

## Healthy ageing is in our own hands, because we ourselves can significantly influence the speed of ageing

On the occasion of this year's "Youth Day", in accordance with its fundamental mission of improving the quality of life through clinically supported innovations in the field of the use of bee products, Medex opened an important public debate on the possibilities of slowing down ageing. Participants discussed the ways in which we can extend the healthy period of our life and effectively ensure high-quality, active and pleasant ageing. The elixir of life and longevity can also be found in the beehive, more precisely in royal jelly. This is the crucial ingredient of Medex's outstanding innovation, the unique ROYAL YOUTH™ formula in the new Beelixir™ food supplement, which helps to slow down biological ageing and extend the period of health by supporting cellular functions.

The round table was attended by **Prof. Branka Javornik, PhD**, expert in the biology of ageing, professor emeritus of the University of Ljubljana and tenured professor of genetics and biotechnology, **Aleša Mižigoj**, CEO of Medex, and **Rok Kopinč, PhD**, Head of Development at Medex, who noted that life expectancy is indeed getting longer, but the fact that we live longer does not mean that we are healthier for longer.

*"Since the population is getting older due to longer lifespans, the field of ageing biology or biogerontology is becoming increasingly important, as it answers the question of why and how we age at the cellular or molecular level and at the level of the organism. Understanding these processes also makes it easier for us to act as individuals",* pointed out **Prof. Branka Javornik**.

Over the years, damage and errors slowly accumulate in our DNA, there is increasingly more cellular waste in the cells, the efficiency of biological processes deteriorates, and information noise or incorrect expression of genes occurs. The body has a developed error correction system; however, it loses its effectiveness over the years. The function of cells, tissues and organs deteriorates significantly, as a result of which the risk

of developing age-related chronic diseases increases dramatically. Consequently, the quality of an individual's life is significantly reduced.

**Chronological age is indicated by our date of birth, while biological age reflects the state of our organs and body.** Biological age can be measured with various methods or parameters, from blood tests to epigenome research, facial images, psychological tests... It can be determined with considerable accuracy and can also be slowed down with an appropriate lifestyle. Genes are in fact not the ultimate indicator, as the field of epigenetics, which studies the expression of genes under the influence of the environment, is also important. *"Of course, we have certain genetic predispositions, but from an evolutionary point of view, our genome, which we inherited from our hunter-gatherer ancestors, mainly contains genes for the protection and maintenance of the organism. They do not perform well in today's inactive, sedentary, stressful and "fattening" environment. A good example of this is nutrition, where it has been shown that the body's response to reduced caloric intake or starvation is a reduction in growth and reproduction and a strengthening of systems for maintenance and damage repair. Resistance to stress is also increased, cell survival is supported, all of which leads to improved health, resistance to disease and longer lifespan. Our diet and other lifestyle "habits", such as regular physical activity, ensuring good sleep and emotional stability, significantly contribute to regulating the expression of genes for longevity," explained **Prof. Branka Javornik, PhD.***

### **Activation of sirtuin proteins is key to slowing down biological ageing**

Sirtuins affect gene expression, are irreplaceable in repairing DNA damage, promote cell self-cleansing and neutralisation of free radicals. One of the most important molecules for the activity of sirtuins is the NAD molecule, which is also essential for the production of cellular energy. Researches found that sirtuins can be activated with different approaches: with the aforementioned reduction in daily calorie intake, moderate physical activity, occasional exposure of the body to low temperatures, and consumption of substances that stimulate their activity. Increasing the activity of sirtuins and ensuring sufficient reserves of NAD is thus one of the key strategies for slowing down biological ageing.

*"Sirtuins are also activated by royal jelly, which regulates gene expression in the queen bee and extends her life by as much as 30 times compared*

*to the worker bee. Research shows that it also extends the life of some other animal species by 10-25%. The clinical study that we conducted showed that it also affects processes indirectly related to ageing in humans, stimulates cell regeneration, increases the body's resistance to stress and inhibits harmful inflammatory processes in the body that contribute to ageing and the development of chronic diseases," explained **Rok Kopinč, PhD, Head of Development.***

**Based on new findings, Medex combined royal jelly and NAD and Q10 coenzymes into a unique standardised Royal Youth™ formula.** In the Beelixir™ product, it is supplemented with zinc and vitamins D3 and B1. With a combination of ingredients, which is unique even on a global scale, researchers took an innovative approach to solving the problem of healthy ageing, which is recommended as a supplement to a healthy lifestyle even after the age of 30. Supporting cellular processes in this way in order to slow down biological ageing will effectively extend the period of healthy life even into the later stage.

*"The fact that royal jelly is really an extraordinary treasure from the beehive is confirmed by the simple fact that the queen bee and the worker bee are genetically identical, due to the difference in the feeding of the larvae (the larvae of the queen are fed exclusively with royal jelly, while the bee larvae are fed with a mixture of honey and pollen), and the queen's larva develops into a true "superorganism", as it is twice the size of the worker, lives 30 times longer and lays 2,000 eggs per day. Using the queen bee's recipe for long life, the longevity of which makes it one of the most amazing creatures, we can also help people in a natural way to stay young, active and strong for longer by slowing down biological ageing. Years of research and development at Medex have really paid off, proving that royal jelly reduces inflammatory processes in cells that contribute to ageing of the organism. That's why I firmly believe that Beelixir™ will be one of those products that we at Medex will be most proud of," said **Aleša Mižigoj, CEO of Medex.***

The age written on our IDs cannot be avoided or changed. However, we can avoid premature ageing, and with a healthy lifestyle and effective support for cells and the organism we can change the way we age. Because life is worth living well until the last day.



*Medex is a family company which has been passionately connected to bees for 69 years. As pioneers of apitherapy we are improving the lives of people with natural, efficient and innovative food supplements based on bee products and other gifts of an intact nature. Medex is the first in Slovenia to check the safety and quality of its honey. Medex is also a pioneer of apitherapy in Slovenia and around the world, which means that it uses bee products for therapeutic purposes. It has a registered research group with four researchers - PhDs, who, together with a support team of 6 experts, discover new areas of efficiency of bee products.*

**For more information, please contact:**  
[global@medex.si](mailto:global@medex.si)