

# NEWSLETTER

VOLUME 01 - ISSUE 01 | 2016

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APBioNet AGM 2015



GIW / InCoB 2015, Japan



PU-CBi-APBioNet Joint Workshop Series 2015 (JWS2015)



ADVANCING BIOINFORMATICS AND ALLIED DISCIPLINES IN THE ASIA - PACIFIC REGION

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Ge Gao, China Chandra Verma, Singapore Durai Sundar, India Victor Tong, Singapore Paul Horton, Japan Hideo Matsuda, Japan Sissades Tongsima, Thailand

### LIAISONS

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# Dear colleagues and members,

The Asia-Pacific Bioinformatics Network (APBioNet) was founded in 1998 at the Pacific Symposium on Biocomputing in Hawaii, USA.

Since then, the organization has established itself as one the vanguards of bioinformatics in the Asia-Pacific Region.

APBioNet's mission, since its inception, has been to pioneer the growth and development of bioinformatics awareness, training, education, infrastructure, resources, and research among member countries and economies. As the President of the organization, I am assisted by the Vice Presidents of Research, Education, Conferences, and Corporate, along with the other Office Bearers, Liaison Officers, and the Secretariat to serve this mission of APBioNet.

The organization's flagship conference, the International Conference on Bioinformatics (InCoB) was inaugurated in 2002 in Bangkok, Thailand, and has been held annually since then in different geographical locations across the Asia-Pacific region. The most recent, 14th InCoB was held in Odaiba, Japan, with a great success, and was for the first time in joint partnership with the International Conference in Genome Informatics (GIW). This year, InCoB will be returning back to Singapore, seven years after the first InCoB (2009) was held there.

Full papers for oral presentation at the conference are published in top international, peer-reviewed journals, such as BMC Bioinformatics, BMC Genomics, BMC Systems Biology, IEEE ACM, JBCB, Computational Biology and Cancer Biology.

The organization, currently, has over 250 paid members, originating from more than 46 countries. We thank the members for their continued support to the organization and its activities.

I hope you will enjoy reading this newsletter, which aims to provide a formal recollection of the major activities in the preceding year.

I look forward to seeing you at InCoB 2016 in Singapore.

Shoba layanah.

Shoba Ranganathan President Asia - Pacific Bioinformatics Network



**Nik Elena Nik Mohamed** Secretary, APBioNet

The APBioNet Annual General Meeting 2015 took place during the joint GIW / InCoB 2015 Conference in Odaiba Japan. Dr. Shoba Ranganathan, President of APBioNet, welcomed all those in attendance, and thanked the International Conference in Genome Informatics (GIW) for the joint partnership, as well as the International Society for Computational Biology (ISCB) for providing support to the conference.

Below are snippets of the key points from the AGM:

- 1. The last election of the Office Bearers was in 2014, who will serve in office until the year 2016. The next election will take place at InCoB 2016 in Singapore.
- 2. The InCoB 2014 in Sydney, Australia, was a great success, with more than 200 registered participants, and 106 paper submissions, half of which were accepted in high quality international, peer-reviewed journals.
- APBioNet has provided and will continue to provide support to bioinformatics speakers attending bioinformatics related activities, such as talks, workshops, seminars and global meetings.



#### InCoB 2014 Journal Publications

Vice President of Research, Dr. Kenta Nakai, highlighted that two of the papers published in InCoB 2014 were accepted by the top Cancer Biology Journal. Currently, conference papers are being published in Bioinformatics, IEEE, ACM, JBCB, BMC Genomics and Computational Biology journals.

APBioNet now wishes to expand the list of publishable journals for InCoB papers to include PeerJ.

### GIW / InCoB 2015 Journal Publications

Vice President of Conferences, Dr. Christian Schönbach then presented on the conference activities of GIW / InCoB 2015. Close to 200 participants had registered for the event. A total of 96 papers were submitted, and more than half were successfully accepted for publishing in BMC Genomics, Medical Genomics, Systems Biology, and Bioinformatics journals.

#### **APBioNet Education Activities**

APBioNet is an active and contributing member of GOBLET, thanks to the efforts of APBioNet's Vice President of Education, Dr. Bruno Gaeta, who serves in GOBLET's Education Committee.

### **APBioNet Financial Report and Membership**

APBioNet's financial report was given by the Treasurer, Mr. Muhammad Farhan Sjaugi.

