

## **My Body Map – A Model of The Human Body**

**Presenter:** Alan Mills ND FSA MAAA, President, The Obesity Project

What should we eat to maintain healthy weight? How much should we eat? And when? Simple questions. Yet we do not know the answers. Scientific studies conflict. Experts disagree. Impassioned authors—many of whom are physicians—sell us competing fads. Meanwhile we grow more and more obese, more and more confused, less and less healthy. This is our diet problem. My Body Map is a way to solve it. My Body Map will be a personalized high-fidelity agent-based simulation tool. Based on scientific research, it will simulate how our bodies process the foods and drinks we consume. It will let us peer into our bodies to see how their components—their organs, cells, organelles, and molecules—work to produce our fat stores. It will also predict the effects of our current diets on our body fat and weight. And it will recommend new diets—based on our personal preferences—to help us maintain healthy weight. In his presentation Dr. Mills will dive deeply into the body—down to the level of our mitochondria—to demonstrate how agent-based simulation modeling helps us understand a process called “chemiosmosis”. Chemiosmosis is how free protons in the crista spaces of mitochondria drive our metabolic processes. Although this may sound like an esoteric topic, it is interesting and vitally important. Chemiosmosis is the fundamental process that drives all life, including the life of all animals and plants. Dr. Mills will present a new discovery about chemiosmosis that he made with the help of agent-based simulation modeling.