

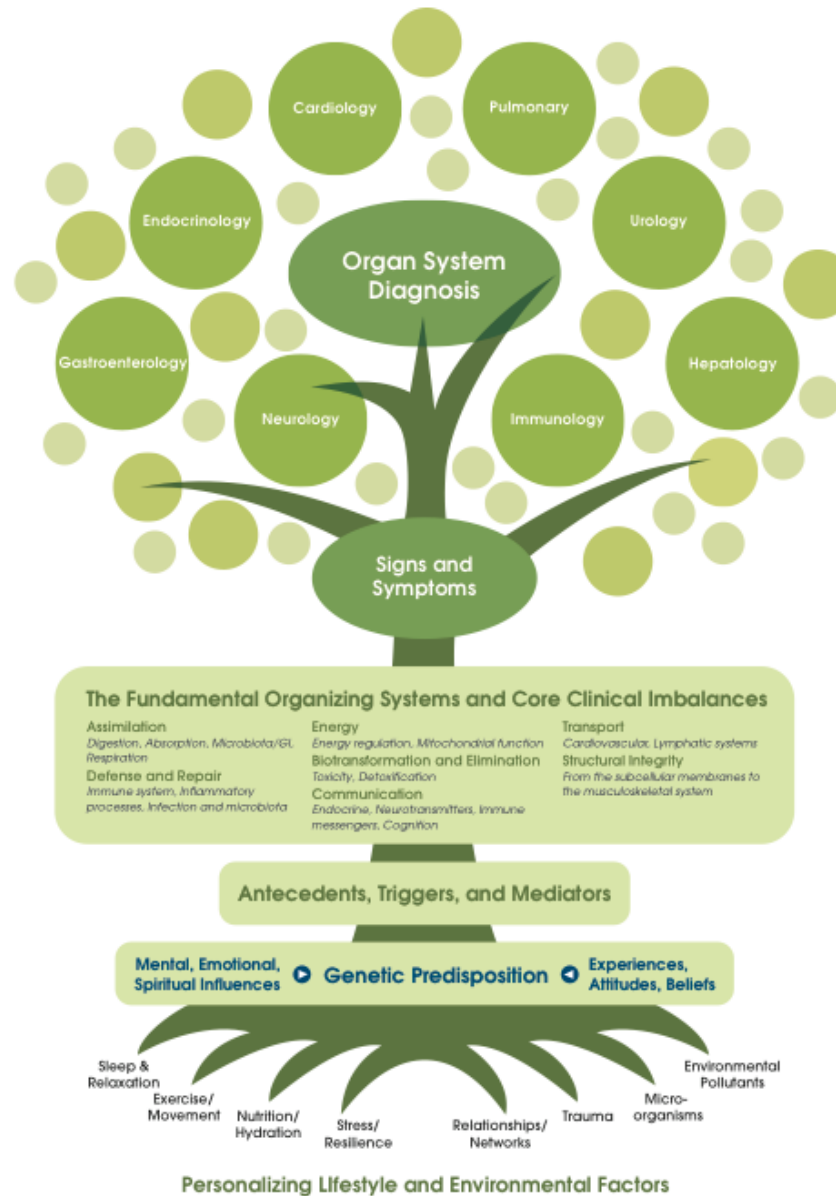
# Nutrition and Toxicants in Autoimmune Disease: Implications for Prevention and Treatment

