

行政院及所屬各機關因公出國人員出國報告  
出國類別：其他(國際會議)

## 出席『第十一屆IUPAC 國際農藥化學會議』報告書

服務機關：行政院農委會農業藥物毒物試驗所

姓名職稱：段淑人 研究員

李貽華 副研究員

孫 斐 副研究員

徐慈鴻 助理研究員

派赴國家：日本

出國期間：2006年8月5日至2006年8月12日

報告日期：2006年10月12日

## 摘要

第11屆國際純化學與應用化學(International Union of Pure and Applied Chemistry, 簡稱IUPAC)聯合會於2006年8月6日至8月11日在日本神戶舉行,計有來自67個國家的1,161人參加,臺灣共有6人與會。本屆會議主題包括:植物保護的發展(Evolution for Crop Protection)以及大眾健康與環境安全(Public Health and Environmental Safety)。全部議程涵蓋範圍廣泛,無論農業化學、毒理評估、環境影響評估或食品安全等,從基礎研究至應用均有涉及,本會議聚集了世界各地從事與農業有關的化學、生物學、生物技術、毒理學、環境科學及環境健康議題有關的學者,就有關農藥化學、生物科學及環境科學等,從學術研究及技術層面交換意見及心得。大會安排各類活動相當豐富,許多議題或部份相關議題同時在不同場地舉行,本所與會人員就專長領域或有興趣者分別參與。本屆最值得關注的問題,應屬日本自今(95)年5月29日起實施的藥物殘留正面表列制度,大會除安排日本專家學者就其制度建立的背景詳加說明外,並安排多位歐美學者就此制度的實施,在技術層面仍待努力處做討論。其他例如在環境風險評估、管理觀念及風險溝通上,以及持久性有機污染物方面之研究等,均提供本所與會人員學習的機會。整體而言,本會議提供本所參加人員在短時間內了解歐美日等國在相關領域中研究發展的脈動,及目前全球所關心的議題和各國的管理規範及策略等,並建立與國外學者互動的平台,對於個人或整體學術水準及研究品質的提升,具有正面作用。

## 目次

壹、目的	3
貳、過程	4
參、心得	11
肆、建議事項	15
附錄 第 11 屆國際純化學與應用化學聯合會議程	16

## 壹、目的

國際純化學與應用化學聯合會 (International Union of Pure and Applied Chemistry, 簡稱 IUPAC), 是一個致力於促進化學領域相關研究及將化學應用於人類的科學性、國際性的非政府組織, 也是各國化學會的一個聯合組織, 以公認的化學命名權威著稱, 並且主導全球許多化學科學研究及應用有關的議題。聯合年會於1963年首次在英國倫敦召開後, 每4年召開大會乙次, 本屆(第11屆)大會在日本神戶舉行, 係由IUPAC及日本農藥協會(Pesticide Science Society of Japan)所主辦。

本屆會議的主題包括: 植物保護的發展(Evolution for Crop Protection) 以及大眾健康與環境安全(Public Health and Environmental Safety)。全部議程涵蓋範圍廣泛, 無論農業化學、毒理評估、環境影響評估或食品安全等, 從基礎研究至應用均有涉及, 目的在聚集世界各地從事與農業有關的化學、生物學、生物技術、毒理學、環境科學及環境健康議題有關的學者, 就有關農藥化學、生物科學及環境科學等, 從學術研究及技術層面交換意見及心得。對於從事相關研究的人員而言, 不啻提供了一個與同行間互相討論、彼此學習及經驗分享的機會, 也得以掌握歐美日等國研究發展的脈動, 以及在這個領域中, 目前全球所關心的議題和各國的管理規範及策略等。

## 貳、過程

第11屆國際純化學與應用化學聯合會，於2006年8月6日至8月11日在日本神戶舉行，大會主席由主辦國日本的農藥協會理理事長 Dr. Hideo Ohkawa擔任。

### 一、與會人員

本屆會議計有來自67個國家的1,161人參加，詳見表一。除主辦國日本出席人數達650人居冠外，由美國、英國及德國參加的人數，亦可睽見此項會議受到歐美等國的重視，中國大陸及韓國等參加人數亦有30人以上，臺灣則僅有6人參與此次會議，在主掌國內農業脈動的農委會，因經費有限，本屆亦僅有1人獲農委會補助參與此次會議，坐失與國際間交流學習的良機，實屬可惜。

表一、參加第11屆國際純化學與應用化學聯合會會議的國家

國家	人數	國家	人數	國家	人數
Argentina	2	Israel	10	New Zealand	5
Australia	11	Italy	2	Nigeria,	6
Austria	1	Morocco	1	Norway	2
Bangladesh	3	Oman	1	Pakistan	2
Belarus	1	Palestinian Authority	1	People' s Republic of China	46
Belgium	5	Peru	1	Philippines	4
Brazil	5	Saudi Arabia	1	Republic of Korea	44
Cameroon	1	Serbia & Montenegro	1	Romania	5
Canada	5	Solomon Island	1	Russia	5
Chile	1	South Africa	1	Senegal	2
Costa Rica	3	Spain	1	Singapore	3
Egypt	3	Syria	1	Sri Lanka	4
Ethiopia	1	The Gambia	1	Sudan	5
France	5	Uganda	1	Switzerland	12
Germany	59	Japan	650	Taiwan	6
Ghana	4	Jordan	2	Thailand	10
Greece	2	Kazakhstan	2	The Netherlands	2
Haiti	1	Kenya	2	Ukraine	4
Hungary	7	Kyrgyz Republic	2	United Kingdom	35
India	17	Malaysia	3	USA	108
Indonesia	1	Mexico	2	Vietnam	7
Iranh	3	Nepal	2	<b>總計</b>	<b>1,161</b>

## 二、會議內容簡介

本屆議程，可分成7部份，包括商品展示活動及6類的學術活動。除了第一天的keynote speech，及每天一場的plenary lecture外，每天同一時段，共有5 - 7個不同主題的一系列學術活動同時在不同場地舉行；中餐及晚餐時段，另有與當天session lecture有關的最新資訊及相關管理規定等的講演；在各項演講/討論議題舉行的同時，另有壁報論文同時展示。這些活動尚不包括以日文為主、針對日本國內大眾，對日本政府推行藥物殘留檢測正面表列制度的相關說明會(special workshops)，以及與日本消費者面對面溝通座談會，以幫助社會大眾對該國政府措施的認同。詳細議程見附錄。

在keynote speech 和 plenary lectures部份，大會邀請產業界、學術界及官方人士從不同觀點，就不久的將來有關農業、農業化學及環境健康等議題進行論述。在session lecture部份，大會邀請特定國家的學者就近年來本領域中所關心的各種課題，就該國的現況及未來發展趨勢進行介紹，其中包括日本對藥物殘留檢測採取正面表列措施的整體架構及孕育過程，一些相關外銷國家如中國大陸的因應措施，以及部份歐美學者從學術角度探討該制度在執行上尚待進一步釐清的問題等。Poster presentations部份則予從事與農業化學研究有關的各種研究人員包括學者及學生等呈現研究成果並進行交流的機會。Selected poster workshops則係由大會自參加poster presentation 的作者中遴選出數位，進行口頭的報告。Luncheon and evening seminars是由贊助者介紹有關農業、環境議題、食品安全等最新資訊及相關管理規定，同時提供大家共同討論的平台。

六個學術活動如后：

- (一) Keynote Speech：1場；
- (二) Plenary Lectures：4場；
- (三) Session Lectures：20個主題，每主題由5-7個講者發表相關論述或研究成果；

前述3個學術活動探討主題見表二。

表二、第11屆國際純化學與應用化學聯合會議演講/討論議題

活 動 種 類	主 題
Keynote Speech	Challenges and Opportunities in Crop Production Over

活動種類	主 題
	the Next Decade
Plenary Lectures	1: Searching environmentally benign methods for pest control: Reflection of a synthetic chemistry 2: Hunger and malnutrition amidst plenty: what must be done? 3: The Current status of pesticide management in China 4: Food Safety Assessment and International Trade Implications of Pesticides in Food
Session	1: Drug Design based on Agrogenomics 2: Biopesticides and Transgenic Crops 3: New Chemistry 4: Natural Products 5: Bioregulator for Crop Protection 6: Control agents for Vectors and Communicable Diseases 7: Mode of Action and resistance Mechanism - Insect Control 8: Mode of Action and resistance Mechanism - Weed Control 9: Mode of Action and resistance Mechanism - Plant disease Control 10: Advances in Formulation and application technology 11: Metabolism and Toxicology 12: Resistance Management and IPM 13: Environmental Chemistry/Residue Analysis 14: Environmental Risk Assessment, Regulatory Aspects, and Risk Communication 15: Environmental Fate and Ecological Effect 16: Monitoring and remediation of Persistence Organic Pollutants 17: Emerging technologies in Crop Protection and Production 18: Genomics, Proteomics, Metabolomics 19: Global Food Quality and Human Health Protection Issues 20: Global Food Safety and trade Issues

(四) Poster Presentations : 共分3大類—

Category I

1. Chemistry Including Natural Products
  - (1) Insect Control

<ul style="list-style-type: none"> <li>(2) Weed Control</li> <li>(3) Disease Control</li> <li>(4) Plant Growth Control</li> <li>(5) Vector Control</li> </ul> <ul style="list-style-type: none"> <li>2. New Technologies for Lead Generation and Drug Design</li> <li>3. Biopesticides and Transgenic Crops</li> <li>4. New Technologies for Pest Control</li> </ul>
<p>Category II</p> <ul style="list-style-type: none"> <li>1. Mode of Action, Resistance Mechanism and New Targets <ul style="list-style-type: none"> <li>(1) In Insect Control</li> <li>(2) Weed Control</li> <li>(3) Disease Control</li> <li>(4) Plant Growth Control</li> <li>(5) Vector Control</li> </ul> </li> <li>2. Resistance Management and IPM</li> <li>3. Metabolism and Toxicology</li> <li>4. Formulation and Application</li> </ul>
<p>Category III</p> <ul style="list-style-type: none"> <li>1. Residue Analysis</li> <li>2. Human Exposure</li> <li>3. Environment Fate and Ecological Effect</li> <li>4. Risk Assessment and Regulation</li> <li>5. Monitoring and Remediation of POPs</li> </ul>

