

# Report on

## ISN-APSN Advanced School (Kaohsiung, Taiwan 2014)

August 18-22, 2014

Chang Gung Memorial Hospital,  
Kaohsiung, Taiwan, Taiwan

Submitted by

Samuel H.H. Chan

Chair, Local Organizing Committee

## **Introduction**

The ISN-APSN Advanced School (Kaohsiung, Taiwan 2014) was formally approved by the ISN Schools Initiative Committee in an e-mail from the Committee Chair, Dr. Dimitra Mangoura dated June 13, 2014. The Advanced School was held on August 18-22, 2014, in conjunction with the 12<sup>th</sup> Meeting of APSN (August 23-26, 2014).

## **Theme of Advanced School**

The theme of the Advanced School is “Neuroimaging as a contemporary adjunct to neurochemistry”.

## **Objectives of Advanced School**

There are two main objectives for this five-day ISN-APSN Advanced School (Kaohsiung 2014). The first objective is to introduce advanced postgraduate Students, postdoctoral fellows and junior faculty members or researchers to contemporary neuroimaging methodologies that are complementary to neurochemical studies. The second objective is to provide a platform to enable young scientists from different fields of neurochemical or neuroscience research to meet and exchange ideas and experiences. The School will be held in conjunction with the 12<sup>th</sup> Biennial Meeting of the APSN, so that the participants can enjoy a wide variety of leading works in neurochemical research.

## **Key Dates and Events**

|                |   |
|----------------|---|
| April 1, 2014  | Call for application sent to all APSP members.                                |
| April 5, 2014  | Call for application announced on the 12 <sup>th</sup> APSN Meeting website.  |
| April 10, 2014 | Invitation to Young Investigator Colloquium speakers to apply for the School. |

|                    |   |
|--------------------|---|
| April 17, 2014     | Invitation to Postgraduate Student Travel Awardees to apply for the School.   |
| April 30, 2014     | 20 applications received by the receipt deadline.   |
| May 1, 2014        | Application materials sent to adjudicators (Professors Akio Wanaka, Andrew Lawrence, Peter Wong and Yukio Yoneda).  |
| May 16, 2014       | Announcement of results of adjudication by e-mail to applicants. 16 students were selected based on research preparedness and accomplishment, sex and regional distribution. 2 of them subsequently withdrew because of family reasons. |
| May 16, 2014       | Announcement of results of adjudication on the 12 <sup>th</sup> APSN Meeting website.   |
| May 28, 2014       | Confirmation of attendance from students.   |
| July 1, 2014       | General information on School to students.  |
| July 1, 2014       | General information on School to overseas faculty.  |
| August 9, 2014     | Information on student arrival and transportation to hostel.  |
| August 10, 2014    | Invitation of students to attend Congress Dinner  |
| August 11, 2014    | Information on airport pickup to overseas faculty.  |
| August 14, 2014    | Final instructions for students.  |
| August 17, 2014    | Arrival of students to hostel.  |
| August 18-22, 2014 | ISN-APSN Advanced School ( <b>see detailed activities below</b> ).  |

August 23-26, 2014      12<sup>th</sup> Meeting of APSN.

August 27, 2014      Departure of students.

### **Overseas School Faculty**

#### **Professor Andrew J Lawrence**

The Florey Institute of Neuroscience & Mental Health  
Melbourne Brain Centre, Australia

#### **Professor Caroline Rae**

Neuroscience Research Australia  
University of New South Wales, Australia

#### **Professor Akio Wanaka**

Department of Anatomy and Neuroscience  
Nara Medical University School of Medicine, Japan

#### **Professor Peter T.-H. Wong**

Department of Pharmacology  
Yong Loo Lin School of Medicine  
National University of Singapore, Singapore

#### **Professor Yukio Yoneda**

School of Pharmacy  
Institute of Medical, Pharmaceutical and Health Sciences  
Kanazawa University, Japan

### **Local School Faculty**

#### **Professor Samuel H.H. Chan**

Center for Translational Research in Biomedical Sciences  
Chang Gung Memorial Hospital, Kaohsiung, Taiwan, Taiwan