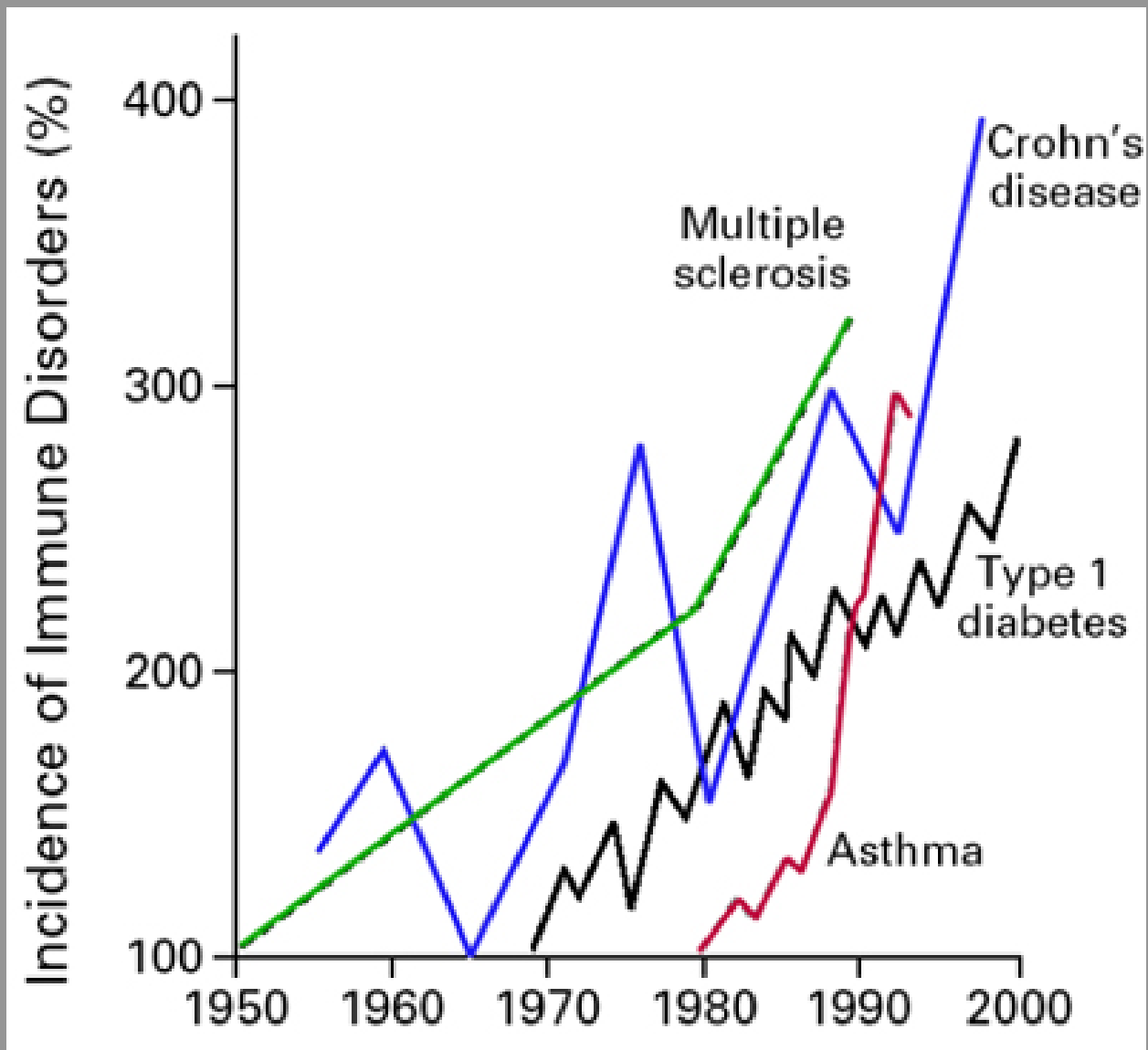
Collaborative on Health and the Environment

