THE INTERNATIONAL SOCIETY FOR FLUORIDE RESEARCH

President
Prof Ming-Ho Yu
Western Washington University
Bellingham WA 98255, USA

Vice President
Dr Miklos Bély
National Institute of Rheumatology
Budapest, Hungary

Second Vice President
Prof N B K Yoshitake
Shiga University of Medical Science
Shiga-Ken, Japan

Secretary
Prof Gene W Miller
Biology Dept,
Utah State University
Logan UT 84322-5305, USA

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

ADVISORY EDITORIAL BOARD

Dr D J Ballentyne
University of Victoria
Victoria BC, Canada

Dr Miklos Bély
National Institute of Rheumatology
Budapest, Hungary

Prof A W Burgstahler
University of Kansas
Lawrence KS, USA

Prof Shouren Cao
Chinese Academy of Preventive Medicine
Beijing, China

Dr M Chikuma
Osaka University of Pharmaceutical Sciences
Osaka, Japan

Dr John Colquhoun
Education Department
University of Auckland
Auckland, New Zealand

Dr J Franke
Medical Academy
Erfurt, Germany

Prof G Neil Jenkins
Newcastle upon Tyne
England

Dr G Embery
University of Wales Medical College
Cardiff, Wales UK

Dr John A Cooke
University of Natal
Durban, South Africa

Dr Edward Czerwinski
Kracow Academy of Medicine
Kracow, Poland

Dr Y Kaneko
Showa University School of Dentistry
Tokyo, Japan

Prof J Kono
Osaka Medical College
Osaka, Japan

Prof Jerzy Krechniak
Medical University
Gdansk, Poland

Dr K A V R Krishnamachari
Andhra Pradesh Projects Office
Hyderabad, India

Prof Lennart Krook
Cornell University
Ithaca NY, USA

Dr John R Lee
9620 Bodega Hwy,
Sebastopol CA, USA

Prof C James Lovelace
Humbolt State University
Arcata, California USA

Dr Zygmunt Machoy
Pomeranian Medical Academy
Szczecin, Poland

Prof G W Miller
Utah State University
Logan, Utah USA

Prof F Murray
Murdoch University
Murdoch WA, Australia

Prof Lennart Krook
Cornell University
Ithaca NY, USA

Dr B P Rajan
Madras Dental College
Madras, India

Dr Bruce Spittle
University of Otago School of Medicine
Dunedin, New Zealand

Dr James C Pushnik
California State University
Chico, California USA

Prof A K Susheela
All India Inst. of Medical Sciences
New Delhi, India

Prof S P S Teotia
LLRM Medical College
Meerut, India

Dr Jörg Spitz
Dept. of Nuclear Medicine
Wiesbaden, Germany

Prof Zan-Dao Wei
Guangxi Medical College
Guizhou, China

Dr Sally W Wheeler
Hawkesbury Agricultural Research Unit
Richmond NSW, Australia

Prof H Tsunoda
Iwate Medical University
Morioka, Japan

Prof N B K Yoshitake
Shiga University of Medical Science
Shiga-Ken, Japan

Prof Y Yoshida
Osaka Medical College
Osaka, Japan

Prof Ming-Ho Yu
Western Washington University
Bellingham, WA USA
## CONTENTS

### EDITORIALS

**GUEST EDITORIAL: FLUORIDE-MAGNESIUM INTERACTION**  
A Machowy-Mokrzynska, Poland ........................................ 175-177

**XXIST WORLD CONFERENCE OF ISFR** ..................................... 177

**KILLING THE MESSENGER**  
Bruce Spittle ................................................................. 178-179

### RESEARCH REPORTS

**CORRELATION AMONG HEAVY METALS AND FLUORIDE IN SOIL, AIR AND PLANTS IN RELATION TO ENVIRONMENTAL DAMAGE**  
N P Gritsan, G W Miller and G G Schumakov, Ukraine .............. 180-188