The Treasurer declared that APBioNet is currently in a financially viable position, and has funds held in trust for InCoB 2011 (Malaysia) and InCoB 2014 (Australia), which can be used to promote bioinformatics activities in the respective countries.

The Treasurer also highlighted the benefits of becoming an APBioNet member and outlined the membership fees structure (see http://apbionet.org/ for membership information).



### APBioNet Travel Fellowship Award and Meritorious Service Award

As many as nine Travel Fellowship Awards, total worth of USD 2,500, were awarded to conference participants. Eight (8) Meritorious Service Awards were given to APBioNet and InCoB committee members to recognize the commendable services provided to the organization on an on-going basis.



Recipient	Country of origin
Garima Singh	India
Song Renhua	Australia
Cheng Shengzhu	USA
Ugur Sezerman	Turkey
Jing Ren	Australia
Chieh Hua Lin	Taiwan
Chia Chun Chiu	Taiwan
Tan Swan	Malaysia
Ching Yee Lau	Malaysia



Recipient	Country of origin
Paul Horton	USA
Jun Sese	Japan
Christian Schönbach	Kazakhstan
Mohammad Asif Khan	Singapore
Muhammad Farhan Sjaugi	Indonesia
Nik Elena Nik Mohamed	Malaysia
Siu Ming Yiu	Hong Kong
Nurul Salwanie	Malaysia

# BECOME AN APBIONET MEMBER TODAY!

### TRAVEL FELLOWSHIPS

Eligibility to apply for APBioNet and ISCB Travel Fellowships

### **DISCOUNTS**

- Discounts to attend APBioNet conferences, workshops and other events
- Discounts on APBioNet
   merchandise and
   publications

APBIONET MEMBER BENEFITS: visit www.apbionet.org to know more

### **MAILING LIST**

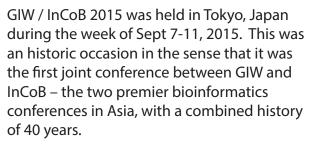
Notification and regular updates on APBioNet activities, as well as attractive offers and opportunities for participation in select activities of interest

### **COMMUNITY OUTREACH**

Eligibility to represent APBioNet at key meetings, AGM and events as official delegates



**Paul Horton**Conference Chair, GIW / InCoB 2015



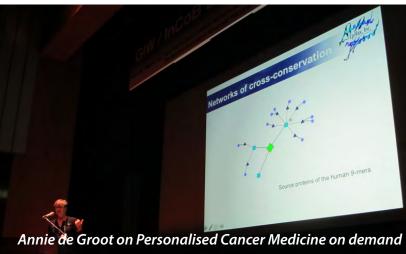
Thus, GIW / InCoB 2015 was anticipated by the community with great expectations, and I believe that it met or exceeded them. Including satellite meetings on Bioconductor and Genome Privacy, the conference week was attended by approximately 200 people from 18 countries covering four continents; with an especially strong contingent from Taiwan (35 people).

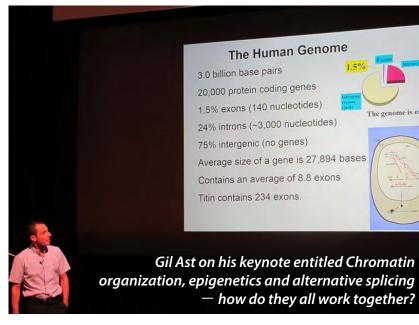
The conference program was anchored by six extremely strong keynotes: Arne Elofsson, Mark Baker, Edward Marcotte, Yana Bromberg, Gil Ast and Annie de Groot; who collectively summarized the frontier of our field from structural proteomics and alternative splicing to human disease and personalized medicine.

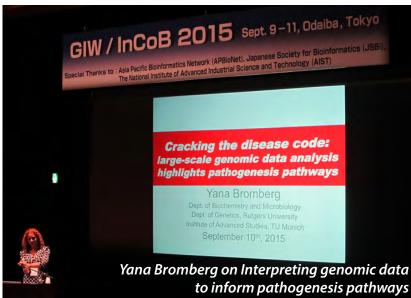
The keynotes were, however, the tip of the iceberg, as the four track program covered a total of 81 talks including 51 on original research first presented to the world during the conference.