June 17, 2014

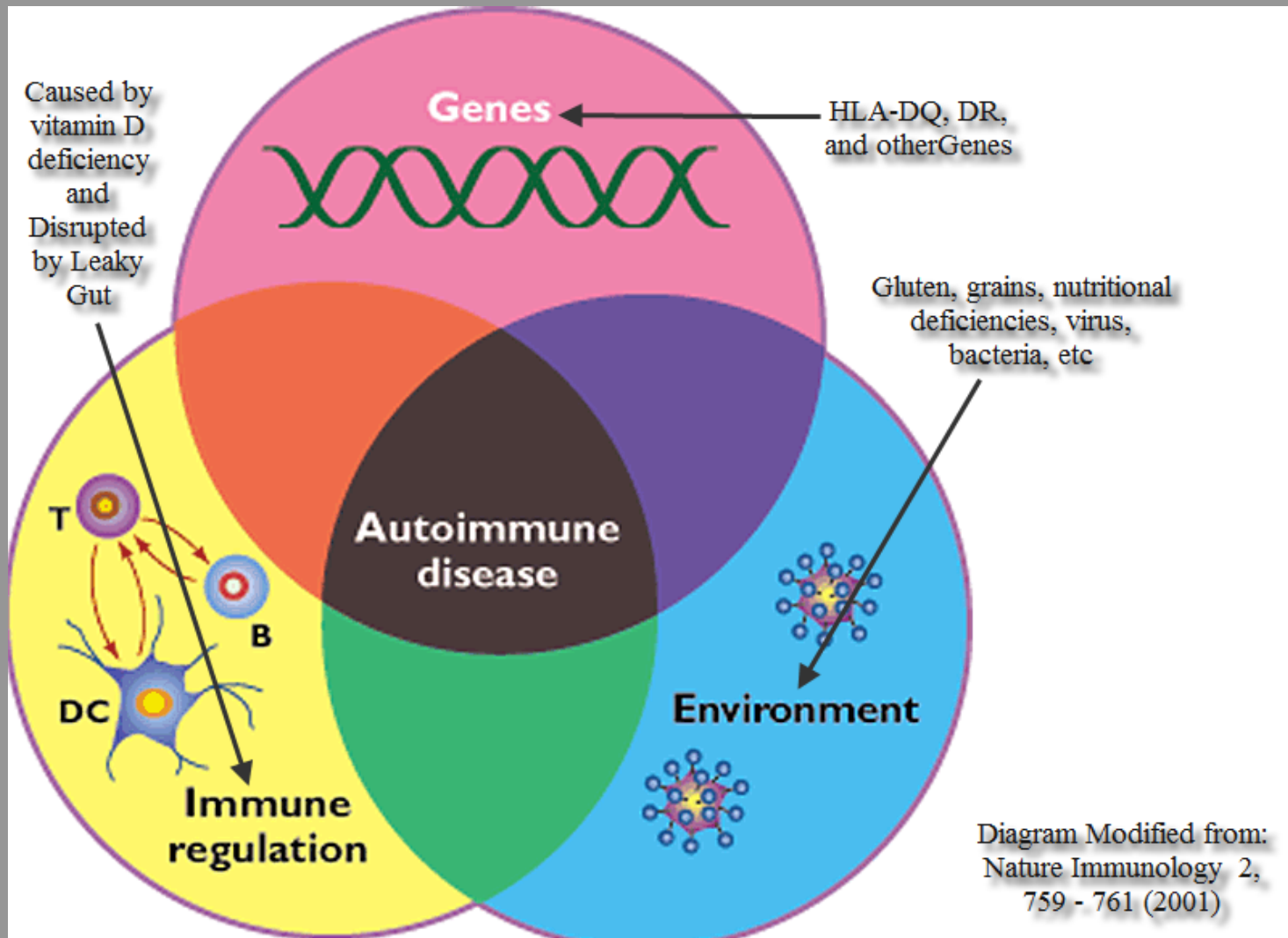
Cynthia Li, MD

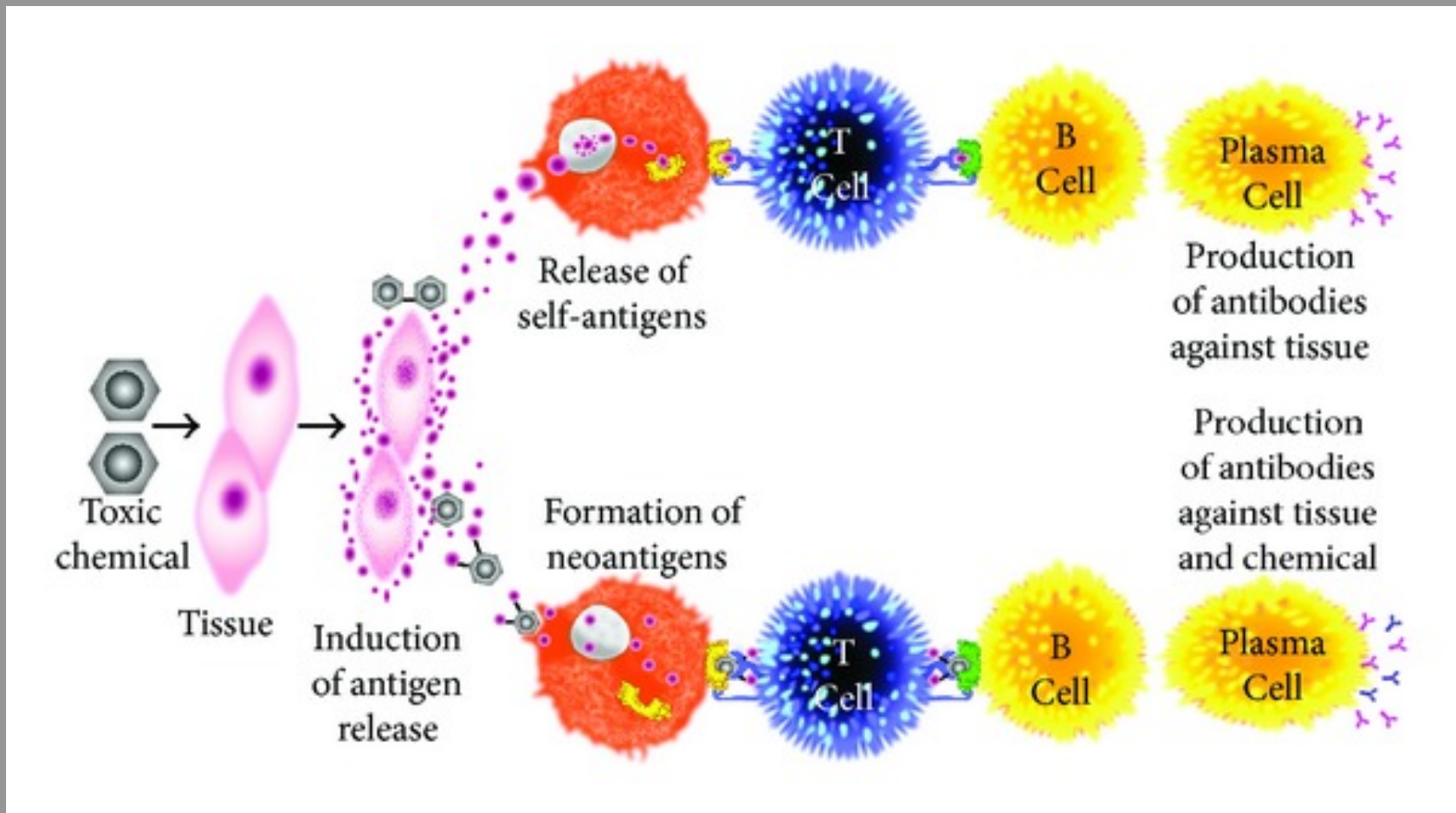
