

FUNDAMENTALS OF CELL HEALTH—REDOX SIGNALING

by Dr. Gary L. Samuelson

It has been a lifetime pursuit of mine to find promising technologies that have the potential to make a real, positive impact on humanity and to help get them to the people who need them. As an atomic physicist and medical researcher, I typically study the processes of life on the fundamental molecular level. I have found that it is extremely rare to find something that is safe, non-toxic, and yet has clear benefits toward advancing health. Historically, when found, such discoveries have fueled some of the greatest advances in health science.

Recently, I have been studying a technology that holds such promise. About four years ago, I was introduced to a method of producing a certain balanced set of reactive molecules (over 15 different kinds) from salt and water. Though I was very skeptical, I was convinced to read over 17 years of comprehensive studies that established that this particular set of reactive molecules is completely safe, non-toxic, soothing and supports the immune system and the normal healing process. My curiosity was piqued.

As I put the puzzle together, I discovered that this specific set of molecules was identical to the redox signaling complexes that are native to our body and are naturally produced by the mitochondria in the saltwater fluids inside all the cells in our body. Typically, some of the individual components are short-lived and difficult to produce outside of living cells. However, the proprietary production method solved this problem and, in effect, was able to produce highly stable redox signaling complexes outside of the body; the same molecular complexes that are the fundamental components of cellular communication networks, as well as being the primary weapon of choice for the immune system.

Redox signaling molecules are the most fundamental messengers inside all types of cells in all forms of life on earth. In fact, redox signaling is an entire subfield of science in redox biochemistry, studied worldwide with hundreds of scientific articles pub-

lished per month. These tiny redox signaling molecules surround and mediate all inner cell communication, damage control, defense, repair, and replacement on the cellular level throughout the whole organism. The wonderful thing about this is that our cells are naturally programmed with the ability to fix themselves, to fight off the threats, and to repair damage. Proper redox signaling makes all this possible. But as we age or are stressed, our cells produce less of these redox signaling molecules and the whole process slows down.

To better see how important cell communication is to our health, we can think of the communities of cells in our tissues as microscopic communities of houses along streets. The blood vessels, just like streets, connect all of the living cells in our tissues in order to bring them the supplies they need to live and carry away the waste that they generate. Communication lines are built into our cells and along our nerves and blood vessels, similar to the phone lines, mail systems and electronic communication systems that connect the houses in our communities. When any individual cell becomes stressed, damaged or threatened it sends messages to surrounding cells and the immune system about its state of affairs. If these messages are clear, appropriate responses are facilitated.

Imagine how important effective communication is to these cell communities, especially in the case of emergency response. Billions of these cells

are damaged every day by infections, for example, or DNA damage, environmental toxins, injuries, malfunctioning cells, or lack of nutrients. The damage must be detected and repaired or the cells must be replaced. The role of these tiny redox signaling molecules is to make the communication system (I like to think of them as “cell” phone systems) work efficiently, allowing the cells to efficiently do what they are designed to do: get rid of bad tissue and rebuild healthy tissue. It is not hard to see that a technology that creates these redox signaling molecules outside the body and delivers them in supplement form has incredible potential.

This potential is just starting to be realized. Four years ago, I was fortunate to be part of a team that, after additional years of development, and much effort, further stabilized that redox signaling compound and created an oral redox signaling supplement: ASEA. ASEA, simply put, is a redox signaling supplement that replenishes the redox signaling molecules lost by natural aging and stress. ASEA has the potential of helping billions of people worldwide. It is my hope that ASEA will be able to find its way to all those who need it. 🏠



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