



I N T R O D U C I N G

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Enzyme Therapy Seminar
October 11-12 • Houston, TX



Hashimoto's & COVID

Where's the Connection?



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Proper Test for The Thyroid

- Inadequate testing and review is the reason so many thyroid issues go undetected, leaving the patient with a heavy symptom burden
- A blood test needs to have ALL of the following EVERY TIME:
 - TSH, TT4, FT4, TT3, FT3, T3 Uptake, RT3, TPO & TBG Antibodies
 - RT3 can be left off if liver, adrenal, immune, and inflammatory scores are normal
- In my office this test (without TBG antibodies) costs \$250



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Hashimoto's: The Enigma

- The most common autoimmune disease
- One of the most benign autoimmune disorders
- Antibodies to the TPO or TBG qualify for diagnosis (MAYO story)
- The pattern in TPO antibody Hashimoto's:
 - TSH: anywhere & variable, immune status dependent
 - T4: low to low normal
 - T3: low to low normal
 - **TPO Antibodies: <30 iu/ml**
- The pattern with TBG antibody Hashimoto's:
 - TSH: Normal Range 1.85-3.0
 - T4: Normal range 6-12 mlu/l (note negative feedback loop)
 - T3: Below normal 100-180 ng/dl
 - **TBG Antibodies <116 IU/mL**



Don't Drink The Water

- Halides accumulated over long periods may occupy iodine receptors and or restrict iodine absorption into thyroid follicular cells.
- Although molecularly similar, the halides are not capable of being used to make T1 or T2 molecules.
- Often, this accumulation may lead to free radical toxicity and then to TPO antibodies.

Chlorine, Fluoride, Bromine:

- In areas where fluoride levels in the water registered above 0.3 mg/l, the risk of having a high rate of hypothyroidism was 37% greater compared to areas that do not fluoridate.



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The Gut Connection

SCFs: acetates, butyrates, propionates

- Generation of T-regulatory cells
- Downregulated by all leaky gut contributors and low microbiome
- Downregulated by spike protein inflammation

ASCA-ANCA

- anti- *Saccharomyces cerevisiae* antibodies-Ulcerative colitis
- antineutrophil cytoplasmic antibodies-Crohn's
- Increased in molecular mimicry with spike protein
- Antibiotic use common in hospitalization treatments



The Cardiovascular Link

- **Circulation to the thyroid gland**
- **TBG Antibodies in the bloodstream**
 - Increased T-reg, antibody, and NK Cell immune dysregulation
- **Microclotting**
 - Interruption of normal blood flow
- **Clinical observation of greater variance of MCV and RDW**
 - Bone marrow spike protein
 - Including skull to brain



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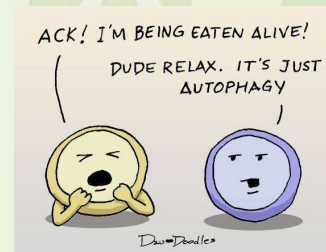
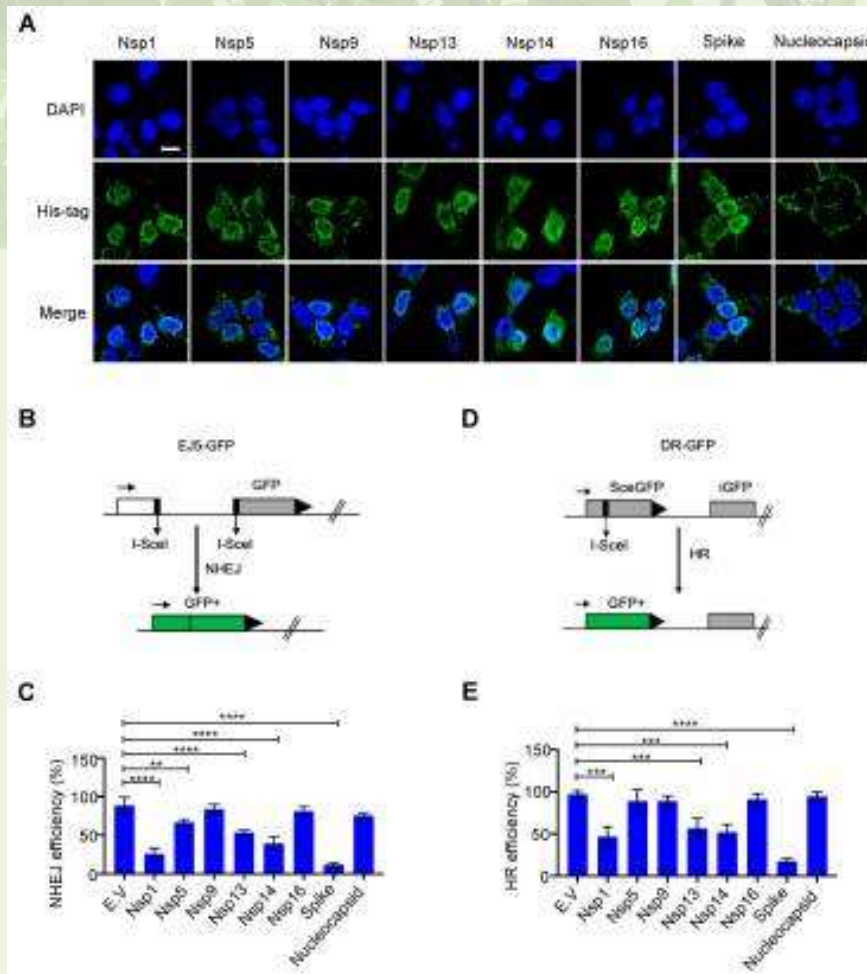