Berkeley, CA



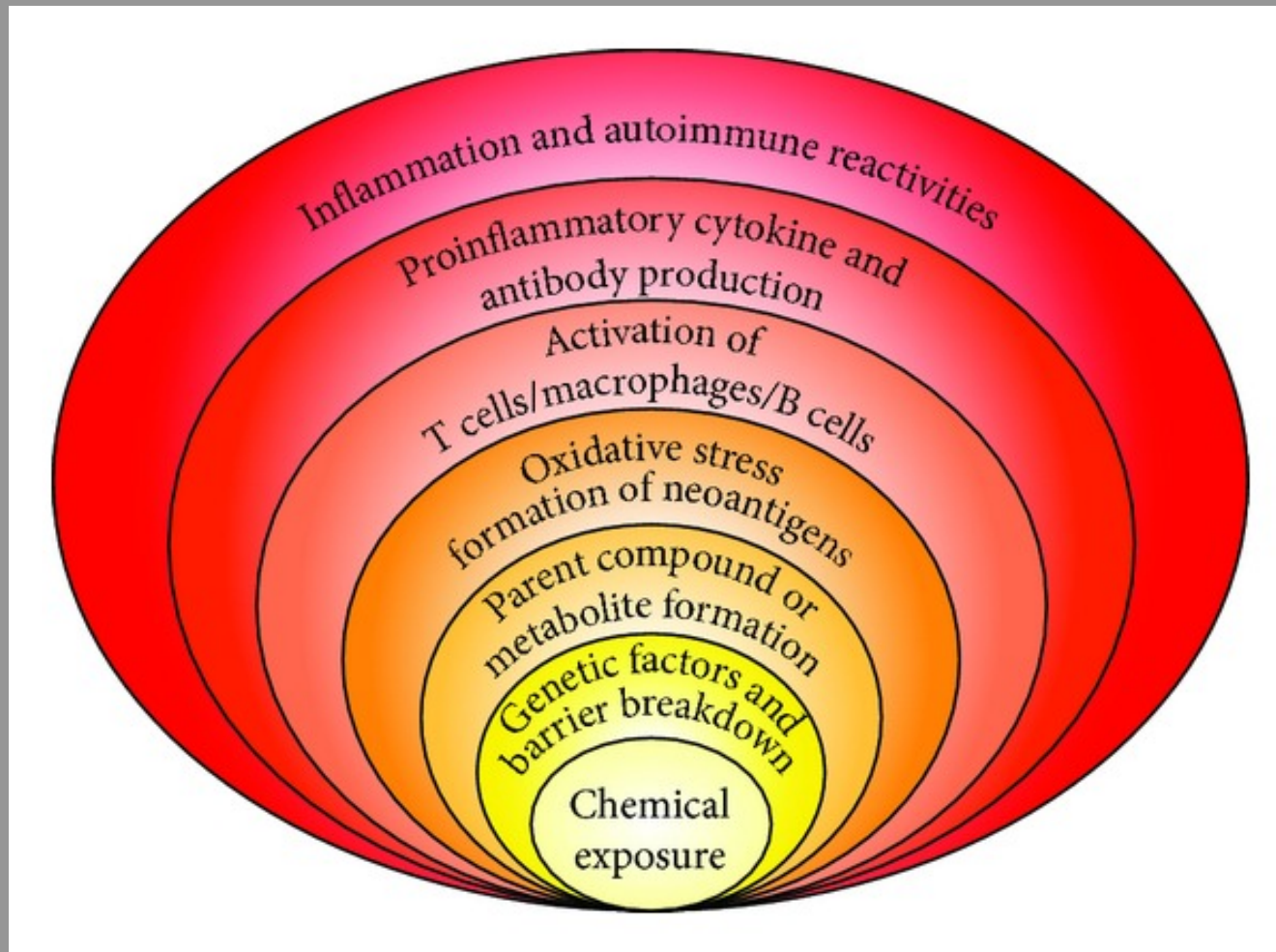


Bach JF. The effect of infections on susceptibility to autoimmune and allergic diseases. *N Engl J Med.* Sep 2002;347(12):911-920.

