THIRTY-FIVE YEARS OF *FLUORIDE*

This two-part issue of *Fluoride* contains cumulative author and subject indexes covering the entire span of publication to date, from 1968 through 2002.

THE BEGINNING[1,2]

The formation of the International Society for Fluoride Research (ISFR) and the birth of the *Fluoride* journal are largely due to the efforts of Dr George L Waldbott. Dr Waldbott was born in Speyer, Germany, in 1898 and emigrated to the USA after World War I. He specialized in allergic and respiratory diseases.

Beginning in the 1950s, he turned his attention, increasingly, to adverse health effects of environmental pollutants, especially fluoride. His work in this area continued until his death on July 17, 1982.

Dr Waldbott undertook a comprehensive survey of the biomedical literature on fluoride, taking his cue from the pioneering research of the Danish physician and health officer, Kaj Roholm (1902-1948), on the symptoms of the incipient stages of skeletal fluorosis.

As a result of his studies, Waldbott made contact with leading fluoride investigators world-wide and soon recognized that, in spite of publishing his reports in highly respected peer-reviewed medical journals, mostly in Europe, the clinical details of his investigations were blocked from appearing in leading U.S. medical journals.

In an effort to lift this blanket of apparent censorship, Waldbott organized the first international symposium on the toxicology of fluorine compounds held in Berne, Switzerland, on October 15-16, 1962. This successful effort, attended by over 30 researchers from 11 countries, led to a similar conference in Detroit, Michigan in 1966. This was sponsored by the newly formed American Society for Fluoride Research. This body became the International Society for Fluoride Research (ISFR) that held its first meeting in 1967 in Frankfurt, Germany.

During the past 4 decades, 24 additional conferences of the ISFR have been held in over 10 countries throughout the world. Since 1990, conferences have been held in Japan, China, Hungary, USA, and Poland.

Fluoride, the official journal of the ISFR, first appeared in July 1968 under the title *Fluoride Quarterly Reports* and received its shorter title in 1970 even though its publication has continued on a quarterly basis.

Since 1968, the picture of Dr Kaj Roholm has appeared on the cover of *Fluoride* as a tribute to this scientist who many consider, "the greatest authority of all time on the biological effects of fluoride". Dr Roholm's book, *Fluorine Intoxication, a Clinical-Hygienic Study*, published in 1937,[3]

remains one of the most sought after reference texts on fluoride and is cited frequently today in the literature. Many years have passed since Roholm's book first appeared, but most of the data that he presented are as new to most scientists today as they were then. Great advances have been made in fluoride research since that time, and these have been recorded, for more than 3 decades, in the pages of *Fluoride*.

The first editor of the journal was Dr Waldbott, who continued in this capacity until his death in 1982. His widow, Edith M. Waldbott, even though she was advanced in years, served as "interim editor" until 1991 when John Colquhoun, BDS, PhD, was appointed as editor.

From 1955 to 1962, Edith Waldbott inaugurated, edited, and published *National Fluoridation News*. This experience was undoubtedly of value in support of her husband's efforts during the early years of the journal.

Mrs. Waldbott died on January 14, 1997, aged 93 years. The third issue of *Fluoride* for 1991 identified Dr Colquhoun as "editor nominee" and announced that she was leaving her position as "interim editor" and Elizabeth Ramsay, one of the Waldbott daughters, became "interim business manager".

John Colquhoun achieved splendid results during his tenure that ended in November 1998 shortly before his death on March 23, 1999. Prof Albert W Burgstahler succeeded him as editor, and Bruce Spittle, MB, DPM was elected managing editor and treasurer, positions which they still hold.

From the publication of the first issue of *Fluoride* in July 1968 to the present, the name of Professor Burgstahler has appeared on the masthead under various titles. He is identified as "coeditor" with Dr Waldbott; "acting editor" with Edith Waldbott; and, "coeditor" and, later, "scientific editor" with Drs Colquhoun and Spittle. There have also been a number of coeditors over the years. These include K Jankauskas, J Yiamouyiannis, GW Miller, KAVR Krishnamachari, M-H Yu, JR Lee, and B Spittle.