據大會統計，不包括現場報名參加者，本屆會議計有44個國家共577篇壁報論文發表，在研究主題的分佈上，與前兩屆會議比較，在有關Mode of Action & Resistance、Natural Products 以及Residue issues 方面的研究有明顯增加的趨勢，而有關Formulation & Application等方面的研究，近年來則有減少的現象，見表三。由研究主題分佈情形變化，可知近年國際上農業化學研究的趨勢，而農藥殘留顯然為國際上主要關注的議題。

表三、近三屆海報論文發表主題類別比較

主題類別	London (1998)	Basel (2002)	Kobe (2006)
1. Synthesis/Structure-Activity Relationship	12%	18%	<b>18%</b>
2. Natural Products	14%	6%	12%
3. Mode of Action and Resistance	12%	16%	21%
4. Metabolism	7%	5%	4%
5. Formulation/Delivery/Application	9%	11%	4%



主題類別	London (1998)	Basel (2002)	Kobe (2006)
6. Environmental Fate	18%	22%	<b>16%</b>
7. Residue in Food and the Environment	19%	12%	<b>15%</b>
8. Regulation and Risk Assessment	9%	10%	7%
9. Transgenic and new technologies	-%	-%	3%
Total poster application number	1,101	599	577

(五) Selected Poster Workshops：計有15場。

(六) Luncheon and Evening Seminars：計有Luncheon Seminars 18場，Evening Seminars 10場。

### 三、大會出版品

本屆會議，主辦單位事前共編印議程相關資料計5冊/種，包括：

- (一) Program and Congress Guidebook
- (二) Book of Abstracts (1)：為keynote lecture, plenary lectures, session lecture及special workshops之講演摘要；
- (三) Book of Abstracts (2)：為壁報論文摘要
- (四) Abstracts Book for Luncheon and Evening Seminars
- (五) CD-ROM: 燒錄有所有演講/壁報論文之摘要以及與會人員名錄，並具有檢索功能。

此外，大會自8月6日至8月10日每日出版活動公報(Kobe gazettes，見<http://www.iupac2006.jtbcom.co.jp/>)，除刊有前一日各項演講重點摘錄外，並有活動照片、當日議程、人物介紹等，甚至神戶當天的天氣預報，處處可見主辦單位的用心，深獲與會人士的好評。

### 四、參與議程摘錄

由於大會安排各類活動相當豐富，許多議題或部份相關議題同時在不同場地舉行，與會人員僅能就專長領域或有興趣者擇一參與，確實有遺珠之憾。表四為公費(孫斐副研究員)奉派出席本次會議人員行程及實際參與之活動的摘要；其餘三人均依各自研究領域及業務需要，參與議程中不同主題之研討。

表四、出席『第十一屆IUPAC國際農藥化學會議』主要行程及活動摘要

日期	行程及活動內容
2006/08/05	去程(自桃園中正機場前往日本神戶)

日期	行程及活動內容
2006/08/06	<ol style="list-style-type: none"> <li>1.報到</li> <li>2.參加開幕典禮</li> <li>3.參加keynote speech</li> <li>4.參加開幕歡迎酒會</li> </ol>
2006/08/07	<ol style="list-style-type: none"> <li>1.參加plenary lecture 1</li> <li>2.參加session 20 : Global food safety and trade issues</li> <li>3.參加luncheon seminar 4 : Specialty crop program and the IR-4 model</li> <li>4.負責個人發表之壁報解說並參觀商品展示</li> <li>5.參加session 19 : Global food quality and human health protection issues</li> <li>6.參加evening seminar 1 : Probabilistic approaches in dietary risk assessment</li> </ol>
2006/08/08	<ol style="list-style-type: none"> <li>1.參加plenary lecture 2</li> <li>2.參觀壁報論文 : Residue in food and the environment</li> <li>3.參加luncheon seminar 8 : How to refine and evaluate a TER - aquatic risk assessment for pesticides in Europe</li> <li>4.負責個人發表之壁報解說並參觀商品展示</li> <li>5.參加 session 15 : Environmental Fate and Ecological Effect</li> <li>6.參加 Evening seminar 6 : Eurofins agrochemical s group presents “ An update on EU regulatory requirements”</li> </ol>
2006/08/09	<ol style="list-style-type: none"> <li>1.參加plenary lecture 3</li> <li>2.參加Special workshop for “Positive List”</li> <li>3.參加luncheon seminar 10 : Japan positive MRL system: Regulatory and trade considerations</li> <li>4.參觀壁報論文 <ol style="list-style-type: none"> <li>(1) Regulation and Risk Assessment</li> <li>(2) Environmental Fate</li> </ol> </li> <li>5.參加 session 14 : Environmental risk assessment, regulation</li> <li>6.參加 congress dinner</li> </ol>
2006/08/10	<ol style="list-style-type: none"> <li>1.參加plenary lecture 4</li> <li>2.參加selected poster workshop-12 : Environmental fate</li> <li>3.參加luncheon seminar 17 : INFOCRIS and IUPAC compendium of agrochemical information</li> <li>4.參觀壁報論文 <ol style="list-style-type: none"> <li>(1) Regulation and Risk Assessment</li> <li>(2) Metabolism</li> </ol> </li> <li>5.參加 session 13 : Environmental chemistry/residue analysis</li> </ol>

日期	行程及活動內容
	6.參加 poster award & closing ceremony
2006/08/11	1.參觀Nihon Nouyaku Co., Ltd. 2.觀光：Todaiji-Temple
2006/08/12	返回國內

## 五、第12屆IUPAC會議預告

在8月10日大會的閉幕儀式上，由下一屆會議主辦國介紹第12屆會議相關資訊：

- (一) 舉辦地點：澳洲墨爾本
- (二) 時間：2010年
- (三) 暫訂主題

1. Discovery of New Chemicals
  - (1) Synthesis
  - (2) Natural products
  - (3) Molecular biology
  - (4) Mechanism-based discovery of crop protection chemicals
  - (5) Biology of pests, diseases and weeds
2. Regulatory and Residue
  - (1) Chemically induced crop traits
  - (2) Induced chemical defence in plants
  - (3) Globalisation and harmonization
3. Formulation and Delivery
  - (1) Chemical ecology
  - (2) Attraction beneficial insects for pest management
  - (3) Application technology
  - (4) Public health pesticides
4. Crop Protection
 

Problems in emerging economies
5. Crop Biofactories
 

Emerging technologies
6. Environmental Fate and Safety Assessment
  - (1) Modeling
  - (2) Environmental risk assessment
  - (3) Environmental persistence, degradation and transport

## 參、心得

### 一、 有關日本正面表列最大殘留容許量制度

此議題及相關研究(包括檢測技術等)為本屆會議最熱門的主題，大會安排有專題報告及午餐討論等活動，並有日本學者發表了多篇有關檢測技術的壁報論文。

依日本Shoji Miyagawa 博士的說明，該制度係日本厚生勞動省(Health, Labor and Welfare, MHLW)參考過去3年來日本國內相關殘留限量資料、國際法典委員會(Codex)所訂的標準，以及主要貿易伙伴國國內的標準，而研發出的農藥在食品中最大殘留容許量(maximum residue limits, MRLs)”正面表列(positive list)”制度。而自今年(2006年)5月29日開始實施這個新的食品安全制度，對國產及進口食品開始強制實施745種農藥殘留的檢測後，實施的第1個月，檢出超過殘留標準的食品數量，是採用舊標準時的5倍，Miyagawa 博士特別強調，基本上這些檢出的量並不會對人體健康有所影響，但卻是貿易上的標準問題，以及是日本大眾所關心的食品中農藥殘留問題。據日本學者指出，該國有67.6%的社會大眾對於食品中農藥殘留問題提出質疑，而Codex在研訂各種食品中的MRL的速度太慢，無法滿足該國的需求。

維護國民飲食的健康，各國政府責無旁貸。日本為農產品進口大國，進口國家包括中國、菲律賓、臺灣及韓國等，包含熱帶、亞熱帶及溫帶國家，由於各國氣候、蟲害不同，各國使用的農業化學藥劑的品目，基本上是遠超過日本國內使用的種類，無論是為了降低該國國民經由飲食暴露殘留藥物的風險，或者是一種貿易障礙的手法，日本政府所採取的正面表列措施，雖然各國學者對某些藥劑的標準認為仍有值得商榷之處，但基本上仍持肯定的態度，因為對人體健康不會造成危害是化學藥劑被允許使用的先決條件。

在以日本為農產品出口第一大國的台灣，因應日本新制的實施，農委會已採取多項措施，如加強用藥管理及充實農藥殘留檢驗設備與能量等。但最重要的是如何落實國內農產品生產過程應符合優良農業操作標準，包括應針對農民及出口業者進行再教育等問題，相信這也是其他輸出國目前或將來必須努力的主要課題。尤其是各國對於藥劑使用/適用的規範因農作物生長環境及防治的病

蟲害有所不同，如何協調該國優良農業操作標準與日本正面表列的落差，是輸出國必須關心的問題。研訂國際上統一的殘留標準，雖然在技術層面上仍有許多待解決的問題，但是在農業化學物質的管理上是有其必要的，以避免其成爲貿易障礙的手段。

## 二、 藥物殘留檢測技術及應用上仍待努力的問題

農產品品項繁多，在藥物殘留的檢測上，如何避免基質的干擾而提高檢測的檢測極限及回收率，一直是研究人員所關心的問題，在本屆會議的壁報展示中，仍有許多相關的研究，以及各國針對不同作物所進行檢測的結果及安全評估等論文的發表，此部份亦爲本所殘毒管制組近年的研究主軸。

另外，在殘留檢測技術上，檢測極限的計算及樣品檢出結果低於檢測極限時結果如何運用等問題，一直是我們在建立殘留檢測分析方法，以及針對農產品中農藥殘留進行取食安全評估時，根據參考文獻運用時，認爲有困擾或有疑慮直得進一步探討的問題。在本屆會議中，除有美國環保署(US EPA)研究人員及IR-4的成員發表相關論述外，藉由面對面的溝通及研究心得的交換，對彼此的研究均有助益，並根據對方提供的相關資料及所設計的程式等，正嘗試運用於我們的研究上。