**Professor Yu-Fan Cheng**

Department of Diagnostic Radiology

Chang Gung Memorial Hospital, Kaohsiung, Taiwan, Taiwan

**Associate Professor Chang-Han Chen**

Center for Translational Research in Biomedical Sciences

Chang Gung Memorial Hospital, Kaohsiung, Taiwan, Taiwan

**Associate Professor Chia-Hao Su**

Center for Translational Research in Biomedical Sciences

Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Associate Professor Steve Leu**

Center for Translational Research in Biomedical Sciences

Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Associate Professor Sara Chua**

Division of Cardiology, Department of Internal Medicine

Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Assistant Professor Wei-Yu Chen**

Center for Translational Research in Biomedical Sciences

Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Assistant Professor Tzu-Hsien Tsai**

Division of Cardiology, Department of Internal Medicine

Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Assistant Professor Jenq-Lin Yang**

Center for Translational Research in Biomedical Sciences

Chang Gung Memorial Hospital, Kaohsiung, Taiwan

## **Local Staff**

### **Postdoctoral Fellows (acting as group leader and chaperon)**

**Yung-Mei Chao, PhD**

Center for Translational Research in Biomedical Sciences  
Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Yi-Ling Chen, PhD – Group D**

Center for Translational Research in Biomedical Sciences  
Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Faith Chia-Hsin Li, PhD**

Department of Physiology, Medical College  
National Cheng Kung University, Tainan, Taiwan

**Ching-Yi Tsai, PhD**

Center for Translational Research in Biomedical Sciences  
Chang Gung Memorial Hospital, Kaohsiung, Taiwan

**Hannah Wu, PhD**

Center for Translational Research in Biomedical Sciences  
Chang Gung Memorial Hospital, Kaohsiung, Taiwan

### **Local Laboratory Assistants - Center for Translational Research in Biomedical Research, Kaohsiung, Taiwan**

I-Chun Chen

Pei-Chia Tsai

Min-Chiao Liao

Kevin Lin

Yu-Chun Chiu

Li-Hsuan Chen

Chun-Yi Tsai

Pei-Rong Lai

Ya-Ting Chang

## **School Students**

### ***Group A***

**Anindita Banerjee**

Assistant Professor

ICARE Institute of Medical Science & Research, India

**Su Jing Chan**

PhD Student

National University of Singapore, Singapore

**Taeko Kimura**

Postdoctoral Fellow

Tokyo Metropolitan University, Japan

**Prapimpun Wongchitrat**

Lecturer

Mahidol University, Thailand

### ***Group B***

**Gangadharappa Harish**

Research Associate

National Institute of Mental Health and Neural Sciences, India

**Sarun Koriala**

Assistant Professor

BP Koirala Institute of Health Sciences, Nepal

**Wilasinee Suwanjang**

Lecturer

Mahidol University, Thailand

**Ying Yang**

PhD Student

National University of Singapore, Singapore

***Group C***

**Pardeep Kumar**

Postdoctoral Fellow

Jawaharlal Nehru University, India

**Jiayi Li**

PhD Student

The Graduate University for Advanced Studies, Japan

**Sujira Mukda**

Assistant Professor

Mahidol University, Thailand

***Group D***

**Hirokazu Hashimoto**

Postdoctoral Fellow

National Institute for Physiological Sciences, Japan

**Heather Madsen**

Postdoctoral Fellow

University of Melbourne, Australia

**Chonlathip Thipkaew**

Research Assistant

Khon Kaen University, Thailand



## **School Activities**

### **(1) Accommodation**

All overseas faculty members stayed at Grand Hotel Kaohsiung, a five-star hotel that is 5 minutes driving from the School venue. Daily transportation to and from the hotel was provided.

All students stayed at Chengcing Hostel; each with a single-room with private bathroom, air-conditioning, free WiFi, refrigerator and TV. The hostel is within walking distance from the School venue. During APSN Meeting, daily transportation to and from the meeting venue was provided for the students. Each student is also provided with a card with instructions in Chinese for taxi drivers to take them to Chengcing Hostel, and information on the person to contact in case of emergency.