CONTENTS

Perusal of the contents of the journal over the 35 years since its first publication reveals that within its covers is a wealth of original peer-reviewed studies on a wide range of topics relevant to fluoride that have been prepared by researchers from every quarter of the globe. Past issues also contain abstracts from the international literature, reviews of major studies and reports on subjects that are relevant to fluoride. As is the case in other periodicals, past issues contain *letters to the editor* expressing, at times, viewpoints that are highly provocative.

The strength of the ISFR and the authors of publications to be found in *Fluoride* are the many scientific disciplines that are represented in its executive, advisory, and editorial boards and membership. These include physi-

cians, dentists, orthopedic surgeons, veterinarians, biologists, chemists, biochemists, geologists, plant physiologists, toxicologists, and others. Their interest in fluoride has created a united and coherent forum. *Fluoride* permits uncensored publication of research concerning all aspects of the biological effects of fluoride.

The October 1982 issue contains a 15-year cumulative index for 1968-1982. It also marks the passing of Dr Waldbott. A February 1998 Commemorative Issue celebrated the 100th anniversary of Waldbott's birth.

Woven into the fabric of the journal are threads too numerous to present in total in this editorial. There are some that can be identified and presented as examples of what may be found by delving into the back issues.

ENVIRONMENTAL TOXICOLOGY

From the earliest issues, *Fluoride* has published a wide variety of research papers, abstracts, special articles and editorials on the environmental issues concerning fluoride.

In 1969, for example, *Fluoride* published H E MacDonald's comprehensive study of sources, problems, disposal of waste fluoride and the effects of fluoride pollution on crops and livestock.[4] Fluoride emissions from phosphate processing plants were discussed by FL Cross and RW Ross.[5] A lengthy abstract of Roholm's report on the fog disaster in the Meuse Valley in 1930 is an outstanding presentation of the problem of air pollution involving fluoride.[6]

Later issues of the journal published special reports by JR Marier in 1972[7] and E Groth in 1975[8] on the ecological effect of fluoride. Both present a review of the literature and deal with the adverse effects on wildlife of low level environmental pollution by fluoride. Marier presented a case for consideration of synergistic effects of the multiple pollutants in water. Does this foreshadow the work showing the action of fluoride and aluminum reported by Varner, Jensen and others in 1998, 26 years later?

Groth lamented the fact that data from field studies, especially on the marine and fresh water ecosystems were virtually non-existent.

C van Hook was the author of a paper published in 1974 that stressed the importance of biological monitoring of airborne fluoride emissions.[9] He used the Silverbow area of Montana as an example.

Over the years, the basic concepts laid down in the early volumes have been elaborated upon. The effects on cattle were described in 1981 by L Krook and GA Maylin.[10] Others reported effects on other domestic animals such as sheep and camels and wild animals including many species of deer as well as voles and wild pigs. GW Miller[11] and M-H Yu[12] have continued to show the way in which fluoride operates to alter the physiological functions of plants. In 1995, the journal published a research report by NP Grit-

san and others that showed that among environmental pollutants studied for their effect on plants, fluoride was the most damaging.[13]

Of major interest is the effect on humans of fluoride contamination from numerous sources such as air, water and soil pollution from fluoride emitting industries, burning of coal, volcanic fog (Vog), excessive fluoride in brick tea (China), and drinking water contaminated either by nature or the hand of man.

