

Case Report

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Preventing Alzheimer's Disease

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Abstract

'Transport DNA's, tDNAs deploy silicon hexafluoride as carrier for calcium phosphate, apatite for bone and tooth maintenance. SO_x/NO_x acid air pollution can cause its inappropriate synthesis in the nasal fossa and transfer via olfactory nerves to the brain, causing Alzheimer's Disease. Since fluorinated anaesthetics relieve symptoms, it could easily be prevented.

Keywords: Transport DNA, tDNA, Alumino-silicate plaques, β-amyloid, τ-protein, Vitamin D₃

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Introduction:

As a Cambridge undergraduate in 1967, I chanced to discover the recently corroborated ferroelectric phase transition in ice crystallised in liquid nitrogen. Graduating in Natural Sciences, I read an MSc in Biochemistry at UCL, trained as a Clinical Biochemist at the University of Surrey, programmed computers for 10 years, compiled a thesis. Some consequences of a consistent framework for the origin of life at King's College Medical School. Since its examiners refused its publication in 1988, I've conducted literature searches. Melrose Press published SCIENCE UNCOILED in 2016.

My trace element studies¹ account for most Western morbidity. Silicon hexafluoride serves as carrier for calcium phosphate for skeletal maintenance. Acid air pollution² disrupting its synthesis explains Alzheimer's Disease³. The stability of fluorospar, CaF₂ aka Blue John illustrates the affinity of calcium for fluorine. Vitamin D₃, 1,25-diOH-cholecalciferol stores ~265 nm UV light matching Si-F bond energy⁴. The conjugated single and double bonds of retinal transfer it through the cell membrane as solitons⁵ for SiF₆⁼ assembly. The parathyroid glands distribute fluoride in PTH⁶, c.f. adjacent thyroids packing iodine to thyroxine. Its continuous release ensures high fluoride concentrations don't endanger the gland. SiF₆⁼ complexes with apatite⁷, Ca₁₀(PO₄)₆(OH)₂ or fluorapatite, Ca₁₀(PO₄)₆F₂ which tRNA analogues, transport DNAs, actively transport, Fig 1.

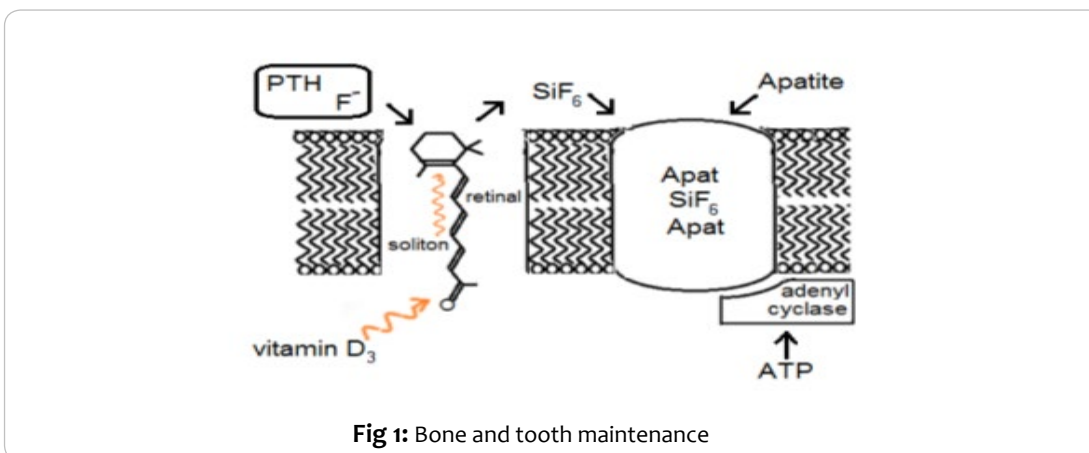
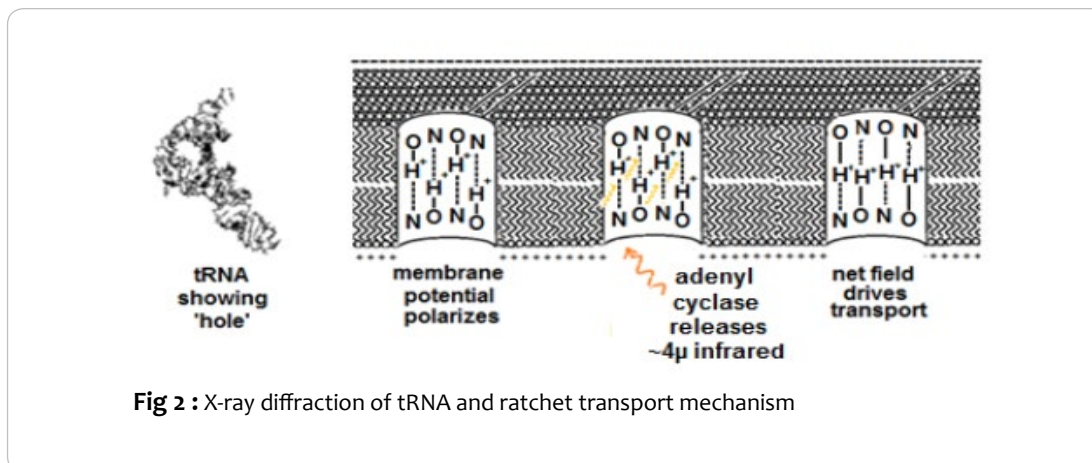