### **(2) Venue**

All School activities took place at the Center for Translational Research in Biomedical Sciences, Children's Hospital, Chang Gung Memorial Hospital, Kaohsiung, Taiwan. This Center is the premier research center that spearheads translational medicine in Taiwan. The Center provided state-of-the-art facilities to teach advanced imaging methodologies that include time-lapse microscopy, in vivo imaging (IVIS), ultrasonography, animal MRI and human MRI. These are invaluable methodologies to neuroscientists that are not usually accessible to participants within a single School. By relating these methodologies to disease modalities such as stroke, this ISN-APSN Advanced School enabled participants to acquire new ideas and to learn new techniques and methods that may be beneficial to their future research. The local School faculties are all researchers from this Center who are actively working in neuroscience and neurochemistry, using neuroimaging as their primary research tool.

### **(3) Advanced Lecture Series**

Beginning on Day 2 of the School, each morning began with an Advanced Lecture delivered by one of the overseas faculty.

August 19, 2014

#### **Professor Akio Wanaka**

*Adult Olig2-positive cells in the brain: implications in pathological and physiological conditions*

August 20, 2014

**Professor Caroline Rae**

*Magnetic resonance spectroscopy*

August 21, 2014

**Professor Andrew Lawrence**

*Imaging studies in addiction*

August 22, 2014

**Professor Yukio Yoneda**

*A wonder of the green tea ingredient theanine*

#### **(4) Lecture Series on Translational Medicine**

By special arrangement, Professor Yu-Fan Cheng, Chief of Diagnostic Radiology and Director of the Cancer Center, Kaohsiung Chang Gung Memorial Hospital, delivered a lecture entitled, “*A clinician’s perspectives on clinical imaging*” on August 22, 2014. This was followed by a guided tour for the overseas faculty and students to the clinical MRI facilities. In the spirit of translational medicine, this lecture and tour was designed to be the grand finale of the Advanced School and were an eye-opener for all participants.

#### **(5) Technical Lecture Series**

On August 18 and 19, 2014, a series of 8 Technical Lectures, 30 minutes each, that are associated with the laboratory hands-on modules was delivered by the local faculty.

*L1: Acute ischemic stroke model in rats (Dr. WY Chen)*

*L2: Chronic cerebral ischemia model in rat (Dr. TH Tsai)*

*L3: Gene delivery in cultured cells (Dr. CH Chen)*

*L4: Isolation of primary neuron cells (Dr. JL Yang)*

*L5: Research applications of time-lapse microscopy (Dr. CH Chen)*

*L6: Research applications of In Vivo Image System (IVIS) in small animals (Dr. S Leu)*

*L7: Research applications of magnetic resonance imaging (MRI) in small animals (Dr. CH Su)*

*L8: Research applications of ultrasonography in small animals (Dr. S Chua)*

## **(6) Laboratory Hands-on Modules**

On August 18-21, 2014, 4 laboratory hands-on modules proceeded in a rotational fashion to allow all students to participate in all modules. These activities took place on the 1st and 11th floor of the Children's Building, Chang Gung Memorial Hospital. A demonstration by the faculty was followed by hands-on experiments by the students. At the conclusion of each module, students are provided with a CD that contains the key experimental observations from that hands-on session.

*Module 1: Induction of chronic cerebral ischemia (Dr. TH Tsai)*

*Module 2: Preparation of primary neuron cells (Dr. JL Yang)*

*Module 3: Gene delivery for culture cells (Dr. CH Chen)*

*Module 4: Induction of acute ischemic stroke and adipose-derived mesenchymal stem cell (ADMSC) delivery (Dr. JL Yang)*

*Module 5: Time-lapse microscopy: Cell proliferation and migration (Dr. CH Chen)*

*Module 6: Time-lapse microscopy: Migration of mitochondria in neuron (Dr. JL Yang)*

*Module 7: MRI examination of acute ischemic stroke in rats (Dr. CH Su)*

*Module 8: MRI examination of chronic ischemic stroke in rats (Dr. CH Su)*

*Module 9: Tracing ADMSC with IVIS & carotid artery ultrasonography (Dr. S Leu and Dr. TH Tsai)*

## **(7) Presentation of Research Work by Students**

In the evening of August 20, 2014, each of the 14 students presented their own research work, aided by power point slides, to the overseas and local faculty. Each student gave a 7-minute talk, followed by a 3-minute discussion. This session was chaired by Professor Peter Wong.