CRIPPLING SKELETAL FLUOROSIS

In 1937 adverse non-dental effects of fluoride on humans were discovered. It was in this year that Roholm published his report on the illness afflicting Danish cryolite workers[3] and his study of the disastrous fog in the Meuse Valley in 1930.[6] It was in 1937 that HE Shortt, CG Pandit and TNS Raghavachari brought to world attention the condition of endemic fluorosis in India.[14]

In 1968 *Fluoride* published an exhaustive study of all aspects of endemic fluorosis in the Punjab (India) prepared by SS Jolly.[15] This was complete with illustrations of clinical features and radiographs. The journal published an up-date by Jolly in 1973 and other subsequent papers. In 1969 the journal published a research paper by SPS Teotia and others from India of metabolic studies of skeletal fluorosis and an approach to treatment.[16] In later volumes Teotia and his co-workers presented further research papers as follow-up.

In 1976, the journal published a paper by KAVR Krishnamachari that described the widespread occurrence in some areas of India of genu valgum associated with endemic fluorosis.[17]

In recent years the journal has published research papers on the prevalence of fluorosis in China and elsewhere. An editorial by J Li and S Cao in 1994 summarized the extent of the problem in China, the efforts to study fluorosis, the implementation of preventive measures, and early diagnosis and treatment.[18] The editorial pointed out that a 1990 survey revealed that, in China, 300 million people lived in endemic fluorosis areas. Of these, 3 million had skeletal fluorosis and 40 million, dental fluorosis. The journal has, especially since 1994, published useful research reports and abstracts that illustrate the far-reaching aspects of Chinese research and activities in this area of concern.

DENTAL FLUOROSIS

Skeletal fluorosis is the end result of long-term exposure to chronic fluoride intoxication. Dental fluorosis occurs as a result of fluoride exposure during tooth development. Skeletal fluorosis is graded according to the appearance of bone on X-ray. Dental fluorosis is visible to the naked eye and has over the years presented a problem in classification. In 1934 H Trendley

Dean developed an "index" to classify this physical sign but this was seen by many to be limited in its usefulness.

In 1971 *Fluoride* published an elaborate classification developed by T Takumori of Japan.[19] This consists in 4 systems that were subdivided into 5 degrees. For anyone interested in dental fluorosis this paper is well worth revisiting even though it has now, since 1978, been replaced by the Thylstrup-Fejerskov Index (TFI). The latter is considered to be superior to Dean's Index and is less complex than that of Takumori but lacks some of its precision.

Recent reports published in the UK, Canada, and the USA have shown concern that the prevalence of fluorosis is high as a consequence of increased fluoride intake from toothpaste, fluoridated vitamin supplements, a number of dietary sources including brick tea in China, and the practice of water fluoridation. *Fluoride* has, over the years, published studies and editorials concerning dietary fluoride.

R Kinter presented an editorial on dietary fluoride in the USA in 1971.[20] He re-visited the subject in a 2-part editorial in 1991.[21] Other early papers on dietary fluoride were published that originated from authors in countries such as Germany, Czechoslovakia and Canada. Studies have been published in the journal that reported on the amount of fluoride in specific food products such as tea, fruit juices, wines, and pharmaceutical products. These must be taken into account in calculations of total fluoride burden and its acute as well as long-term effects.

In 1997 K Akiniwa reviewed the acute toxic dose of fluoride and demonstrated that poisoning is caused by exposure to lower doses than commonly suggested.[22] Akiniwa recommended that the acute toxic dose should be re-examined. This emphasizes the need to be aware of total fluoride ingested from all sources on a daily basis.

NON-SKELETAL AND NON-DENTAL PROBLEMS

A large number of published studies deal with the non-skeletal and non-dental problems associated with fluoride exposure from a variety of sources. The non-skeletal effects of chronic fluoride intoxication were of special interest to GL Waldbott, the founder of the journal. As a result, the early issues contain informative editorials on the subject.

In 1976, papers were published that were presented to a "Symposium on the Non-skeletal Phase of Chronic Fluorosis" with an introduction by Waldbott.[23] The reports that follow discuss the effects of fluoride on muscles, joints, arteries, thyroid, spinal cord, and kidneys and the subject of allergic reactions to fluoride.

