

News from here and there

New anti-cancer photosensitizer drug developed

Toronto scientists at the Princess Margaret Hospital have developed a new anti-cancer photosensitizer drug for use in photodynamic therapy (PDT). The results of this study have been published in the May 2007 issue of *Proceedings of the National Academy of Sciences* (2007;104:8989–94). PDT combines the administration of a photosensitizer drug followed by local illumination of the tumour with a specific wavelength of light to activate the drug. Optical fibres are strategically placed to control the delivery of light into the tumour. Upon light activation, the photosensitizer transfers its excess energy to molecular oxygen, producing the highly reactive, cytotoxic singlet oxygen (1O_2) that brings about cancer cell death.

Drs Gang Zheng and Brian Wilson have demonstrated unprecedented selective PDT-induced cell death by exerting precise control of the ability of a photosensitizer to produce 1O_2 . Their research group has developed a photodynamic molecular beacon that utilizes MMP-7 controlled 1O_2 production to achieve PDT selectivity. The MMP-7-specific photodynamic molecular beacon (PPMMP7B) comprises a disease-specific linker, a photosensitizer drug and a 1O_2 quencher. Photoactivity of the photosensitizer is silenced until the linker interacts with a specific target molecule, in this case the tumour-associated protease, MMP-7. MMP-7 is abundantly produced by many types of carcinomas such as pancreatic, colon, breast and non-small-cell lung cancer, which makes it an attractive anticancer target.

In vitro experiments on KB cells (a human nasopharyngeal epidermoid carcinoma cell line that is high in MMP-7 expression) and BT20 cells (a human breast cancer cell line that lacks MMP-7 expression) demonstrate that PPMMP7B is specifically photoactivated by MMP-7 and its photodynamic cytotoxicity is MMP-7 sequence-specific. Preliminary *in vivo* studies in mice injected with KB and BT20 cells also reveal the MMP-7 activated PDT efficacy of this photodynamic molecular beacon. MMP-7 expressing tumours subjected to PDT in mice completely regress in 30 days with no signs of regrowth after treatment with PDT.

MEENAKSHI KASHYAP, *Toronto, Canada*

Flip-flop over helmet rule in Tamil Nadu

On 1 June 2007, the provision of the motor vehicles act which makes wearing a helmet mandatory for riders of two wheelers was once more enforced in Tamil Nadu. This was done following a direction from the Madras High Court based on a public interest litigation (PIL). On that day, there was near universal compliance with the law, and nearly all two-wheeler riders at least in the major towns were seen wearing helmets.

In a surprising move, on the very next day, the chief minister of Tamil Nadu stated that although the law made it mandatory to wear helmets, the police need not be strict in enforcing the law. This has virtually killed the law, and from 3 June, a large number of two-wheeler riders stopped wearing helmets.

All over the world, helmet use has been shown to save lives in the event of an accident. It is noteworthy that a doctor, the leader of the Pattali Makkal Katchi, Dr Ramadoss was in the forefront of

politicians opposing the law. His son, Dr Anbumani Ramadoss is the Union Minister for Health and has made some notable public health initiatives, especially against tobacco. It is therefore inexplicable that the party should oppose a law which is clearly aimed at the well-being of the people.

GEORGE THOMAS, *Chennai, Tamil Nadu*

Community health leader imprisoned in Chhattisgarh

Dr Binayak Sen, a community health leader among mine workers in Chhattisgarh was arrested on 14 May 2007 and still remains in prison for his activism in fighting for the rights and liberties of tribal people, on vague allegations of illicit communications with Naxalite leaders.

Dr Sen worked with miners in Dalli Rajahara addressing their health needs, helping them set up and manage their own Shaheed Hospital. When this hospital no longer required his leadership, he moved to a mission hospital in Tilda where he worked in paediatrics and community health. He was a member of the state advisory committee that initiated the community-based health worker scheme across Chhattisgarh, now well known as the Mitandin programme. In recognition of his work, Christian Medical College, Vellore conferred on him the Paul Harrison Award in 2004, for distinguished service in rural areas. He took his MB,BS and MD in paediatrics from Christian Medical College, Vellore and was a faculty member at the Centre for Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi.

Dr Sen has been active and effective in defending the liberties of the disadvantaged, especially through the Peoples' Union for Civil Liberties (PUCL). He has served as the General Secretary of the State PUCL Committee for the past 5 years and as Vice President of the National Committee for the past 3 years. He helped organize fact-finding campaigns into human rights violations in the state and in recent times has worked intensively to bring large-scale oppression by the so-called Salwa Judoom in Dantewara to national and international attention.

Dr Sen's cause has been taken up by several people's organizations and public appeals for his release made by Medha Patkar and Arundhati Roy. Numerous petitions have already been submitted to the President, Prime Minister and the Human Rights Commission. Some of these can be viewed and signed on the internet.

