

To the  
**European Commission's Health and Consumer Protection Directorate  
General**  
via email

Re:  
**SCHER: Fluoridation - Call for Information**

## Comments on the "working mandate"

(websites [http://ec.europa.eu/health/ph\\_risk/committees/04\\_scher/docs/scher\\_q\\_081.pdf](http://ec.europa.eu/health/ph_risk/committees/04_scher/docs/scher_q_081.pdf)  
and [http://ec.europa.eu/health/ph\\_risk/committees/04\\_scher/scher\\_call\\_info\\_04\\_en.htm](http://ec.europa.eu/health/ph_risk/committees/04_scher/scher_call_info_04_en.htm) ,  
deadline April 8, 2009)  
submitted on April 8, 2009, to  
[Sanco-Sc8-Secretariat@ec.europa.eu](mailto:Sanco-Sc8-Secretariat@ec.europa.eu)  
in agreement with the dialogue procedure published on the web.

by  
**Rudolf Ziegelbecker jr. (= R.C.Ziegelbecker)**  
Academic titles: **Mag.rer.nat., Dipl.-Ing., Dr.techn.**  
Profession's title: Professor

Profession: Former (theoretical) physicist,  
actually teacher of physics (and mathematics) at a technical college in Graz/Austria  
and member of a ministerial working group for Austrian education standards in science education,  
multiple prize winner at science competitions for schools, in 2003 received the EU-promoted  
"EIROforum science teaching award" at "Physics on Stage" for one of Europe's best science projects  
with students.

**From about 1976 to 1993, on a voluntary, extra-professional and absolutely unsalaried basis, I  
assisted my scientifically working father\*1) at his professional fluoride research** (which he did  
for the Styrian (=regional) government and for the government-owned Research organization) as a  
"critical thinker" who also did some scientific work on his own, **mainly in order to find out - sine ira  
et studio - the true magnitude and sort of an eventual rest of benefit of fluoridation**, after  
the conclusions from all basic fluoridation studies had been scientifically disproved\*2), but no clear  
data for the size of an eventual remaining positive effect were available in my eyes until  
1987. Moreover, I unwillingly witnessed harmful side-effects by unwitting fluoride-overdosing within my  
family as well as the fate of "fluoridation" in Europe and the true reasons for it.

\*1) I attach my father's biography which contains a lot of background information on the fate of  
fluoridation in Europe.

\*2) I attach only the most important and fundamental paper in "Prophylaxe": "Gesetzmäßigkeiten im  
Verlauf der Zahnkaries" = "Mathematical Laws in the Development of Dental Caries" - unfortunately in  
the moment only available in German with a probably too short English summary - and

\*3) I attach his "compendium of summaries", all of these scientific work and communications having  
contributed to the cessation of fluoridations in Europe.

Institution: My institution (HTBLVA Graz Ortweinschule) has nothing to do with fluoride research.

Declaration of interests: My only interests, because of sincere sorrow for all Europeans after my  
father's death, is to point to "forgotten" or not widely known facts and provide unbiased scientific and  
background information about specific aspects of fluoridation especially to public institutions, like the  
EU-Commission, which are responsible for the health of Europe's citizens, to researchers as an input  
to their work and to my students as an example for the scientific method and some of its weaknesses.  
I don't do any more own research since I was able to fully understand and quantitatively explain the  
action of ingested fluoride on permanent teeth.

Since science must be "open", these my comments shall be open to everybody and may therefore be communicated also to other researchers and all those interested.

## **Comment #1 on the (preliminary) "working mandate" - general**

Since statements contained in the "working mandate" should be true for various reasons (people should be able to further trust in the correct functioning of the EU institutions, the health of hundreds of millions of Europeans should not be menaced by a weighing by bona fide experts but on the basis of false premises, personal responsibility in the case of not tenable information to decision makers,...), **all objectively false or at least not sufficiently reliable information should be omitted from the "working mandate"**.

