

# INTERNATIONAL NEWSLETTER ON PLANT PATHOLOGY

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News and announcements from all on any aspect of Plant Pathology are invited for the Newsletter. Contributions from the ISPP Executive, Council and Subject Matter Committees, Associated Societies and Supporting Organisations are requested.

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## **Les Palmes Académiques award to Prof. Dr Manzoor H. Soomro of Pakistan**

The French Ambassador to Pakistan, Mr. Philippe Thiébaud, has presented the Chairman of the Pakistan Science Foundation, Prof. Dr. Manzoor H. Soomro with the Order of Academic Palms ("Les Palmes Académiques") in recognition of his major contributions between France and Pakistan in the field of science and technology. The Academic Palms is a distinction initiated by Napoleon in 1808 to reward scholars from the Universities of Paris, it was subsequently extended to individuals who contributed to the French culture and education. Since 1955, the French Ministry of Education has the responsibility to reward personalities in the educational field who, by their actions, have shown outstanding devotion and accomplishments for the promotion of education. The appointment of Prof. Dr. Soomro as Officer of the Order of Academic Palms is intended to recognise an exceptional career dedicated to the promotion of science and an active contribution to the collaboration between France and Pakistan. Under his leadership, the cooperation between the Pakistan Science Foundation, the French Embassy, and several French Academic Institutions has flourished.

Prof. Dr. Manzoor H. Soomro is a plant pathologist who has previously worked on banana bunchy-top and nematode diseases. He pioneered the diagnosis of banana bunchy top virus (BBTV) that had destroyed banana crop in Pakistan during early 1990s. He has been Chairman of the Pakistan Science Foundation for over 3 years and is currently President of the ECO Science Foundation (ECOSF). Dr. Soomro launched Inquiry Based Science Education (IBSE) program for schools in Pakistan in 2010 and Travelling Science Expos in collaboration with French Institutions.



The French Ambassador to Pakistan, Mr. Philippe Thiébaud, presenting the Chairman of the Pakistan Science Foundation, Prof. Dr. Manzoor H. Soomro with the Order of Academic Palms (photo credit: France in Pakistan, Diplomatic Office, <http://www.ambafrance-pk.org/France-honours-Pakistan-Science>)

#### **Pathologists awarded at the IUFRO World Congress**

Three pathologists received awards at the XXIV IUFRO (International Union of Forest Research Organisations) World Congress held in Salt Lake City in Utah during October 2014. Dr. Richard Hamelin and Dr. Jolanda Roux received Scientific Achievement Awards and Dr. ShuaiFei Chen was a recipient of an Outstanding Doctoral Research Award. Well done to all!

Details on these and other awards are available on [IUFRO News 2014](#).

#### **Safeguarding fruit crops**

A paper by R. C. Gergerich et al. titled "Safeguarding fruit crops in the age of agricultural globalization" was published in February 2015 by Plant Disease (vol. 99, pp. 176-187). The abstract is as follows:-

The expansion of fruit production and markets into new geographic areas provides novel opportunities and challenges for the agricultural and marketing industries. Evidence that fruit consumption helps prevent nutrient deficiencies and reduces the risk of cardiovascular disease and cancer has assisted in the expansion of all aspects of the fruit industry. In today's competitive global market environment, producers need access to the best plant material available in terms of genetics and health if they are to maintain a competitive advantage in the market. An ever-increasing amount of plant material in the form of produce, nursery plants, and breeding stock moves vast distances, and this has resulted in an increased risk of pest and disease introductions into new areas. One of the primary concerns of the global fruit industry is a group of systemic pathogens for which there are no effective remedies once plants are infected. These pathogens and diseases require expensive management and control procedures at nurseries and by producers locally and nationally. Here, we review (i) the characteristics of some of these pathogens, (ii) the history and economic consequences of some notable disease epidemics caused by these pathogens, (iii) the changes in agricultural trade that have exacerbated the risk of pathogen introduction, (iv) the path to production of healthy plants through the U.S. National Clean Plant Network and state certification programs, (v) the economic value of clean stock to nurseries and fruit growers in the United States, and (vi) current efforts to develop and harmonize effective nursery certification programs within the United States as well as with global trading partners.

