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OUR STORY



SENS STRATEGIES FOR ENGINEERED NEGLIGIBLE SENESCENCE curing the diseases of aging

Research Advisory Board

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The Mprize

The Methuselah Foundation is pleased to announce the establishment of the Advisory Board for the Foundation's SENS Research program. These distinguished specialists in the various planks of the SENS platform of rejuvenative medicine will play a key role in the work of the Foundation, guiding our SENS research budget into scientific projects that will open up the bottlenecks in progress toward a comprehensive panel of age-reversing biomedicine. In doing so, they will be guided by the Advisory Board Statement of Principles, to which all members are signatories.

OUR STRATEGY

YOUR ROLE

Statement of Principles

Two thirds of all deaths worldwide, and about 90% of all deaths in the developed world, are from causes that only rarely kill young adults. These causes include Alzheimer's, cardiovascular disease, type 2 diabetes and most cancers. They are age-related because they are expressions of the later stages of aging, occurring when the molecular and cellular damage that has accumulated in the body throughout life exceeds the level that metabolism can tolerate. Moreover, before it kills them, aging imposes on most elderly people a long period of debilitation and disease. For these reasons, aging is unarguably the most prevalent medically-relevant phenomenon in the modern world and the primary ultimate target of biomedical research.

Regenerative medicine can be defined as the restoration of an individual's molecular, cellular and/or tissue structure to broadly the state it was in before it experienced damage or degeneration. Aging is a degenerative process, so in theory it can be treated by regenerative medicine, thereby postponing the entire spectrum of age-related frailty and disease. But in practice, could regenerative medicine substantially postpone aging any time soon? If so, it will do so via the combined application of many distinct regenerative therapies, since aging affects the body in so many ways. Recent biotechnological progress indicates that many aspects of aging may indeed be effectively treatable by regenerative medicine in the foreseeable future. We cannot yet know whether all aspects will be, but extensive scrutiny has failed to identify any definite exceptions. Therefore, at this point there is a significant chance that such therapies would postpone age-related decline by several years, if not more, which constitutes a clear case for allocating significant resources to the attempt to develop those therapies.

Unfortunately, the regenerative medicine approach to combating aging is not yet being adequately pursued by major funding bodies: only a small number of laboratories worldwide are funded (either publicly or privately) to develop therapies that could rejuvenate aged but otherwise undamaged tissues. The Methuselah Foundation has risen to the challenge of filling this void in the biomedical research funding arena. Research is chosen for funding by the Foundation on the basis of the following major criteria:

- * it is demonstrably relevant to the development of regenerative medicine targeting some aspect of aging;
- * it is poorly funded by other sources;
- * funding from other sources seems unlikely to be forthcoming in the near future.

As and when it is developed, this panel of therapies may provide many years, even decades, of additional youthful life to countless millions of people. Those extra years will be free of all age-related diseases, as well as the frailty and susceptibility to infections and falls that the elderly also experience. The alleviation of suffering that will result, and the resulting economic benefits of maintained productivity of the population, are almost incalculable. In our capacity as the overseers of the Methuselah Foundation's research strategy, we urge you to do all you can to help the Methuselah Foundation carry out this mission with maximum speed.

Signed,



Aubrey D.N.J. de Grey, Ph.D, Chairman and Chief Science Officer, Methuselah Foundation

Pedro Alvarez, PhD, George R. Brown Professor of Engineering, Rice University





Anthony Atala, MD, Professor and Director of the Wake Forest Institute for Regenerative Medicine



María A. Blasco, PhD, Group Leader, Telomeres and Telomerase Group, Spanish National Cancer Centre (CNIO).



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