## **Comment #2 on the (preliminary) "working mandate" - phrase "but it is beneficial in the prevention of dental caries (tooth decay)"**

This part of the sentence is not sufficiently reliable or even false (even if it has been adopted from the NDA-panel's opinion on the Request N° EFSA-Q-2003-018 adopted 22 Feb 2005) for the following reasons which have not been considered by the EFSA until now:

**1. It has not sufficiently been discussed in the scientific community if the main effect of ingested fluoride, which is an eruption delay of permanent teeth resulting in less teeth at same age as well as in a shorter exposition time of the smaller number of teeth to cariogenic influences if compared at same age** (therefore a "quadratic" and consequently quite strong effect, clearly resulting in less dental caries if compared with fluoride-free children at same age, but not less dental caries if compared with children of same age or number of the teeth!), **may really be considered as a "benefit" since this effect is inevitably connected with the fact that the (later erupted) "fluoridated" set of teeth shows a higher(!) relative increase of dental caries than a non-fluoridated set, which means at least that, if a non fluoridated and a fluoridated set of teeth with an equal level of dental caries are compared, in the fluoridated set of teeth dental caries will progress quicker(!) than in the non fluoridated set.**

**The potential of this higher susceptibility is thus high, however, that during lifetime of persons the fluoridated ones may "overtake" the non-fluoridated ones concerning dental caries.**

The eruption delay as well as the higher susceptibility to dental caries of fluoridated sets of teeth were investigated in the attached paper ("PROPHYLAXE"), which I (and not only I) therefore consider to be a fundamental one for fluoridation research. It covers the fluoridation experiments of Grand Rapids, Newburgh, Muskegon, Kingston, Aurora, New York - all with the same result. **The higher susceptibility to dental caries after equal exposure**, as far as I know, **has not been considered/regarded in a single one of those studies which led to the recommendations of fluoridation** by the WHO and other health and dentists' organizations which are therefore, and also for some other reasons, scientifically not tenable.

For the mechanism why fluoridated teeth are or may be more susceptible to dental caries at least at higher age there exists a simple explanation, and all pieces of this puzzle fit very well together even if I am not able to cite more relevant literature now (since I do no more research on fluoridation). But I testify that at the ISFR Conference 1987 at Nyon another researcher (I remember he was a dentist who declared to be "still pro-fluoride" ) communicated to me that he had investigated the mineralization velocity and enamel structure for fluoridated teeth: Fluoridated teeth would stop mineralization during tooth formation while fluoride is in the saliva. When fluoride disappears, mineralization runs quicker, but nevertheless the whole process ends with a thinner tooth enamel in which the crystallites are not as well ordered as without fluoride (I know that the latter is also supported by some published studies). This piece of the puzzle fits well to the decreased resistance of fluoridated teeth against dental caries which was first found by my father Rudolf Ziegelbecker in the

attached paper and fits as well to the "fluoride bombs" described e.g. by Dr. Bill Osmunson in the attached guest editorial in the FLUORIDE journal ("Bill Osmunson FJ2007...").

Not only my father's scientific paper(s) give reason for serious doubts about a benefit, but also a remarkable event at the Nyon 1987 ISFR conference during the discussion of a poster which were 100% consistent with my father's findings: Using the presented data I could spontaneously show on the blackboard that the differences in dental caries between the three groups were caused solely by tooth eruption delay. The fluoridated group in the experiment had far less teeth at the age of 6 or 7, but the ratio of observed dental caries and (=divided by) the exposition to dental caries (i.e. the integral of the number of teeth times time since eruption) turned out to be the same in the fluoride-free, the medium fluoridated and the strongly fluoridated group, which means that fluoride had not increased the resistance of the teeth against dental caries. And I testify that my statement in front of the full auditory that this eruption delay therefore should rather be considered to be a sign of intoxication than a real caries reduction, was not opposed by any expert, not even by the author of this study.

**2. Two other completely unbiased, independent validation tests were done by my father and myself** in order to check the results described above and to isolate an eventual benefit of water fluoridation **by "repeating" the method used by Dean et al. in his famous 21 cities study on a statistical basis**, this means: not by considering, but by averaging over all cariogenic influences other than natural fluoride in the drinking water, instead. For these tests I developed a priori (from low-level probability considerations) the "naturally suited" net of coordinates in which dental fluorosis as well as dental caries curves should behave (and indeed behave) normally linear. The results were the following:

**a) concerning dental fluorosis: No dosage of fluoride in drinking water seems to be "harmless".** I attach my paper "Lognormal Distributions...."