## 三、 有關環境風險評估、管理觀念及風險溝通

由歐盟、美國及日本學者，對該國有關農藥對環境風險評估的要求等的介紹知，基本上歐美等國所要求的風險估計資料是類似的，但美國的特別處是，根據Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)，針對瀕危物種必須另與評估，並且立法要求應分析使用該農藥的生態風險，以及經濟利益，以取得平衡。在歐盟，有關環境安全評估的立法則必須考量區域性及個別會員國的要求；日本由於農作物主要爲水稻，故在環境安全評估上主要考量對水生生物的衝擊及國人經由飲用水暴露殘留農藥的風險，但也同時朝向對環境中其他非目標生物安全評估的方向努力。

事實上，環境保護爲近20年來世界各國所努力的重要課題，如何降低農藥對生態環境的衝擊備受重視，不僅產業界輻力於對環境安全農藥的研發，各國政府在管理上也以追求生物多樣性、生態平衡的維護爲首要目的，因此在對環

境安全的評估技術上，不斷地檢討改進，對於指標生物的選擇也追求多樣性，例如有多篇壁報論文探討農藥對陸生動物蚯蚓的毒性影響，力求兼顧產業發展及生態平衡。反觀國內，近年來有關農藥對環境安全的評估上，在管理制度面，已停滯不前，與歐美日等國管理制度相較，確實應該檢討。當然，風險評估愈繁瑣，風險溝通愈為重要，但要維護我們的環境安全，是有必要繼續努力的。

經由商品展示的參觀知，目前國際上已有多家私人公司接受委託，在專屬的實驗室中從事於環境安全評估的資料製備，例如瑞士的RCC公司及英國的Huntingdon公司等在各個國家設有完備的環境毒理實驗室，由商機的呈現，亦可見此領域受到的重視。

#### 四、 持久性有機污染物(Persistent Organic Pollutants, POP)方面之研究

有關「持久性有機污染物對環境之衝擊」研究發表多以監測及復育為主，日本有3篇報告是利用transgenic plants來偵測環境中POPs類物質(包括dioxins、PCBs及ER類污染物)，分別將有AhR(aryl hydrocarbon receptor)-reporter gene或者ER(estrogen receptor)-reporter gene轉殖到植物體(此原理與本所戴奧辛生物監測方法的原理相同，但轉殖對象為植物體)，所利用的植物包括阿拉伯芥及牽牛花(開花植物)，所使用的reporter gene包括GFP(green fluorescent protein)或者color gene等，當植物體內累積POPs物質時植物花的顏色會發生改變，或者由GFP的變化(mRNA的變化或螢光強度的變化)監測POPs的累積情形。有一篇是利用*Perna viridis*(綠色長嘴蚌，俗名：淡菜)體中POPs之累積情形，長期監測亞太地區POPs之變化。比較亞太地區人奶中之PCDDs及PCDFs之含量，以了解有機污染物透過食物鏈之影響變化。農作物及水、土中多環芳香族碳氫化合物(PAHs)之監測等。顯示本所之研究方向與國際趨勢相符。

#### 五、 Nihon Nohyaku公司研究中心參訪

Nihon Nohyaku為日本第一家農業化學公司，建立於1928年，其新的研究中心建立於1995年位於大阪南部，堪稱為一設備完善新穎的建築，主要從事化學合成研究、製劑研究、醫藥研究、安全性研究及生物研究等，多項實驗的運作已取得優良實驗室操作的認證(GLP)，每年有多項新產品問世，例如近年在台灣

申請登記十字花科蔬菜小菜蛾防治用藥劑tolfenpyrad即為該公司的產品，雖然礙於公司的商業機密要求所有參訪人員不得拍照，但由該公司為參訪者所預備的各項實物解說，確實可以感受到該公司的嚴謹及對自己產品的自豪。

#### 肆、建議事項

為提昇國內研究人員之國際觀及宏遠視野，掌握國際研發現況及趨勢，建議政府有關部門應鼓勵具有潛力者參與類似大型國際會議，藉著學者專家之演講，參加專題研討與觀摩，以及發表研究論文等活動，非但可大幅開拓專業視界、增進專業知識，並建立與國外相關研究領域學者溝通的平台，對於個人或整體學術水準及研究品質的提升，具有正面作用。



## 附錄 第11屆國際純化學與應用化學聯合會議程

## August 6 (Sun)

17:00-18:00

**Main Hall (ICCK)**

### Keynote Speech

Chairperson : **S. Goto** (Japan)

**KS**

Challenges and opportunities in crop production over the next decade

**J. C. Collins**  
DuPont (USA)

## August 7 (Mon)

8:45-9:45

**Main Hall (ICCK)**

### Plenary Lecture 1

Chairperson : **H. Miyagawa** (Japan)

**PL1**

Searching environmentally benign methods for pest control: reflection of a synthetic chemist

**K. Mori**  
Univ. of Tokyo (Japan)

10:00-12:45

### Session Lecture 4

#### Natural Products

Organizers : **M. Iwata** (Japan), **J. R. Coats** (USA), **P. Lewer** (USA)

**S4-1**

Allelochemicals for weed management: molecular biology approaches

**S. O. Duke**  
USDA-ARS (USA)

**S4-2**

Natural products as a source of novel bioactive compounds

**A. D. Buss**  
MerLion Pharmaceuticals (Singapore)

**S4-3**

Spinosad: from nature to green chemistry to novel mode of action

**N. Orr**  
Dow AgroSciences (USA)

**S4-4**

New agrochemical natural products from New Zealand lichens, liverworts and plants

**N. B. Perry**  
Univ. of Otago (New Zealand)

**S4-5**

Essential oil-based pesticides: new insights from old chemistry

**M. B. Isman**  
Univ. of British Columbia (Canada)

**S4-6**

Eco-chemical control of the potato cyst nematode by hatching stimulator from solanaceae plants

**A. Fukuzawa**  
Hokkaido Tokai Univ. (Japan)

15:30-18:30

### Session Lecture 7

#### Mode of Action and Resistance Mechanism -Insect Control

Organizers : **Y. Ozoe** (Japan), **J. G. Scott** (USA), **P. Maienfisch** (Switzerland)

**S7-1**

Insecticide mode-of-action: gaining insight through model organism genetics

**S. W. Chouinard**  
Cambria Biosciences (USA)



**S7-2** Recent advances in understanding the mode of action of ecdysteroid and juvenile hormone analogs

**S7-3-1** Modes of action and interaction of neonicotinoids at insect nicotinic receptors: results from radioligand binding studies

**S7-3-2** Molecular basis of selectivity of neonicotinoids

**S7-3-3** Global aspects on the incidence and mechanisms of neonicotinoid resistance

**S7-4** Amino acid substitution conferring insecticide insensitivity of Ace paralogous acetylcholinesterase

**S7-5** The molecular biology and population genetics of pyrethroid resistance

**S. R. Palli**  
Univ. of Kentucky (USA)

**H. Kayser**  
Syngenta Crop Protection AG  
(Switzerland)

**K. Matsuda**  
Kinki Univ. (Japan)

**R. Nauen**  
Bayer CropScience AG (Germany)

**Y. Kono**  
Univ. of Tsukuba (Japan)

**J. G. Scott**  
Cornell Univ. (USA)

## August 7 (Mon)

**Room 301 (ICCK)**

10:00-12:45

### Session Lecture 20

#### Global Food Safety and Trade Issues

Organizers : **P. W. Lee** (USA), **E. Carazo** (Costa Rica), **Y. He** (China), **N. K. Umetsu** (Japan)

**S20-1** Impact of pesticide residues on the global trade of food and feed in developing and developed countries

**S20-2** New dimensions of food safety and food quality research

**S20-3** A statistically-based method for establishing NAFTA-harmonized tolerances

**S20-4** CCPR policies related to establishing Codex MRLs in foods

**S20-5** Possible models to solutions to unique trade issues facing developing countries

**J. J. Baron**  
USDA (USA)

**J. N. Seiber**  
USDA-ARS (USA)

**P. S. Villanueva**  
US Environmental Protection Agency  
(USA)

**Y. Yamada**  
Ministry of Agriculture, Forestry and  
Fisheries (Japan)

**C. P. Gaston**  
Exponent (USA)

**\*Please note that Luncheon Seminar 1 moved to August 8 (Tue) 12:30-13:00, Room 301 (ICCK)**

### Luncheon Seminar 1

**Sponsors : PSSJ/Otsuka Chemical Holdings**

Chairperson : **K. Tanaka** (Japan)

**LS1** Risk assessment of pesticides -risk of eating - " How to convince consumers"

**N. K. Umetsu**  
Pesticide Science Society of Japan  
(Japan)

**15:30-18:30****Session Lecture 19****Emerging Global Food Quality and Human Health Protection Issues**Organizers : **M. W. Skidmore** (U.K.), **K. Watanabe** (Japan), **B. J. Petersen** (USA)**S19-1** Chronic and acute risk assessment of pesticides in food and the JMPR approach**E. D. Caldas**  
Univ. of Brasilia (Brazil)**S19-2** Pesticide residue assessment and MRLs setting in China**Y. He**  
Ministry of Agriculture (China)**S19-3** Harmonization of ASEAN MRLs, the work towards food safety and trade benefit**N. Tayaputch**  
Laboratory Center for Food and Agricultural Products (Thailand)**S19-4** Positive list system for agricultural chemical residues in foods: impact on human health protection in Japan**A. S. Takei**  
ICaRuS Japan (Japan)**S19-5** GM food safety assessment**G. A. Kleter**  
Wageningen Univ. and Res.  
(Netherlands)**S19-6** Roundtable Discussion**Coordinator: B. J. Petersen**  
Exponent. (USA)**18:45-19:45****Evening Seminar 1****Sponsor : CropLife International****Probabilistic Approaches in Dietary Risk Assessment**

Chairperson :

