Chapter 1



Meditation can modulate body metabolonomics and brain function. The mechanism is by induction of the heme oxygenase system. Meditation induced heme oxygenase which converts heme to carbon monoxide and bilirubin. Bilirubin and biliverdin are free radical scavengers and mops up free radicals. Free radicals are required for the function of the NMDA dependent thalamo-cortico-thalamic feedback reverberatory circuit crucial in consciousness. This circuit mediates working memory and focused attention. Free radicals also activate NMDA and by its capacity of diffusing freely through the brain systems can induce NMDA activity, synchronized burst firing of neurons in different parts of sensory areas producing perceptual synchronization. This mediates consciousness. Thus the scavenging of free radicals by heme oxygenase leads to suppression of consciousness and meditative trances. Heme oxygenase induction suppresses ALA synthase. Thus heme is depleted from the system. There is increased porphyrin synthesis leading onto porphyrinuria and porphyria. The stimulus for porphyrin synthesis comes from heme deficiency. Porphyrins can organize into self replicating supramolecular structures called porphyrions which are induced by meditative practices. The porphyrins can self organize to form macromolecular structures which can self replicate to form a porphyrin organism. The photon induced transfer of electrons along the macromolecule can lead to light induced ATP synthesis. The porphyrins can form a template on which RNA and DNA can form generating viroids. The porphyrins can also form a template on which prions can form. They all can join together - RNA viroids, DNA viroids, prions - to form primitive archaea. Thus the archaea are capable of self replication on porphyrin templates. The porphyrins are dipolar and the setting of membrane intercalated porphyrin mediated sodium potassium ATPase inhibition produces a pumped phonon system and a Frohlich model of superconductivity mediating quantal perceptions and low temperature. Thus the porphyrions mediate quantal

perception during meditative trances. The porphyrins have increased quantal perception leading to sensing of low level EMF fields causing cortical especially prefrontal cortex atrophy. The cerebellar dominance and a cerebellar cognitive affective disorder. This produces porphyrin related quantal perception. The porphyrins can have quantal perception of low level EMF fields leading to prefrontal cortex atrophy. This leads onto cortical dysfunction and lack of functioning of the conscious brain. The cerebellum dominates and the unconscious takes over. This leads onto Neanderthalisation of the brain and schizophrenia and autism. Thus the increase in porphyrins leads to cortical dysfunction and prefrontal cortex atrophy. The porphyrins can destroy the human endogenous retroviruses and the jumping genes leading to lack of dynamicity of the genome. This leads onto maldevelopment of the prefrontal cortex. The cerebellar cortex becomes dominant as the cognitive organ with features of impulsivity, extrasensory perceptive mechanisms, robotic automatic programmes and autistic / schizophrenic features. This leads onto an induced cerebellar cognitive affective disorder with a sense of the quantal world and a feeling of oneness with the universe. This is the basis of the collective unconscious or spirituality.

Porphyrins are dipolar molecules and in the setting of porphyrin mediated membrane sodium potassium ATPase inhibition induced pumped phonon system can produce a quantal perceptive state. Porphyrins are macromolecules which can have both a wave and particle existence and can bridge the particulate world and the quantal world. Membrane sodium potassium ATPase inhibition induced dipolar porphyrin mediated pumped phonon system can lead onto a cellular plasma state and EMF signal transduction. Macromolecules like RNA, DNA, protein and the cell itself can have an EMF signature. This porphyrin generated macromolecular cellular EMF signature is important in regulation of cell function.

Meditation induced heme oxygenase can lead to metabolonomic and brain evolution. There is increased porphyrin synthesis from succinyl CoA and glycine. Defect in heme synthesis and heme depletion leads to deficiency of heme enzymes. Deficiency cytochrome C oxidase and aconitase leads to mitochondrial oxidative phosphorylation defects and TCA cycle defects. This leads to pyruvate dehydrogenase deficiency and defect in synthesis of acetyl CoA. There is increase in glycolysis consequent to porphyrin photo-oxidation induced free radical generation and HIF alpha induction. This produces the Warburg phenotype. The increased level of pyruvate that is generated is converted to glutamate and ammonia. Thus there is hyperammonemia as a consequence of the metabolic defect. Since glycine is utilized for porphyrin synthesis serine is not synthesized leading onto deficiency of the substrate for synthesis of cystathionine. This leads to accumulation of homocysteine and homocystinuria. Deficiency of acetyl CoA leads to defects in the isoprenoid pathway and defective synthesis of cholesterol and ubiquinone. There is also deficiency of the heme containing cholesterol synthesizing enzyme lanosterol synthase. This leads to a cholesterol depleted state.

The heme deficiency leads to lack of synthesis of the heme enzyme cytochrome P420 dependent sex hormones and a widespread asexual state. The mitochondrial dysfunction leads onto insulin resistance and metabolic syndrome x. The Warburg phenotype and increased glycolysis leads to oncogenesis. The mitochondrial dysfunction can produce neurodegeneration. The increase in lymphocyte glycolysis can produce immune activation and autoimmune disease. Thus the meditation induced porphyria can lead to civilisational disease.

The porphyrins can self organize to form macromolecular structures which can self replicate to form a porphyrin organism. The photon induced transfer of electrons along the macromolecule can lead to light induced ATP synthesis. The porphyrins can form a template on which RNA and DNA can form generating viroids. The porphyrins can also form a template on which prions can form. They all can join together - RNA viroids, DNA viroids, prions - to form primitive archaea. Thus the archaea are capable of self replication on porphyrin templates. The self replicating archaea can sense gravity which gives rise to consciousness. They can also sense the anti-gravity fields which gives rise to the unconscious brain. Thus there can be both self replicating archaea and anti-archaea regulating the conscious and unconscious brain. Thus the climate change stress mediated increased porphyrin synthesis leads to prefrontal cortex atrophy, cerebellar dominance, cerebellar cognitive affective disorder, quantal perception and Neanderthalisation of the population. The porphyrions are self replicating supramolecular organisms which forms the precursor template on which the viroids, prions and nanoarchaea originate. Meditative stress induced template directed abiogenesis of porphyrions, prions, viroids and archaea is a continuous process and can contribute to changes in brain structure and behavior as well as disease process.