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Gmail - Fwd: Ny forskning forbinder T2DM med Toxoplasma. Forskere foreslår introduktion af "Toxoplastisk type 2 diabetes"



Bo Svensson <cooldane@gmail.com>

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## Fwd: Ny forskning forbinder T2DM med Toxoplasma. Forskere foreslår introduktion af "Toxoplastisk type 2 diabetes"

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Bo Hembæk Svensson <bohembraeksvensson@gmail.com>  
To: Bo Svensson <cooldane@gmail.com>

Fri, Feb 24, 2017 at 11:13 AM

----- Forwarded message -----

From: **Bo Hembæk Svensson** <bohembraeksvensson@gmail.com>

Date: Mon, Feb 20, 2017 at 8:02 PM

Subject: Ny forskning forbinder T2DM med Toxoplasma. Forskere foreslår introduktion af "Toxoplastisk type 2 diabetes"

To: [mkt@novonordisk.com](mailto:mkt@novonordisk.com), Henrik Nedergaard <[HN@diabetes.dk](mailto:HN@diabetes.dk)>, [JRNW@novo.dk](mailto:JRNW@novo.dk)

Cc: Maria Vang Johansen <[mvj@sund.ku.dk](mailto:mvj@sund.ku.dk)>, [ilka@fvst.dk](mailto:ilka@fvst.dk), [po@sum.dk](mailto:po@sum.dk)

Til ledelsen i Novo, Diabetesforeningen m.fl.

Ny forskning forbinder igen Toxoplasma med diabetes - i en grad så forskerne foreslår en helt ny forsknings linie i; **"toxoplastic type 2 diabetes."**

"We believe that *T. gondii* may be an important target for T2DM intervention, and propose a new field of study, "toxoplastic type 2 diabetes."

The role of *Toxoplasma gondii* as a possible inflammatory agent in the pathogenesis of type 2 diabetes mellitus in humans:

Denne forskning kommer ovenpå en lang række andre peer-reviewed artikler der forbinder både diabetes I og II med Toxoplasma;

"These data strongly suggest that the parasite play an important role in development of both types of diabetes mellitus."

<https://www.omicsonline.org/t-gondii-infection-acquired-during-pregnancy-and-or-after-birth-may-be-responsible-for-development-of-both-type-1-and-2-diabetes-mellitus-2155-6156.1000241.php?aid=10899>

"Toxoplasma gondii is not only implicated in schizophrenia and related disorders, but also in Alzheimer's or Parkinson's disease, cancer, cardiac myopathies, and autoimmune disorders."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3603208>

"Diabetes may be caused by *Toxoplasma gondii*. Presence of *T. gondii* in the pancreas at the same time could directly undermines the pancreas cells"

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3918195/>

"The prevalence of toxoplasmosis showed positive in patients with diabetes in the B1 gene 139 (67.8%) and RE gene 117 (57.1%)."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4842229/>

"Seropositivity may be associated with neoplasms, diabetes, and other chronic infections."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2688793/>

"A Positive Association between *T. gondii* Seropositivity and Obesity"

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3872312/>

En meget interessant vinkel er ALOX12: "Others had found evidence of ALOX12 influencing outcomes in diabetes, neurodegenerative disease and schizophrenia" og "Some may contribute to atherosclerosis or diabetes. When this powerful immune response remains on the job it can have effects that might be harmful."

<https://sciencelife.uchospitals.edu/2014/07/22/what-does-it-mean-when-2-billion-people-share-their-brain-with-a-parasite/>

...der er desuden identificeret adskillige "pathways" mellem Tg infektion og pancreas, f.eks ifm P2X7R, NLNP, CCK mv. f.eks;

"TG (strain I) strongly alters CCK mediated signaling. This can lead to activation of Zymogen-Trypsinogen (and thereby Trypsin) and activation of Calcineurin (and thereby activation of T-cells).

"It is of note that in the current study, cholecystokinin (CCK)/gastrin-mediated signaling was strongly altered by type I infection of neural cells"

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3067490/>

It is known that TG creates a boost of T-cells when it penetrates a host-cell - it actually manages to control the immune system and most Toxoplasmosis goes undetected.

"After encysting, this organism releases a compound that boosts the number of T cells in the host's body"

[http://bioweb.uwlax.edu/bio203/s2008/parks\\_chri/Adaptation.htm](http://bioweb.uwlax.edu/bio203/s2008/parks_chri/Adaptation.htm)

A and B shows it can be argued that a link exists - not only between TG and T-cells, but also to those mechanisms that allow the beta-cells to be destroyed."

Også på [genome.jp](http://www.genome.jp) foreslås pathway til nærmere undersøgelse:

[http://www.genome.jp/kegg-bin/show\\_pathway?T01093\\_04940](http://www.genome.jp/kegg-bin/show_pathway?T01093_04940)

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I tillæg til ovenstående foreligger der et betydeligt materiale der belyser sagen fra andre vinkler, og lægger alen til postulatet om kausal forbindelse mellem diabetes og Tg.

Toxoplasma er langsomt, men sikkert, ved at bryde igennem til vores fælles bevidsthed og til at blive en del af den globale dagsorden.

Hjælp os til at løse dette vigtige problem.

Med venlig hilsen

Bo Hembæk Svensson et al.