See: <http://dx.doi.org/10.1094/PDIS-07-14-0762-FE>

### **Alan C. (Chris) Hayward, 1932-2014**

Alan Christopher Hayward, known to us all as Chris, was a much respected staff member of the Department of Microbiology at University of Queensland (UQ), Brisbane, Australia, for 32 years before his retirement in 1997. He made important contributions to the Department both during its early expansion and formative period in the 1960s as well as in later years when he served a period as Acting Head of Department. Many generations of students, myself included, were fortunate to have been taught by Dr Hayward. He will be remembered for his enthusiastic lecturing style which inspired many, but also for his affable and caring nature - he always made time to talk with students and staff who needed his advice and was an outstanding mentor to both students and colleagues. He embodied the very definition of a scholar and a gentleman. He taught widely in general microbiology, microbial taxonomy, plant and soil microbiology, and in developing areas such as biotechnology in a range of faculties, particularly Science and Agriculture. He also played a key role in the development and teaching of first year courses in the biological sciences. His ability to share his knowledge earned him the respect of students and colleagues alike as an outstanding educator for which he received a UQ Teaching Excellence Award in 1991.



Chris was born in Birmingham, England in 1932 and was awarded his B.S. (Honours) and Ph.D. degrees from the University of Birmingham. After a brief period working as a process microbiologist at the Commonwealth Microbiological Research Institute in Trinidad, West Indies, he worked as a bacteriologist at the Commonwealth Mycological Institute (now the CAB International Mycological Institute) in Kew, England. He joined the Department of Microbiology at UQ as a Lecturer in 1965. Chris was widely recognised internationally as one of the world's leading plant bacteriologists and a noted authority on bacterial wilt, one of the most important diseases of a large number of crops of economic importance. His research at UQ, beginning in the mid-1960s and continuing beyond his retirement (he published a review on bacterial wilt as recently as 2013), has contributed greatly to our understanding of the taxonomy, genetics, and evolutionary relationships of this important crop pathogen. One notable publication in 1964 became a classic in the field, with citations exceeding 500. Many years later, when molecular methods became available and other systems for classification were devised in Chris's own laboratory, the evolutionary insight of that 1964 paper became evident.

Chris's pioneering research on bacterial wilt and on the taxonomy and identification of bacterial plant pathogens in general was recognised by his peers with the award of Fellow of the Australasian Plant Pathology Society and Fellow of the American Phytopathological Society. He also served as President of the Australasian Plant Pathology Society during 1991-1993.

Chris Hayward was an outstanding teacher and scientist who touched the lives of many who will remember him with great fondness, affection and appreciation. He will be missed by his students, colleagues, and the worldwide scientific community.

Chris passed away on the 26th December, 2014. A memorial service was held for Chris on Friday 2nd January at the Brisbane Boys College Chapel, Toowong.

(Australian Society for Microbiology)

### **Professor Shimai Zeng, April 8 1926 - December 31 2014**

Professor Shimai Zeng, Professor in the Department of Plant Pathology at China Agricultural University, and an Academician of Chinese Academy of Engineering (1995-2014), passed away in hospital in Beijing, China, on 31 December of 2014. Professor Zeng is remembered for his significant contributions to the exploration of plant pathology worldwide.

Professor Zeng was born in Beijing to parents originally from Xiangtan County of Hunan Province, China. He graduated from the Department of Plant Pathology, College of Agriculture, Peking University in 1948. After graduation, he worked as an Associate Professor in the former Beijing Agricultural University (now China Agricultural University), then a Professor and Dean of the Department of Plant Protection, China Agricultural University.

In the early 1960s, Professor Zeng was involved in the statistical analysis of plant disease epidemics in China. In the 1970s, he was an advocate of the theory of systems science and the systems engineering method for the study of plant disease epidemics and one of the founders of plant protection systems engineering in China. In the late 1980s to 2000s, with co-authors including Y Luo, XB Yang, and CL Xiao, he contributed several significant papers on stripe rust of wheat and disease epidemic modeling.

Professor Zeng had served as the Vice President of the China Society of Plant Protection (1985-1997), the



President of Chinese Society for Plant Pathology (CSPP, 1998.03-2002.03), and Editor-in-Chief of the *Acta Phytopathologica Sinica* (1999-2001). He was the first President of the Asian Association of Societies for Plant Pathology (AASPP, 2000.08-2005.06) and a Council member of ISPP (1998-2003). He was instrumental in organizing the 10th International Congress of Plant Pathology held in Beijing 2013 (ICPP2013) and was the President of the Organizing Committee. Professor Zeng joined the China Democratic League in 1953, and the Communist Party of China in 1961.