Autoimmunity | Autophagy | Autoimmunity

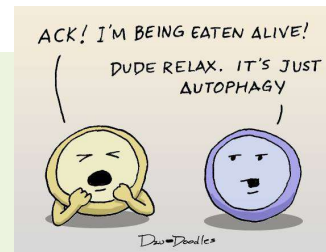
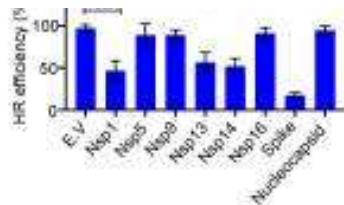
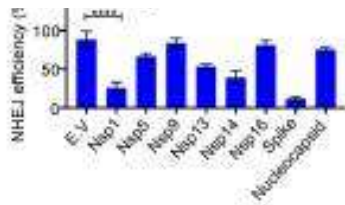
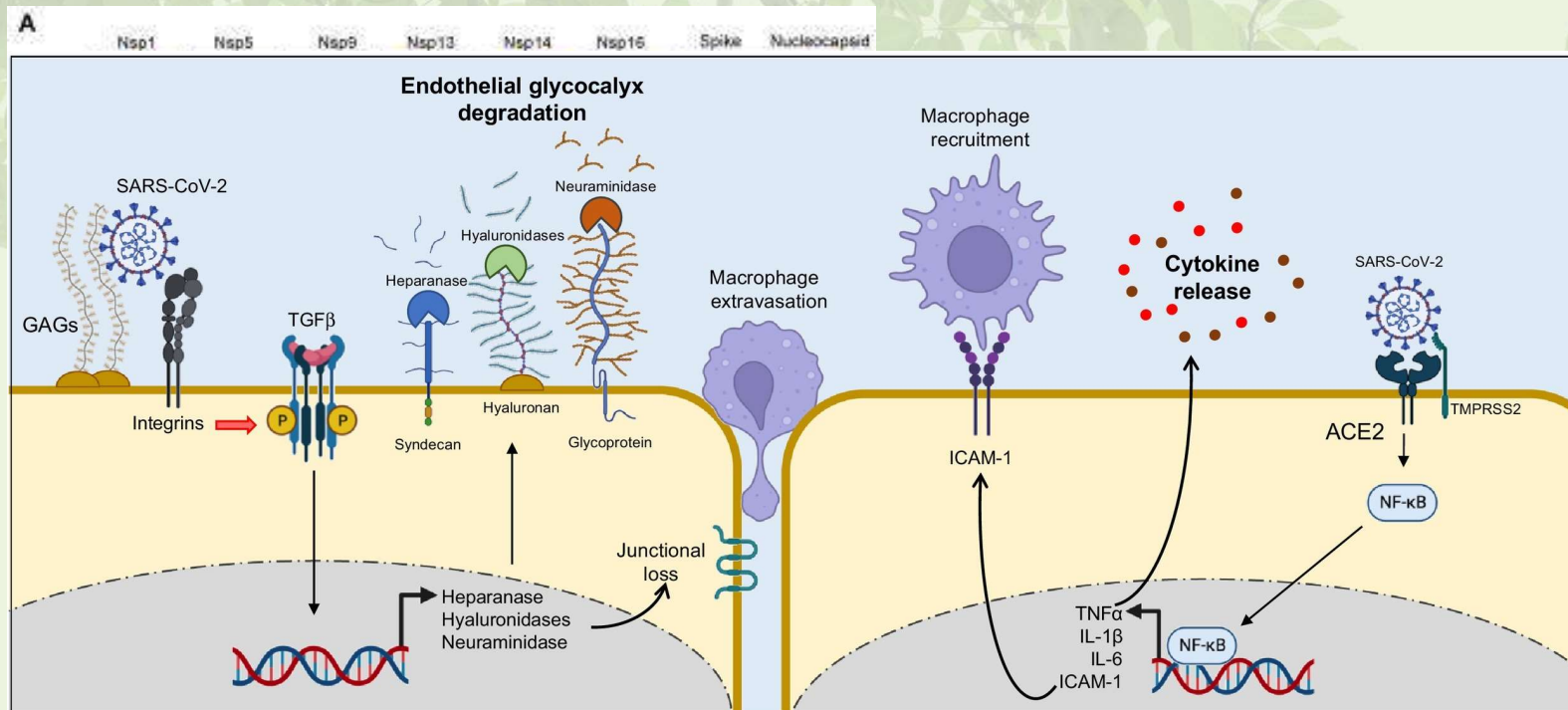
- We are inherently autoimmune
- Normal antibody production and cell removal is defined as apoptosis or autophagy
- Out of range antibody and cytotoxic activity is autoimmunity
- Predisposed apoptotic targets are converted into autoimmune victims by accelerated T-cell & NK cells
- There are 3 phases of progression in autoimmunity
 - 1) Genetic & Cell Wall Alteration
 - 2) Molecular Mimicry
 - 3) Epitope Spreading/ Bystander Activation



Genetic & Cell Wall Alteration | Phase 1



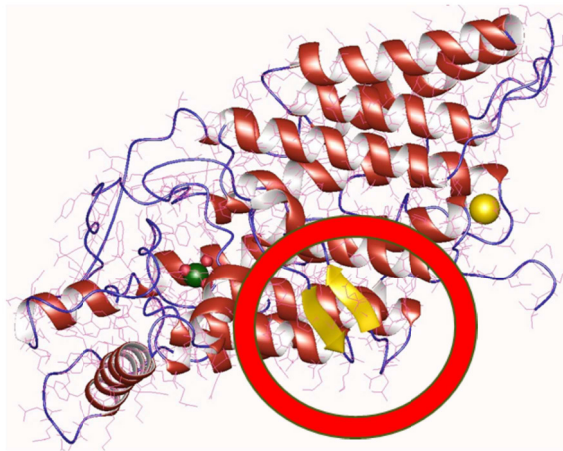
Genetic & Cell Wall Alteration | Phase 1



