

## RESVERATROL NOTES:

Resveratrol, a substance present in the wine and vines and oak, which is attributed the ability to fight and even reverse many of the processes of aging. Says in this regard Professor David Sinclair, a professor at Harvard University and first researcher who linked this component of red wine with longevity.

He is right. And, in addition to increasing life expectancy, studies indicate that resveratrol helps prevent chronic diseases associated with aging, from cardiovascular disease to Alzheimer's, through the osteoporosis, arthritis, cataracts, psoriasis and even wrinkles. Are we at last to the fountain of youth?

80,000 molecules

Professor David Sinclair is one of the scientists that has studied aging. He himself found, 10 years ago, how resveratrol is able to prolong the life of cells up to 70%, by activating sirtuins, longevity genes. Over the years, Sinclair and his team have been showing step by step how this molecule increased the lifespan of yeast, worms after later insect (bees and flies) and finally mammals, namely mice. "We saw that rodents treated with it had just having twice endurance and relatively immune to the effects of obesity and age," he explains. The pharmaceutical industry was quick to see the potential of these findings and thus was born Sirtris Pharmaceuticals, a partnership between David Sinclair and the pharmaceutical company GSK.

Is the goal of the project? Develop substances able to delay aging in humans and prevent age-related diseases. The fountain of youth, encapsulated. "We studied 80,000 molecules and found that 20 worked. Well, the best of them all proved resveratrol," says the expert.

But how this gem aging work? Of the seven types of sirtuins (a type of protein) identified to date, this molecule acts on SIRT1, capable of activating the power plant cells: the mitochondria. "Increasing the production of SIRT1, stimulate the activity of this central cellular energy, which loses power over the years. When recharging batteries thereby protecting cells against deterioration and got profound effects on health," he says.

In other words: aging longer an immutable and irreversible fate. An idea that disrupts the fundamentals handled so far and many scientists have questioned, but a study published in the journal Science in March this year has confirmed. "In fact, thanks to the latest research now better know the exact location of the gene in which resveratrol works and how. These investigations will lead us to new molecules and drugs that can prolong life and prevent age-related diseases. The door to longevity is more open than ever. "

David Sinclair, a professor at Harvard University: "We will help the body stay more years"

We began to associate wine and health with the "French paradox", whereby the Gauls, despite eating fat, live longer because they drink red wine ...

David Sinclair. Right. Since then there have been numerous articles on resveratrol and its cardiovascular benefits and prevention of neurodegenerative diseases, type 2 diabetes, cataracts, osteoporosis or inflammatory diseases such as psoriasis or arthritis.

Q. When will there be drugs that combat aging?

A. My team and I have shown that it can act through the sirtuin SIRT1 to prolong cell life expectancy. In fact, drugs that have tested 117 acting on it through a common mechanism. Low calorie diets and exercise have also demonstrated ability to activate SIRT1. Develop more effective activators synthetic resveratrol and reproduce the benefits of diet and exercise. We have dozens of them 100 times more potent than wine. The top three are being tested on humans.

P. Perhaps these antiaging drugs may be administered preventively.

A. That is the idea and have achieved drugs that are being tested in clinical trials. For now, this prophylaxis we have conducted in mice. However, it should be clear that to achieve our objective we are not saying that a person can eat what you want and spend the day lying and simply take a pill to stay young and healthy. We seek to develop drugs that help the body stay longer.

P. Recent research has indicated, however, that an excess of antioxidants can be harmful to health.

R. Antioxidants neutralize the action of free radicals, the molecules responsible for accelerating cell aging. What is more recent studies indicate that perhaps the body needs small amounts of free to implement their own systems of defense and protection radicals. We are delving into this field, but in the meantime we have seen that resveratrol is indeed more effective in people who need it most. It is as if programmed to correct functional imbalances.

Q. It seems that environmental stress stimulates the protective potential of living beings. I say this because the vines that grow without irrigation, without herbicides or fertilizers are most resveratrol develop ...

R. And we can use this protective potential. Plants have developed substances to counter threats that lurk possible strategies against aging.

- "Why live as vines? Asks Joseph Vercauteren, a professor at the Faculty of Pharmacy of the University of Montpellier (France) -. The explanation lies in the wealth of resveratrol strains own, "says this expert of Caudalie laboratories.