**EFFECT OF FLUORIDE EXPOSURE ON INTELLIGENCE IN CHILDREN**  
X S Li, J L Zhi and R Q Gao, China .................................... 189-192

**CHANGES OF THE HUMAN ERYTHROCYTE MEMBRANE PROTEIN SH BINDING SITE PROPERTY WITH EXPOSURE TO FLUORIDE AND THREE STRONG MUTAGENS**  
Yingyan Wang, Xiaojie Li and Wenjuan Xin, China .................. 193-200

**HIGH FLUORIDE CONTENT OF FOOD AND ENDEMIC FLUOROSIS**  
Y Z Han, J Q Zhang, X Y Liu et al, China .............................. 201-202

**ENDEMIC FLUOROSIS IN SAN LUIS POTOSI, MEXICO. IDENTIFICATION OF RISK FACTORS ASSOCIATED WITH OCCUPATIONAL EXPOSURE TO FLUORIDE**  
J Calderón, I Romieu, M Grimaldo et al, Mexico ..................... 203-208

**REVIEW - Historical piece**  
THE QUESTION OF FLUORIDATION ......................................... 209-212

continued on following pages
## ABSTRACTS

### On dental effects:

**AN ANALYSIS AND MONITORING REPORT:**
WATER FLUORIDATION IN NEW ZEALAND  
Public Health Commission, New Zealand ........................................... 213

**SCIENCE OR FICTION?**  
John Colquhoun, New Zealand ......................................................... 214

**FLUORIDE - HOW MUCH OF A GOOD THING?**
INTRODUCTION TO THE SYMPOSIUM  
B A Burt, USA. ................................................................. 214

**COMMENTARY ON AND RECOMMENDATIONS**
FOR THE PROPER USES OF FLUORIDE  
H S Horowitz, USA .......................................................... 215

**SOURCES OF FLUORIDE INTAKE IN CHILDREN**  
S M Levy, M C Kiritsy and J J Warren, USA ................. 215-216

**THE CARIOSTATIC MECHANISMS OF ACTION**
OF FLUORIDES. A REVIEW  
C Fischer, A Lussi and P Hotz, Germany ..................................... 216

**CHARACTERIZATION OF FLUOROSED HUMAN ENAMEL**
BY COLOR REFLECTANCE, ULTRASTRUCTURE,
AND ELEMENTAL COMPOSITION  
N J Giambro, K Prostak and P K Denbesten, USA ....................... 216-217

**STUDIES ON THE INFLUENCE OF FLUORIDE ON**
THE EQUILIBRATING CALCIUM PHOSPHATE
PHASE AT A HIGH ENAMEL/ACID RATIO  
E I F Pearce, M J Larsen and T W Cutress, New Zealand ................ 217

**ENDEMIC FLUOROSIS IN SAN LUIS POTOSI, MEXICO**
I. IDENTIFICATION OF RISK FACTORS ASSOCIATED
WITH HUMAN EXPOSURE TO FLUORIDE  
M Grimaldo, V H Borja-Aburton, A L Ramirez et al, Mexico .......... 218

**LIST OF OTHER ARTICLES ON DENTAL EFFECTS** ......................... 218

### On effects on bone:

**EFFECTS OF FLUORIDE ON RAT VERTEBRAL BODY**
**BIOMECHANICAL COMPETENCE AND BONE MASS**  
C H Søgaard, L Mosekilde, W Schwartz et al, Denmark ................... 219

**RELATIONSHIP BETWEEN BONE FLUORIDE CONTENT,**
**PATHOLOGICAL CHANGE IN BONE OF ABORTED**
**FETUSES, AND MATERNAL FLUORIDE LEVEL**  
J Shi, G Dai and Z Zhang, China .............................................. 219
A PHYSIOLOGICALLY BASED PHARMACOKINETIC MODEL FOR FLUORIDE UPTAKE BY BONE
H V Rao, R P Beliles, G M Whitford and C H Turner, USA ........................................ 220

