

2007 epsm-abec **ABEC UpDate**

The planning for EPSM-ABEC 2007 is in its final stages and all bodes well for a productive and enjoyable meeting in Fremantle, at what is probably one of the best times of the year to be in the West.

The combined meeting will be opened by Prof. Lyn Beasley (not sure of the relationship, if any), Chief Scientist for WA and will be followed by the opening Plenary Address to be given by Prof. Barry Marshall, Nobel Laureate. Professor Marshall and his research partner Dr. Robin Warren were awarded the Nobel Prize for medicine in 2005 for ground breaking working in the 1980's on the role of helicobacter pylori in stomach ulcers and their treatment. While stomach ulcers may not be your cup of tea, the role of the science and Barry's unique approach to the conduct and proof of the research is an interesting and engaging story in its own right. His plenary address will be a fitting way to open the conference in Perth.

The ABEC program offers a range of proffered papers, invited papers, instructional sessions and workshops. The (nearly) completed program should provide a guide in this respect. While we commend the overall program you may find particular interest in the following;

Monday: Focus Sessions on Biomaterials and Implant Technology.



The session will be led by invited speaker, Clinical Professor Fiona Wood and to set the theme of the conference, the intent is to take you out of your comfort zone and to look at where the physical scientist fits with other important clinical and biomedical sciences. Fiona Wood is a practicing plastic surgeon with key responsibilities in the areas of burns trauma, treatment and cell based therapies. Her role with the 25 burns victims from the bombing of the Sari nightclub in Bali and the use of cell therapy in their treatment is well known and led to recognition as Western Australian of the Year in 2003, an AM in 2004 and Australian of the Year in 2005. Prof. Wood heads up the Telstra Burns facility at RPH and is prominent for an interest in tissue engineering as Director of the McComb Research Foundation.

The session that follows will include papers on both biological material substrates and conventional engineering technologies. Professor Leon Neethling follows the tissue engineering theme, looking at the design and performance of tissue heart valves and Marian Sturm, senior scientist with the recently formed Cell Therapy and Tissue Engineering Centre at RPH will discuss the challenges in establishing GMP practices in this difficult area.

Proffered papers follow with a transition from the biological through to the engineering aspects of implant design, manufacture and performance.

Tuesday: Workshop on "Trends in Clinical Equipment and Information Technology"

There have been dramatic changes in the design of medical equipment over the last ten years or so and change continues to accelerate. Increasingly, clinical equipment systems and the need for integrated clinical data, corporate data and personal information are blurring the lines of responsibility. The major shift from stand alone equipment to systems based technologies has a knock on effect in terms of how we manage the technology and whether the biomedical engineer is adequately equipped for the task.

How do we define the future, how do we plan for it, what is our role in co-operation with the IT specialist, are we meeting clinical expectations - these are all questions that will form the future.

The object of the Workshop is to explore some of these challenges and to cause us to question our directions, hopefully in a positive way. The Workshop will be followed (on the Wednesday) by a session looking at the need for improved definition and standards in respect of the interface between clinical equipment and IT systems; the object being to develop form a terms of reference for ongoing work as a tangible outcome from the conference.



The Workshop will be anchored by Dr. Elliot Sloane, from Villanova University in the USA. Dr. Sloane has an extensive clinical engineering background in both the University and Industry, with wide ranging interests in biomedical informatics, health systems engineering and technology assessment. Dr. Sloane will be providing a ABEC Plenary Address that will open the Workshop and set the tone for the following sessions. Following the plenary, the meeting will break off into two streams; the first described best as a general BME stream and the second following the workshop theme. The introduction will be followed by four sessions covering;

- a review of how BME-IT systems are managed across health sectors in Australia with presentations by colleagues from Qld, NSW and WA*
- an insight into clinical expectations as to future need in areas of critical care, with presentations from senior clinicians in the areas of Anaesthesia, Emergency Medicine and Intensive Care*
- a glimpse into where the Industry is heading and likely trends from both the US and Europe with input from Siemens Ltd, GE Healthcare and Hospira.*
- a quick look at how corporate IT systems and whole of health demand may influence directions with a presentation by Marcus Young (Incarta IT) who will provide a unique perspective, with a foot in both the BME and IT camps. It is intended that Marcus will explore the effect that whole of health initiatives (eg. e-health, smartcard technologies, centralised health records, etc.) will have on hospital systems and procedures.*

In each case it is intended that the presentations will be forward looking, challenging and provocative in the hope that this will stimulate enthusiastic participation in the final panel session and ensuing IT standards workshop. The panel session should be an opportunity to develop ideas, air frustrations and to challenge the accepted dogmas.