#### Selected Publications:

Yang X. B. and Zeng S. M. 1989. Effect of yellow rust on yield components of winter wheat in China. *Plant Pathology* 38: 1-8.

Luo, Y. and Zeng, S. M. 1995. Simulation studies on epidemics of wheat stripe rust (*Puccinia striiformis*) on slow-rusting cultivars and analysis of effects of resistance components. *Plant Pathology*, 44: 340-349.

Yang, X. B., & Zeng, S. M. 1992. Detecting patterns of wheat stripe rust pandemics in time and space. *Phytopathology*, 82(5): 571-576.

Luo, Y., Shen, Z. R., & Zeng, S. M. 1993. Risk analysis of disease epidemics on wheat by simulation studies. *Agricultural Systems*: 43(1): 67-89.

Xiao, C. L. Subbarao K. V. and Zeng S. M. 1996. Incorporating an asymptotic parameter into the Weibull model to describe plant disease progress. *Journal of Phytopathology* 144: 375-382.

Zeng, Shi-Mai, and Yong Luo. 2006. Long-distance spread and interregional epidemics of wheat stripe rust in China. *Plant Disease* 90: 980-988.

Zeng, S. M., & Luo, Y. 2008. Systems analysis of wheat stripe rust epidemics in China. *European Journal of Plant Pathology*, 121: 425-438.

(Chenggui Han, Haiguang Wang, Jianjun Zeng and Greg Johnson)

#### **Plant pathology: taking you further than you ever imagined**

The APS video, "Plant pathology: taking you further than you ever imagined", has reached more than 14,000 views since it was uploaded in August 2012. The now viral video asks: "How will we sustainably increase our food, fiber, and fuels using less land and resources?" The answer: healthy plants.

This entertaining, colorful, and informative video can be used as a helpful resource to illustrate what we do as plant pathologists and why this work is so important now and in the future.

<https://www.youtube.com/watch?v=mzTE3StOHlQ>

(Phytopathology News, APS, February 2015)

#### **Australia and Africa to work together on plant biosecurity**

Plant biosecurity specialists in national plant protection organisations, and in trade and private sector organisations have identified plant biosecurity training needs for ten African countries. Matched training in Australia will follow, with the resulting 'biosecurity change champions' working to improve regional biosecurity to impact farmer incomes, food security and safe regional trade of agricultural products. The Australia-Africa Plant Biosecurity Partnership is led by Australia's Plant Biosecurity Cooperative Research Centre (PBCRC) and funded by the Australian International Food Security Research Centre (AIFSRC) within Australian Centre for International Agricultural Research (ACIAR), Commonwealth Agricultural Bureaux International (CABI) and the Australia Awards scholarship program. The program is being delivered by a consortium of PBCRC, ACIAR, CABI, Commonwealth Science and Industrial Research Organisation (CSIRO) and the Crawford Fund.

More details on this initiative: <http://aciar.gov.au/aifsc/news/australia-and-africa-work-together-plant-biosecurity>

(Australian International Food Security Research Centre News)

#### **9th International Workshop on Grapevine Trunk Diseases, 18-20 November 2014**

The 9th International Workshop on Grapevine Trunk Diseases (9IWGTD) was held at the National Wine Centre in Adelaide, Australia in November 2014. It was hosted by the South Australian Research and Development Institute (SARDI) and the University of Adelaide on behalf of the International Council on Grapevine Trunk Diseases (ICGTD).

The 9IWGTD attracted 111 delegates from 13 countries. Seventy-one abstracts were delivered in oral and



poster presentations, providing new information on management, epidemiology and diagnosis of grapevine trunk diseases.

Highlighted at the 9IWGTD were the advances in grapevine trunk disease research since the last workshop in Valencia, Spain 2012, particularly in epidemiology of spore dispersal and host infection, potential disease resistance, practical disease management and economic justification for early adoption of preventative strategies. The 9IWGTD also emphasised the need for more research to address nursery propagation standards and to localise research in order to provide appropriate recommendations for our diverse industries. It also recognised the great benefit of international collaboration through the ICGTD in addressing the wide range of trunk pathogens and their associated diseases.

