

BULLETIN

July 2008

Volume 15, Number 5

AFAS FEAST-France Fellowship Presentations

Friday 15th August 2008

About the Fellowships

AFAS Feast- France Fellowships

Winners of the Victoria Fellowships who are planning a study mission in France will be eligible for a \$5,000 AFAS Feast-France Fellowship as a supplement to their Victoria Fellowship.

This award from the Australian French Association for Science and Technology (AFAS) and the Embassy of France aims to facilitate science and technology to mutually benefit Victoria and France.

This year marks the 5th anniversary of the AFAS FEAST-France Fellowships

Victoria Fellowships

The Victorian Government annually awards up to six Victoria Fellowships to emerging leaders in engineering, science or technology. Each Fellow receives a travel grant of up to \$18,000 to undertake a short-term overseas study mission to assist in developing a commercial idea, in undertaking specialist training or in career development.

Agenda for the Evening

7:30 pm Welcome glass and refreshments
8:00 pm Presentation Ceremony
8:30 pm Reception
9:30 pm Close

2007 AFAS FEAST-France Fellows

Dr Bryony Coleman

Auditory neuroscience and stem cell biology

Dr Coleman will develop techniques to restore the function of the auditory nerve, which transmits sound information to the brain, by replacing the specialised cells, called auditory neurons, that comprise it. Although related to cochlear implants, Dr Coleman's study has broad implications for the emerging field of neural transplantation – including for Parkinson's Disease and spinal cord injury – as transplanted cells must function in a normal manner if they are to benefit patients.

Mr Simon Craig

Fluid Fertilisers

Over the past 10 years, the use of fluid fertilizers in Australia has increased dramatically, especially in Western Australia and South Australia. In Victoria, fluid fertilizer use is limited. Research into its use for broad acre cropping began in Victoria in 2001, but this research has been hindered by the drought. Mr Craig will gather knowledge on the compatibility of fluid fertilizers with added fungicides and micronutrients. This knowledge will be passed on to Victorian farmers and inform their uptake of fluid fertilizers.

Mr Andrew Walter

Spintronics and quantum computing

In response to consumer demand for ever-smaller and faster devices, the electronics industry has identified the emerging fields of spintronics and quantum computing as the next step in the manufacturing of electronics. Mr Walter will investigate the electronic and magnetic properties of nanometre thin metallic films to see if they are suitable for data storage applications. His investigation will include manufacturing the films as well as designing and constructing equipment to analyse them.

WHEN: Friday 15th August 2008

TIME: 7:30 pm

WHERE: Centre for Innovation & Technology
Commercialisation,
Level 1, Emirates House
257 Collins Street
Melbourne, 3000

RSVP before Friday 8th August 2008 to

Peter Tolé, Ph 03 9810 5700 (BH)
president.vic@afas.org.au

George Bolz, Ph 03 9818 1834 (AH)
treasurer.vic@afas.org.au

AFAS FEAST-France Fellows

2006

Dr Bryan Fry

Therapeutic potential of bioactive natural products

Dr Fry will investigate the evolution of the biochemical, molecular, structural and functional properties of animal venom proteins, with a particular emphasis on harnessing the natural power of potentially active molecules. Bryan will strengthen his links with his colleagues from the Muséum National d'Histoire Naturelle (Paris) with whom he jointly published a paper in Nature last February (*Early evolution of the venom system in lizards and snakes*, Nature, 439, 544-588, 2006).

Mr Hadi Lioe

Ion Mass Mobility Spectrometers

Mr Lioe will study the fundamentals of different types of ion mobility mass spectrometers. These instruments are extremely useful in the characterisation of peptides and proteins in biological samples. Hadi intends to visit the Laboratoire de Spectrométrie Ionique et Moléculaire, in Lyon where he will be investigating the mechanism of protein misfolding, the main cause of neurodegenerative diseases (e.g. Alzheimer).

Dr Paul Stoddart

Laser based methods to measure chemical concentrations

Dr Stoddart will investigate the manufacturing possibilities of a patented laser based method to provide immediate chemical concentration measurements such as those needed for glucose testing for diabetics, and water quality testing. Paul's plan is to visit the Institut des Matériaux Jean Rouxel to explore the potential for fabricating arrays of oriented carbon nanotubes on optical fibres.

2005

Ms Thanh Tam Chau is a PhD candidate at the University of Melbourne where she is investigating the behaviour of emulsions at nanoscale within the Particulate Fluid Processing Centre in the Department of Chemical and Biomolecular Engineering. Emulsions are key components in the manufacture of many foods, paints resins, pharmaceuticals and even explosives. Ms Chau's research is exploring the effect of stabilisers on the interaction between droplets in emulsions with a view to understanding the structure-function relationships between stabilisers and oils in emulsions.

Ms Hayley Newton is a PhD candidate with the Department of Microbiology, Monash University. She is investigating *Legionella pneumophila*, the bacteria that cause Legionnaire's disease, a rare and often life-threatening form of pneumonia. *L. pneumophila* is found in water ways, potting mix and artificial systems that use water for cooling, heating and industrial processes. Through comparisons with other species of *Legionella*, Ms Newton has identified three genes that appear to be involved in *L. pneumophila*'s ability to cause disease in human cells

Mr John Papandriopoulos

is a PhD candidate with the ARC Special Research Centre for Ultra-Broadband Information Networks (CUBIN), University of Melbourne. He is developing clever new ways to improve the performance of wireless sensor networks which will have a significant impact on many activities such as industrial automation, security monitoring and traffic control. Physically tiny and cheap to deploy, sensors will soon find their way into a wide range of machines and devices. They communicate through a wireless network – a new kind of “internet for machines – to create a system that is more powerful than individual parts.

2004

Three fellowships have been awarded to this year's Victoria Fellows:

Mr Micah Atkins, Dr Serryn Eagleson and Mr Rick Barber.

Micah and Rick, both researching in micro-nanotechnology, will be visiting one of the world leaders in micro-fabrication, L&T in Grenoble, and, amongst other planned visit, will be introduced to the French micro-nanotechnology network (RMNT).

For her work in urbanisation with the help of GIS, Serryn will be put into contact with the French Government Agency DATAR responsible for urbanisation and regional planning, as well as a couple of companies involved in space applications.

Melbourne French Theatre

AFAS members are now eligible for a Concession when booking for MFT plays. Refer to the web site for details:
<http://www.mftinc.org>

Welcome to new Corporate members

AREVA NC Australia

Welcome to new Individual members

Mr Ian Butterworth
Dr Bryony Coleman
Mr Simon Craig
A/Prof John Davy
Mr David Dreadon
Mr Robert Hamilton
Dr Audrey Koitka
Mr Andrew Walter

Welcome to new Student members

Ms Camilla Bachet
Ms Jenny Chow
Ms Mandy Gook
Ms Susan Patrick
Ms Melissa Sgaroto

les Emissions en Français à radio SBS

1224 AM
mardi : 11h
vendredi : 11h
dimanche : 16h

CALENDAR FOR 2008

31st January-1st February
Pasteur – WEHI Workshop

25-29th February
International Conference on Nanoscience & Nanotechnology

Friday 4th April
Annual Reception & AGM
Networking Opportunity

Wednesday 7th May
Public transport in the 21st century

Friday 20th June
Annual Dinner
Aux Batifolles

Thursday 24th July
Virtual Reality AstroTour
Swinburne University

Friday 15th August Presentation of AFAS FEAST-France Fellowships

November
Water & Energy Conference