This considerable body of work has now been published as 78 papers, many of them as GIW/InCoB 2015 supplements in BMC Genomics, BMC Medical Genomics, BMC Systems Biology, BMC Bioinformatics; others in Bioinformatics, IEEE/ACM Transactions on Computational Biology and Bioinformatics and the Journal of Bioinformatics and Computational Biology.

We refer interested reader to the introductions contained in the aforementioned BMC supplements for an overview of the original research presented at the conference





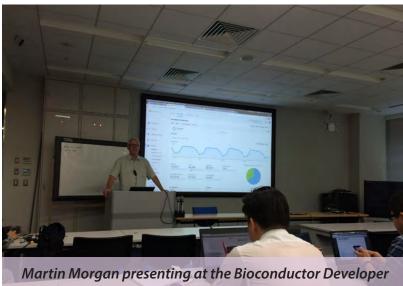


We list the topics of the five best paper award presentations to give a brief idea of the scope of the original research presented at the conference: mouse microRNAs responses to lipopolysaccharide-stimulation; computational identification of vaccine targets; selection of blood-based biomarkers for Alzheimers disease; Identification of network-based biomarkers for cardioembolic stroke; and detection of deletions from

low-coverage sequencing data. This list reflects the fact that bioinformatics is becoming increasingly

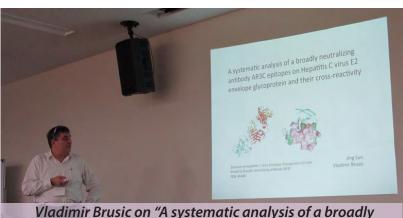
We did not intend to merge GIW and InCoB, and indeed in 2016 they will be held separately (GIW in Shanghai, InCoB in Singapore). However, the collaboration in the year 2015 was a positive experience and we expect to see dynamic and highly fruitful collaboration between these two conferences (and others) as we move bioinformatics forward in Asia and beyond.

Finally, as the conference chair, this reporter would like to thank APBioNet and JSBi (Japan Society for Bioinformatics), the Novartis Foundation, and the numerous conference sponsors for indispensable organizational and financial support; and the many volunteers and staff who made the conference possible; in particular Christian Schönbach, Jun Sese, Shoba Ranganathan, Siu-Ming Yiu, Mohammad Asif Khan, Nurul Salwanie, Muhammad Farhan Sjaugi, and Monami Tanabe.

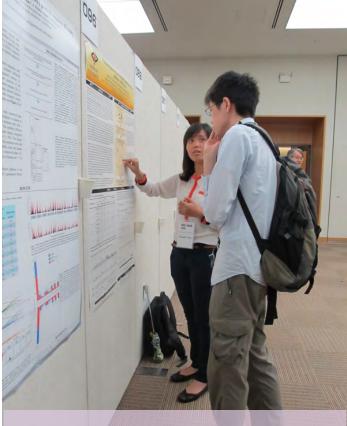


indispensable for medical research.

meeting on the September 8, 2015



neutralizing antibody AR3C epitopes on Hepatitis C virus E2 envelope glycoprotein and their cross-reactivity



Poster presentation session during GIW / InCoB 2015

# MARK YOUR CALENDAR

# 15<sup>th</sup> International Conference On BioInformatics







21<sup>th</sup> - 23<sup>rd</sup> September 2016 Biopolis, The Matrix, Singapore



Jointly Organized by









Christian Schönbach VP Conference, APBioNet

On December 9, 2015 BioMed Central released the GIW / InCoB2015 Supplement Issues of BMC Genomics, BMC Bioinformatics, BMC Medical Genomics and BMC Systems Biology.

The four issues contain 43 articles that are categorized as "Research" rather than "Proceedings". Two introductory articles in BMC Genomics and BMC Bioinformatics summarize the conference and published works.

The first BMC Genomics supplement was published in the year 2009. In the period of 2009 to 2014, we have published a total of 159 articles in BMC Genomics, which have been cited 950 times (Web of Science, Thomson Reuters, Dec 10, 2015).

The 113 BMC Bioinformatics published articles attracted 590 citations. The h-index of the supplement issue after five years is 10 for BMC Genomics and 7 for BMC Bioinformatics, respectively.