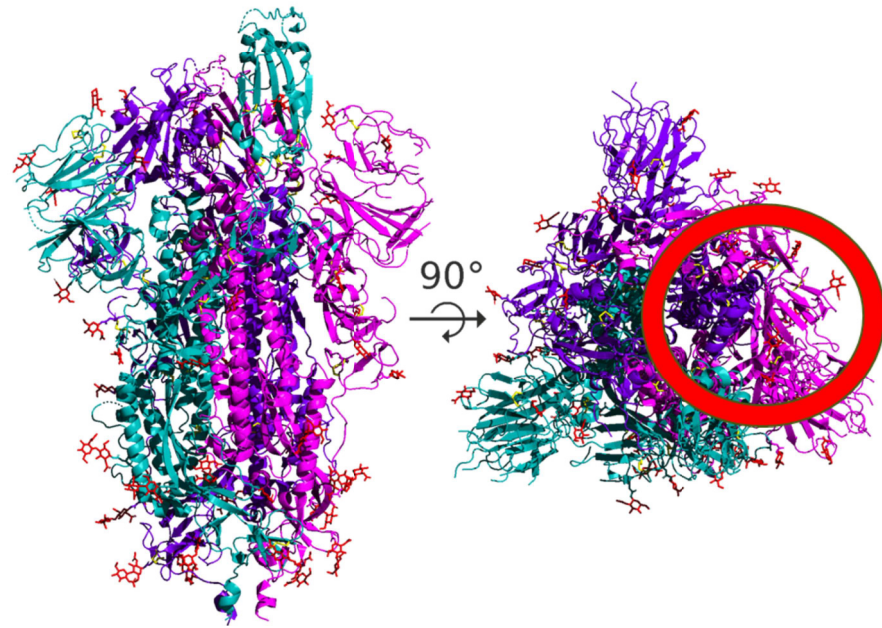
Trends in Microbiology



Molecular Mimicry-Protein Specific | Phase 2



TPO Enzyme Structure

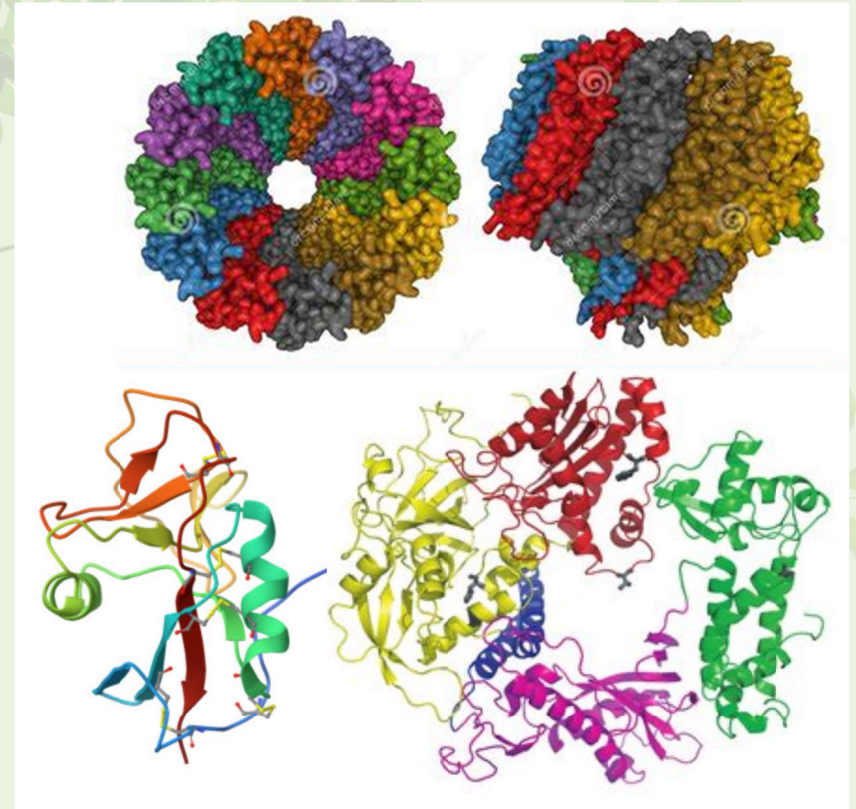


SARSCov-2 Protein Structure



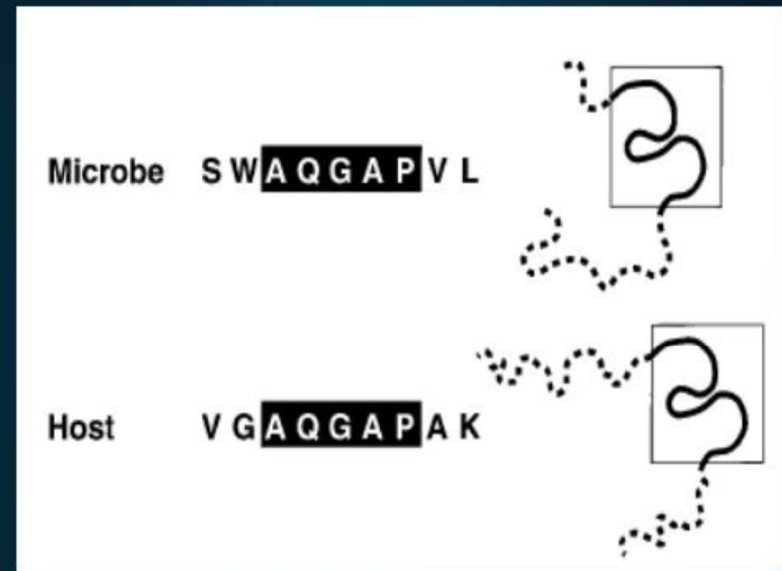
Epstein-Barr, HHV-6, and Covid

- Epstein-Barr and HHV-6 have long been known as autoimmune instigators for many autoimmune disorders.
- Molecular mimicry is the leading theory as to why.
- Endemic viruses downregulate vitamin D receptors and interferon production to decrease immune recognition.
- Protein synthesis and autophagy is decreased in older populations.