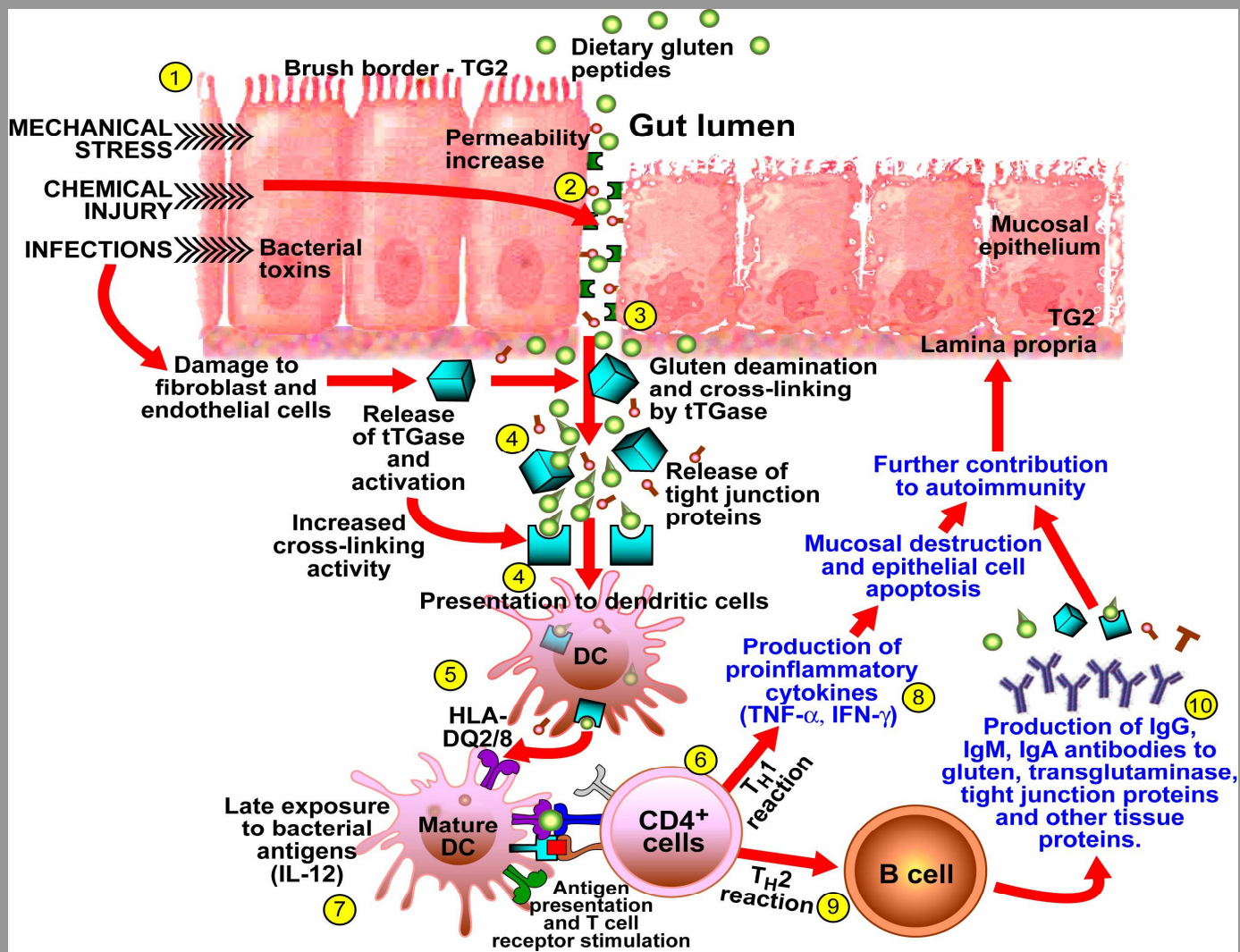




Vojdani, A. A Potential Link Between Environmental Triggers and Autoimmunity. *Autoimmune Dis.* Feb 2014

