- 1. I am writing from Sweden where in the 1970s where I was part of the team of scientists who worked hard to prevent fluoridation being introduced into our country, including my testimony to the Swedish Parliament that decided fluoridation should be illegal due to ethics. Since then more and more evidence supports the legitimacy of our concerns about fluoridation.
- 2. My address: Thorild Wulffsgatan 50, SE-413 19 Göteborg, Sweden.
- 3. My specialty is neuropharmacology,. As a neuropharmacologist, I have conducted research on the neurotransmitter dopamine (L-Dopa) and its effects in Parkinson's disease, and for this research, I was awarded the Nobel Prize in Medicine in 2000.
- 4. In 1957 my research demonstrated that dopamine was a neurotransmitter in the brain and not just a precursor for norepinephrine, as had been previously believed. While working at Astra AB in Sweden, our research team was able to derive the first marketed selective serotonin reuptake inhibitor, zimelidine, from brompheniramine.

My research developed a method for measuring the amount of dopamine in brain tissues. It was found that dopamine levels in the basal ganglia, a brain area important for movement, were particularly high. Research then showed that giving animals the drug reserpine caused a decrease in dopamine levels and a loss of movement control. These effects were similar to the symptoms of Parkinson's disease. By administering to these animals L-Dopa, which is the precursor of dopamine, we could alleviate the symptoms. These findings led other doctors to try using L-Dopa on patients with Parkinson's disease, and found it to alleviate most of the symptoms at least in the early stages of the disease. L-Dopa is still the basis for most commonly used means of treating Parkinson's disease.

- 5. My Curriculum Vitae is attached with a list of my selected references, awards and distinguished lectures, honorary degrees, and memberships in scientific organizations. (http://www.nobelprize.org/nobel\_prizes/medicine/laureates/2000/carlsson-cv.html)
- 6. I entered the University of Lund, Sweden, in 1941. Awarded an "M.L." (corresponding to American M.D.), 1951. Awarded "M.D." (corresponding to American Ph.D.), 1951, University of Lund. Assistant of the Department of Pharmacology, University of Lund from 1944,

Assistant Professor 1951, Associate Professor 1956. 1959 Professor of Pharmacology, University of Gothenburg, Sweden (Chairman 1959-1976). Emeritus 1989. Visiting Scientist at the Laboratory of Chemical Pharmacology, National Heart Institute, Bethesda, Md., USA, 1955-1956.

7. Fluoridation is an obsolete practice. It goes against all principles of modern pharmacology. First of all, once we put fluoride in the water we cannot control the dose people get. There is a huge variation in the amount of water people drink from the infant to those who consume copious amounts of water (such as diabetics, and outdoor workers in hot climates). Furthermore, the use of the public drinking water supply to administer a drug goes against all principles of science because individuals, even if we were able to control the dose, respond very differently to any kind of drug or toxic substance.

8. Meanwhile, World Health Organization data indicates very little difference, if any, in tooth decay in 12-year olds between those living in fluoridated and non-fluoridated communities (Cheng et al. (2007), *British Medical Journal* 335(7622):699-702). It is very clear that our children's teeth have not suffered in Sweden because we rejected fluoridation.

9. It has become clear that the major benefits of fluoride appear to be topical not systemic (Centers for Disease Control and Prevention, 1999, 2001). In pharmacology, if the effect is local, it is awkward to use it in any other way than as a local treatment. I mean this is obvious. You have the teeth there, they're available for you, why drink the stuff?

10. I urge you to end fluoridation in Austin and instead to review carefully the methods used in non-fluoridating countries which have successfully combated children's tooth decay without exposing them - unnecessarily - to this pharmacologically active substance.

I declare under penalty of perjury that the foregoing is true and correct.

Dr. Arvid Carlsson

Date: January 16, 2012

Curriculum Vitae of Dr. Arvid Carlsson

http://www.nobelprize.org/nobel\_prizes/medicine/laureates/2000/carlsson-autobio.html