**ES1** Probabilistic approaches in dietary risk assessment**L. Rossi**  
US EPA (USA)**August 7 (Mon)****Room 401 (ICCK)****10:00-12:45****Session Lecture 18****Genomics, Proteomics, and Metabolomics**Organizers : **D. Ohta** (Japan), **R. Feyereisen** (France), **E. Ward** (USA), **T. A. Walsh** (USA)**S18-1** Genome wide metabolic functional genomics for new traits in plants: expectations and delivery**A. J. Krotzky**  
Metanomics GmbH (Germany)**S18-2** High throughput gene function discovery in *Arabidopsis* and crop plants**D. C. Boyes**  
Monsanto (USA)**S18-3** Functional identification of Arabidopsis metabolism-related genes with 'omics approaches**D. Shibata**  
Kazusa DNA Research Institute (Japan)**S18-4** Chemical genetic approaches to uncover new sites of pesticide action**T. A. Walsh**  
Dow AgroSciences (USA)



**13:00-14:00**

**Luncheon Seminar 2**

**Sponsors : JCPA/PSSJ**

Chairperson : **M. Suzuki** (Japan)

**LS2** JCPA Crop Protection Outreach Campaign

**N. Motoyama**  
Chiba Univ. (Japan)

**15:30-18:30**

**Session Lecture 5**

**Bioregulator for Crop Protection**

Organizers : **K. Yoneyama** (Japan), **R. A. Menendez** (USA)

**S5-1** Plant chemical biology: development of small active molecules and their application of plant physiology, genetics and pesticide science

**T. Asami**  
RIKEN (Japan)

**S5-2** Alternate bearing in tree crops: *the role of bioregulators*

**C. J. Lovatt**  
Univ. of California (USA)

**S5-3** Bioregulators that enhance fruit quality

**E. A. Curry**  
USDA-ARS (USA)

**S5-4** Manipulating gibberellin status for crop improvement

**P. Hedden**  
Rothamsted Research (U.K.)

**S5-5** Salicylate activity: modulation of herbicide efficacy

**P. D. Petracek**  
Valent BioSciences (USA)

**18:45-19:45**

**Evening Seminar 2**

**Sponsor : PSSJ**

**Export of Crops and Pesticide Residue Issues in China and Thailand**

Chairperson : **I. Yamamoto** (Japan)

**ES2** Export of crops and pesticide residue issues in China and Thailand

**S. Impithuksa**  
Ministry of Agriculture and Cooperatives (Thailand)

**C. Pan**  
China Agricultural Univ. (China)

**August 7 (Mon)****13:00-14:00****Room 403 (ICCK)****Luncheon Seminar 3****Sponsor : Battelle AgriFood**Chairpersons : **M. Bell** (U.K.), **M. Weidenauer** (Switzerland)**LS3-1** Registration & commercialization of agrochemicals in Europe**M. Weidenauer**  
Battelle AgriFood (Switzerland)**LS3-2** The importance of formulation development in Agchem Product Life Cycle management**M. Bell**  
Battelle AgriFood (U.K.)**18:45-19:45****Evening Seminar 3****Sponsors : PSSK/PSSJ****Current and Future R&D Activities in Agrochemical Area in Korea and Japan (Fungicide)**Chairperson : **M. Fujimura** (Japan)**ES3-1** Current and future R&D activity for fungicides in Korea**D. Kim**  
LG Life Sciences (Republic of Korea)**ES3-2** Past and current of R&D activities and challenges of fungicide in Japan**R. Ichinose**  
Sankyo Agro. (Japan)**August 7 (Mon)****10:00-12:45****Room 501 (ICCK)****Session Lecture 16****Monitoring and Remediation of Persistent Organic Pollutants**Organizers : **A. Katayama** (Japan), **A. S. Felsot** (USA), **L. L. McConnel** (USA)**S16-1** Persistent organic pollutants (POPs) in the Asia-Pacific region**S. Tanabe**  
Univ. Ehime (Japan)**S16-2** Persistent organic pollutants (POPs) and pesticides in tropical Asia**A. Chowdhury**  
Univ. of Calcutta (India)**S16-3** Temporal trend of POPs residue in Japanese agricultural soils**N. Seike**  
National Institute for Agro-  
Environmental Sciences (Japan)**S16-4** Fate and behaviour of pesticides in biobeds**P. Fogg**  
ADAS UK (U.K.)**S16-5** Wastewater treatment using Fenton electrochemical process**A. T. Lemley**  
Cornell Univ. (USA)



13:00-14:00

**Luncheon Seminar 4**

**Sponsors : USDA/IR-4 Project**

**Specialty Crop Program and the IR-4 Model**

Chairperson : **J. J. Baron** (USA)

**LS4** Specialty crop program and the IR-4 Model

**J. J. Baron**

USDA (USA)

**L. A. Rossi**

US EPA (USA)

**H. W. Ewart**

California Citrus Quality Council  
(USA)

15:30-18:30

**Session Lecture 10**

**Advances in Formulation and Application Technology**

Organizers : **J. A. Zabkiewicz** (New Zealand), **L. D. Gaultney** (USA), **X. He** (China), **K. Isono** (Japan)

**S10-1** Thirty years of formulation technology-where to next?

**P. J. Mulqueen**

Syngenta UK (U.K.)

**S10-2** Homogeneous blends of granular formulations

**W. L. Geigle**

E.I. Dupont de Nemours (USA)

**S10-3** Nanoscale - a new dimension for agroformulation?

**M. Bratz**

BASF AG (Germany)

**S10-4** Role of adjuvants in foliar uptake and the relevance of models

**T. Watanabe**

Agro Kanesho (Japan)

**S10-5** Toxicity and dose-transfer of two chlorpyrifos formulations

**H. Yuan**

Chinese Academy of Agriculture  
Science (China)

**S10-6** Air induction nozzles: impact on off-target drift and biological efficacy

**T. M. Wolf**

Agriculture & Agri-Food Canada  
(Canada)

18:45-19:45

**Evening Seminar 4**

**Sponsor : Bio-oriented Technology Research Advancement Institution**

**Biomonitoring of POPs in Transgenic Flowering Plants**

Chairperson : **H. Ohkawa** (Japan)

**ES4-1** Monitoring of estrogenic compounds in transgenic plants carrying ER and reporter genes

**H. Inui**

Kobe Univ. (Japan)

**ES4-2** Monitoring of dioxins in transgenic flowering plants carrying AhR and reporter genes

**Y. Tanaka**

Suntory (Japan)

**August 7 (Mon)****13:00-14:00****Room 502 (ICCK)****Luncheon Seminar 5****Sponsor : Nippon Soda**Chairperson : **S. Kobayashi** (Japan)**LS5**

Specialty of Nisso Chemical Analysis Services (NCAS) - qualitative and quantitative analyses of trace amounts of ingredients in complex matrices

**T. Gomyo**

Nisso Chemical Analysis Service (Japan)

**18:45-19:45****Evening Seminar 5****Sponsor : Huntingdon Life Sciences**Chairperson : **D. Kirkpatrick** (U.K.)**ES-5**

Finding solutions in global agrochemical development: case studies from our experience

**K. Barrett**

Huntingdon Life Sciences (U.K.)

**P. Aikens**

Huntingdon Life Sciences (U.K.)

**J. O'Connor**

Huntingdon Life Sciences (U.K.)

\*Simultaneous Interpretation in Japanese is provided.

**August 7 (Mon)****Main BLDG Kairaku (Portopia Hotel)****10:00-12:45 / 14:15-17:15****Special Seminar****"Advanced Residue Analysis" in Japanese**

Chairperson : K. Nakamura (Japan)

**SS**

Advanced residue analysis of pesticide to obtain precise and accurate data - to cope with the new "Positive List System"

**M. Ueji**

National Institute for Agro-Environmental Sciences (Japan)

**T. Nagayama**

Tokyo Metropolitan Institute of Public Health (Japan)

**K. Sasaki**

National Institute of Health Sciences (Japan)

**T. Goto**

Shinshu Univ. (Japan)

\*This seminar is entirely held in Japanese and interpretation is unavailable.

本会議に参加登録されている方は先着40名まで、このセミナーに参加可能です。ただし、本会議に参加登録されており、かつこのセミナーへ事前登録されている方を優先いたしますので、ご了解ください。

本セミナーに参加希望の方は、直接会場受付までお越し下さい。受付は9時30分開始予定です。関連資料とお弁当券をお渡します。





**August 8 (Tue)**

**Main Hall (ICCK)**

**8:45-9:45**

**Plenary Lecture 2**

Chairperson : **Y. Endo** (Japan)

**PL-2** Hunger and malnutrition amidst plenty: what must be done?

**S. Pandey**  
FAO (Italy)

**10:00-12:15**

**Research Director Forum**

Organizers : **T. Umemura** (Japan), **I. Ueyama** (Japan), **K. Tanaka** (Japan), **M. W. Skidmore** (U.K.), **P. W. Lee** (USA)

Forum modulators : **N. K. Umetsu** (Japan), **K. D. Racke** (USA)

**RDF**

**P. Confalone**

DuPont (USA)

**P. Eckes**

BASF (Germany)

**T. Haga**

Ishihara Sangyo (Japan)

**D. Kittle**

Dow AgroSciences (USA)

**A. Klausener**

Bayer CropScience AG (Germany)

**G. Ramos**

Syngenta Crop Protection AG  
(Switzerland)

**T. Umemura**

Sumitomo Chemical (Japan)

\*Seven panelists, who are the research directors of the panelists major agro - business industries will discuss the current positions and future visions for the industry and to highlight R & D success stories of their respective company

**15:00-18:00**

**Session Lecture 9**

**Mode of Action and Resistance Mechanism -Plant Disease Control**

Organizers : **H. Ishii** (Japan), **K. Kuck** (Germany), **B. A. Fraaije** (U.K.)