Molecular Mimicry

- Eps...
kn...
ma...
 - Micro...
as...
 - En...
D r...
to...
 - Pro...
de...
- Microbe and Host Cell:
 - Share of a linear amino acid sequence
 - Share of conformation fit
 - Host immune response against the microbe reacts if the host sequence comprises a biologically important domain
 - Autoimmunity may occur



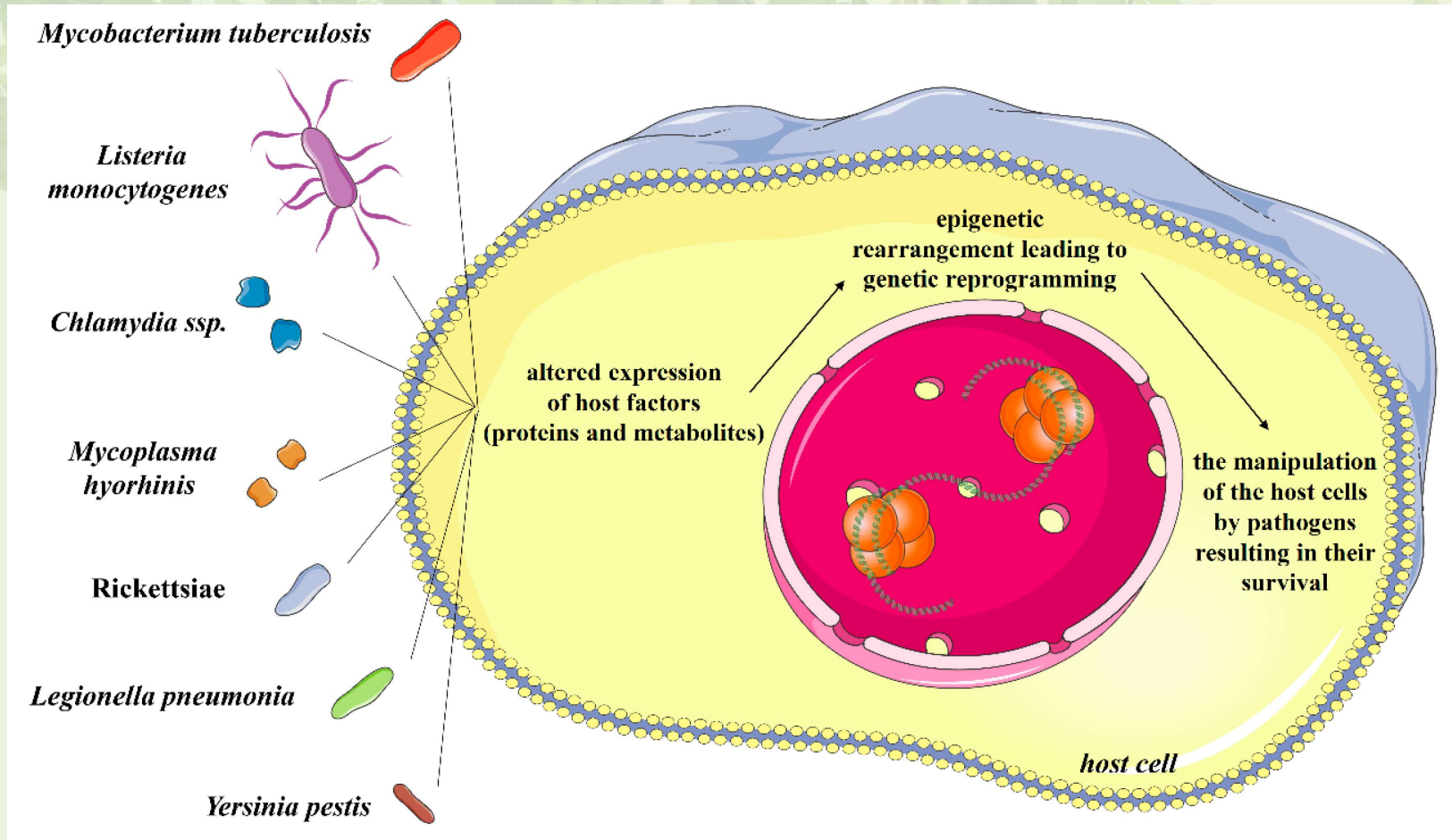
(Oldstone, 1998)



Mycoplasmic Infections

Intercellular Mycoplasmas

m. pneumoniae implicated in GBS, scleroderma, RA, ALS, SLE



Epitope Spreading | Phase 3

(aka “Bystander Activation”)

- Epitope (determinant) spreading is the development of immune responses to endogenous epitopes secondary to the release of self antigens during a chronic autoimmune or inflammatory response.
- The past year has seen considerable advances in our understanding of the contribution of epitope spreading to the chronic pathogenesis of experimental T-cell-mediated and antibody-mediated autoimmune diseases.
- Most significantly, conclusive functional evidence for a major role for epitope spreading in the chronic pathogenesis of murine relapsing-remitting experimental autoimmune encephalomyelitis, a CD4 + T-cell-mediated model of multiple sclerosis, was forthcoming.



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PLP178–191 is primarily responsible for relapses in SJL/J mice primed with PLP139–151.

