

this. The idea was to: (i) draw scientists from various disciplines; (ii) formulate laboratory problems that can be tackled by mathematicians; (iii) clearly show the role of mathematics in our daily lives and (iv) engage the public at large.

The exhibits were an outcome of collective effort by Bangalore-based ICTS, its parent organization TIFR, Mumbai and TIFR's Centre for Mathematics. The interactive exhibits explaining applications of mathematics in our daily lives

were displayed at the Visvesvaraya Industrial and Technological Museum in Bangalore during 20 November–1 December 2013. Students from Indian Institute of Science Education & Research (IISER), Mohali; Indian Institute of Science, Bangalore, TIFR, ICTS and volunteer teams from various science colleges participated in conceptualizing the exhibits together with Srishti School of Art, Design and Technology (Figure 2).

To sum up, an event like this surely corroborates with Blaise Pascal's succinct words, 'Mathematics is too serious and, therefore, no opportunity should be missed to make it amusing'.

1. Prakash, Megha, *Curr. Sci.*, 2013, **105**, 754.

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MEETING REPORT

Stem cells and cancer biology*

Stem cells play a crucial role in the generation and maintenance of adult tissue. Emerging evidence suggests that they are also key elements in maintenance and progression of cancer. Many solid cancers harbour a distinct sub-population of cancer cells that bear stem cell features and are therefore termed cancer stem cells. Cancer biology and stem cells research are rapidly emerging fields in medicine. With the mission and slogan 'Spreading the knowledge and bringing people together', the Fourth International Conference on Stem Cells and Cancer (ICSCC-2013), helped people from all over the world to gather and discuss their research. ICSCC-2013 also provided a platform in bridging the gap between the biologists and medical scientists.

Abhay Chowdry (Director, Haffkine Institute, Mumbai) in his welcome speech featured the history of Haffkine Institute, its interest in public health improvement and also its success rate in curing diseases. Christopher Heeschen (co-organizer of the conference and Senior Group Leader, Clinical Research Programme, Spanish National Cancer Research Centre, Spain) called cancer biology and stem cell science as hot topics for research in medicine. Keith Humphries

(Director, Terry Fox Laboratory, Canada) expressed happiness on seeing a large number of young scientists gathered at the conference and encouraged them to participate in such conferences.

The chief guest of the inaugural ceremony, R. D. Lele (Director, Nuclear Medicine Department, Jaslok Hospital & Research Centre, Mumbai) dwelt on inherited cancer syndrome and mentioned that cancer development does not depend only on the genes. He also stressed on the prevention of cancer and importance of RBC membrane. He said that women should follow a strict diet, as dietary habits of a mother will greatly affect the development of stem cells in a child. According to the guest of honor, Rajan Badwe (Chief of Surgical Oncology, Tata Memorial Hospital, Mumbai) stem cells provide resistance against drugs and also against radiations. He highlighted the importance of stem cells and hypoxia induction.

The keynote address at the inaugural ceremony was presented by Mukesh Hariawala (Cardiac Surgeon from Boston, USA). He highlighted the basics, clinical and future of therapeutic aspects of stem cells and stem cell application in cardiac angiogenesis shockwave therapy. He also highlighted that chemotherapy for treating cancer may lead to heart disease, and stressed upon treating of disease at its matrix level itself. There is need for a marriage between stem cells and angiogenesis, which is a physiological process through which new blood vessels form from pre-existing vessels.

The scientific sessions of oral presentations included topics like molecular mechanisms in cancer development/leukaemia cancers, cancer stem cells, cancer therapeutics, mesenchymal and cardiac stem cells, cancer diagnostics and biomarkers, etc. The presentations elucidated that the presence of cancer stem cells has the exclusive ability to regenerate tumours. The cancer stem cells share many characteristics with normal stem cells, including self-renewal and differentiation. With the growing evidence that cancer stem cells exist in a wide array of tumours, it is becoming increasingly important to understand the molecular mechanisms that regulate self-renewal and differentiation, because corruption of genes involved in these pathways likely participates in tumour growth. The presentations helped in understanding the biology of cancer stem cells, which will contribute to the identification of molecular targets important for future cancer therapies.

Some of the best oral and poster presentations were awarded at the valedictory ceremony. T. A. Malancha (IISER, Kolkata) was given the 'Best young investigator award'.

Researchers could take home many clinical aspects and clinicians the scientific aspects from this international conference. The organizers have been successful in achieving their mission of spreading knowledge and bringing people together.

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*A report based on the 'Fourth International Conference on Stem Cells and Cancer (ICSCC-2013): Proliferation, Differentiation and Apoptosis' held in Haffkine Institute, Mumbai, during 19–22 October 2013. The conference was organized by the International Centre for Stem Cells, Cancer and Biotechnology, Pune.