste

The prevalence of soy allergy range from 1 to 6 per 1,000 adults

Food Allergy

May increase antibiotic resistance due to their altered DNA

Genetically Modified

Slightly poor nutrition: lack of specific amino acids

Less Nutrition

Not juicy and need to be extruded to produce meat-like texture

More Processing

Will get more expensive with climate change, war and food crisis

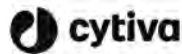
Variable Price

高通量非動物性試驗系統

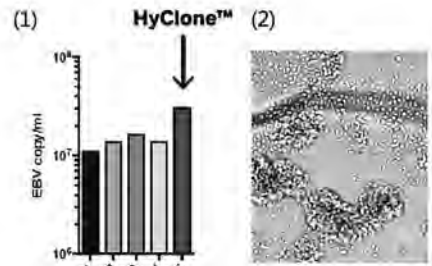
HyClone™ 最高品質北美血清 Characterized FBS



SH30396.03



- ◆ 0.1 μm 三次過濾技術
- ◆ 超低 Endotoxin 及 Hemoglobin
- ◆ 解凍及繼代後高存活率
- ◆ 初代細胞培養首選
- ◆ 適用於各種細胞株應用



- (1) qPCR 檢測 Virus Titer 高於 10^7 copies/mL，更優於它牌血清
- (2) 確認受感染的 B cell 轉化成淋巴母細胞株 (Lymphoblastoid Cell Lines)

BMG LABTECH 全功能盤式判讀儀 CLARIOstar Plus

- ◆ 專利濾片式 LVF 全波長設計
 - ◆ 兼具實驗彈性與靈敏度
- ◆ EDR 技術
 - ◆ 提升單次偵測動態範圍高達 8 Decades
- ◆ 自動化 Gain 值與 Z 軸高度最佳化
 - ◆ 實驗結果更靈敏
- ◆ 可進行多種偵測實驗
 - ◆ 吸收光/ 螢光、冷光/ 偏極化螢光/ 延遲性螢光/ALPHA
- ◆ 可加裝獨立氣體控制儀 (Atmospheric Control Unit)
 - ◆ 彈性設定 CO_2 、 O_2 含量
 - ◆ 觸控螢幕介面，即時偵測調整氣體比例