Wednesday: Combined Plenary Session by Invited Speaker, Prof. Yongmin Kim "Translational Research, Technology commercialisation and Entrepreneurship"

Professor Kim has been invited to present to the conference with the sponsorship support of the IEEE-EMBS. Yongmin Kim hails from the University of Washington, Washington DC and has a particular interest and recognised expertise in using sophisticated health care technologies to provide medical services in non-traditional settings. His interests are reflected in the topic and to demonstrate his versatility he will also be speaking on the topic of "Distributed Care and Diagnosis" in the clinical engineering stream on Monday afternoon.



Dr Joel Nobel is well known to many of us as the founder of ECRI Institute in the USA and is sponsored to the conference by ECRI. Joel has played a key role in developing ECRI's overall policies and has initiated many of its programs in healthcare technology assessment, product evaluation, risk management and technical assistance services.

Dr Nobel is presenting an invited paper "Professional Development Options for Biomedical Engineers" to wrap up the biomedical engineering topic stream on the Wednesday afternoon.

Wednesday: CPD Instructional Sessions.

Of importance are two instructional papers being presented on Wednesday afternoon on the important topics of remote servicing of medical equipment and infection control – not related but no less of importance.

*Seimens Ltd will be presenting on options and methods for **accessing remote service support for medical equipment** utilising contemporary IT technology; a recognition of the global basis of many of the technologies we find ourselves dealing with.*

*Assoc.Prof Keryn Christiansen, Head of the Department of Microbiology at Royal Perth Hospital will be presenting an equally important paper dealing with the challenge of working (intimately) in an environment with the risk inherent in the so-called superbug or in Keryn's terminology, the **Antimicrobial resistant organism**. RPH's Microbiology Department under the direction of the Prof. Christiansen has an unenviable record and is recognised internationally for its work in isolating and eliminating MRSA and VRE outbreaks in the Hospital. BME Departments have an important part to play in this work, both for their own protection and for the protection of others – the question is, how do we meet this challenge? Knowledge is power – be there !!*

Thursday: Workshop on BME Aid to Developing Countries and Recovering Communities.

The Thursday session (starting a little later to assist communities of developing BME's to recover from the conference dinner the night before) follows a theme that has been explored at previous meetings – the vexed question as to the best way to provide assistance where it is most needed.

The participants include;

- *Prof. Michael Henderson (Perth) describing progress in assisting in Indonesia (Aceh) following the tsunami and earthquake incidents, funding opportunities and the need for BME development in the region to underpin local and WA initiatives in the medical and public health areas.*
- *Mr.G. Forward (Fremantle) describing initiatives being taken to assist medically and in the orthopaedic area in Ethiopia and to identify problems experienced by clinicians wishing to work and assist in African centres, including those requiring BME input.*
- *Mr.Bruce Morrison (Newcastle) covering initiatives (successes and misfortunes) in areas of the Pacific (eg. Solomons, Fiji, Samoa)*
- *Mr.David Smith (Melbourne) covering issues related the PNG*
- *Mr. Mike Denison (Melbourne) more of the above related to his Red Cross experience.*

The object as I see it is to develop a working paradigm that addresses the need to develop a sound BME resource base in developing or recovering communities (probably including Aust.) and to see whether this meets the emerging need being described for Indonesia and Africa, (for example). It is intended that panel discussion and contribution from the floor will improve the coverage provided by the faculty of expertise nominated.

Hopefully we can identify a potential way forward, provide something that the College of Biomedical Engineers can get its teeth in to, establish an interest on the part of individuals with skills that may be of assistance and ensure that any effort that ensues is sensitive to the needs of recipient communities.

The above presents an up to date synopsis of some of the weeks key activities and contributions. There will be plenty of opportunity to catch up with colleagues, to embellish the lies you told at the last conference, to consult the trade and to take in the pleasures and many attractions of Fremantle and Perth.

Detailed info is available at <http://www.epsm.org.au>. See you in Fremantle !!

Australian Biomedical Engineering Conference: 14th - 18th October. Fremantle WA