**S9-1** Mode of action of the selective fungicide cyazofamid:  
specific inhibition of mitochondrial complex III

**S. Mitani**

Ishihara Sangyo (Japan)

**S9-2** Complex II inhibitors

**Y. Yanase**

Mitsui Chemicals (Japan)

**S9-3** Fluopicolide : mode of action

**R. Beffa**

Bayer CropScience SA (France)

August 8 (Tue)

**S9-4** Studies on the mode of action of metrafenone, a new systemic fungicidal compound

**S9-5** Disease resistance inducers

**S9-6** Mechanism and molecular detection of dicarboximide resistance

**S9-7** DMI resistance: an overview

**S9-8** QoI inhibitors: resistance mechanisms and its practical importance

**B. T. Navé**  
BASF AG (Germany)

**H. Ishii**  
National Institute for Agro-  
Environmental Sciences (Japan)

**M. Fujimura**  
Toyo Univ. (Japan)

**B. A. Fraaije**  
Rothamsted Research (U.K.)

**K. H. Kuck**  
Bayer CropScience (Germany)

**August 8 (Tue)** \*Luncheon Seminar 1 moved to August 8 (Tue) 12:30-13:00,  
Room 301 (ICCK). See page 21 for the program.  
**10:00-12:15**

**Room 301 (ICCK)**

### Selected Poster Workshop 1

#### Weed and Plant Growth Control (Chemistry & Natural Products)

Chairperson : **J. W. Lyga** (USA), **F. Cederbaum** (Switzerland)

**SPW1-1** Managing grass weeds in cereals: chemistry and biology of the novel herbicide pinoxaden

**SPW1-2** Synthesis and herbicidal activity of novel phytoene desaturase inhibitors: 3-(substituted oxy)pyrazole-4-carboxamide derivatives

**SPW1-3** One-pot tandem aldol-alkylation routes to (dehydro) diox-opiperazines: novel analogues of the Thaxtomin family of phytotoxins

**SPW1-4** Inhibitors of IAA-amino acid conjugate synthetases and hydrolases as chemical probes to study IAA homeostasis

**SPW1-5** Synthesis and molecular design of novel agrochemicals containing selenium

**SPW1-6** Synthesis and germination stimulating activity of some imino-analogs of strigolactones

**M. Muehlebach**  
Syngenta Crop Protection AG  
(Switzerland)

**R. Ohno**  
Sagami Chemical Research Center  
(Japan)

**A. Plant**  
Syngenta (U.K.)

**L. H. Tai**  
Kyoto Univ. (Japan)

**Z. Li**  
East China Univ. of Science and  
Technology (China)

**Y. Kondo**  
Kobe Univ. (Japan)

**15:00-18:00**

### Session Lecture 15

#### Environmental Fate and Ecological Effect

Organizers : **A. Barefoot** (USA), **T. Katagi** (Japan), **C. Romijn** (Germany)

**S15-1** A state of the art of testing methods for endocrine disrupting chemicals in fish and daphnids

**S15-2** Pesticide risk evaluation for birds and mammals-combining data from effect and exposure studies

**S15-3** Herbicide effect on aquatic algae

**S. Hagino**  
Sumika Technoservice (Japan)

**C. Wolf**  
RIFCON GmbH (Germany)

**S. Ishihara**  
National Institute for Agro-  
Environmental Sciences (Japan)



**S15-4** Recent developments in testing methodologies and risk assessment approaches on honey bees

**S15-5** Effect of aging on sorption of agrochemicals to soil

**S15-6** NAFTA harmonized guidance for the conduct of pesticide terrestrial field dissipation studies

**S15-7**

**C. Maus**

Bayer CropScience AG (Germany)

**W. C. Koskinen**

USDA-ARS (USA)

**M. A. Corbin**

US EPA (USA)

**18:30-19:30**

### Evening Seminar 6

**Sponsor : Eurofins Agroscience Services**

#### An Update on EU Regulatory Requirements

Chairperson : **P. Duchêne** (France)

**ES6** An update on EU regulatory requirements

**F. Bodzian**

Eurofins Agroscience Services (Germany)

**P. Cowley**

Agrisearch (U.K.)

**P. Duchêne**

Eurofins Agroscience Services (France)

**C. Solé**

Eurofins Agroscience Services (France)

**I. Tornier**

Eurofins Agroscience Services (Germany)

\*French wine will be treated.

**August 8 (Tue)**

**Room 401 (ICCK)**

**10:00-12:15**

### Selected Poster Workshop 2

#### Higher Tier Exposure Assessment

Chairperson : **E. Capri** (Italy)

**SPW2-1** Steps 1234 - a new model for the estimation of PEC-surface water

**SPW2-2** Probabilistic risk assessment through pesticide fate modeling for evaluating management practices to prevent pesticide runoff from paddy fields

**SPW2-3** Investigation of new methods and geo-databases for a refined GIS-based probabilistic exposure assessment

**SPW2-4** Is the resulting residue proportional to pesticide application rate?

**SPW2-5** Engineering of the transgenic plants carrying the receptor-mediated reporter gene expression systems for bioassay of POPs

**M. Klein**

Fraunhofer IME (Germany)

**S. H. Vu**

Tokyo Univ. of Agriculture and Technology (Japan)

**R. Kubiak**

RLP AgroScience (Germany)

**P. S. Villanueva**

US EPA (USA)

**K. Gion**

Kobe Univ. (Japan)

August 8 (Tue)

**12:30-13:30****Luncheon Seminar 6****Sponsor : PTRL West****Chemical Alternatives to Methyl bromide**Chairperson : **F. C. Baker** (USA)**LS6**

Physical, chemical and environmental properties of selected chemical alternatives for the pre-plant use of methyl bromide as soil fumigant

**L. O. Ruzo**

PTRL West (USA)

**18:30-19:30****Evening Seminar 7****Sponsor : Immunochemical Society of Japan****Biochemical Assays for POPs**Chairperson : **H. Ohkawa** (Japan)**ES7-1**

The use of enzyme-linked immunosorbent assays (ELISA) for the determination of pollutants in environmental and industrial wastes

**Y. Goda**

Japan Enviro Chemicals (Japan)

**ES7-2**

Immuno- and receptor assays for environmental compounds

**B. Hock**

Technische Univ. Munchen (Germany)

**August 8 (Tue)****Room 403 (ICCK)****10:00-12:15****Selected Poster Workshop 3****Topics in Formulations, Application, Resistance, and Integrated Pest Management**Chairperson : **L. D. Gaultney** (USA)**SPW3-1**Detection and management of the newly-established Q biotype of *Bemisia tabaci* (Gennadius) in the USA**T. J. Dennehy**

Univ. of Arizona (USA)

**SPW3-2**Screening of rhizo-functional bacteria against *Fusarium oxysporum* f.sp *lycopersici* and their antifungal and hyphal branching-inducing principle(s)**A. Asante**

Hokkaido Univ. (Japan)

**SPW3-3**

Encapsulation technologies for crop protection

**W. L. Geigle**

E.I. DuPont de Nemours &amp; Co., Inc. (USA)

**SPW3-4**

Factors influencing the association between a.i. and adjuvant in the leaf deposit for adjuvanted SE's

**M. A. Faers**

Bayer CropScience (Germany)

**SPW3-5**

Measurement of collection efficiency on rotating rods, strings, and horizontal surfaces

**W. C. Hoffmann**

USDA-ARS (USA)



12:30-13:30

**Luncheon Seminar 7**

**Sponsor : GL Sciences**

Chairperson : **S. Ogawa** (Japan)

**LS7**

Introduction of sample cleanup method related to the 'Positive List' system in Japan

**T. Imanaka**  
GLSciences (Japan)

18:30-19:30

**Evening Seminar 8**

**Sponsor : Bochu-Kagaku**

**Basic Concept of Pesticide Design**

Chairperson : **T. Ueno** (Japan)

**ES8-1**

Significant feature of organophosphorus agrochemicals in structure and activity

**M. Eto**  
Kyushu Univ. (Japan)

**ES8-2**

Proposal of SAR-omics as a paradigm for the lead evolution in drug design

**T. Fujita**  
Kyoto Univ. (Japan)

**August 8 (Tue)**

**Room 501 (ICCK)**

10:00-12:15

**Selected Poster Workshop 4**

**Fast Procedures for Pesticide Multi-residue Analysis**

Chairperson : **M. Anastassiades** (Germany)

**SPW4-1**

Multiresidue analysis of 500 pesticide residues in agricultural products using GC/MS and LC/MS

**Y. Akiyama**  
Hyogo Prefectural Institute of Public Health and Environmental Sciences (Japan)

**SPW4-2**

Multiresidue method for the determination of pesticide residues in food by GC/MS, GC/FPD and LC/MS/MS

**M. Okihashi**  
Osaka Prefectural Institute of Public Health (Japan)

**SPW4-3**

Withdrawn

**SPW4-4**

Simultaneous determination of pesticides in crops by LC/MS/MS using a cleanup step with ultrafiltration

**H. Kajita**  
Research Institute for Environmental Sciences and Public Health of Iwate Prefecture (Japan)

**SPW4-5**

Multi-residue pesticide analysis in fruits and vegetables by LC/MS using triple stage quadrupole mass spectrometry and time of flight mass spectrometry

**M. Takino**  
Yokogawa Analytical Systems (Japan)

August 8 (Tue)

**12:30-13:30****Luncheon Seminar 8****Sponsor : Fraunhofer IME**Chairperson : **H. Suzuki** (Japan)**LS8** How to refine and evaluate a TER - aquatic risk assessment for pesticides in Europe**C. Schäfers**  
Fraunhofer IME (Germany)**W. Kördel**  
Fraunhofer IME (Germany)**15:00-18:00****Session Lecture 2****Biopesticides and Transgenic Crop**Organizers : **T. Yamamoto** (USA), **H. Ohkawa** (Japan), **J. E. Dripps** (USA)**S2-1** An overview of biopesticides and transgenic crops**T. Yamamoto**  
Pioneer HiBred International (USA)**S2-2** Sprayable biopesticide development**P. Warrior**  
Valent BioSciences (USA)**S2-3** Functional proteomic analyses of *Bacillus thuringiensis* cry toxin receptors in susceptible and resistant insects**M. J. Adang**  
Univ. of Georgia (USA)**S2-4** Rapid discovery of bacterial genes with commercial applications**M. Koziel**  
Athenix (USA)**S2-5** Imidazolinone tolerant crops**B. K. Singh**  
BASF Plant Science (USA)**S2-6** Bioassay of persistent organic pollutants in transgenic plants with Ah receptor and GUS reporter genes**H. Inui**  
Kobe Univ. (Japan)**18:30-19:30****Evening Seminar 9****Sponsor : IUPAC**Chairperson : **G. R. Stephenson** (Canada)**ES9** The environmental impact of the altered use of pesticides in genetically modified crops**G. A. Kleter**  
Wageningen Univ. and Research Center  
(The Netherlands)**August 8 (Tue)****Room 502 (ICCK)****10:00-12:15****Selected Poster Workshop 5****New and Established Target and Resistance of Disease Control**Chairperson : **K. Kuck** (Germany)**SPW5-1** Reliable™: labor saving disease control agent for *Phytophthora infestans* on potatoes in Japan**H. Hadano**  
Bayer CropScience (Japan)



- SPW5-2** Antifungal activity and mode of action of tolnifanide
- SPW5-3** Development of QoI resistant alleles in populations of strawberry powdery mildew
- SPW5-4** Fungicide resistance in the barley pathogen *Rhynchosporium secalis* in Northern Ireland
- SPW5-5** Histidine biosynthesis in *Magnaporthe grisea*: a potential target for plant protectants?
- SPW5-6** Transcriptome profiling of the response of *Mycosphaerella graminicola* isolates to triazole fungicides using cDNA microarrays

- C. Tanaka**  
Kyoto Univ. (Japan)
- J. M. Fountaine**  
National Institute for Agro-  
Environmental Sciences (Japan)
- C. McCartney**  
Queen's Univ. of Belfast (U.K.)
- E. Thines**  
Institute for Biotechnology and Drug  
Research (Germany)
- B. A. Fraaije**  
Rothamsted Research (U.K.)