岑祥股份有限公司

台北：02-27851156
台中：04-24710255

新竹：03-5307592
高雄：07-3431735

台南：06-2071392
info@thco.com.tw



官網

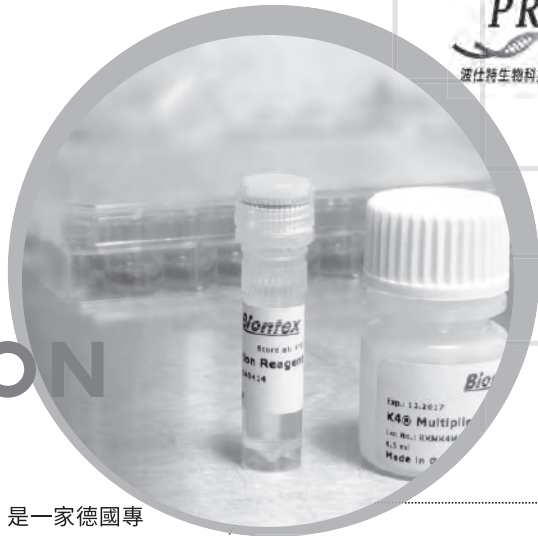


LINE@

Biontex

德國新一代
**TRANSFECTION
REAGENT**

PRO TECH
波仕特生物科技

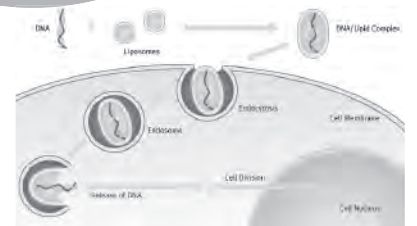
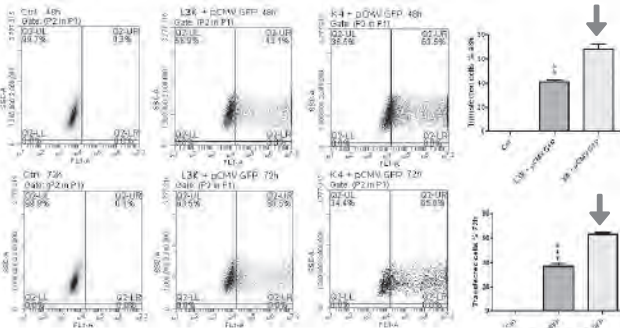


K4® TRANSFECTION SYSTEM

Biontex Laboratories GmbH 於1997年在德國成立，是一家德國專門研究轉染試劑和技術的公司，致力於開發將遺傳物質和蛋白質高效送入真核細胞的產品，其研發出的產品具有容易操作、低毒性和高效能的優勢。

最新開發出的轉染系統K2/K4 Transfection System以獨特的策略來克服轉染時細胞的先天免疫。細胞先天免疫被認為是成功轉染的障礙，真核細胞透過此系統檢測外來物質，如LPS、細菌或病毒的核酸，並採取防禦措施防止潛在病原體的侵入甚至會啟動細胞凋亡過程。此外，細胞會通過訊息傳遞給鄰近的細胞，從而建立防禦機制。

K4與競爭廠牌比較結果 in HeLa cell



在細胞生物學中，轉染是將外來遺傳物質DNA或RNA引入真核細胞，即使在今天，脂質轉染的複雜過程仍未完全了解。目前公認的轉染階段：當陽離子脂質Liposomes遇到帶負電荷的核酸時，會重新形成脂質複合體 Lipoplexes，真核細胞可以通過 Endocytosis (胞飲作用) 主動攝取脂質複合體 Lipoplexes 進入細胞；DNA 通過 Endosome 膜的破壞 (滲透作用和融合作用) 獲得釋放，在有絲分裂過程時 DNA 得以進入細胞核中。

K4 轉染系統包含陽離子脂質轉染試劑和 Multiplier 倍增器。具有專利的 Multiplier 倍增器是由多種抑制細胞訊息的抗體及拮抗劑所組成，可降低細胞檢測外來核酸的能力。在許多情況下，與傳統的轉染試劑相比，K4 轉染系統可以提高轉染效率以及細胞活力。多用途應用: DNA (plasmids, bacmide), RNA (mRNA, miRNA, and siRNA), 以及修飾核酸 (e.g. antisense oligonucleotides) 轉染

Transfection efficiency was measured using flow cytometry. Both after 48h and 72h from transfection quantification showed highest transfection efficiency with K4 Transfection System against L3K. Data were collected from three independent experiments.

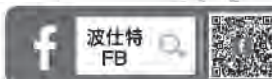
K4® Transfection System (Cat. No.: T080) 產品優勢:

- 廣效型轉染試劑: 適用 plasmid、mRNA、siRNA 和 miRNA 及共轉染
- 降低細胞偵測外來核酸的能力
- 適用於 Transient & Stable Transfection
- 無血清抑製作用 (serum inhibition): 使用時不需置換培養基
- 與市售試劑相比轉染效率顯著提高
- 毒性較低: 維持細胞狀態佳及存活率高



K4 System
Reference

0800-231-530



漢達生技

以「科學」、「誠信」的經營理念
增進病患福祉，提升人類生活品質

漢達生技醫藥股份有限公司因應國內外醫藥法規政策及生技產業發展趨勢，依產品特性及高技術門檻等之利基型學名藥，以藥物劑型及處方設計為基礎研發特色，專注及改善於505(b)(2)新藥及現有藥物之特性，創新新藥之開發，新劑型、新使用劑量、新使用途徑、新適應症、新療效複方以高技術門檻學名藥為開發策略，針對某些利潤較佳及風險較低之產品以自行開發產品模式 (Self-Development Model) 取得產品所有權，使產品利潤最大化；對開發風險及開發費用較高之產品則考量與國內外著名製藥公司以共同開發模式進行產品合作(Co-Development Model) 在可獲得相當利益下，降低整體開發風險，亦或是和國際著名藥廠以共同開發模式或提供研發授權或技術服務 (Out-License Model) 合作，執行新藥研發。