Many of the vague symptoms encountered during the early stages of fluorosis resemble those of hypothyroidism, especially fatigue. A review by JR

McLaren was published in 1976 as a special article.[24] In it, McLaren referred to the work of P Gallerti who, in 1958, reported on the use of fluoride to treat the overactive thyroid.

A common symptom, gastric irritation, is described by AK Susheela as "an early warning sign" in an abstract published in a 1989 issue.[25] Studies carried out by Susheela and her colleagues that were published in the journal in 1992 show the detrimental effect of fluoride on the gastric mucosa.[26]

NJ Chinoy and her colleagues have, over the years, made many contributions to the journal that show the adverse effects of fluoride on fertility, especially in males. Most of the experimental work of this group that has been published has been on animals but observations have been made regarding low human fertility in the endemic fluorosis areas of India.

During the past decade, the journal has published research papers on the relationship between fluoride ingestion and intelligence. Studies from China published in 1995 and 1996 show a decrease in IQ of children exposed to fluoride in soot and gases from coal combustion and in drinking water.[27, 28]

P Mullenix and her colleagues in the USA demonstrated these adverse neurological effects of fluoride in animal experiments. An abstract of their paper was published in the journal in 1995.[29]

INDUSTRIAL (OCCUPATIONAL) FLUOROSIS

Many of the research papers, abstracts and editorials dealing with occupational fluoride exposure expand on the work of Kaj Roholm with cryolite workers.

From 1975 to 1981, the journal published research reports from H Runge, J Franke and their colleagues from Germany[30,31,32] and E Czerwinski and his colleagues from Poland[33,34] along with some others that dealt with many aspects of industrial (primarily, aluminum smelter) fluorosis.

Runge and Franke present Fritz's expansion, in 1958, of Roholm's classification of skeletal fluorosis to include clinical manifestations that precede the discovery of x-ray findings.[35]

In addition, these two groups of researchers present details of skeletal changes found on x-ray and bone biopsy as well as clinical and laboratory clues required for early detection and monitoring. Along with others, such as Palzic in 1993,[36] Runge and Franke present evidence both genetic and physical that could be used for pre-employment screening of those workers most likely to be candidates for severe disability.

The similarity between the skeletal changes in occupational fluorosis and endemic fluorosis has not gone unnoticed as is attested in a 1978 report by Czerwinski.[37]

A number of reports have been published in the journal over the years that present assessments of techniques that may be used to determine and moni-

tor body fluoride burden from urine, hair and nails and from chemical constituents of blood such as alkaline phosphatase, sialic acid (SA) and glycosaminoglycans (GAS). Susheela and her colleagues show the use of the SA/GAS ratio to differentiate between skeletal fluorosis and ankylosing spondylitis that it resembles in an abstract published in 1989.[38]

In 1997, the journal published a paper by E Czerwinski on the use of computer enhancement of x-rays to provide earlier diagnosis.[39] PZ Chen and XC Meng, in 1996, described the use of computerized tomography (CT), a method of using x-ray transmissions and a minicomputer to reconstruct a graphic image of a "slice" of body area, to illustrate how calcification of ligaments within the spinal canal can provide a mechanism to explain spinal nerve paralysis in skeletal fluorosis.[40]

FLUORIDE AS TREATMENT FOR OSTEOPOROSIS

The use of fluoride compounds to treat osteoporosis is controversial. Both sides of the argument are presented in the back issues. There is agreement on the positive relationship between fluoride ingestion and increase in bone density as shown on x-ray. However, there are differences of opinion as to whether or not this can lead to prevention of fractures of the vertebrae and the possibility that this treatment may lead to increased fractures in areas such as the proximal femur (hip).