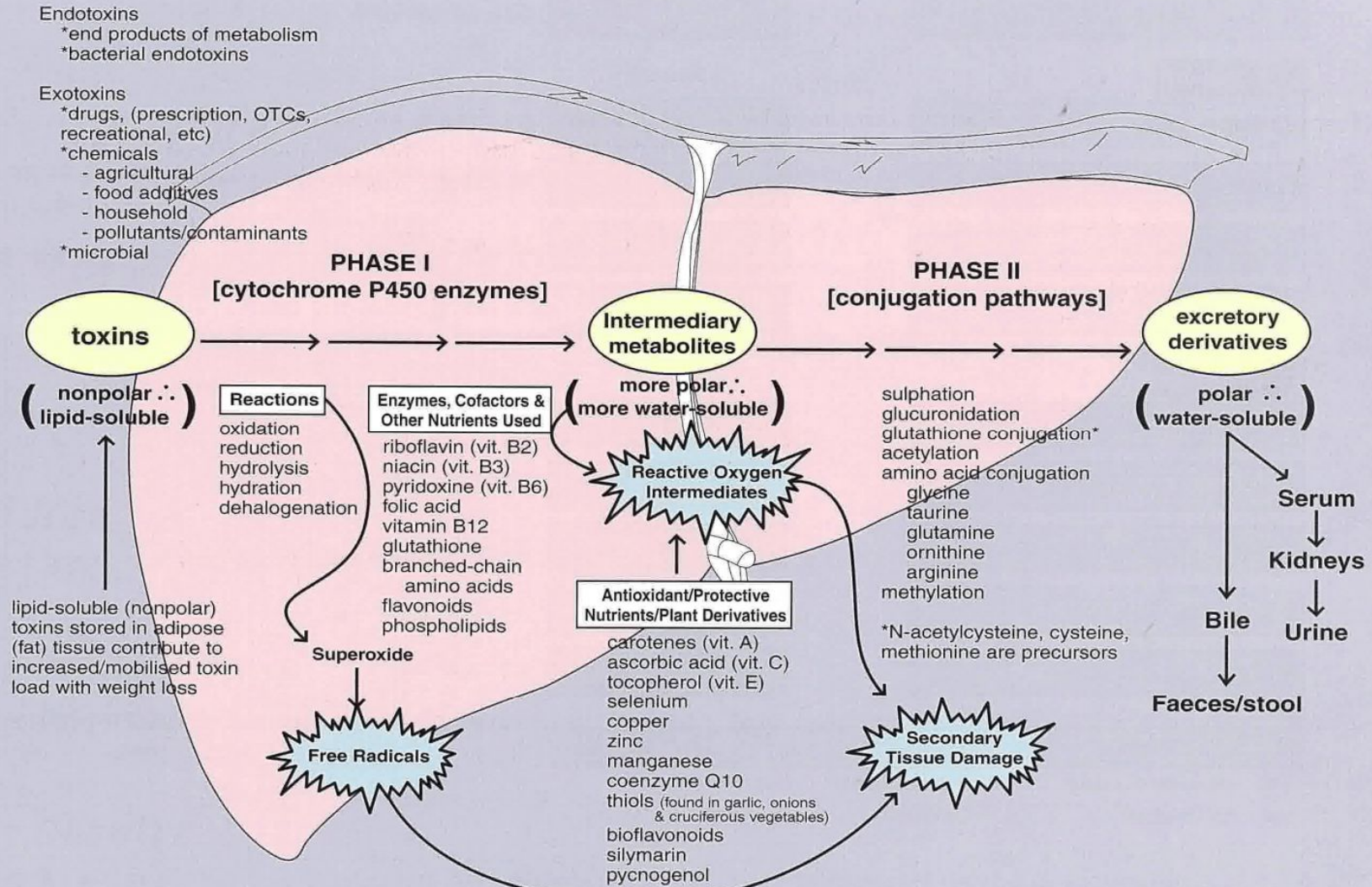


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Depiction of the intestinal mucosa with emphasis on the factors involved in the development of celiac disease in individuals with HLA-DQ2/DQ8 positive

# Liver Detoxification Pathways & Supportive Nutrients





## Effective Detox Foods



## Immune Boosting Foods

### Grapefruit



Packed with vitamin C makes this an immune-boosting essential. They are packed with bioflavonoids, which are phytonutrients.

### Cruciferous Vegetables



Rich in antioxidant vitamins which give an immune system boost, and also contain Choline which keeps your cells functioning properly and helps maintain healthy gastrointestinal tract.

### Carrots



A great source of beta carotene which support the body's mucus membrane, which lines the respiratory and intestinal tracts, making it harder for bacteria to enter the bloodstream.

### Cinnamon



Cinnamon is an antiviral, antifungal, and antibacterial and an immune system booster. It actually fights the pathogens that cause illness.

### Berries



Berries contain antioxidants responsible for the health of your immune system, as well as your body's ability to destroy invading bacteria and germs. They also contain vitamin C and magnesium, two nutrients that are essential in maintaining the strength and function of your immune system.

### Mushrooms



A major source of the immune system-boosting mineral, zinc. If you don't have enough zinc in their diet tend to have fewer white blood cells to help fight off disease, which can lead to a reduced immune response.

### Kale



Greens such as kale, spinach, and Swiss chard are immune-boosting foods that contain high levels of vitamin C, which help fight off infection and regenerate other antioxidants in the body, including vitamin E. They also contain folate, another immune booster.

### Watermelon



Contains antioxidant Vitamins A and C, which helps to neutralize free radicals than can lead to inflammation, general sickness and chronic illnesses such as stroke and heart attack. It contains beta-carotene, which helps fight cancer, particularly colon cancer. Lycopene, a carotenoid found in watermelon provides additional cancer fighting health benefits.

<http://eatingmywaytobetterhealth.blogspot.com/>



## Case Presentation

# Additional Resources

Functional Medicine: [www.functionalmedicine.org](http://www.functionalmedicine.org)

Toxicology of Autoimmune Diseases, Pollard:  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC3076021/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3076021/)

A Potential Link Between Environmental Triggers and Autoimmunity, Vojdani:  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC3945069](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3945069)

Autoimmunity and the Gut:  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC4035413/#po.=6.52174-](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4035413/#po.=6.52174-)

*Detoxification and Healing: The Key to Optimal Health*, Dr. Sidney Baker, 2003