

Alcimed

Press Release

Preventive biology: definition and challenges

Alcimed, a consulting company specialized in innovation and new businesses, provides an update on the definition and challenges of preventive biology. As an integral part of "anti-aging" medicine it brings together applications at the frontiers of medicine and early diagnosis, sometimes incorporating controversial practices.

Lyon, June 20th, 2018 - How can we delay the effects of time? How can we optimize the functioning of our bodies and age well? These are just some of our expectations, all of which we would like to be met by a single, simple and magically effective pill. The mystery of longevity, as old as time, cannot be solved by a simple treatment! Nevertheless, today, complete and thorough patient care, offering at least some of the benefits, is proposed. But, beware of scams, as they can be very expensive!

"Anti-aging" or preventive medicine

Anti-aging medicine aims to prevent both the natural process of aging and to support people in aging better. In France, this type of care generally begins with a consultation in a specialized center (clinic or anti-aging medical practice). During this consultation, the most important information is collected through discussions and a thorough clinical examination. Depending on the results obtained, the health professional can set up follow-up consultations and prescribe biological assessments in order to build personalized recommendations to support the patient.

The term "anti-aging" medicine includes various key words such as "well-being" or "preventive" (medicine).

Preventive biology

In the field of aging, according to Benjamin D'HONT, project manager at Alcimed, preventive biology can be defined as: "*A scientific approach designed to maintain an optimal state of well-being and health for as long as possible.*"

In order to anticipate and prevent disorders related to the natural aging process, anti-aging medicine may rely on preventive biology. Indeed, biology makes it possible to quantify the imbalances inherent to the process of aging. During the anti-aging medical consultation, the doctor has multiple biological techniques at his disposal to perform his investigations, the most common ones being nutritional biological assessments, hormonal biological assessments and assessments of oxidative stress. However, there is no consensus neither as to the composition of these assessments nor regarding the prescribing practices, which are often adapted to the patient and their financial means. Once the results of preventive biology have been analyzed,

the practitioner can recommend the adoption of a specific diet, physical activity or the intake of food supplements.

There is no generic approach in terms of the number of consultations, the type of prescription or the biological assessments performed. In fact, in France, the preventive biology approach is an individual matter and it is directly financed by the patient himself. As a result, there is a wide cost discrepancy between basic assessments, such as genomic or microbiota sequencing, or nutritional assessments. Despite these inconsistencies in clinical practices, the patient pathways are similar. The assessments performed in the first consultation enable specialists to draw up a vision of the general state of the individual, and then more specific assessments of the physiological systems are prescribed.

Ageing, a major public health issue

The above-mentioned consultations and assessments are not affordable for everyone and are not reimbursed by basic or complementary health insurances. Yet, it is clear that ageing is a public health concern as the overall cost of the aging population represents a major expense for the health system. In this field, preventive biology can help avoid certain costs, such as that for paying care agencies all whilst improving the quality of life of the population by redirecting these expenses towards a preventive rather than curative approach.

In fact, earlier disease management allows for higher treatment efficiency and a reduction in hospitalization time, resulting in an improvement in patients' quality of life. Early and large-scale screening for endogenous (such as familial cardiovascular issues) and exogenous (such as environmental exposure to toxins) risks are among the challenges of personalized medicine, encompassing preventive biology.

Despite the advantages of preventive biology, there is some mistrust, particularly in the scientific and medical community. While the scientific basis of the approach is relatively well documented, there is no consensus on its use in a clinical or preventive context. One example is the measurement of telomere length. Even though it is clearly involved in cellular aging, it is not recognized as a sufficient biological marker for the process. Nevertheless, this fact did not prevent the development of assessments based on this measure which claim to be able to measure the biological age of the individual.

Preventive biology can help tackle several public health challenges in the future, but its development requires a clear definition together with a more structured scientific framework. Integrating preventive biology into a primary prevention framework or into the development of personalized medicine could be a major step forward. It would make it possible to intelligently redirect the flow of patients by allowing them to live longer in good health, drastically reducing the costs of care. However, preventive biology still needs to prove its worth in order to be respected in the eyes of everyone.

Preventive biology is already present in our environment but only in specific cases such as genetic sequencing for populations at risk of cancer. Scientific advances and the evolution of the care management model will be crucial for its further developments.

About Alcimed - www.alcimed.com

Founded in 1993, Alcimed is an Innovation and New Business Consulting firm specialized in sectors driven by innovation: life sciences (food, biotech, healthcare), energy, environment, aeronautics, chemicals, cosmetics, materials, building, transportation, space and defence. Our purpose is to help both private and public decision-makers exploring and developing uncharted territories, dealing with new technologies, new offers, new geographies, possible futures, and new ways to innovate. Alcimed's clients are: industrial leaders, start-ups, SMEs, major companies, private equity players and public institutions. Alcimed's team is made up of 200 highly-skilled, multicultural, passionate individuals with a double culture in science/technology and business. The company, headquartered in Paris, accounts 8 offices in 6 countries: Belgium, France, Germany, Singapore, Switzerland and USA. Alcimed is a member of CroissancePlus and the ACI (Association des Conseils en Innovation).

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