Extending the healthy, productive years of life is the primary goal of the Glenn Foundation for Medical Research, a task which it aims to achieve through funding research into the biological mechanisms of ageing. Here, Mark R Collins, President and Director, discusses the common misconceptions of the outputs of ageing research, and how a collaboration with a data journalist is helping to craft engaging public messages.
The Glenn Foundation for Medical Research celebrates its 50th anniversary this year. What inspired Paul Glenn to launch the Foundation in 1965, and what is its core mission?

Paul became interested in medical research and the biology of ageing early on, partly from observing the decline in health of his grandparents and parents. He noticed that the majority of health problems are age-related and hoped that he could one day help to extend the healthy, productive years of life. While an undergraduate at Princeton University, USA, he began investigating research in biological ageing by meeting scientists in the field and attending scientific meetings. In the ‘media’ section of the Foundation’s website you can watch an interview with Paul in which he describes his initial experiences in pursuing the understanding of biological ageing and how that eventually led to the creation of the Glenn Foundation in 1965, with its mission to extend the healthy productive years of life through research on the mechanisms of biological ageing.

The Glenn Foundation supports and collaborates with an impressive consortium of high-profile institutions across the US, including the American Federation for Aging Research (AFAR); Harvard, Princeton and Stanford Universities; the Mayo Clinic; Massachusetts Institute of Technology, and many more. Can you describe the differences and similarities in these centres?

We refer to academic Glenn Centers and AFAR as members of the Glenn Consortium – a network of institutions with significant programmes investigating biological ageing. Together, our goal is to support highly productive and collaborative research and institutions. The common thread among the institutions is scientific excellence in ageing research across multiple disciplines. Ageing encompasses nearly all of the biological sciences, including technologies that did not exist when Paul established the foundation 50 years ago. The rate of innovation and discovery continues to increase. We see the advance of new knowledge leading to treatments for age-related debility and disease.

The Foundation has been particularly proactive and visionary in supporting the full range of basic to translational research. What have been some of the most important breakthroughs or progress you’ve seen in the field to date?

It’s important to note that I’m not a scientist but have been fortunate to help establish some of the Foundation’s programmes with the assistance of many scientific advisors. Our relationship with AFAR, for example, provided the Foundation with access to senior scientists who review grant applications for AFAR (including ours) and thus a connection to peer-reviewed work of new investigators that we might not otherwise have encountered. We have always cultivated collegial relationships in the scientific community, beginning with Paul’s early friendships to those that we have today. Recent research and understanding of metabolic pathways and genetics, for example, has led to the discovery of drugs that extend health and longevity in experimental animals. That research is at the beginning of translation to human trials.

At present, ageing is not a condition for which there are specific clinical trials, so new drugs that broadly inhibit age-related disease will probably arrive through validation in treating specific syndromes. Research in ageing is wide-ranging, from evolutionary and comparative biology to studying biological and other traits of human centenarians. From these studies, we can learn how living organisms survive and thrive and apply that knowledge to human health.

Longevity has always captured the attention of media and the corporate community. What inspires you – and worries you – about the public perception of ageing research today?

There has been interest in ageing and longevity throughout recorded history, some of which derives from mythology and aspirations of immortality. I worry about misplaced trust in myths and schemes to find (and sell) eternal youth. Ageing well does not mean to not age at all – at least not to me. Generally, by ageing well, we mean increased health span – to enjoy more of our lives in good health. Quests to ‘defeat ageing’ or ‘reverse ageing’ are distractions from objectives that are within reach. In addition to basic science and developing new therapeutic technologies, preventive measures are equally important and must be recognised by promoting healthy choices in diet and lifestyle while treating those conditions that appear despite a healthy lifestyle. Not only individuals, but all of society benefits by keeping people healthy and out of hospitals.

You have taken a particular interest in how both organisations and researchers can craft engaging messages about healthy ageing. Tell us more about your work with data journalist David McCandless?

I was fortunate enough to meet David at a TED Conference in 2010 where he had delivered a presentation, now viewed well over 2 million times on TED.com. David has the technical and creative ability to translate complex data into comprehensible visualisations. I have long been interested in design and communication and sought assistance from David in explaining the purpose of biological ageing research. In our first collaboration, with the help of AFAR and Professor Richard Faragher in the UK, we produced a four-minute video, entitled Live Longer, Live Well, that provides an engaging and efficient introduction to ageing research. We look forward to working further with David and his team at the Information is Beautiful Studio to develop web-based dynamic visualisations to help explain ageing research to a broad audience.

The Live Longer, Live Well video states that ‘a better world for older people is a better world for everyone’. A common misperception of biomedical research on ageing is that its goal is to enable people to live forever. How would you describe the difference between anti-ageing initiatives and longevity research?

To me, anti-ageing is an oxymoron, a word often found at the junction of anxiety and narcissism – more descriptive of a marketplace than of evidence-based science. Ageing is a reality with which we must cope physically, psychologically and financially. It is clearly possible to extend both life and health but probably within limits. Not everyone agrees that such limits exist. Nature’s solution to mortality is reproduction of the species at the expense of the individual. Some believe that technology will override this limitation. The subject provides fuel for lively scientific and philosophical debates that, in part, drive the research agenda.

With an eye towards the future, how do you foresee the Foundation progressing in the coming years?

Paul structured the Glenn Foundation to exist in perpetuity, to pursue his vision and mission. As the Glenn Foundation and the field of ageing research continue to develop, there will be opportunities and ideas that we have not yet imagined. Biology is complex but that complexity sometimes yields to breakthroughs and we aim to facilitate some of those by supporting talented scientists.

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