Tolerogenic treatment*	Number of relapses per mouse	Relapse frequency	Mean peak clinical score	Mean day of onset of relapse
Sham-SP	8/10	0.80	2.9	33
PLP139–151-SP	5/10	0.50	2.8	37
PLP178–191-SP	2/10[†]	0.2[†]	2.7	38
PLP139–151-SP + PLP178–191-SP	2/10[†]	0.2[†]	2.5	42

Article | [Open access](#) | Published: 31 October 2023

Antigen presentation by B cells enables epitope spreading across an MHC barrier

[Cecilia Fahlgvist-Hagert](#), [Thomas R. Wittenborn](#), [Ewa Terczyńska-Dyla](#), [Kristian Savstrup Kastberg](#), [Emily Yang](#), [Alysa Nicole Rallistan](#), [Quinton Raymond Market](#), [Gudrun Winther](#), [Sofie Fonager](#), [Lasse F. Voss](#), [Mathias K. Pedersen](#), [Nina van Campen](#), [Alexey Ferapontov](#), [Lisbeth Jensen](#), [Jinrong Huang](#), [John D. Nieland](#), [Cees E. van der Poel](#), [Johan Palmfeldt](#), [Michael C. Carroll](#), [Paul J. Utz](#), [Yonglun Luo](#), [Lin Lin](#) & [Søren E. Degn](#) 

Nature Communications **14**, Article number: 6941 (2023) | [Cite this article](#)

8699 Accesses | 2 Citations | 20 Altmetric | [Metrics](#)

Abstract

Circumstantial evidence suggests that B cells may instruct T cells to break tolerance. Here, to test this hypothesis, we used a murine model in which a single B cell clone precipitates an autoreactive response resembling systemic lupus erythematosus (SLE). The initiating clone did not need to enter germinal centers to precipitate epitope spreading. Rather, it localized to extrafollicular splenic bridging channels early in the response. Autoantibody produced by the initiating clone was not sufficient to drive the autoreactive response. Subsequent epitope spreading depended on antigen presentation and was compartmentalized by major histocompatibility complex (MHC). B cells carrying two MHC haplotypes could bridge the MHC barrier between B cells that did not share MHC. Thus, B cells directly relay autoreactivity between two separate compartments of MHC-restricted T cells, leading to inclusion of

#auth-Gudrun-Winther-Aff1

- Epitope spreading to e chronic

PLP178-1

Tolerogenic treatment*

Sham-SP

PLP139-1

PLP178-1

PLP139-1

PLP178-1

Phase 3

(")

of immune responses self antigens during a

151.

Mean peak clinical score	Mean day of onset of relapse
2.9	33
2.8	37
2.7	38
2.5	42

How SARS COV-2 is special in Hashimoto's

Checks all the boxes

Phase 1

Phase 2

Phase 3



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Infection Instigated Autoimmunity

Microbe Name	Disorder(s)	Microbe Name	Disorder(s)
<i>Porphyromonas Gingivalis</i>	RA	<i>Entamoeba Histolytica</i>	Bone & Brain
<i>Streptococcus Mutans</i>	AI Myocarditis	<i>Giardia Lamblia</i>	GI, Intestinal autoimmunity
<i>Helicobacter pylori</i>	GI, Brain, CNT, Hashimoto's	<i>Cryptosporidium Parvum</i>	Colon AI, Celiac, NCGS
<i>Camphylobacter Jejuni</i>	GI, Brain, CNT	<i>Blastocystis Hominis</i>	IBS, Fibromyalgia
<i>Yersinia Enterocolitica</i>	GI, Eye, Arthritis, Hashimoto's	<i>HSP-60/Chlamydia</i>	Brain, Cardiovascular
<i>Clostridium Difficile</i>	GI, UC, Crohn's	<i>Streptozymes</i>	OCD, PANDAS, Heart, Arthritis
<i>Candida Albicans</i>	GI, all autoimmune	<i>Mycoplasmas</i>	SLE, Arthritis, Phospholipid AB
<i>Rotavirus</i>	GI, Type 1 diabetes	<i>Acinobacter</i>	MS



Microbe Name	Disorder(s)	Microbe Name	Disorder(s)
<i>Klebsiella</i>	CNT, Skeletal, Eye	<i>HHV-6</i>	CFS, Fibromyalgia, SLE, Brain, Hashimoto's
<i>Mycobacterium Avium</i>	GI, Hashimotos, MS Type 1 diabetes	<i>Borrelia Burgdorferi</i>	BBB, Brain , Arthritis
<i>Aspergillus</i>	CFS, Fibromyalgia, Brain	<i>Babesia, Ehrlichia, Bartonella</i>	BBB, Brain, Arthritis
<i>Penicillium</i>	CFS, Fibromyalgia, Brain	Influenza	Encephalomyelitis
<i>Stachybotrys</i>	CFS, Fibromyalgia, Brain	Semliki Forest Virus	AI Demyelinating Disease
<i>EBV</i>	CNT, SLE, Brain/ MS, Hashimoto's	Herpes Simplex	AI Encephalitis
<i>Hepatitis C</i>	Liver, p450 Hepatocyte AI	Epstein-Barr Virus	AI hepatitis
<i>Cytomegalovirus</i>	Type 1 diabetes, CNT, SLE, Brain	Coxsackie Virus	AI Myocarditis



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SARS COV-2 Virus Autoimmunity

Microbe Name

SARS COV-2 "COVID19"

Disorder or Tissue Name



Front Immunol. 2020; 11: 617089.

Published online 2021 Jan 19. doi: [10.3389/fimmu.2020.617089](https://doi.org/10.3389/fimmu.2020.617089)