**b) concerning dental caries values found in the entity of fluoridation studies before 1987:** Even though many data published were verifiably selected in single fluoridation studies, **the "benefit" of water fluoridation in 12-14 years old children is zero or even below zero at least for concentrations above 0.3 ppm** fluoride in drinking water. (See my attached paper "Lognormal Distributions....")

**c) concerning dental caries values for 12 years old children gathered at WHO in 1987** for locations where also values for (natural) fluoride in drinking water were available at the WHO headquarter - with the restriction that at least 4 data points should be available for the considered country: **The "benefit" of water fluoridation again turns out to be zero**, this time not only above 0.3 ppm as (possibly) in the case of (sometimes highly selected) data from fluoridation studies, but **already from below 0.1 ppm onwards**. (See my attached paper "WHO data....")

Please bear in mind that the characteristics of science is that a single experiment which contradicts a theory or model falsifies this theory or model if this experiment is repeatable. Any of the experiments/analyses mentioned above can be repeated (under controlled conditions). Their results would not be a "wonder" and would be trustable for anybody who studies the analyses done by my father of the fundamental errors and deficiencies which occurred in the premises(!), methods and conclusions of a large number of "successful" fluoridation studies.

According to our knowledge the above facts also hold for any other ingested fluoride as from tablets, salt and food in general.

**3. The phrase "but is beneficial in the prevention of tooth decay (dental caries)" is not sufficiently reliable also with respect to the SCCP opinion SCCP/0882/05 (which is cited in the "working mandate"), p.6, saying "the need to provide systemic fluoride supplementation for caries prevention is questionable".**

My knowledge, derived from scientific work, is even more detailed, that means that e.g. **according to the attachments "WHO data.." and "Lognormal distributions..." any increase of fluoride intake will cause no decrease, eventually even an increase of dental caries in 12 years old children and according to my attachment "PROHYLAXE..." any increase of fluoride intake (at least during tooth formation) will therefore increase dental caries values for higher ages.**

For "local" applications like fluoridated tooth pastes and others I am not an expert, but as far as I see the experimental results (e.g. that mentioned in the SCCP opinion SCCP/0882/05 p.5 Ref.: S26 which is considered in the actual working mandate: No caries reducing effect at lower F-concentration in toothpastes) agree well with my personal suspicion that in local applications fluoride acts almost only by inhibiting the metabolism of caries-inducing bacteria (~"poisoning" them).

This my suspicion is not only not excluded by the NDA-panel's opinion on fluoride of 2005 ("In addition, fluoride inhibits sugar metabolism by oral bacteria."), but is strongly supported by the following fact: I know that Rudolf Ziegelbecker (my father) has intensively re-analysed **Dean's original data (which were most relevant for fluoridation)** and had found a strong correlation between dental caries values and lactobacillus acidophilus while in that multivariate multi-step regression and residues analysis **the fluoride variable was of zero significance(!)**. I think these results were only presented at an ISFR conference in Budapest and may have to be redone. They **heavily support the SCCP opinion that "systemic fluoride .... is questionable", which - by the way - partially already contradicts the NDA opinion on the benefits of fluoride which led to a far too high upper tolerable intake level**, which was adopted 22 Feb 2005 on the Request N° EFSA-Q-2003-018.

### **Comment #3 on the (preliminary) "working mandate" - phrase "While no doubts the beneficial effects of fluoride..."**

This phrase is obviously false

#### **1. in view of the complete above comment #2**

and is false also

#### **2. in view of the sincere criticism of this statement by Professor Paul Connett from the USA (<http://fluoridealert.org/connett.fluoridation.mandate.pdf>) and others**

**3. in view of the following personal communication of August 2007 to me from one of the world's best known and highly respected experts on fluoridation, Prof.em. Albert W. Burgstahler, since decades editor of the scientific, peer reviewed journal "FLUORIDE" which is the only independent journal in this field since it accepts no advertisements. I cite with his permission ("Yes, you may use my statement as editor of FLUORIDE to illustrate how important information about F research has been excluded from PubMed and pro-F reviews, so that many sincere, well-meaning people in public health are unaware of what they should know."):**