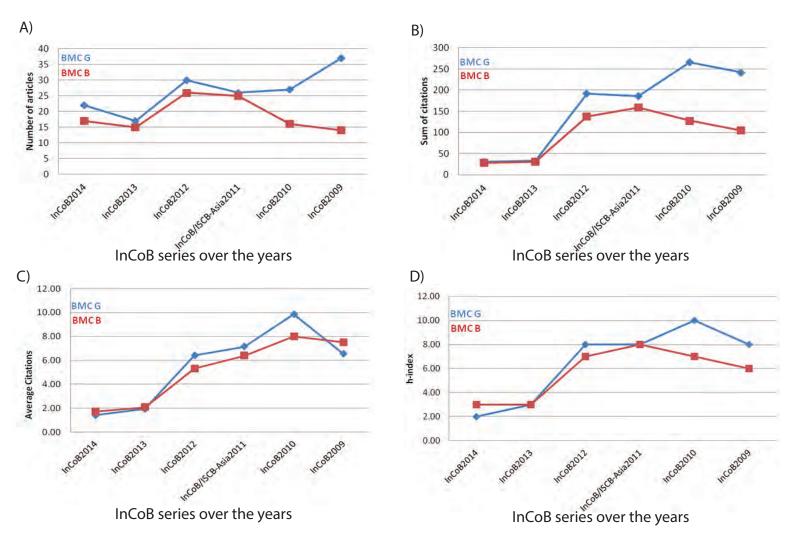


Figure 1. Number (A) and impact (B-D) of articles published in BMC Bioinformatics and BMC Genomics journals as InCoB supplements over the years.



**Bruno Gaeta**VP Education, APBioNet

The 2015 Annual General Meeting (AGM) of the Global Organisation for Bioinformatics Learning, Education and Training (GOBLET) took place in Cape Town, South Africa, in November. The AGM was attended by around 30 representatives from all over the world.

The event was preceded by two days of "train the trainer" workshop that covered both teaching practice and the use of new technologies and paradigms in bioinformatics education.





The AGM included three days of productive discussion on ways in which GOBLET can better accomplish its mission and serve its members, including improvements to the GOBLET web portal so it can better support trainer needs, and discussion of methods through which excellence in training and teaching practice, as well as quality of training materials can be recognised.

The development of a GOBLET-branded e-learning platform for the delivery of quality course materials was a new direction that was the focus of much brainstorming.



### **GOBLET AGM 2016**

The participants also voted on the location of the 2016 GOBLET AGM, which will take place next November in Brisbane, Australia.

The location in the Asia-Pacific region will make it easier for APBioNet members to attend potential training events associated with the AGM.



by **Nurul Salwanie Che Wahid** Executive Officer (Management), Secretariat, APBioNet

APBioNet, in collaboration with the Perdana University Centre for Bioinformatics (PU-CBi), organized a number bioinformatics related workshops in 2015 as part of a Joint Workshop Series (JWS2015; http://bit.ly/1fvkJle).

The JWS2015 workshop series consisted of three workshops that were designed to help and support bioinformatics research in the region, specifically in Malaysia. This workshop series was generously sponsored by Malaysia Medical Association (MMA) and Carl Zeiss (Singapore).

### **INTRODUCTORY BIOINFORMATICS WORKSHOP, 17-25 AUGUST 2015**

The Introductory Bioinformatics Workshop 2015 (IBW2015) marked the beginning of the series. IBW was successfully organized twice in the past (2012 and 2013) by PU-CBi.

This 7-day intensive, hands-on workshop, led by APBioNet's Vice President (Corporate) and Director of PU-CBi, Assistant Professor Dr. Mohammad Asif Khan, focused on building participants foundation in bioinformatics, by covering a wide range of topics from biological databases and tools to homology modelling.

The workshop focused on hands-on practicals, which followed the theory lectures, and each topic was ended with a group discussion on the learning objectives. The participants, who largely came from non-bioinformatics backgrounds, found the workshop engaging and fulfilling.



### R STATISTICAL COMPUTING FOR BIOLOGISTS WORKSHOP, 12-16 OCTOBER 2015

R Statistical Computing for Biologists was designed for students and researchers interested in performing biostatistical analyses. This comprehensive 4-day workshop focused on various features of R Statistical software (e.g. data types, data manipulation tools, graphics, programming and Bioconductor).

The workshop was facilitated by Dr. Lloyd Low, an experienced user of the R language. The participants enjoyed the workshop and requested for future workshops to focus on advanced applications of the R language.