下表為已開賣和研發中之藥品：

產品	適應症	現況	產品優勢
Quetiapine XR	思覺失調症	◆2016年於加拿大上市銷售。	◆取得完整五項劑量之FDA最終生產批准 (Final Approval)。
Dexlansoprazole DR capsule	糜爛性逆流性食道炎、非糜爛性胃食道逆流疾病之症狀治療	◆2017年4月取得美國食品藥物管理局 (FDA) 學名藥審查最終核准。 ◆2022年11月於美國市場上市銷售。	◆與原廠達成和解。 ◆通過美國FDA學名藥申請審查，取得30mg及60mg最終核准(Final Approval)。
TASCENSOT TM ODT	多發性硬化症	◆於美國時間2022年3月4日與Cycle簽訂美國市場獨家銷售授權合約，負責美國市場之銷售。 ◆通過美國FDA新藥申請審查，取得最終核准(Final Approval)	◆與原廠達成和解。 ◆強化產品口溶速崩效果。 ◆易吞嚥服用、不具苦味。 ◆安定性之口溶速崩錠劑。

類型	產品	適應症
505(b)(2)新藥	HND-027	癌症
	HND-033	癌症
高技術門檻學名藥	HND-026	腸胃科用藥
	HND-004	第二型糖尿病患者用藥
	HND-032	戒菸輔助劑



〈掃碼了解更多〉

以臺灣作為全球營運及專業製劑研發中心，擁有專業研發團隊及可因應市場變化之全盤性之策略規劃。

以新藥成功開發之模式逐步建立公司品牌，產品開發選題具獨特性和市場潛力，採不同營運模式進行，規劃國際化營運佈建，投入資金佈局全球，加速產品上市時程，並藉由美國子公司及中國杭州孫公司跨入世界前兩大藥物銷售區域，和國際製藥業展開密切合作關係，提升公司在國際市場醫藥研發產業中的能見度，為公司創造短期營收及獲利，成為國際化研發型專業之製藥公司。



漢達生技醫藥股份有限公司
Handa Pharmaceuticals, Inc.

TAF OECD GLP & TFDA GLP 雙認證實驗室

台美檢驗，量身訂做您的檢測需求

主要檢測項目

類別	試驗項目	
化學品	<ul style="list-style-type: none"> • 化學品動物毒理試驗 一到四級 • 化學品生態毒理試驗 一到四級 • 全球化學物質註冊之毒理試驗服務 • REACH 毒理試驗服務 	
健康食品	<ul style="list-style-type: none"> • 安定性 試驗 • 功效性 試驗 • 安全性 試驗 • 細胞篩選試驗 	<ul style="list-style-type: none"> • 健康食品標章認證申請 • 一般食品檢驗 • 功效人體試驗
生醫藥	<ul style="list-style-type: none"> • 抗菌 / 抗病毒試驗 • 疾病動物模式 • 細胞表面抗原檢測 • 間質幹細胞鑑定 • 細胞純度 / 存活率檢測 • 消毒劑確效 • 菌種數據庫 	<ul style="list-style-type: none"> • 無菌性試驗 • 內毒素試驗 • 黴漿菌測試 • 菌種鑑定 • 環境檢測 • 水質檢測
其他檢驗項目：食品、美妝保養品、環境、醫療器材、CRO 委託實驗、實驗室能力試驗		

客製化開發流程



台美檢驗全方位服務，為您量身訂做精準試驗，幫助您迅速上市產品

安全性試驗
 功效性試驗
 安定性試驗
 衛生安全檢測
 健康食品查驗登記