A field tour showcased the iconic wine region of the Barossa Valley to the international audience. Delegates were shown the latest trunk disease research being conducted at the SARDI Nuriootpa Research Centre, as well as a commercial vineyard and a grapevine nursery and their pro-active trunk disease management practices.

Abstracts from the 9IWGTD proceedings will be published in *Phytopathologia Meditteranea* and will be made available at [www.icgtd.org](http://www.icgtd.org).

The 10th IWGTD will be held in Reims, France in 2017.



Delegates at the 9th International Workshop on Grapevine Trunk Diseases.



Field tour where delegates were shown the latest trunk disease research being conducted at the SARDI Nuriootpa Research Centre.

(Mark Sosnowski, Convenor of 9IWGTD)

### **New class of antibiotic could fight resistance for 30 years**

A new class of antibiotic has been discovered using to a new technique that could yield more of the same. The technique involves culturing bacteria in their natural habitats by inserting the target into a device called the iChip. This new discovery and the new technique is an incredible boon in our fight against antimicrobial resistance. [Full article](#) is published in Science Mag.

### **Hidden Histories and Ancient Mysteries of Witches, Plants, and Fungi**

A new book that traces the evolution of plant lore and crop protection from the ancient beginnings of agriculture, through human civilisations advances, and into the modern fields of medicine, botany, agriculture, and even witchcraft is available through APS Press. The book, titled 'Hidden Histories and Ancient Mysteries of Witches, Plants, and Fungi' by Dr. Frank Dugan of the USDA Agricultural Research Service, compiles a wide variety of academic disciplines into an entertaining, and historically relevant text that opens a window on the cultures of centuries past and the plants within them. The book includes the following topics:

- The impact of crises on social history and on the development of cultivated plants,
- Archaeological and linguistic evidence for early medicinal use of ethnobotanical knowledge, particularly by women,
- A discussion of medieval and Renaissance writings for pharmaceutical purposes,
- Evidence of New World crops in Old World folklore,
- The creation of new "ancient" traditions of ethnobotany, and
- The roles of plants and agriculture in contemporary customs of possible pagan origin, focusing especially on those meant to protect crop and livestock health

Dr. Dugan offers new perspectives on these topics through recent advances in archaeobotany, molecular-genetics, paleolinguistics, paleo- and historical climatology, agricultural history, and comparative folklore. Visit

[www.shopapspress.org](http://www.shopapspress.org) to learn more about this title.

(The American Phytopathological Society Press Release)

### **New mycological keys to Australian fungi**

Two new mycological keys to Australian fungi are available through Lucid. One of these is [FunKey: Key to Agarics](#) which is an integrative key and information system for the genera of agarics occurring in Australia. Agarics are the gilled fungi, colloquially referred to as mushrooms and toadstools.

A second key [Plants and fungi of south western New South Wales](#) is an online key to 1092 species.

### **Ecological Management of Bioaggressors in Agroecosystems**

A new network, named EMBA (Ecological Management of Bioaggressors in Agroecosystems), was launched recently. This network, affiliated to INRA's Plant Health and Environment Division (SPE), aims to structure research focused on the biocontrol of pests that affect cultivated plants. The network set up in 2014 involves 60 research scientists and its purpose is to develop innovative crop protection solutions in the context of the Ecophyto plan which aims to reduce the use of chemical inputs.

Creation of the EMBA network aims to federate researchers from different disciplinary fields who are all working in the area of biocontrol, whether this concerns the development of biological control agents such as macro-organisms (e.g. insects, nematodes), micro-organisms (e.g. bacteria, virus, fungi), semiochemicals (e.g. pheromones) or natural substances that favour biocontrol. The aim is to coordinate research efforts in order to propose new and effective control strategies and encourage the development of these biocontrol products.

As a forum for dialogue and exchanges, the network aims to increase interactions between scientists so as to facilitate thinking on the major challenges related to this theme, the scientific obstacles that need to be overcome and the new strategic concepts and methods that must be developed relative to plant protection. The network will base its research strategy on public or private research partnerships. One of its missions will therefore be to compile an inventory of potential public and private partners who are working on this theme.

(The Newsletter for Industry, INRA, January 2015)

### **Canadian Phytopathological Society News**

Information of all Canadian Phytopathological Society (CPS) activities is now available in [CPS News](#) newsletter and their redesigned [website](#).

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