Fig 1: Bone and tooth maintenance

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I argue elsewhere that tDNAs⁸ are descendants of the first bioactive molecules, they share tRNAs' H-bond-lined hole⁹, Fig 2. Embedded in cell membranes, membrane potential¹⁰ aligns them. Adenyl cyclase re-

leases phosphodiester, Pi ~ Pi bond energy from ATP as ~4μ laser light. H-bonds absorbing this wave-length are depolarised and the residual electric field propels charged complexes through.



The reaction:



is pH sensitive, its failure due to acidity arising at menopause or in kidney failure causes brittle bone disease, osteoporosis¹¹. Associated pathologies include: vitamin D deficiency causing rickets¹², F- deficiency explaining childhood tooth decay¹³ and excess F- resulting in mottled teeth¹⁴. A parallel reaction in plants yields their silica hard parts¹⁵, SOx/NOx acid air pollution entering their leaves inhibits it, causing leaf-fall¹⁶. Liming soils proved ineffective¹⁷, reducing interest in pollution control.

If SOx/NOx air pollution causes inappropriate SiF₆= synthesis in the nasal fossa, olfactory nerves transfer it to the brain. There its breakdown yields alumino-silicate plaques and fluoride. F- disrupts Krebs cycle¹⁸ causing progressive cell death and interferes with protein folding, creating β-amyloid and τ-protein tangles^{19,20}. Mutant tRNAs substituting amino acids create similar tangles in Prion diseases²¹, embedded tRNAs render them infectious. Poor neurotransmission explains memory loss and related personality changes – the characteristic symptoms of Alzheimer's Disease.

The wife of a sufferer who preferred not to be named had reported temporary symptomatic relief four days after anaesthetic administration (presumably fluorinated). I observed in my father's case following a hip transplant. The metabolic insult promotes renal F- excretion²² as AlF₆³⁻ and simultaneous brain clearance of F-. The neural network model²³ of brain function fails to explain the memory recall but it's consistent with my minion-based account²⁴.

The age and distress of patients and their relatives obstruct investigation, anaesthetists liaising with psychiatrists might be test this proposal. Diesel exhaust²⁵ abatement or a pharmaceutical vector introducing F- to the brain might prevent this consequence of careless exploitation of scarce resources. My father had a letter published in The Times newspaper²⁶ concerning the danger of lead pollution from vehicle exhaust.

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