FLUORIDE AND BONE HEALTH
K Phipps, USA .............................................................................................................. 220-221

RELATIONSHIP BETWEEN FLUORIDE CONTENT IN BONES AND THE AGE OF EUROPEAN ELK (ALCES ALCES L)
Z Machoy, E Dabkowska, D Samujlo et al, Poland .................................................. 221

DIAGNOSIS AND TREATMENT OF OSTEOPOROSIS
C Alexandre, France ..................................................................................................... 221-222

HISTOMORPHOMETRIC ANALYSIS OF ILIAC CREST BONE BIOPSIES IN PLACEBO-TREATED VERSUS FLUORIDE-TREATED SUBJECTS
M W Lundy, M Stauffer, J E Wergedal et al, USA .................................................. 222

On non-skeletal effects:

RELATION OF EXPOSURE TO AIRWAY IRRITANTS IN INFANCY TO PREVALENCE OF BRONCHIAL HYPER-RESPONSIVENESS IN SCHOOLCHILDREN
V Søyseth, J Kongerud, D Haarr et al, Norway .......................................................... 223

ASTHMA AND RESPIRATORY PROBLEMS - A REVIEW.
T V O'Donnell, New Zealand .......................................................................................... 223

EFFECT OF DIFFERENT EXPOSURE COMPOUNDS ON URINARY KINETICS OF ALUMINIUM AND FLUORIDE IN INDUSTRIALLY EXPOSED WORKERS
F Pierre, F Baruthio, F Diebold and P Biette, France ................................................. 224

SHIBBOLETHS AND JIGSAW PUZZLES: THE FLUORIDE NEPHROTOXICITY ENIGMA
B R Brown, USA .......................................................................................................... 225

HUMAN KIDNEY METHOXYFLURANE AND SEVOFLURANE METABOLISM: INTRARENAL FLUORIDE PRODUCTION AS A POSSIBLE MECHANISM OF METHOXYFLURANE NEPHROTOXICITY
E D Kharasch, D C Hankins and K E Thummel, USA .............................................. 225-226

RENAL FUNCTION AND SERUM FLUORIDE CONCENTRATIONS IN PATIENTS WITH STABLE RENAL INSUFFICIENCY AFTER ANESTHESIA WITH SEVOFLURANE OR ENFLURANE
P F Conzen, M Nuscheler, A Melotte et al, Germany .................................................. 226-227

SERUM HAPTOGLOBIN AND C-REACTIVE PROTEIN IN HUMAN SKELETAL FLUOROSIS
A K Susheela and P Jethanandani, India ..................................................................... 227
SAFETY OF CIPROFLOXACIN THERAPY IN CHILDREN: MAGNETIC RESONANCE IMAGES, BODY FLUID LEVELS OF FLUORIDE AND LINEAR GROWTH
K M Pradhan, N K Arora, A Jena et al, India .................................................. 228

INHALATION ONCOGENICITY BIOASSAY IN RATS AND MICE WITH VINYL FLUORIDE
M S Bogdanffy, G T Makovec and S R Frame, USA .......................... 228-229

On effects on plants:
GRAMINE AND FREE AMINO ACIDS AS INDICATORS OF FLUORIDE-INDUCED STRESS IN BARLEY AND ITS CONSEQUENCES TO INSECT HERBIVORY
E L Hautala and J K Holopainen, Finland .................................................. 229

PLANT UPTAKE OF FLUORIDE IN IRRIGATION WATER BY LADYFINGER (ABELMORCHUS ESCULENTUS)
V Singh, M K Gupta, P Rajwanshi et al, India ............................... 230

On effects on aquatic life:
FLUORIDE TOXICITY TO AQUATIC LIFE: A PROPOSAL OF SAFE CONCENTRATIONS FOR FIVE SPECIES OF PALEARCTIC FRESHWATER INVERTEBRATES
J A Camargo and T W Lapoint, Spain .................................................. 230

1995 INDEX (Centerfold) ................................................................. 200a-200d