**"Even now, despite no clear evidence of any real caries reduction from water fluoridation or even from topical fluorides, many researchers submitting research reports for publication in FLUORIDE still adhere to the belief that there is such evidence. But then, when asked to cite it, they bring up outdated and disproved reports or else drop the claim."**

In this context you should know that around 1970 all medical journals "closed" themselves to objective publications on fluoride thus creating a massively biased "parallel world" which was far off scientific discussion and which until today is able to maintain the belief in the "benefits" from fluoride on the basis of repeating disproved pro-fluoride reports and ignoring scientific evidence. This "parallel world" could be maintained until today because "scientific reviews" - like the "York Review" of 2000 and probably also the Opinions of the Scientific Committees of the EU - use to include only "original studies" in their work but to exclude exactly those studies which disproved or relativised the namely original studies. The result must be a scientifically untenable Opinion which again supports this biased "parallel world" which is present in medical literature but not in free and responsible science, and is based on those disproved reports. "Closed" means, that the (medical journal's) editors' uniform "question" on the phone was: "In favour or against? - I ask because we don't publish against fluoride".

#### **4. in view of the extensive documentation provided to the NDA and the CONTAM panel between February 13 and March 6 and on April 6, 2006 by my father and by myself, on the basis of which the "upper tolerable intake level" of fluoride in the NDA panel Opinion was criticised as a far too high compromise in view of the not existing "benefits".**

Also from the actual draft working mandate I understand that again the EFSA Scientific Committees have to weigh / to balance between benefits and potential harm. Consensus about such a critical question, like if preventing dental caries in the youth by preventing early (=normal?) permanent teeth's eruption (by intoxication?) by fluoride at the cost of a higher relative caries increase and no or even a

negative net effect at higher age can be considered a benefit, must not only be assumed in the actual working mandate, but must be carefully analysed on a scientific basis.

This also means that **the earlier Opinions** of the Scientific Committees - especially that of the NDA panel which had not considered most important scientific literature like the attached - which are mentioned in the preliminary "working mandate" and which **do not take into account all the most relevant information provided later (after 2005)** to the EFSA, **should under no circumstances be taken "as they are"** as the starting point for further work.

I'll forward the material mentioned above which was sent by my father to the EFSA NDA and CONTAM panels and eventually also to the Advisory Forum and Management Board (3 messages, 8 attached documents, reception acknowledged by Karin de Borchgrave, Communications Department, [info@efsa.eu.int](mailto:info@efsa.eu.int), on March 06, 2006) again in separate mails.

Appendix: I remember the criticised phrase has been used by fluoridation promoters already for decades when attempting to bypass scientific control.

**Comment #4 on the (preliminary) "working mandate"**  
**- phrase "The potential for negative health effects that may result from excessive intake, have put in question the practice of intentional water fluoridation and in some parts of the European Union and elsewhere (USA)."**

**This sentence is incomplete and therefore in an essential part misleading.**

**This sentence may be the view how fluoridation promoters have or wished to have experienced politicians' decisions.**

**As well important or even more important facts, beyond toxicology and individual fears and feelings, were, however:**

(See also the attached Biography of Rudolf Ziegelbecker and the also attached Compendium of Summaries)

- 1. At all hearings, discussions and decision processes on a scientific or at least on an elevated level the promoters' experts had to admit that they were not able to tell how large the actual share of fluoridation was among the variety of measures and influences which altogether had led to the observed differences in dental caries in each experiment stressed as a proof for the benefits of fluoridation by them, or**
- 2. my father (Rudolf Ziegelbecker sen.) could prove that the "caries reduction" asserted to fluoridation was due to other influences without doubt, or**
- 3. my father could prove that at least one delegate to the WHO had reported a non-existing "success" of fluoridation, this report having certainly contributed to a recommendation of fluoridation by the WHO, or**
- 4. my father could prove that the author of the study (I think it was Dean in his 21 cities study - for more information one would have to study my father's papers, see attached "Compendium of Summaries") had specifically selected data out of thousands of known possible data points for "proving" a success of fluoridation, or**
- 5. after 5 or 6 "success" reports had appeared in favour of fluoridation, my father published the fact that the "proof" for the "benefit" of drinking water fluoridation was done predominantly on a population which had never received fluoridated water (wrong plans of the water pipes were used in Kassel) which led to the immediate cessation of the water fluoridation there, or**
- 6. my father could prove (in Graz) that, if the data provided by fluoridation promoters to politicians had been correct, children would have had at least 40 teeth (instead of 28 or eventually up to 32) which led to a definitive "no" from the City of Graz to all attempts of a re-introduction of tablet fluoridation in primary schools after mandatory tablet fluoridation had been halted and dental caries had even decreased after the halt according to the official data of the school dentistry, or**
- 7. after years of doubt and health concerns by the Czechoslovakian water experts and by the Academy of Sciences my presentation "Lognormal Distributions" which suggests an approximate zero "benefit" of fluoridation (document attached) and a massive correlation between fluoridation and cancer (I think I remember it was something like a 99.9%**