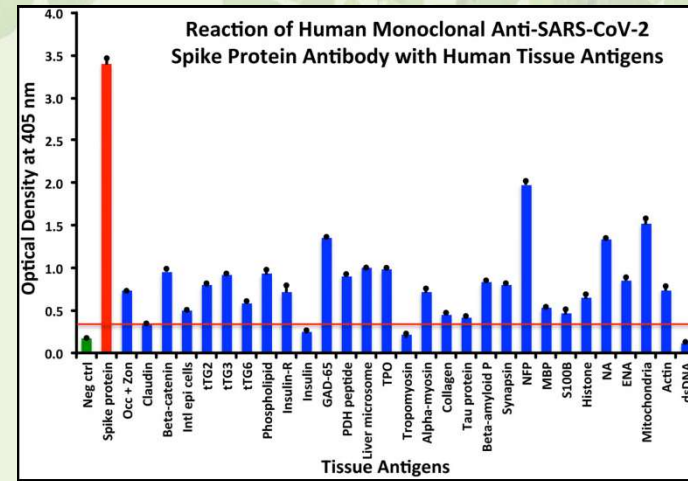
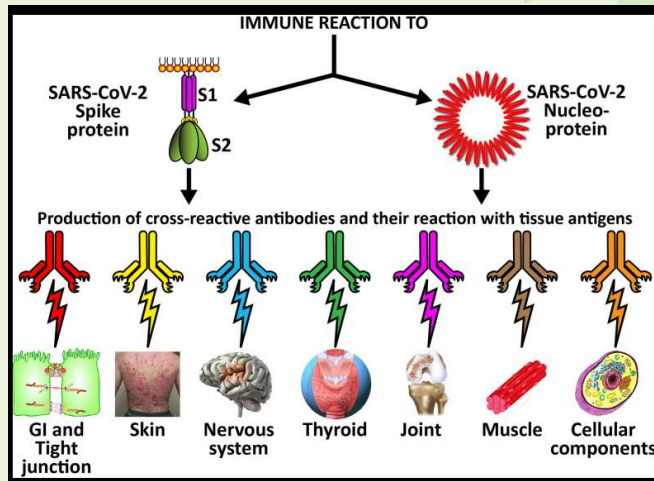
PMCID: PMC7873987

PMID: [33584709](https://pubmed.ncbi.nlm.nih.gov/33584709/)

Reaction of Human Monoclonal Antibodies to SARS-CoV-2 Proteins With Tissue Antigens: Implications for Autoimmune Diseases

Aristo Vojdani, ^{1,2,*} Eloy Vojdani, ³ and Datis Kharrazian ^{2,4,5}

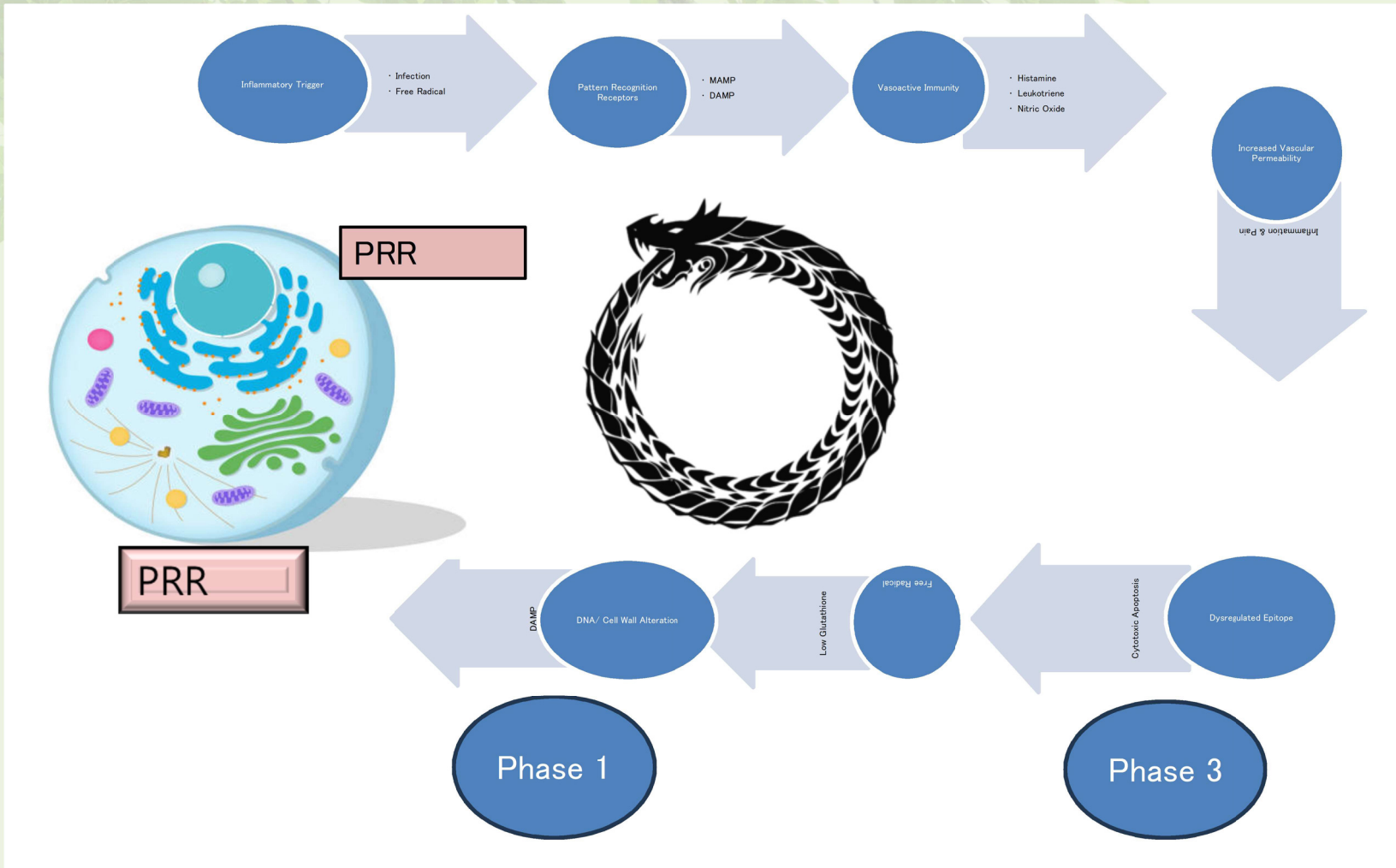
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The MAMP/DAMP Progression to Autoimmune Feedback Loop



Infection vs. MRNa Gene Therapy

- Lipid Nanoparticles-serum of the “vaccines” with toxic liposomal base
 - **Moderna**
 - SM-102
 - Polyethylene glycol (PEG) 2000 dimyristoyl glycerol (DMG)
 - 1,2-distearoyl-sn-glycero-3-glycero-3-phosphocholine (DSPC)
 - **Pfizer**
 - (4-hydroxybutyl)azanediyl)bis(hexane-6, 1-diyl)bis(2-hexyldecanoate)
 - 2 [(polyethylene glycol)-2000]-N,N-ditetradecylacetamide
 - 1,2-Distearoyl-sn-glycero-3-phosphocholine
- Microclotting
- IgG4
- Development of self organizing nanobots?



