Supplementary Material

A Novel Approach to the Treatment and Prevention of Alzheimer's Disease Based on the Pathology and Microbiology

Pathway for Spirochetes in Alzheimer's Disease

Spirochetes have been demonstrated in AD brains by pathology [1-3].

Spirochetes have been cultured from AD brains by microbiology [1,2].

Those cultured spirochetes make Aβ and Aβ protein precursor simultaneously with making biofilms *in vitro* [4].

Biofilms have been demonstrated by pathology both intra and extracellularly *in vivo* [5,6].

Aβ has been demonstrated intracellularly *in vivo* by pathology [5].

Aβ plus ordinary tau protein has been shown to generate p-tau [7].

P-tau has been shown to eventuate in dendritic disintegration and neurofibrillary tangles [7].

Extracellular biofilms have attachment sites for TLR 2 which generates both NFkB and Aβ by known pathways [8].

Spirochetes may require up to two years to make a single biofilm [5].

Bacteria such as *porphyromonas* can make a biofilm in minutes [9].

Biofilms made by one organism have receptor sites for other organisms which are incorporated into the community. Their role, if any, is undetermined [8, 10].

Given the similarity by pathology, microbiology, and clinical findings of GP and AD, it seems reasonable to consider organisms similar to *T. pallidum* in the etiology of AD.

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