correlation between the size of the "yearly fluoridation increase steps" and the size of the subsequent "cancer deaths increase steps" in the USA, the causal relation of which has neither been searched nor found until today) **were the true reasons for the almost immediate cessation of water fluoridation in the capital Prague and in Ceske Budejovice after a short check by the Academy of sciences, or**

**8. more than once my father could show that costs for dental health had increased more where fluoridation was practised, instead of decreased as predicted by promoters, or**

**9. in spite of horror visions of fluoridation promoters, dental caries was nowhere observed to increase after a halt of fluoridation** (according to the reports my father received from the cities in question. If an increase would have been the regular case, this news would have been spread all over the world by fluoridation promoters and also would have led to a correction of my and my father's scientific opinion. Of course, in agreement with my comment #2 point 1, children might regain a larger number of - more caries resistant (!), however - teeth, but with more dental caries at early ages due to the larger number and longer exposition of their teeth if permanent dentition is not any more retarded and if they are compared only at same life-age, at early ages. But this only happens if fluoride intake from other sources is reduced too). **Or,**

**10. after 40 years of duration the most famous water fluoridation of Central Europe, in Basle/Switzerland, was stopped in 2003 by the Great Council of Basle because, after sound scientific critique of this "experiment" by my father and by the "Forum for Responsible Application of Science" (translated title), in spite of 5 years' time all the fluoridation experts were not able to prove without doubt that fluoridation is effective in Basle (see attached document "Basle stops water fluorid..").**

**The fact that the doubts about efficacy were a principal reason for ending many fluoridations in Europe should be mentioned in the working mandate at least equally to the doubts about health risks.**

### **Comment #5 on the (preliminary) "working mandate"**

**- phrase in "2. Terms of reference", "Taking as a basis the SCCP opinion...."**

As already explained in my comment #3 point 4, the opinions of the year 2005 do not take into account neither the information given in my actual comments (above and attached) on the working mandate nor the information sent to the EFSA in spring 2006. Since correct application of the scientific method does not allow to be based on "original papers" which have been refuted by other papers without regarding and confirming or refuting those other papers, especially if regarding them would require to change the whole view of the issue (e.g. upper tolerable intake levels would probably have to be lowered if retarding dental caries for a limited period by reducing the number of erupted permanent teeth by intoxication by fluoride would not any more be considered a "benefit") I suggest that all 3 cited opinions of the EFSA Scientific Panels should be regarded, but in view of the new information and material now accessible to the EFSA not necessarily taken as a "basis" for its new risk assessment since they contain false statements on the benefits of fluoridation.

### **Comment #6 on the (preliminary) "working mandate"**

**- "2. Terms of reference, paragraph (1)"**

The scientific method forces to **take into account all material relevant for a correct assessment, and since the above and attached material is of very high relevance for the question if adverse health effects of medium severity** (newly recognised and newly apparent health hazards - the higher susceptibility of fluoridated teeth to dental caries described in the attached German paper in PROPHYLAXE only being one of them - as well as the well-known dental fluorosis which already occurs at fluoride concentrations far below the "recommended intake") **may be tolerated or not - depending on the assessment of the effects of ingested fluoride on teeth described in my comments #2 and #5 (there again), supported by comments #3 and #4, as to be "benefits" or not. In order to be able to consider the mentioned relevant material the term "since 2005" should be omitted in order to remove any doubt and "evidence of adverse and/or beneficial**

health effects" should be exchanged by "evidence of adverse and/or beneficial effects on the body" or something similar in order to make clear that effects on the teeth as well as on the rest of the body are assessed. At least the higher relative caries increase in fluoridated teeth should be assessable as an adverse effect under this paragraph.