GLENN CHRISTO, *Shillong, Meghalaya*

Supreme Court interim stay on caste-based reservations

The Supreme Court (SC) bench comprising justices Shri Arijit Pasayat and Shri L. S. Pant on 5 April 2007 stayed the 27% reservation for Other Backward Classes (OBCs) in elite educational institutions. The Court observed that the 1931 census could not be taken as a baseline document for determination of OBC categories for providing reservation. The Court held that Section 6 of the Constitution was not applicable as no data had been collected for 76 years as to who constitutes the OBCs. The Court also observed that reservation cannot be permanent and that it appeared to

perpetuate backwardness.

A reservation policy is a feature unique to India and is different from affirmative action to structure social equity in other countries where the amount of concession offered is left to the discretion of the practising institution and not made a mandatory compulsion by law.

While the anti-reservationist student community hailed the SC interim stay order, political parties were unanimous in opposing the verdict though some were more guarded than the others. However, it is still too early to consider that the last has been heard on this matter. The coming days will tell how the judgment will unfold and how the government will react. Meanwhile the fate of innumerable students hangs in the balance.

ASHISH GOEL, *New Delhi*

Malnourishment in Madhya Pradesh

Severe malnourishment among children in Madhya Pradesh has finally become a cause for concern. The National Family Health Survey III highlighted the fact that during the past 8 years (1998–2006), the number of malnourished children in Madhya Pradesh has increased from 54% to 60.3%. Only 14% of children under the age of 3 are breastfed within an hour of birth and 82.6% of children 6–35 months of age are anaemic. While the state government chose to question the veracity of the findings, in April 2007, a team consisting of Members of Parliament and mediapersons visited villages in Madhya Pradesh to examine ways to combat malnourishment among children. The team looked at the functioning of the mid-day meal and *anganwadi* schemes, vaccinations and supply of medicines. The team expressed concern about the increase in malnourishment despite well planned policies and adequate funding and said that the main purpose of the visit was to identify lacunae in the programmes and find methods to plug them.

PRABHA DESIKAN, *Bhopal, Madhya Pradesh*

Indian Council of Medical Research (ICMR) launches bioethics education course with Indira Gandhi National Open University (IGNOU)

The ICMR in partnership with IGNOU has launched a bioethics education course for medical researchers. This will run as part of the funding provided to ICMR to promote bioethics in India by the Fogarty International Centre at the National Institutes of Health, USA.

At the launch, Professor N. K. Ganguly, Director General of ICMR mentioned that ICMR, which has developed national guidelines in the field of ethics and regulation of research, was now also participating in the field of bioethics education. This would help medical researchers learn about the need to be ethical in doing research with humans and/or animals.

IGNOU's Vice-Chancellor Professor V. N. Rajasekharan Pillai spoke on the Open University's expertise in the field of distance education, including the relevant infrastructure with regional teaching centres and countrywide transmission via satellite for live teleconferencing using multimedia. ICMR will work with IGNOU to design, develop and implement the course, with the possibility of continued work in medical education. The fee for the course is yet to be announced.

There is a possibility that the course(s) developed jointly by ICMR and IGNOU could be in the future launched in other commonwealth countries as well.

Dr Nandini Kumar, Deputy Director General, ICMR said that the ICMR–IGNOU joint initiative would work out modalities by which bioethics education would be further disseminated. These could range from selected lectures for national transmission to development of the course for Certificate/Diploma, once the modules for the same were developed. She highlighted that 'there may come a time when a short online course certificate may become necessary for researchers before initiating research projects and before new members joined ethics committees'.

ANANT BHAN, *Pune, Maharashtra*

Immunization certificate for travelling Indians: Future shock?

India's poor performance in controlling polio has nearly cost it very dear. The Government of India has just about managed to defeat a WHO resolution which—if passed at the World Health Assembly in Geneva—would have forced every Indian to carry an immunization certificate while travelling abroad. WHO has decided that there should not be any travel advisory in this session, announced Union Health Minister Anbumani Ramadoss. This may be good news for the moment but there is some bad news as well. Polio is spreading and the international community is not taking this lightly. From 15 June 2007, polio, bird flu, smallpox and SARS will be treated as world health emergencies. All member countries will have to inform WHO in case of an outbreak.

According to the Global Polio Eradication Initiative, India has the dubious distinction of being 1 of only 4 countries (with Nigeria, Pakistan and Afghanistan) that remain endemic for polio. In 2006, India saw a 10-fold increase in polio, reporting 676 cases. As on 15 June 2007, India has already recorded 62 confirmed cases of polio with Uttar Pradesh and Bihar contributing 38 and 15 cases, respectively. The Indian government has decided to contribute an additional sum of Rs 1300 crore in what is being called the biggest immunization programme the world has ever seen.

India is fast running out of time and if the government and the healthcare sector do not wake up and manage to get their act together, Indians will soon have to carry a 'disease-free' certificate each time they travel abroad.

ANIMESH JAIN, *Mangalore, Karnataka*