

ADDENDA – ALZHEIMER’S – A TRANSMISSIBLE PRION DISEASE:

to Petition to FDA to reverse its policy promoting spreading of prion infected sludge on food crops.

Page 5 of Petition – text to be substituted:

“The brain diseases caused by prions include Alzheimer's, Parkinson's and Huntington's, amyotrophic lateral sclerosis, also known as [Lou Gehrig's](#) disease, and other varied disorders known collectively as the frontotemporal dementias, Prusiner said. Among those, he said, are the dementias suffered by some contact sport athletes, as well as "soldiers from the Iraq and Afghanistan wars.

The findings, along with his account of discoveries he and other researchers have made over years of work, appear this week in the journal Science and the Proceedings of the [National Academy of Sciences](#).

<http://www.sfgate.com/health/article/UCSF-links-key-dementia-protein-brain-traumas-3654204.php>

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<http://www.sciencemag.org/content/349/6248/1255555.abstract?sid=3c7969f1-b6b1-485f-8246-b32c19461267>

Science, also widely referred to as Science Magazine, is the academic journal of the American Association for the Advancement of Science (AAAS) and is one of the world's top scientific journals.

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Review

Alzheimer’s and Parkinson’s diseases: The prion concept in relation to assembled A β , tau, and α -synuclein

1. Michel Goedert

+ Author Affiliations

1. *Laboratory of Molecular Biology, Medical Research Council, Francis Crick Avenue, Cambridge CB2 0QH, UK.*

1. ↩^{*} Corresponding author. E-mail: mg@mrc-lmb.cam.ac.uk

“OUTLOOK

“The prion concept appears to apply to all human neurodegenerative diseases with abnormal protein assemblies, including AD and PD. This has brought unity to the field and changed the way we think about these diseases.”

“A pathological pathway leading from soluble proteins to insoluble filaments.

This pathway is at the heart of human neurodegenerative diseases, including Alzheimer’s and Parkinson’s diseases. The formation of pathological seeds is a rare and energetically unfavourable event, which requires exposure of backbone amide groups and a high protein concentration. Once a seed has formed, single molecules can change shape and join the growing aggregates. Seed addition induces rapid assembly of the soluble protein. Fragmentation generates new seeds, accelerating the formation of aggregates. Filaments represent the endpoints of aggregation. They are typically unbranched, with a diameter of ~10 nm, and can be several micrometers long. This drawing is not to scale. [Adapted from S. K. Fritschi *et al.*, in *Proteopathic Seeds and Neurodegenerative Diseases*, M. Jucker, Y. Christen Eds. (Springer, Berlin, 2013), pp. 61–69]. “

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ALZHEIMER’S = transmissible – (possibly infectious)

Dr. John Collinge, UK

<http://www.independent.co.uk/life-style/health-and-families/health-news/alzheimers-disease-may-be-infectious-study-suggests-10493032.html>

Alzheimer's disease may be infectious, study suggests

Disturbing possibility raises questions about certain surgical procedures

Excerpts:

“The “seeds” of Alzheimer’s disease may be transmitted from one person to another during certain medical procedures, scientists have found.

A study into people who died of a separate kind of brain disease after receiving injections of human growth hormone suggests that **Alzheimer’s may also be a transmissible disease.**

The findings have raised questions about the safety of some medical procedures, possibly including blood transfusions and invasive dental treatment, which may involve the transfer of contaminated tissues or surgical equipment.

The investigation has shown for the first time in humans that Alzheimer’s disease may be a transmissible infection which could be inadvertently passed between people.

"It may be possible to transmit Alzheimer's disease from one person to another, according to a study published Wednesday in *Nature*."

"What we need to consider is that in addition to there being sporadic Alzheimer's disease and inherited or familial Alzheimer's disease, there could also be acquired forms of Alzheimer's disease," said lead scientist Professor John Collinge, director of the Medical Research Council Prion Unit at UCL."

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Other articles, same subject – Alzheimer’s transmissible – possibly infectious, contagious

<http://www.npr.org/sections/health-shots/2015/09/09/438839277/brain-tissue-transplants-may-have-spread-alzheimers-protein>

“The importance of the autopsy study is its finding that Alzheimer's has a lot in common with so-called prion diseases. They include Creutzfeldt-Jakob in people, the very similar **mad cow disease in cattle, and scrapie in sheep and goats, Walker says. Prion diseases and Alzheimer's both appear to involve rogue proteins that fold into abnormal shapes and then form toxic clusters or seeds, he says. “**

<http://www.pbs.org/newshour/updates/alzheimers-like-markers-linked-human-growth-hormone-treatments/>

People have implicated prions in Alzheimer’s disease **since the 1970s**, given that age-related dementia disorder is also linked to misfolded proteins, along with cell death and connection loss in the brain. Moreover, mice and marmosets develop amyloid plaques when injected with brain fluid containing amyloid-beta proteins.

This new study provides the first hint that a similar transmission event could occur in humans.

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<http://www.telegraph.co.uk/news/science/science-news/11853619/Alzheimers-disease-may-be-caught-through-medical-accidents.html>

Alzheimer's disease may be caught through medical accidents

University College London study finds it is theoretically possible to become infected through blood transfusion, brain surgery or root canal operation

“What we need to consider is that in addition to there being sporadic Alzheimer's disease and inherited or familial Alzheimer's disease, there could also be acquired forms of Alzheimer's disease,” said lead scientist Professor John Collinge, director of the Medical Research Council Prion Unit at UCL.”