#### **Comment #7 on the (preliminary) "working mandate"**

- "2. Terms of reference, paragraph (3)"

- phrase "In doing so the SCHER is asked to take into account the potential benefits of fluoride in tooth decay prevention."

Since scientific view of the "benefits" of fluoride is generally changing now (for a correct description of its action see my above comment #2 point 1.) and the relevant information arrives at the EFSA only now (partially already in 2006) either this (for the EFSA) new view has to be adopted or a reassessment would have to be made on the "benefits" of fluoride - with regard to this relevant information coming from myself and probably also from others - before the potential benefits can be correctly taken into account.

Under no circumstances it would be scientifically tolerable to ignore relevant information, which had not yet been adequately regarded, for reasons like publication date before 2005 or that it were no "original study" (the latter criterium would exacerbate extremely the correction of false scientific results by re-analysis especially of the experimental premisses and method of basic experiments).

The changing scientific view is also well documented in my comment #3, see especially paragraph 3, and in view of all the above arguments my only idea is to remove the sentence criticised in this my comment #7 from the working mandate as long as there does not exist a new sine-ira-et-studio scientific opinion on the benefits of fluoridation in which all the relevant material is present and erroneous or disproved studies are removed from the consideration.

#### **Comment #8 on the (preliminary) "working mandate"**

- "2. Terms of reference, paragraph (5)"

- phrase "as reported in some studies."

This appendix seems a bit misleading to me since even for dental fluorosis there exists a large number of studies, each of which show that any increase of fluoride content in drinking water would increase the amount of dental fluorosis, consequently exacerbating a fluoride health affect (One of them is attached to this email ("Lognormal distributions...." - see fig.7).

#### **Comment #9 on the (preliminary) "working mandate"**

- possible additional questions:

In view of all the above comments and the attached material the following additional question might be helpful, eventually important also for legal aspects which could arise:

e.g. (6) "Can a benefit in the sense of a sustainable increase of the resistance of teeth against dental caries (i.e. also at higher life-age) by intentionally adding fluoride such as hydrofluorosilic acid to drinking water be guaranteed if all scientific and other evidence which has reached the EFSA up to now is considered, and how large will it be?"

**I want to emphasise that e.g. the attached papers "Bill Osmunson...", "PROPHYLAXE...", "WHO data..." and "Lognormal distributions..." are able to provide scientific evidence on this important question.**

## Final Comment (#10):

The above contains only a few facts I witnessed myself and which are not widely known, but should be known to today's experts assessing this issue for the European Commission. Of course there is much more evidence for a lack of a true benefit of fluoridation, e.g. fig. 1 in the attached guest editorial of Dr. Bill Osmunson, all of it well agreeing with my father's (Rudolf Ziegelbecker's) findings which I in brief outlined above (see also the attached biography).

All those facts should lead to a reformulation of the working mandate in the interest especially of the Spanish, Irish and UK citizens which still are subject to mandatory fluoridation, at a time when more than 2000 professionals and experts, among them a novel prize winner, urge a re-investigation of fluoridation in the USA and a worldwide stop of fluoridation.

It is essential and part of true scientific work that also the above background information as well as the attached material -which has not been considered by the EFSA until now - is taken into account when weighing the hazard potential against the seeming and transient "benefits" of fluoridation (described in my comment #2 paragraph 1) since this background information is important to understand why that scientifically uncontrolled medical literature in favour of fluoridation developed and why, in spite of the massive resources invested, so many countries in the EU do not or not any more practise intentional fluoridation.

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I hope that my comments are clear enough and that my English is understandable, please contact me if there are questions.

For completeness and better readability I also attach the above text: "Comments on working mandate..."

I'll forward the material which my father had sent in 2006 for the attention of the NDA and CONTAM panel (in order that these are able to adapt their opinions according to important scientific facts which had not been considered) again in 3 separate mails since this material was written by a true expert and should influence the scientific opinions within the EFSA and the EU Commission.

Sincerely

Rudolf Ziegelbecker jr.