Infection vs. MRNa Gene Therapy

“vaccines” with toxic liposomal base

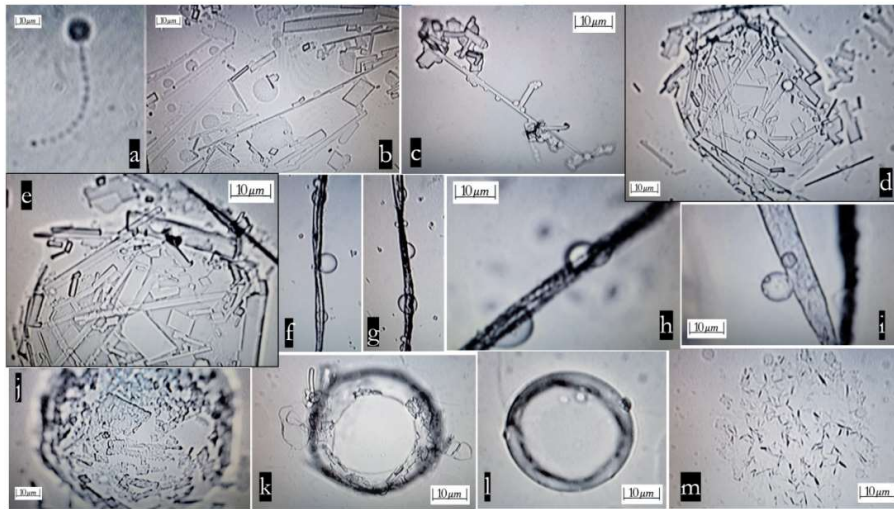


Figure 11. Findings for Pfizer incubation study for 372 days; (a) Day 22, this is what we describe as a beaded chain (at 400X magnification); (b) Day 24, 2-dimensional geometric self-assembly at the bottom (at 200X magnification) in normal saline; (c) Day 60, floating 3-dimensional detailed chip-like structures (at 400X magnification) in distilled water; (d) and (e) day 60, accumulated 3-dimensional chip-like structures within an oval shaped boundary (200X/400X) in distilled water; (f), (g), (h), (i) Floating filaments shedding bubbles inside and outside in normal solution at day 95 (100x/100x/200x/200x); (j), (k), (l), (m) Progressive degenerative changes in distilled water 200X (day 82/day 256/day 306/day 372).

2000 dimyristoyl glycerol (DMG)

1,3-glycerol-3-phosphocholine (DSPC)

1,3-bis(hexane-6, 1-diyl)bis(2-hexyldecanoate)

[100]-N,N-ditetradecylacetamide

1,3-phosphocholine

- Mic
- IgG
- Dev

International Journal of Vaccine Theory, Practice, and Research

IJVTPR

Real-Time Self-Assembly of Stereomicroscopically Visible Artificial Constructions in Incubated Specimens of mRNA Products Mainly from Pfizer and Moderna: A Comprehensive Longitudinal Study

ing nanobots?



Infection vs. MRNa Gene Therapy

“vaccines” with toxic liposomal base

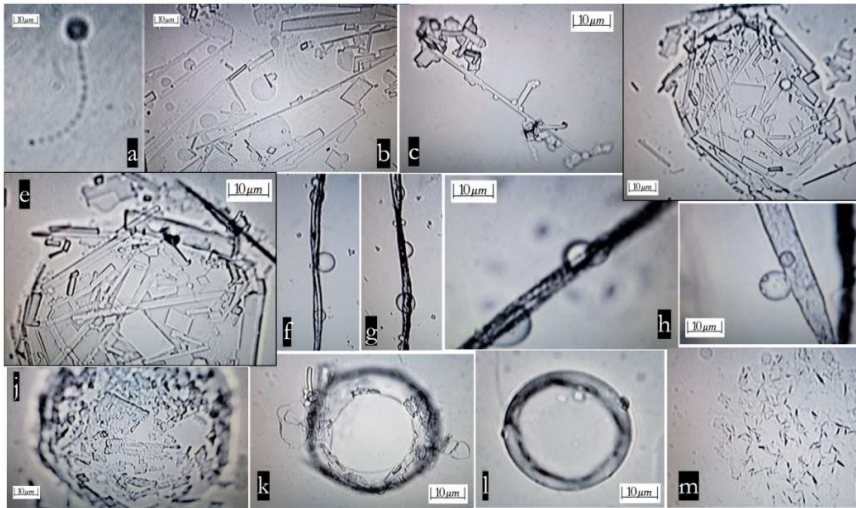


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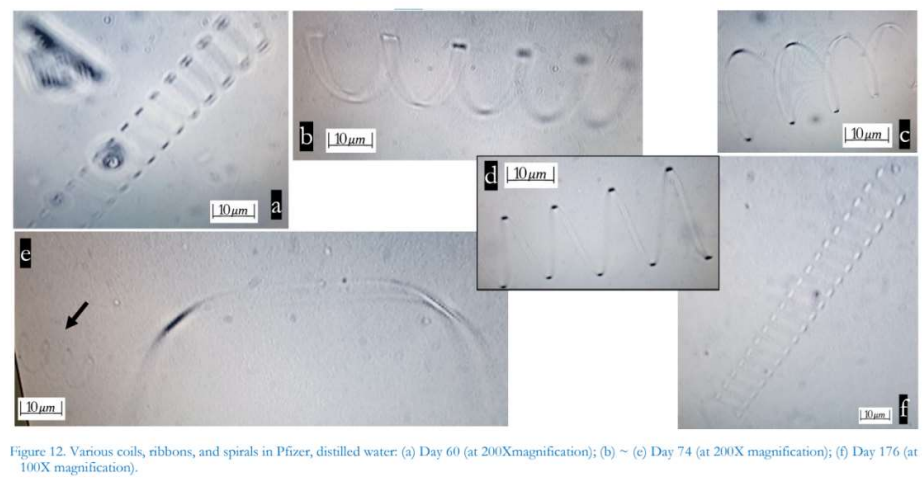