## **(8) Presentation of Results from Laboratory Hands-on Sessions by Students**

In the afternoon of August 22, 2014, each of the 14 students presented a summary of "what I have learnt in the Advanced School", aided by power point slides prepared from the results obtained during the laboratory hands-on sessions. Each student again gave a 7-minute talk, followed by 3 minutes of questions-and answers. A panel made up of the 5 overseas faculty and chaired by Professor Peter Wong acted as adjudicators. Based on contents, presentation skills and performance during questions-and answers, 1

Gold, 1 silver and 2 bronze awards were given to the best presentations, with a certificate and a respective cash award of USD 300, 200 and 100.

**Gold Award:** Heather Madsen (Australia)

**Silver Award:** Gangadharappa Harish (India)

**Bronze Award:** Wilasinee Suwanjang (Thailand)

Ying Yang (Singapore)

#### **(9) Presentations of Students at 12<sup>th</sup> Meeting of APSN 2014**

On August 23-26, all students participated in the 12<sup>th</sup> Meeting of APSN 2014, including the Opening Ceremony and Welcome Reception, the Congress Dinner, and the Closing Ceremony. In addition, each student presented their work in the form of either Young Investigator Colloquium, oral or poster presentation. The registration fees and congress dinner were paid by the School.

|     |                       |                 |                 |
|-----|-----------------------|-----------------|-----------------|
| 1.  | Wilasinee Suwanjang   | Thailand        | YIC             |
| 2.  | Pardeep Kumar         | India           | YIC             |
| 3.  | Su Jing Chan          | Singapore       | Oral and poster |
| 4.  | Anindita Banerjee     | India           | Poster          |
| 5.  | Gangadharappa Harish  | India           | Poster          |
| 6.  | Hirokazu Hashimoto    | Japan           | Poster          |
| 7.  | Taeko Kimura          | Japan           | Poster          |
| 8.  | Sarun Koriala         | Nepal           | Poster          |
| 9.  | Jiayi Li              | Japan (Chinese) | Poster          |
| 10. | Heather Madsen        | Australia       | Poster          |
| 11. | Sujira Mukda          | Thailand        | Poster          |
| 12. | Chonlathip Thipkaew   | Thailand        | Poster          |
| 13. | Prapimpun Wongchitrat | Thailand        | Poster          |
| 14. | Ying Yang             | Singapore       | Poster          |

**(10) School Student Who Received Presentation Awards**

Several students were the recipients of presentation awards at 12<sup>th</sup> APSN Meeting.

**Oral Presentation Award**

**Gold Award:** Su Jing Chan (Singapore)

**Tokuji Ikenaka Award for Best Poster Presentations**

**Silver Medal:** Su-Jing Chan  
Ying Yang

## Financial Report

### Income (New Taiwan Dollars)

|  |         |
|--|---------|
| 1. ISN (first installment)                     | 957,272 |
| 2. ISN (second installment)                    | 238,431 |
| 3. Donation from Chang Gung Medical Foundation | 145,659 |

#### Sum Total of Income

**NTD 1,341,362**  
~USD 44,907\*\*

### Expenses (New Taiwan Dollars)

|  |         |
|--|---------|
| 1. Airfare for overseas faculty  | 89,425  |
| 2. Airfare for students  | 386,280 |
| 3. Lodging for overseas faculty  | 73,900  |
| 4. Lodging for students  | 97,200  |
| 5. Salary for local faculty  | 74,000  |
| 6. Wages for local staff and assistants  | 82,880  |
| 7. Meals and coffee-and-tea breaks for faculty and students  | 46,578  |
| 8. Welcome and farewell dinner for faculty and students  | 47,927  |
| 9. Transportation  | 25,527  |
| 10. Awards for student presentation  | 21,140  |
| 11. Laboratory consumables (including animals, reagents, antibodies)                                     | 170,465 |
| 12. Registration fees for 12 <sup>th</sup> APSN Meeting for students                                     | 81,000  |
| 13. Congress dinner for students   | 29,400  |
| 14. Miscellaneous fees (name tags, certificates, stationery, postage)                                    | 16,792  |
| 15. Discounted charges for imaging facilities (animal MRI, IVIS, ultrasonography, time-lapse microscopy) | 96,000  |
| 15. Insurance  | 2,170   |
| 16. Bank transfer fees   | 678     |

#### Sum Total of Expenses

**NTD 1,341,362**  
~USD 44,907\*\*

\*\* 1 USD ~ NTD 29.87

