## **Longevity AI Product Details**

Calorie restriction has been shown to enhance lifespan in some pre-clinical models, but it is difficult to adhere to. That's why we created GEROPROTECT® Longevity A.I.™, which can mimic the benefits of calorie restriction.

## Artificial Intelligence technology from Insilico Medicine, Inc.

Insilico Medicine created a database of research on over 200 geroprotectors, or compounds thought to be capable of inhibiting some aspects of aging at the cellular level. Then they use a proprietary algorithm based on 21st Century artificial intelligence computing techniques to identify withaferin A from ashwagandha, gamma-linolenic acid from borage seed oil, and ginsenoside Rg3 from ginseng as best-suited to mimic some of the benefits of calorie restriction.

## Seven pillars of aging

**Molecular Integrity**—Certain large molecules, such as DNA and RNA, proteins and essential lipids are delicate. As we age, oxidation, UV exposure, glycating agents and other factors can damage these sensitive molecules. Maintaining their integrity is essential to healthy aging.

**Epigenetics**—Youthful gene expression helps hold back the hand of time. But diet and other environmental influences can not only change the way these longevity genes are expressed, but also destabilize them. Maintaining youthful gene expression is essential to lifespan.

**Proteostasis**—Think of protein homeostasis as a "quality control network" that helps ensure the integrity of proteins within our cells. The cell signaling pathways that affect longevity and youthfulness strongly influence proteostasis as well, making it an integral part of healthy aging.

**Healthy inflammatory response**—Inflammation is one of our body's natural biological defenses. It is important to encourage the body's healthy response to inflammation.

**Adapting to stress**—We're continually exposed to physical, environmental and psychological stressors, to which our bodies physically respond. As we age, it's important to help our bodies deal with physical and emotional stress in a healthy, constructive way.

**Stem cell health**—Stem cells operate as a kind of internal repair system. When some cells in our bodies become old or damaged, they are replaced by new cells derived from stem cells. But as we age, effectiveness of stem cell replacement and tissue regeneration is reduced. So, maintaining healthy stem cell activity is essential to good health.

**Healthy metabolism**—Cells produce energy our bodies need at a cost to their environment, which is us. Natural pathways exist to counteract the byproducts of cellular energy production, but they become less efficient as we age. Maintaining these pathways is essential to youthful cellular metabolism.

## Synergistic ingredients target anti-aging pathways

The ingredients in Longevity A.I.™ work together to address each aspect of the normal aging process. Ginsenoside Rg3 supports molecular integrity, withaferin A supports proteostasis and gamma-linolenic acid helps maintain youthful gene expression. They all promote healthy cell metabolism. Gamma-linolenic acid together with withaferin A help to maintain a youthful and healthy stress response. And gamma-linolenic acid together with ginsenoside Rg3 are powerful inhibitors that support a healthy inflammatory response and contribute to healthy stem cell activity.