---

## 12:30-13:30

### Luncheon Seminar 9

Sponsor : RCC Japan Office

Chairperson : **K. Maita** (Japan)

- LS9** New R&D cooperation models between CRO's and industry - Where do we stand and where do we go?

**A. Wais**  
RCC (Switzerland)

---

## 15:00-18:00

### Session Lecture 1

#### Drug Design Based on Agrogenomics

Organizers : **U. Schirmer** (Germany), **M. Akamatsu** (Japan)

- S1-1** Drug design based on agrogenomics
- S1-2** Modern tools for drug discovery in agricultural research
- S1-3** Genomic researches of agricultural pests toward novel targets
- S1-4** *C. elegans* - the path from novel targets to novel chemistry
- S1-5** Target-based lead identification: a perspective for herbicides
- S1-6** Target based research: a critical review of its impact on agrochemical invention, focusing on examples drawn from fungicides

- U. Schirmer**  
Consultant, former BASF (Germany)
- A. Klausener**  
Bayer CropScience AG (Germany)
- H. Noda**  
National Institute of Agrobiological  
Sciences (Japan)
- R. C. Ackerson**  
Devgen (Belgium)
- T. Ehrhardt**  
BASF AG (Germany)
- S. J. Dunbar**  
Syngenta (U.K.)

18:30-19:30

---

**Evening Seminar 10**

**Sponsors : PSSC/PSSJ**

**Current and Future R&D Activities in Agrochemical Area in China and Japan (Insecticide)**

Chairpersons : **K. Tanaka** (Japan), **Z. Li** (China)

---

**ES10-1** New strategies of finding novel neonicotinoid insecticides from bio-informatics and chemical modification

**X. Qian**  
East China Univ. (China)

**ES10-2** Molecular diversity of neonicotinoids and their actions on nicotinic acetylcholine receptors

**K. Matsuda**  
Kinki Univ. (Japan)

---

August 8 (Tue)





**August 9 (Wed)**

**Main Hall (ICCK)**

**8:45-9:45**

**Plenary Lecture 3**

Chairperson : **P. W. Lee** (USA)

**PL3** The current status of pesticide management in China

**Y. Z. Yang**  
Ministry of Agriculture (China)

**10:00-12:15**

**Selected Poster Workshop 6**

**Discovery of Targets and Emergence of Unexpected Resistance**

Chairperson : **R. Nauen** (Germany)

**SPW6-1** Significance of the sulfonylurea receptor (SUR) as the target of diflubenzuron in chitin synthesis inhibition in *Drosophila melanogaster* and *Blattella germanica*

**F. Matsumura**  
Univ. of California (USA)

**SPW6-2** Functional genomics approaches to insect nicotinic acetylcholine receptor (nAChR) gene families - insights into receptor function and insecticide actions

**D. B. Sattelle**  
Univ. of Oxford (U.K.)

**SPW6-3** A nicotinic acetylcholine receptor point mutation (Y151S) conferring insecticide resistance causes reduced agonist potency to a range of neonicotinoids

**N. S. Millar**  
Univ. College London (U.K.)

**SPW6-4** Flubendiamide stimulates Ca<sup>2+</sup> pump activity coupled to RyR-mediated calcium release in lepidopterous insects

**T. Masaki**  
Nihon Nohyaku (Japan)

**SPW6-5** Elucidation of the mode of action of Rynaxypyr™, a selective ryanodine receptor activator

**D. Cordova**  
DuPont (USA)

**SPW6-6** Phthalic acid diamides: mode of action and target selectivity

**U. Ebbinghaus-Kintscher**  
Bayer CropScience AG (Germany)

**SPW6-7** Flubendiamide, a novel insecticide, selectively activates lepidopterous ryanodine receptor

**S. Kiyonaka**  
Kyoto Univ. (Japan)

**SPW6-8** Endocrine disruption, resistance and induction of P450 genes by xenobiotics in *Drosophila*

**R. Feyereisen**  
INRA / Univ. de Nice - Sophia Antipolis (France)

**15:00-18:00**

**Session Lecture 8**

**Mode of Action and Resistance Mechanism -Weed Control**

Organizers : **H. Matsumoto** (Japan), **S. B. Powles** (Australia), **G. Donn** (Germany)

**S8-1** Shedding light on herbicide mode of action: novel diagnostic tools

**G. Donn**  
Bayer Cropscience GmbH (Germany)

**S8-2** Physionomics: herbicide mode of action diagnosis by physiological profiling

**K. Grossmann**  
BASF AG (Germany)

**S8-3** A review of major target site herbicide resistance mechanisms evolved in world crop weeds

**S. B. Powles**  
Univ. of Western Australia (Australia)

August 9 (Wed)

**S8-4** Non-target site resistance to herbicides: occurrence and mechanisms

**K. Kreuz**  
BASF AG (Germany)

**S8-5** Investigation on the mechanisms of glyphosate resistance in horseweed (*Conyza canadensis*)

**P. C. Feng**  
Monsanto (USA)

---

## August 9 (Wed)

**Room 301 (ICCK)**

**10:00-13:30**

### Special Workshop 1

### Luncheon Seminar 10

**Sponsors : Dow AgroSciences/IUPAC**

### Japan positive MRL System : Regulatory and Trade Considerations

Chairperson : **K. D. Racke** (USA)

**LS10-1** Enforcement of the Japanese positive list system

**S. Miyagawa**  
Ministry of Health, Labour and Welfare (Japan)

**LS10-2** Impact of the new Japanese MRL system on China and other Asian countries

**W. L. Chen**  
China Agriculture Univ. (China)

**LS10-3** Produce in trade requires harmonized MRL's

**H. W. Ewart**  
California Citrus Quality Council (USA)

**LS10-4** Implementation of the Japan positive list system: an Australian horticultural perspective

**K. Bodnaruk**  
Horticulture Australia (Australia)

\*This specially combined workshop (10:00 - 12:15) and luncheon seminar (12:30 - 13:30) will feature 4 lecture presentations beginning at 10:00.

After a short break a panel discussion begins at 12:30.

Participants for this event are encouraged to attend both the workshop and the luncheon seminar in order to fully understand the highly related presentations and discussion.

---

**15:00-18:00**

### Session Lecture 14

### Environmental Risk Assessment, Regulatory Aspects, and Risk Communication

Organizers : **H. Yamamoto** (Japan), **M. Streloke** (Germany)

**S14-1** United States Environmental Protection Agency (USEPA) Office of Pesticide Programs (OPP) approach to conducting ecological risk assessments

**M. A. Corbin**  
US EPA (USA)

**S14-2** Current EU-regulation in the field of ecotoxicology

**M. Streloke**  
Federal Office of Consumer Protection and Food Safety (Germany)

**S14-3** Japanese pesticide regulation on water related issues: AEC, UF and BCF

**J. Koide**  
Ministry of the Environment (Japan)

**S14-14** Pesticide risk assessment, current challenges to environmental protection in China

**Z. Shan**  
SEPA of China (China)

**S14-5** New developments in risk assessment for pesticides in aquatic environment: communicating risks

**K. R. Solomon**  
Univ. of Guelph (Canada)



**August 9 (Wed)**

**Room 401 (ICCK)**

**10:00-12:15**

**Selected Poster Workshop 7**

**Improving Analysis, and Assessing Human Exposure Considering Sampling and Processing**

Chairperson : **M. Anastassiades** (Germany)

**SPW7-1** Evaluation of large volume injection in GC-MS analysis of pesticide multiresidues using a PTV injector with automated liner exchange

**N. Ochiai**  
GERSTEL (Japan)

**SPW7-2** Elution patterns of multiclass pesticides from three types of anion exchange cartridges

**K. Iijima**  
Institute of Environmental Toxicology  
(Japan)

**SPW7-3** Daily intake of pesticides based on the market basket method in Hyogo prefecture, Japan

**N. Yoshioka**  
Hyogo Prefectural Institute of Public  
Health and Environmental Sciences  
(Japan)

**SPW7-4** Fungicide and insecticide residues in wine grape by-products following field applications

**G. Rose**  
Research Primary Industries Victoria  
(Australia)

**SPW7-5** Estimation of sampling uncertainty for determination of pesticide residues in plant commodities

**A. Ambrus**  
Hungarian Food Safety Office  
(Hungary)

**12:30-13:30**

**Luncheon Seminar 11**

**Sponsor : Covance**

Chairperson : **D. Phillips** (U.K.)