#### LINUX PRIMER FOR BIOLOGISTS WORKSHOP, 26-30 OCTOBER 2015

Linux Primer for Biologists was the final workshop in the JWS 2015 series and featured PU-CBi faculty, Mr. Muhammad Farhan Sjaugi and Dr. Adeel Malik, avid users of the Linux Operating System (OS). This 5-day workshop focused on introducing the Linux OS, including installation and configuration of the operating system, basic Linux commands, data parsing using text editor, file management system, and installation of Linux applications, and demonstrations of its utility to solve biological problems.





Nurul Salwanie Che Wahid
Executive Officer (Management),
Secretariat, APBioNet

APBioNet, in collaboration with the Perdana University Center for Bioinformatics (PU-CBi), jointly organised the first bioinformatics roadshow by European Bioinformatics Institute (EMBL-EBI) in South East Asia.

As part of the roadshow, a two-day workshop on Bioinformatics Applications in Proteomics and Mass Spectrometry was organised from the 1-2 December, 2015, at Perdana University, Malaysia. The workshop featured an expert bioinformatician from EMBL-EBI, Mr. Tobias Ternent.

The two day event covered various tools and software from EMBL-EBI, namely UniProt, InterPro, Enzyme Portal, MS Search Engine, PRIDE public repository data and ProteomeXchange.

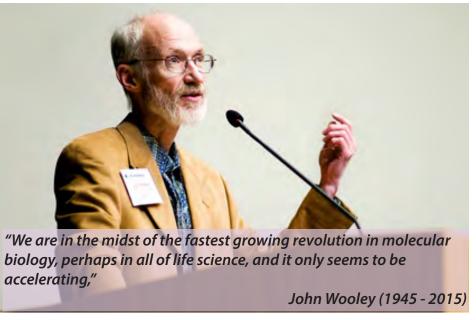


A public lecture on "Big Data Challenges" by Mr. Tobias Ternent was also organized as part of the roadshow. This lecture was in line with EMBL-EBI's commitment to help scientists realise the potential of 'big data' in biology, and the talk focused on explaining the wider technical challenges, and solutions of 'big data'. Both events were generously sponsored by EMBL-EBI, Malaysia Medical Association (MMA), Carl Zeiss (Singapore), Novaglobal (Singapore) and Komunikasi Saintifik (Malaysia).





by
Tan Tin Wee
Honorary Director, APBioNet Ltd



The Asia-Pacific Bioinformatics Network grieves the loss of its dear colleague, Dr. John Wooley, the long-time Associate Vice Chancellor for Research and Professor of Pharmacology at the University of California, San Diego who passed away in April 2015 after a long battle with cancer.

Wooley earned his Ph.D. in biophysics from the University of Chicago. He then quickly grew active in both life sciences and technology, and later became involved in multiple government computational biology programs and bioinformatics projects. He started off multiple programs in an effort to grow a community of cross-disciplinary scientists focused on building algorithms, tools, software and databases that could be used by the biological science communities. He was clearly a visionary, recognizing early on the need and value of integrating computational science to experimental biology.

Wooley will always be remembered as a talented, passionate proponent and contributor to the field of informatics. He was a master of bridging disciplines and led important aspects of projects in microbial genomes and computational structural biology. He saw the importance of funding programmes to support researchers and was an avid believer for any programme and event that supported such a cause. His close friends and colleagues have all come up to express their condolences, such as Philip Bourne, First Associate Director for Data Science, National Institutes of Health, who said "John was responsible for my first grant while he was at the US National Science Foundation. He gave me more money than I had asked for. He was that kind of guy. It has never happened since." Professor Larry Lee Smarr of University of California, San Diego, Wooley's long time friend and collaborator, noted that Wooley is a pioneer in providing funding support for computational biology. "He helped create a whole generation of bioinformatic researchers and is deeply missed."

His visionary work has inspired many in the field, and will continue to inspire many more in future generations. His devotion to those whom he mentored and to his family was without equal. We are deeply privileged to have been among the beneficiaries of his professional largesse.

We would like to extend our deepest condolences to his family and friends.



Mohammad Asif Khan (PhD, NUS, SG) Editor-in-Chief



Nurul Salwanie Che Wahid (BSc, UKM, MY) Managing Editor



Nik Elena Nik Mohamed (MForSc, UWA, AU) Assistant Editor



Shoba Ranganathan (PhD, IIT, IN)



Christian Schönbach (PhD, UT, DE)



Tan Tin Wee (PhD, Edin, UK)



Paul Horton (PhD, UC, US)



Bruno Gaeta (PhD, UNSW, AU)