Figure 12. Various coils, ribbons, and spirals in Pfizer, distilled water: (a) Day 60 (at 200X magnification); (b) ~ (c) Day 74 (at 200X magnification); (d) Day 176 (at 100X magnification).

100]-N,N-ditetradecylacetamide
β-phosphocholine

- Mic
- IgG
- Dev

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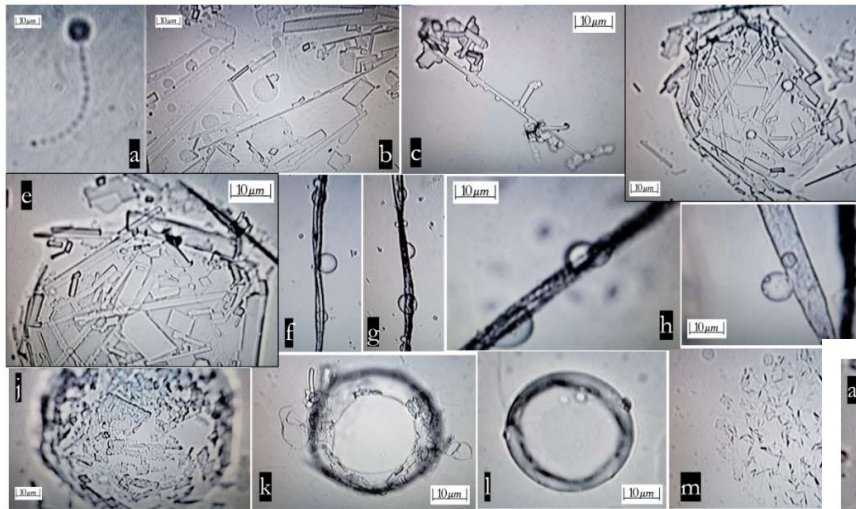


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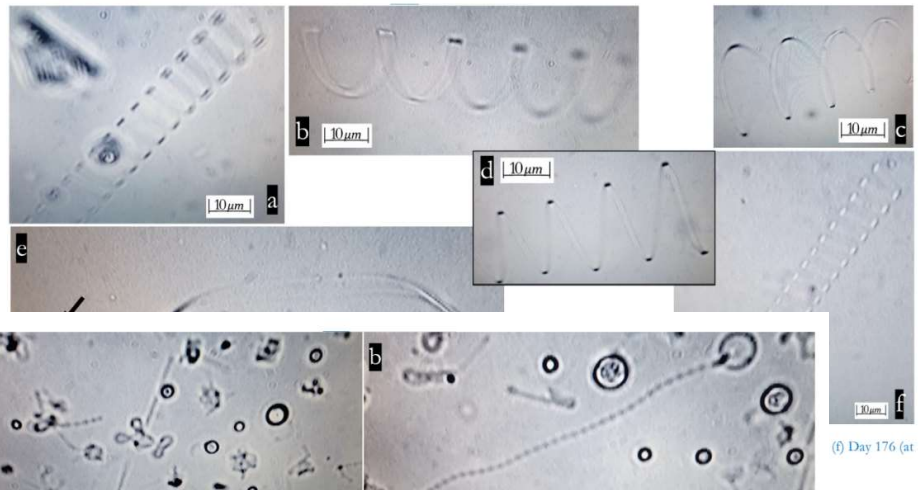


Figure 13. Beaded Chains and Assorted Structures in Pfizer Distilled Water (Day 176, 400x): (a) Various artificial satellite-like structures, (b) Long beaded chains gathered on the central surface of the medium.

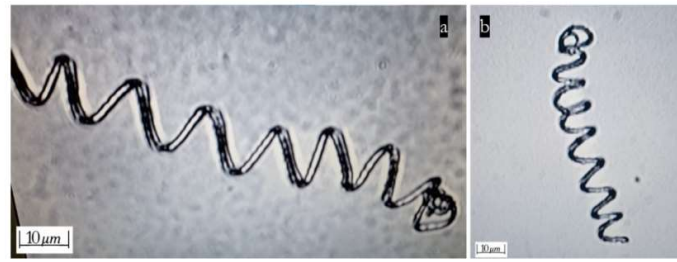


Figure 14. Typical Algae-typed Magnetic Nanobot-like Spinals in Pfizer in distilled water: (a) Day 176 (400x); (b) Day 537 (200x).

- Mic
- IgG
- Dev

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What About Our Own Proteins?

Infections may be the triggering event for dysfunctional immune cycles.

- Cytokines are protein based and can be reduced with proteolytic enzymes.
- NFkB inhibitors reduce the signaling that releases NK cells.
- Enzymes such as the TPO and TBG are protein based, so are often targets for autoimmunity. The targeting mechanism is believed to be pH based. Alkalization of body fluids and tissues regains targeting control of both enzymes and antibodies.



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Using Transformation Enzyme® Products

- **Proteolytic enzymes** - Protease, Protease 375K, Protease IFC
- **Lipolytic enzymes** - Lypo, LypoZyme
- **Immune support** to resolve infection - Immune AV
- **Anti-inflammatory** support - RepairZyme
- **Cellular repair** - Super CellZyme



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