**LS11** Advances in analytical methods for metabolism

**D. J. Lankester**  
Covance Laboratories (U.K.)

**15:00-18:00**

**Session Lecture 17**

**Emerging Technologies in Crop Protection and Production**

Organizers : **K. Schleifer** (Germany), **H. Miyagawa** (Japan), **H. M. Brown** (USA)

**S17-1** Virtual screening as integral part of the agrochemical research process

**K. Schleifer**  
BASF AG (Germany)

**S17-2** Efficient lead discovery of GPCR ligands using active learning with descriptor sampling

**M. Asogawa**  
NEC (Japan)

**S17-3** A fragment-based design approach to ACP-enoyl reductase inhibitors

**R. Viner**  
Syngenta (U.K.)

**S17-4** Estimation of molecular reactivity by quantum chemical calculations - application to biotic degradation

**M. E. Beck**  
Bayer CropScience AG (Germany)

**S17-5** Strigolactones, germination stimulants for parasitic weeds *Striga* and *Orobancha*: action mechanisms, *in vitro* production and biosynthesis

**Y. Sugimoto**  
Kobe Univ. (Japan)

S17-6 A potent new phytoresponsive molecule isolated from smoke

**K. W. Dixon**

Kings Park and Botanic Garden / Univ.  
of Western Australia (Australia)

**August 9 (Wed)**

**Room 403 (ICCK)**

**10:00-12:15**

**Selected Poster Workshop 8**

**Miscellaneous Technologies for Pest Control Including Transgenic Crops**

Chairperson : **T. Yamamoto** (USA)

**SPW8-1** Cloning and characterization of NRPS genes in fungal herbicide *Exserohilum monoceras*

**A. Morita**

Kyoto Univ. (Japan)

**SPW8-2** Dimethyldisulfide: a new soil fumigant

**R. M. Bennett**

Cerexagri (USA)

**SPW8-3** An oxidoreductase is highly expressed in a virulence - loss - mutant of the cabbage yellows fungus having biocontrol activity

**A. Okabe**

Tokyo Univ. of Agriculture and  
Technology (Japan)

**SPW8-4** Lepidopteran insect-killing *Bacillus sphaericus* with no mosquitoicidal activity and a novel insecticidal factor

**H. Nishiwaki**

Kinki Univ. (Japan)

**SPW8-5** Biolistic transformation and detection of jellyfish green fluorescent and chitinase proteins in Indian Basmati rice

**J. Tarafdar**

Bidhan Chandra Krishi Viswavidyalaya  
(India)

**SPW8-6** Development of defense gene expression monitoring system by the bioluminescence reporter genes in higher plants

**T. Tanaka**

Yokohama National Univ. (Japan)

**12:30-13:30**

**Luncheon Seminar 12**

**Sponsor : Wildlife International**

Chairperson : **C. Hutchinson** (USA)

**LS12** Addressing ecotoxicology issues to meet 21<sup>st</sup> century needs

**C. Hutchinson**

Wildlife International (USA)



**August 9 (Wed)**

**Room 501 (ICCK)**

**10:00-12:15**

**Special Workshop 2**

**Special Workshop for "Mosquito Control"**

Chairperson : **M. Takagi** (Japan)

**SW2**

**P. Paeporn**

Ministry of Public Health (Thailand)

**S. Kasai**

National Institute of Infectious Diseases  
(Japan)

**T. Tomita**

National Institute of Infectious Diseases  
(Japan)

**H. Kawada**

Nagasaki Univ. (Japan)

**J. Nash**

Bayer CropScience (Japan)

**T. Itoh**

Sumitomo Chemical (Japan)

August 9 (Wed)

\*Mosquito control, current situation and new technologies Six "mosquito" experts will introduce their current investigation results.

This theme will be succeeded by following Luncheon Seminar and afternoon session.

**12:30-13:30**

**Luncheon Seminar 13**

**Sponsor : Sumitomo Chemical**

**New Approach for Vector Control**

Chairperson : **T. Itoh** (Japan)

**LS13**

Prospects for use of insecticide treated materials in personal protection and chemical control of vector borne diseases

**P. F. Guillet**

WHO (Switzerland)

**15:00-18:00**

**Session Lecture 6**

**Control Agents for Vectors and Communicable Diseases**

Organizers : **J. M. Clark** (USA), **N. Matsuo** (Japan)

**S6-1**

Metofluthrin, novel pyrethroid insecticide, an innovative mosquito control agent

**Y. Shono**

Sumitomo Chemical (Japan)

**S6-2**

Vector competence of Japanese mosquitoes for dengue and West Nile viruses

**Y. Eshita**

Oita Univ. (Japan)

**S6-3**

ITNs: attract/kill, or avoid/repel?

**E. D. Walker**

Michigan State Univ. (USA)

**S6-4** Defining the basis of metabolic resistance to insecticides in mosquitoes

**S6-5** Reverse chemical ecology: prospecting of mosquito attractants and repellents

**S6-6** Control of pediculosis: current and future needs

**J. G. Vontas**  
Agricultural Univ. of Athens (Greece)

**W. S. Leal**  
Univ. of California-Davis (USA)

**J. M. Clark**  
Univ. of Massachusetts (USA)

---

## August 9 (Wed)

**Room 502 (ICCK)**

**10:00-12:15**

### Selected Poster Workshop 9

#### New Technologies for Lead Generation and Drug Design

Chairperson : **U. Schirmer** (Germany)

**SPW9-1** Rational design of novel herbicides based on ligand-receptor interaction studies

**SPW9-2** Metabolic phenotyping and biomarker identification through FT-ICR MS-based metabolomics studies

**SPW9-3** Virtual target-based screening in combinatorial library design: enhancing *in-vitro* and *in-vivo* hit rates

**SPW9-4** Novel genes, *FMI1*, *FMI2* and *MGH61A*, strongly expressed at early infection stage of the rice blast fungus - have the gene products the potentiality to be new target sites of fungicides?

**SPW9-5** Structure based molecular design of AHAS inhibitors

**SPW9-6** Structure-activity relationship for the activity of non-steroidal ecdysone agonists and the prediction of the ligand binding to the *Bombyx mori* ecdysone receptors

**G. F. Yang**  
Central China Normal Univ. (China)

**D. Ohta**  
Osaka Prefecture Univ. (Japan)

**S. Lindell**  
Bayer CropScience GmbH (Germany)

**T. Teraoka**  
Tokyo Univ. of Agriculture and Technology (Japan)

**J. - G. Wang**  
Nankai Univ. (China)

**Y. Nakagawa**  
Kyoto Univ. (Japan)

**12:30-13:30**

### Luncheon Seminar 14

**Sponsor : Agilent Technologies**

Chairperson : **Y. Takigawa** (Japan)

**LS14** The Agilent 6000 Series LC/MS Solutions for pesticides and veterinary medicines in food and the environment

**J. Zweigenbaum**  
Agilent Technologies (USA)

**15:00-17:15**

### Selected Poster Workshop 10

#### Alternative in Metabolism & Toxicology Study

Chairperson : **M. Skidmore** (U.K.)

**SPW10-1** Oxidative metabolic profiling of pesticides using transgenic tobacco cell suspension cultures, which express human P450 isozymes

**SPW10-2** Iron-porphyrin catalyzed oxidation model for plant metabolism of pesticides

**B. Schmidt**  
RWTH Aachen Univ. (Germany)

**M. Fukushima**  
Sumitomo Chemical (Japan)



- SPW10-3** Comparison of oral absorption and systemic availability
- SPW10-4** Species difference in excretion and PK of procymidone and its metabolites
- SPW10-5** Sex-dependent difference of methoxychlor *O*-demethylation by rat liver microsomes
- SPW10-6** Evaluation of estrogen receptor binding activity of metabolites of DDT analogs

**P. J. Aikens**  
Huntingdon Life Sciences (U.K.)

**Y. Tomigahara**  
Sumitomo Chemical (Japan)

**K. Ohyama**  
Institute of Environmental Toxicology  
(Japan)

**M. Akamatsu**  
Kyoto Univ. (Japan)

---

**August 9 (Wed)**

**Main BLDG Kairaku (Portopia Hotel)**

**13:00-16:00**

---

**Open Seminar**

**Open Seminar for Public in Japanese (Japan Crop Protection Association)**

Seminar animated by Dr. Masaru Kitano on pesticide technologies to achieve better recognition amongst targeted consumers

\*This seminar is conducted entirely in Japanese.

本会議の参加登録をされている方は、このセミナーへ自由に参加できます。(先着 80 名)  
直接会場へお越し下さい。

---

August 10 (Thu)

Main Hall (ICCK)

8:45-9:45

### Plenary Lecture 4

Chairperson : **D. J. Hamilton** (Australia)

PL4

Food safety assessment and international trade implications of pesticide residues in food.

**K. D. Racke**

Dow AgroSciences (USA)

10:00-12:15

### Selected Poster Workshop 11

#### Insect Control (Chemistry & Natural Products)

Chairperson : **P. Maienfisch** (Switzerland)

SPW11-1

From QSAR to product : ANN - based QSAR and the discovery of XDE - 175 - the next generation spinosyn insecticide

**T. C. Sparks**

Dow AgroSciences (USA)

SPW11-2

Discovery, synthesis and acaricidal activity of cyflumetofen and its derivatives

**N. Takahashi**

Otsuka Chemical (Japan)

SPW11-3

Substituted arylpyrazole anthranilic diamides: novel insecticidal activators of the ryanodine receptor

**T. P. Selby**

DuPont Crop Protection (USA)

SPW11-4

Synthesis and insecticidal activity of new hydrazone derivatives

**Y. Masuzawa**

Nissan Chemical Industries (Japan)

SPW11-5

Essential structural factors of mitochondrial complex I inhibitor acetogenins

**M. Abe**

Kyoto Univ. (Japan)

SPW11-6

Identification and characterization of a novel peptide (pp3158) from the starved larval hemolymph of the silkworm, *Bombyx mori*

**S. Nagata**

Univ. of Tokyo (Japan)

13:45-16:45

### Sesion Lecture 3

#### New Chemistry

Organizers : **E. Kuwano** (Japan), **G. D. Crouse** (USA), **U. Muller** (Switzerland)

S3-1

Synthesis of triazolo[1,5-c]pyrimidine sulfonamides leading to the discovery of penoxsulam, a new rice herbicide

**T. C. Johnson**

Dow Agrosciences (USA)

S3-2

Discovery and SAR of pinoxaden: a new broad spectrum, post-emergence cereal herbicide

**M. Muehlebach**

Syngenta Crop Protection AG  
(Switzerland)

