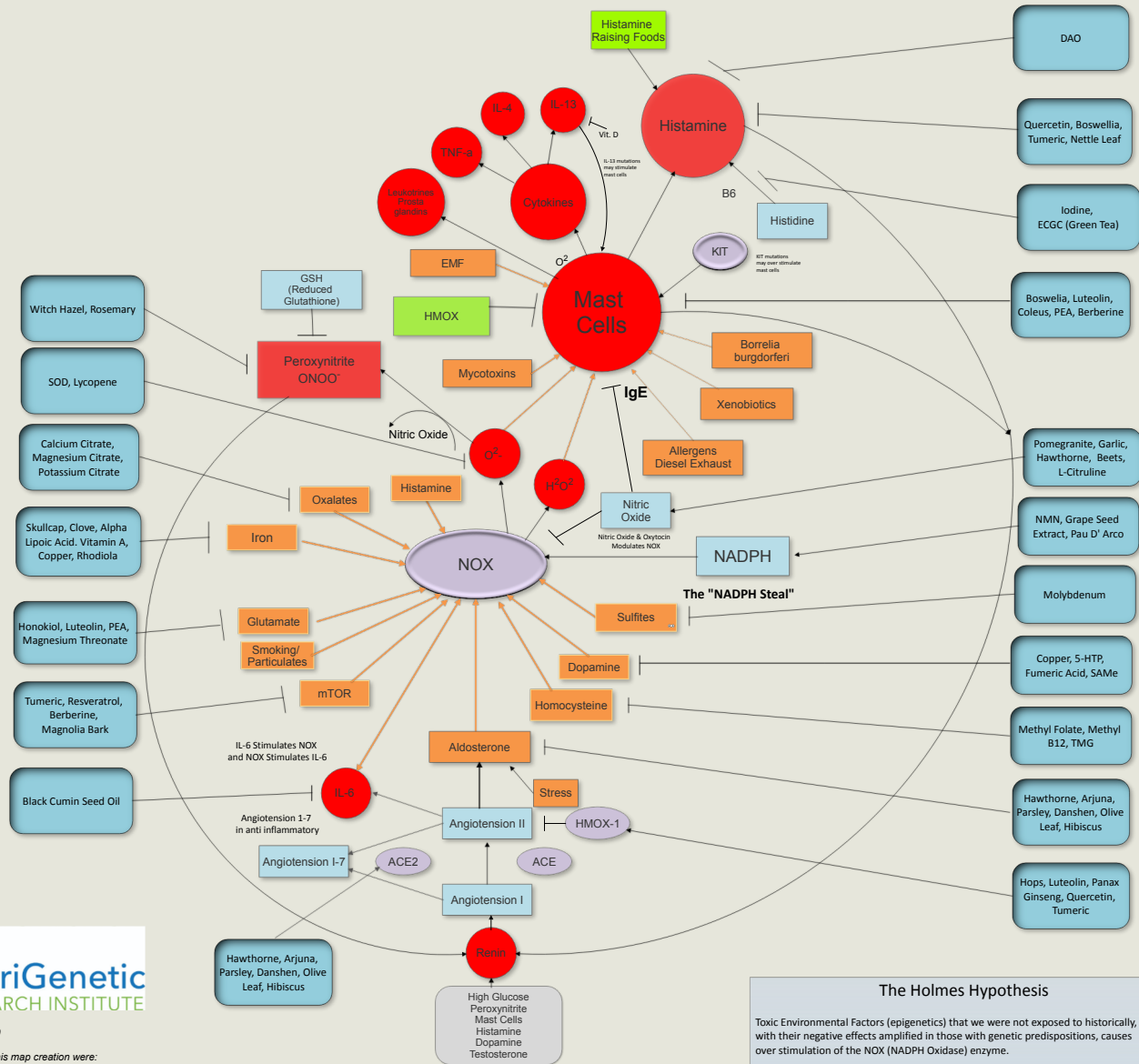


Nutrients to Compensate for NADPH Steal & Holmes Cycle



Copyright 2020

Contributors to this map creation were:

Robert Miller, CTN
Matthew Miller BSc

Reproductions of this map without permission of NGRI is forbidden.

This pathway map is for informational, educational and research purposes only.

This map was not intended to provide diagnosis or treatment for any disease, and all users of this map agree to hold NGRI and the creators of this pathway map harmless for how they may use it.

Although great care was taken to ensure accuracy, errors may have occurred or further research or findings may contradict the pathways and interactions.

The Holmes Hypothesis

Toxic Environmental Factors (epigenetics) that we were not exposed to historically, with their negative effects amplified in those with genetic predispositions, causes over stimulation of the NOX (NADPH Oxidase) enzyme.

This results in over production of Superoxide, Peroxynitrite, Mast Cells, Histamine and Glutamate.

The NOX Enzyme uses NADPH to produce the free radicals, resulting in what we have named the "NADPH Steal", resulting in less ability to have sufficient NADPH to support Phase 1 Detox, produce Nitric Oxide and recycle critical antioxidants such as Glutathione.

In turn, these free radicals produced by NOX stimulate Renin, Angiotensin I, Angiotensin II, Aldosterone, IL-6 and NOX, thus resulting in a positive feedback loop that creates a self-perpetuating vicious cycle of inflammation named the "Holmes Cycle."