The journal, in 1997, published an overview by J Franke of 35 years of his research on the use of fluoride in the treatment of osteoporosis.[41] He concluded that fluoride therapy, carefully monitored, is beneficial and safe. The journal had previously, in 1994 and 1996, published abstracts of the research of CYC Pak supporting the use of slow acting fluoride preparations in the treatment of osteoporosis. A critical review of the use of slow release fluoride in osteoporosis by J Lee was published in 1996.[42]

CH Søgaard, using a rat model, is quoted in an abstract published in a 1997 issue of the journal as stating that her studies showed a "detrimental effect on bone quality".[43] In 1999 the abstract of the study by PJ Meunier of random controlled studies concluded with the statement that the data for fluoride in the treatment of osteoporosis was either lacking or inconclusive.[44] In 2001, the journal published the abstract of a meta analysis by DH Haguenauer and others who concluded that although the treatment increased bone density, it did not reduce vertebral fractures but does lead to an increase in non-vertebral fractures and gastrointestinal side effects.[45]

This is in agreement with Waldbott's view as long ago as 1973. In one of his many unsigned editorials, Waldbott reviewed the literature and stated that "…fluoride treatment of osteoporosis … should be viewed with skepticism because of questionable efficacy and the possibility of serious side effects".[46]

There have been a number of papers and abstracts published in the journal over the years on this subject; those referred to above give some idea of the continuing debate.

FLUORIDATION OF DRINKING WATER

Many studies, abstracts, and editorials are to be found over the years that deal with the process of water fluoridation; that is, the deliberate addition of fluoride compounds to drinking water in an effort to improve oral health. These studies address the issues of safety and efficacy of this process that is said by its supporters to reduce the incidence of dental caries.

The ISFR, officially, takes no stand either for or against fluoridation. As a result, the journal publishes studies from both sides of this scientific and political issue.

CONTROVERSIAL INTERPRETATION

There are a number of contradictions. Many of the journal's authors who deal with fluoride intoxication from industry, coal burning and contaminated water supplies see a major public health *problem*. The promoters of water fluoridation to improve oral health see a public health *triumph*.

Increased bone mineral density (BMD) in the workplace or endemic area is an early sign of fluoride accumulation, a prelude to possible crippling disease. The same finding in a patient under treatment for osteoporosis is a signal of therapeutic success. An increase in BMD observed in young women residing in a fluoridated community compared to a similar sample residing in a non-fluoridated community is interpreted by one team of researchers as a finding of preventive value for future osteoporosis.

Dental fluorosis in reports from endemic areas and those inflicted by neighborhood pollution is a *visible sign* of chronic fluoride intoxication during tooth-forming years. The same disease is understood by advocates of water fluoridation; but is referred to as a *cosmetic* effect.

NON-SKELETAL SYMPTOMS

The myriad of vague symptoms such as fatigue, gastrointestinal upset, muscular pain and weakness described by Fritz as preceding industrial fluorosis[35] are also encountered by those sensitive individuals that are exposed to fluoridated drinking water.

Waldbott described his early clinical work on fluoride intoxication (1955-1956) mainly in European journals and later in the early volumes of *Fluoride*. A posthumous contribution on the same topic was published in the 1998 Commemorative Issue of *Fluoride*.[47] Waldbott's observation that the symptoms could be cleared by replacing fluoridated water with distilled water was confirmed by a double blind study by GW Grimbergen published in the journal in 1974.[48]

FLUORIDATION AND DOWN'S SYNDROME

In 1957 and 1959, I Rapaport published reports showing that there was a significant relationship between residence in a fluoridated community and an increased prevalence of Down's Syndrome in younger mothers. The connection between fluoridation and Down's syndrome was supported by AW Burgstahler in an editorial in 1975[49] and a paper published in abstract form in the journal in 1997.[50] A review by K Takahashi presenting evidence that fluoridation is associated with a higher incidence of Down's syndrome is to be found in the journal in 1998.[51]

FLUORIDATION AND CANCER

In 1977 the journal published a research paper by J Yiamouyiannis and D Burk on the subject of age-dependence of cancer mortality related to artificial fluoridation.[52] These researchers compared the official US mortality figures in the 10 largest fluoridated US cities with those of the 10 largest US non-fluoridated cities. They reported that the average mortality for cancer increased faster in the fluoridated cities. In the same issue, an editorial by GL Waldbott reviewed the circumstantial, experimental, clinical, and statistical evidence prior to 1977 that indicated a positive relationship between fluoride and cancer.[53] Much of this evidence had been published in earlier issues of the journal.