S3-3

Rynaxypyr<sup>TM</sup>: discovery of the anthranilic diamide insecticides as a new class of potent ryanodine receptor activators

**G. P. Lahm**

DuPont Crop Protection (USA)

S3-4

Flubendiamide, a novel insecticide characterized by its advanced chemistry and biology

**A. Seo**

Nihon Nohyaku (Japan)





**S3-5** Boscalid: innovative chemistry for an innovative product

**M. M. Keil**  
BASF AG (Germany)

**S3-6** Fluopicolide - new chemistry and a novel mode of action  
for long-lasting oomycete control

**T. W. Wegmann**  
Bayer CropScience AG (Germany)

**August 10 (Thu)**

**Room 301 (ICCK)**

**10:00-12:15**

### Selected Poster Workshop 12

#### Fate and Bioremediation of Selected Pesticides

Chairperson : **M. J. Schocken** (USA)

**SPW12-1** "The biotransformation of ethaboxam in plants, animals  
and the environment" & "Ethaboxam: fate and effects in  
the aquatic environment"

**D. Kirkpatrick**  
Huntingdon Life Sciences (U.K.)

**SPW12-2** Pyridaben: fate in the environment

**J. O'Connor**  
Huntingdon Life Sciences (U.K.)

**SPW12-3** Amisulbrom: metabolic fate in soil

**Y. Ijima**  
Nissan Chemical Industries (Japan)

**SPW12-4** Mitigation of the point source contamination by pesticides  
in Mediterranean conditions

**E. Capri**  
Università Cattolica del Sacro Cuore  
(Italy)

**SPW12-5** Persistence and dissipation behavior of novel insecticide  
A9908 in Liuyang river water, China

**X. Ou**  
Hunan Research Institute of Chemical  
Industry (China)

**13:45-16:45**

### Session Lecture 11

#### Metabolism and Toxicology

Organizers : **K. Tanaka** (Japan), **Y. Kim** (Republic of Korea), **J. H. Krauss** (Switzerland), **R. I. Krieger** (USA)

**S11-1** Pesticide metabolism and metabolic interactions in  
humans

**R. L. Rose**  
North Carolina State Univ. (USA)

**S11-2** Toxicology and metabolism relating to human  
occupational and residential chemical exposures

**R. I. Krieger**  
Univ. of California (USA)

**S11-3** Bioavailability of common conjugates and bound residues

**M. W. Skidmore**  
Syngenta (U.K.)

**S11-4** Agrochemical induction of human cytochrome P450 and  
the prediction

**Y. Yamazoe**  
Tohoku Univ. (Japan)

**S11-5** Developmental neurotoxicity (DNT) study designs: the  
role of milk transfer studies

**D. Myers**  
Huntingdon Life Sciences (U.K.)

\*Dr. R. L. Rose passed away in a traffic accident on May 23. We would like to offer his family and friends our sincerest condolences.

August 10 (Thu)

10:00-12:15

Room 401 (ICCK)

Selected Poster Workshop 13

Herbicidal Action and Plant Growth Regulation

Chairpersons : **Y. Yogo** (Japan), **T. Asami** (Japan)

**SPW13-1** Interactions between the parasitic weed *Striga hermonthica* and its host *Sorghum bicolor* at a molecular level

**SPW13-2** Investigating the mode of action of natural phytotoxins using metabonomics

**SPW13-3** Dichloromethyl ketal structure affects the expression of glutathione S-transferase isoforms in maize

**SPW13-4** Reduced sensitivity of [*Amaranthus palmeri* S. Wats] to glyphosate results in lack of control in genetically modified crops

**SPW13-5** Screening of *Arabidopsis* mutant by phytohormone brassinosteroid biosynthesis inhibitor (Brz)

**Y. Hiraoka**  
Kobe Univ. (Japan)

**K. A. Aliferis**  
Agricultural Univ. of Athens (Greece)

**I. Jablonkai**  
Institute of Biomolecular Chemistry (Hungary)

**T. C. Mueller**  
Univ. of Tennessee (USA)

**T. Komatsu**  
Tokyo Univ. of Agriculture and Technology (Japan)

12:30-13:30

Luncheon Seminar 15

Chairperson : **B. Hall** (Japan)

Sponsor : **Charles River Laboratories**

**LS15** Design considerations for radiolabelled plant metabolism and related studies

**S. Chapleo**  
Charles River Laboratories (Japan)

August 10 (Thu)

12:30-13:30

Room 403 (ICCK)

Luncheon Seminar 16

Chairperson : **M. Akamatsu** (Japan)

Sponsors : **Otsuka Chemical Holdings / T.J.C. Chemical / Mitsui & Co.,Ltd.**

**LS16-1** Agriculture and crop protection in Thailand from an industrial perspective

**P. Zaprong**  
T.J.C. Chemical (Thailand)

**LS16-2** Presentation of Vietnamese agriculture

**Q. T. Dong**  
HAI Agrochem Joint Stock Company (Viet Nam)



**August 10 (Thu)**

**Room 501 (ICCK)**

**10:00-12:15**

**Selected Poster Workshop 14**

**Risk Assessment and Mitigation of Pesticide and POPs Contamination**

Chairperson : **L. L. McConnell** (USA)

**SPW14-1** Predictive value of aquatic toxicity testing with additional invertebrate species

**K. Barrett**  
Huntingdon Life Sciences (U.K.)

**SPW14-2** Remediation of simazine and 4-nonylphenol with transgenic plants carrying drug-metabolizing cytochrome P450 genes

**H. Inui**  
Kobe Univ. (Japan)

**SPW14-3** Biodegradation of chlorinated aliphatic hydrocarbons and benzene in an anaerobic river sediment

**F. Liu**  
China Agricultural Univ. (China)

**SPW14-4** Phototransformation of oryzalin in aqueous isopropanol and acetonitrile

**S. K. Pramanik**  
Bidhan Chandra Krishi Viswavidyalaya (India)

**SPW14-5** Bioavailability of synthetic pyrethroids in surface aquatic systems

**J. Gan**  
Univ. of California (USA)

**12:30-13:30**

**Luncheon Seminar 17**

**Sponsors : IUPAC/FAO**

Chairperson : **J. B. Unsworth** (U.K.)

**LS17** INFOCRIS and the IUPAC compendium of agrochemical information

**J. B. Unsworth**  
IUPAC (U.K.)  
**I. G. Ferris**  
Joint FAO/IAEA Programme (Austria)

**13:45-16:45**

**Session Lecture 13**

**Environmental Chemistry/Residue Analysis**

Organizers : **R. A. Yokley** (USA), **F. Liu** (China), **S. Jackson** (USA), **I. Saito** (Japan)

**S13-1** Environmental chemistry and LC/MS/MS

**J. D. Vargo**  
Univ. at Iowa (USA)

**S13-2** Defining the scope, capabilities and limitations of residue analytical methods

**J. S. Corley**  
State Univ. of New Jersey (USA)

**S13-3** Analysis of environmental behavior of adjuvants, alkylphenol polyethoxylates, by MALDI-TOF- MS

**H. Tamura**  
Meijo Univ. (Japan)

**S13-4** Multiresidue analysis of pesticide residues in foods using the QuEChERS method

**M. Anastassiades**  
CVUA Stuttgart (Germany)

**S13-5** Improved monitoring of Bt proteins in soil using biomimetic extraction technology

**G. Shan**  
Dow AgroSciences (USA)

August 10 (Thu)

Room 502 (ICCK)

10:00-12:15

### Selected Poster Workshop 15

#### Disease Control (Chemistry & Natural Products)

Chairperson : **T. Seitz** (Germany)

**SPW15-1** Synthetic studies of biologically active natural products of agricultural interest

**SPW15-2** The antifungal 3-aryl-5-methyl-2,5-dihydrofuran-ones related to incrustoprin

**SPW15-3** Structure-activity relationship study of flagellin-derived elicitor peptides whose conformations were constrained

**SPW15-4** Orysastrobin - an effective fungicide in rice

**SPW15-5** Isolation and structural properties of aerial mycelium differentiation-inhibitory substance of *Streptomyces scabiei* causing potato common scab

**SPW15-6** Synthesis and fungicidal activities of 12-alkoxy(benzyloxy)-imino-1,15-cyclopentadecanlactams

**H. Kiyota**

Tohoku Univ. (Japan)

**P. A. Worthington**

Syngenta (U.K.)

**M. Miyashita**

Kyoto Univ. (Japan)

**J. Rheinheimer**

BASF AG (Germany)

**M. Natsume**

Tokyo Univ. of Agriculture and Technology (Japan)

**D. Q. Wang**

China Agricultural Univ. (China)

12:30-13:30

### Luncheon Seminar 18

Sponsors : PSSC/PSSJ

#### Current and Future R&D Activities in Agrochemical Area in Korea and Japan (Herbicide)

Chairpersons : **K. Tanaka** (Japan), **X. Qian** (China)

**LS18-1** Structure-activity relationship of novel sulfonylurea inhibitors on AHAS

**Z-M. Li**

National Pesticide Engineering Research Center (China)

**LS18-2** Mode of action of several classes of herbicides causing photooxidative injury in plant

**H. Matsumoto**

Univ. of Tsukuba (Japan)

13:45-16:45

### Session Lecture 12

#### Resistance Management and IPM

Organizers : **R. ffrench-Constant** (U.K.), **H. Nemoto** (Japan)

**S12-1** Understanding and managing pesticide – natural enemy interactions as a critical component of IPM

**P. C. Jepson**

Oregon State Univ. (USA)

**S12-2** Broad spectrum neonicotinoid resistance with no fitness cost

**R. ffrench-Constant**

Univ. of Bath (U.K.)

**S12-3** IPM in Asian small scale farming

**Y. Suzuki**

National Agricultural Research Center (Japan)



**S12-4** Does the change in pest management strategy influence an expansion of resistance gene distribution in spider mites?

**S12-5** The agrochemical industry's approach to ensuring the sustained efficacy of insecticides

**S12-6** When IRM and IPM coincide: combating insecticide resistance in the aphid *Myzus persicae*

**M. Osakabe**

Kyoto Univ. (Japan)

**R. Nauen**

Bayer CropScience (Germany)

**I. Denholm**

Rothamsted Research (U.K.)