HISTORIC XXIInd CONFERENCE

The XXIInd Conference of the International Society for Fluoride Research, on August 24-27 at the Lakeside Inn, Bellingham, Washington, USA, was excellently organized by Ming-Ho and Ervena Yu and their team. Its 104 participants from 11 countries, were able to hear, view and discuss 35 papers and 29 posters. Some of the more significant presentations were the following.

Dr Phyllis Mullenix, a neurotoxicologist from the Boston Children’s Hospital, Massachusetts, whose earlier work on the influence of fluoride on rat behaviour was commented on in our Editorial of May 1996, reported on a further experiment using the same methodology. She compared the effects of two steroids being used in the treatment of childhood leukemia, one of which had a fluorine atom in its structure. The results indicated that the fluorine-containing steroid caused behaviour patterns typical of hyperactivity. This steroid is currently being used, in preference to the other, because it is effective at much lower doses. A follow-up study of the children using this drug for two years showed a significant drop in their average intelligence score, compared with those using the non-fluorine drug. Possible explanations for this effect were discussed.

Dr Karl Jensen, a US Environmental Protection Agency neurotoxicologist, reported on details of his work with Professor Isaacson’s team at the State University of New York at Binghamton. These long term (one year) studies compared animals fed aluminium fluoride (AlF$_3$) or sodium fluoride (NaF), both at very low concentrations (equal to the 1 ppm in fluoridated drinking water) and non-fluoride controls. They found there was an uptake of Al into the brains of both the AlF$_3$ and NaF groups (but greater in the former) and alterations to brain structures, compared with the controls. The increase in brain Al in those fed NaF must have come from Al in the animals’ diet. Apparently fluoride facilitates the uptake of Al across the blood brain barrier. The kidneys were also damaged, which possibly affected the blood brain barrier.

Dr Jennifer Luke, from the University of Surrey in England, presented her work on the pineal gland, the small organ situated between the two brain hemispheres, and with functions which include the production of melatonin. Because it is outside the blood brain barrier, has a rich blood supply and is a calcifying tissue, it can accumulate fluoride. Enormous fluoride concentrations were found in the pineal glands of cadavers – higher than those found in the bones of skeletal fluorosis patients. Dr Luke reported on an experiment on two groups of animals (gerbils) – one on a low fluoride and the other on a high fluoride diet. A significant decrease in melatonin production occurred in the high fluoride group, with a corresponding earlier genital maturation. She postulated that higher blood fluoride levels in children could account for the recorded decline in the age of puberty.

Professor Roger Masters from Dartmouth College in New Hampshire and Myron Coplan, a chemical engineer from Natick, Massachusetts, reported a positive correlation between blood lead levels of 280,000 children in Massachusetts and the use of silicofluorides for water fluoridation (the commonest method). In that state and in Georgia behaviours associated with lead neurotoxicity (like violent crime) are more frequent in communities using silicofluorides than in areas not using them.

Other studies reported on new, hitherto unexamined, effects of fluoride, or confirmed and expanded on past findings of fluoride toxicity. At the meeting of the Society’s members it was decided to hold the next conference in Szczecin, Poland, in the year 2000.

John Colquhoun
EDITORIAL CHANGES

At the XXIInd ISFR Conference, the meeting of Society members accepted the resignation of the journal's Editor for the past eight years, Dr John Colquhoun. Professor A W Burgstahler, of Lawrence, Kansas, who for the past year has shared the editorial work by acting as Scientific Editor while Dr Colquhoun remained Managing Editor, was appointed to the new post of Editor. Dr Colquhoun remains in the post of Treasurer, responsible for receiving subscriptions and printing and distributing the journal, and becomes a Co-editor. In future, therefore, as explained on the last page of this journal, manuscripts, letters and other information being submitted for publication should be sent to

ISFR Editor:
Prof A W Burgstahler, 1640 Massachusetts St, Lawrence, KS 66044, USA

while subscriptions and donations should continue to be sent to

ISFR Treasurer:
Dr John Colquhoun, 81A Landscape Road, Mt Eden, Auckland 4, New Zealand

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Further information can be obtained from
Professor Zygmunt Machoy or Dr D Chlubek
Department of Biochemistry and Chemistry
Pomeranian Medical Academy
Al. Powstanców Wlkp. 72
70-111 SZCZECIN, Poland.
Fax: (0048 91) 482 40 57

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Further information and registration forms can be obtained from
Professor Sun Guifan, School of Public Health
China Medical University, 92 Beier Road
Shenyang 110001, China.

Phone/Fax: 86 24 23871744 E-mail: sungf@iris.cmu.edu.cn