The Yiamouyiannis and Burk study led to US Congressional hearings in 1977 that forced the National Cancer Institute (NCI), the Environmental Protection Agency (EPA), and the National Institute for Dental Research (NIDR) to nominate fluoride for study by the National Toxicology Program (NTP).

The report of the study carried out by Battelle Laboratories was released by the NTP in 1990. An editorial written by R Carton for the journal and published in 1991 criticized the published finding.[54] Carton, an employee of the EPA at the time, alleged that the conclusion that there was "equivocal evidence of osteosarcoma" in male rats had been subject to misinterpretation and possible downgrading of results.

Subsequent to the release of the NTP report, the journal published abstracts of the studies of RN Hoover and PD Cohn that were supportive of a relationship between osteosarcoma in humans and residence in a fluoridated community. J Lee reviewed this evidence, along with the NTP findings, in an editorial published in 1993.[55]

Recently, in 2001, K Takahashi, K Akinawa and their colleagues presented a statistical review using US data that gave further support for a connection between fluoridation and cancer.[56]

FLUORIDATION AND HIP FRACTURES

The treatment of osteoporosis with fluoride led to the reporting in the journal from 1986 to the present of the complication of increased incidence of hip fractures. Probably, as a consequence of this complication, a number of studies were carried out on the possibility of a relationship between long-term residence in a fluoridated community and fractures of the hip. In the majority of published studies, a positive correlation was reported. These papers are to be found in abstract form in the journal under such authorship as MFR Sowers, SJ Jacobsen, C Danielson, C Cooper, and others.

In a 1993 issue, an editorial by J Lee reviewed these studies and the interpretation placed on them by the US National Research Council report *Health Effects of Ingested Fluoride.*[57] Lee revisited this "continuing debate" in 2000. In an editorial, Lee pointed out additional support from a large 1995 study in France that had found the same positive correlation between water fluoride exposure and hip fracture increase.[58]

Lee pointed to the evidence that fluoride may increase bone *quantity* but also decreases bone *quality* and bone *strength*. He referred to the study of L Krook published in a 1998 issue of *Fluoride* that showed that the fluoride-induced increase in serum alkaline phosphatase, interpreted by conventional medicine as a sign of osteoblast activity, is actually a reflection of increased mortality of osteocytes in bone.[59] This process, according to Krook, releases the enzyme when the cells are killed by fluoride.

FLUORIDE AND ALUMINUM

In 1998, the journal published 2 abstracts of the work carried out by J A Varner, RL Isaccson and others that documented the development of significant pathological changes in the brains and kidneys of rats produced by a combination of fluoride at 1 ppm and aluminum.[60,61] These experiments replicated the situation commonly occurring in the treatment of water with both fluoride and alum.

A comprehensive review of the interactions of fluoride and aluminum by A Lubkowska, B Zyluk, and D Chublek was published as an editorial in *Fluoride* in 2002.[62]

SILICOFLUORIDES

In 2000 *Fluoride* published an abstract of the research of RD Masters and MJ Coplan on the association of silicofluorides treated water and elevated blood lead levels.[63] These researchers reported on the findings from a lead screening of over 280,000 children in Massachusetts. In 2001 another abstract of a report prepared by Masters, Coplan, and others showed similar findings from a study of 151,225 venous blood level tests from children ages 0-6 inclusive collected by the New York State Department of Children's Health.[64]

In a review editorial,[65] Masters and Coplan addressed the observation that silicofluoride and sodium fluoride behave differently in the body. The silicofluorides do not undergo complete dissociation and that 3 times the amount of fluoride crosses the gut/blood barrier than is the case with sodium fluoride. Two disturbing conclusions are brought forward. First, the commercial grade of silicofluorides used in water fluoridation since 1947 have never properly (or officially) been tested for safety in water fluoridation. Second, there is a statically significant association between silicofluorides and elevated blood lead levels. The risk to children of this finding alone is (or should be) obvious.

