In consideration of the "universal non-specific mesenchymal reaction" also referred to as the Sanarelli-Shwartzman phenomenon, we raise the question: How can the SULTs (sulfotransferases) and PAPS molecules assemble and perform the multitude of sulfation reactions required to produce all of the many post translational modifications of mucopolysaccharides and proteoglycans? It seems improbable to us that SULTs, which are typically highly-specific in their stereo-chemical requirements, would have sufficient enzymatic “promiscuity” to permit the proper positioning of the sulfuryl groups for each of many distinct locations in the 3-dimensional structure of heparan sulfate proteoglycans (HSPGs) and proteoglycans which typically populate the “mesenchyme”. We have proposed a novel chiral, paramagnetic ortho molecule as a potential candidate universal “sulfation factor”, which would potentially circumvent the high metabolic energy requirement of the SULTs/PAPS system, through use of ELF EM energy sources. We postulate that such a factor may involve miRNAs, molecular mimicry, water-mediated allostery and highly-stereotyped, non-specific chemistry of the type that might have taken place on a primordial/prebiotic planet where, at least initially, only smaller and simpler orthomolecules existed. We propose that enantiomeric enrichment and chiral induction was enabled by the effect of ELF EM fields on nano-associates of water which formed adjacent to hydrophilic surfaces in various mixtures of solutes. Hexagonal symmetry, helices of variable pitch and helix angle, and fractality are predicted to arise from an ice-like hexameric, cyclic radical-cationic cluster of water as the basis for the “fractal dimension” within “fractones”, which have been identified in the brain, heart, gut and bone marrow.

Biography

Robert Michael Davidson has completed his PhD in Pharmaceutical Chemistry from UCSF, NSF Postdoctoral Fellowship at the National Bureau of Standards, Center for Analytical Chemistry, MD degree at St Louis University School of Medicine, Nuclear Medicine Residency at Baylor College of Medicine, Houston, Texas and Internal Medicine Residency in Phoenix, Arizona. He was an Associate Medical Director for DuPont Pharma’s Radiopharmaceutical Division 1990-1992. He has published more than 30 papers in peer-reviewed journals. He is a Fellow of the American Institute of Stress (From 2012 to until now) and practicing complementary/alternative/integrative Internal Medicine in Gladewater, Texas, USA.

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