EFFICACY OF FLUORIDATION

From the outset, the journal has presented research papers, abstracts and editorials dealing with both the support and condemnation of the "benefits" to be achieved from water fluoridation as a way of preventing dental caries.

In 1981, the journal published a paper by R Ziegelbecker.[66] This researcher processed through his computer the results of all published studies to that date dealing with the relationship between fluoride in water and dental caries. These data included those of H Trendley Dean that formed the foundation of the concept. Ziegelbecker found no relationship. Later, in 1993, using the World Health Organization oral health data bank collected in 1987, he again showed that there was no inverse relationship between dental caries incidence and water fluoride levels.[67]

In 1990, the journal published the analysis by J Yiamouyiannis of the results (obtained through the Freedom of Information Act) of the 1986-1987 oral health survey of 39,207 US schoolchildren ages 5-17 that had been carried out by the National Institute for Dental Research (NIDR).[68] Yiamouyiannis showed that there were no significant differences in decay rates of permanent teeth or the percentages of decay-free children in fluoridated, partially fluoridated or non-fluoridated areas. The "official" report by JA Brunelle and JP Carlos of the NIDR showed a "benefit" of 17.7% (DMFS). This represents a difference of less than one tooth surface.

J Colquhoun, in an article published in *Fluoride* in 1993, showed that in New Zealand there had been a decline in caries prevalence that commenced *before* fluoridation was started.[69]

In recent years, *Fluoride* has published papers and abstracts that show prevalent opinion that fluoride does not have a systemic anti-caries effect but works topically. Studies have been published that show that when fluoridation is stopped, there is no increase but a continued decline in tooth decay, except as refined sugary foods and beverages reverse the trend.

FINAL REMARKS

Has the journal *Fluoride* fulfilled its mandate? It has been a forum for those who have expanded on the work of Roholm. It has provided a medium for research papers that may have been declined by the establishment-oriented traditional journals. At the same time, the journal has provided easy access to abstracts of many studies published elsewhere. It has also published special articles and editorials that have served as a review mechanism.

Those members of the ISFR whose names have appeared on the masthead of the journal during the past 35 years have served well and deserve our gratitude.

Fluoride has become a veritable encyclopedia covering all biomedical and related aspects of fluoride research. A glance at the 35-year cumulative index provides proof of this. Nevertheless, the reasons for its origin thirty-five years ago remain. *Index Medicus*, published by the US Public Health Service's National Library of Medicine, a major source of references to fluoride-related health topics, continues to decline the inclusion of *Fluoride* in its list of journals indexed.

The foremost effect of this ban is to deprive physicians, dentists, and other interested groups of a source of information concerning the effect of fluorides on humans, animals, and plants. This action appears to be motivated by the Public Health Service's desire to protect its stand on fluoridation in spite of the fact that the ISFR has at no time been involved in the politics of this program. This strongly suggests that those who do not want the truth to be known put the exclusion of *Fluoride* from *Index Medicus* in place to protect the image of fluoride and fluoridation.

The modern-day would-be-censors of scientific information should heed the warning that, eventually, the truth will come out and be heard. A step in this direction is the search engine *SciFinder Scholar* that *Chemical Abstracts* has introduced and that permits retrieval of papers in journals such as *Fluoride* that *Index Medicus/PubMed* do not cover. This could mean that justice will finally prevail.

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