

# **Top-100 Longevity Charities**

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#### Introduction

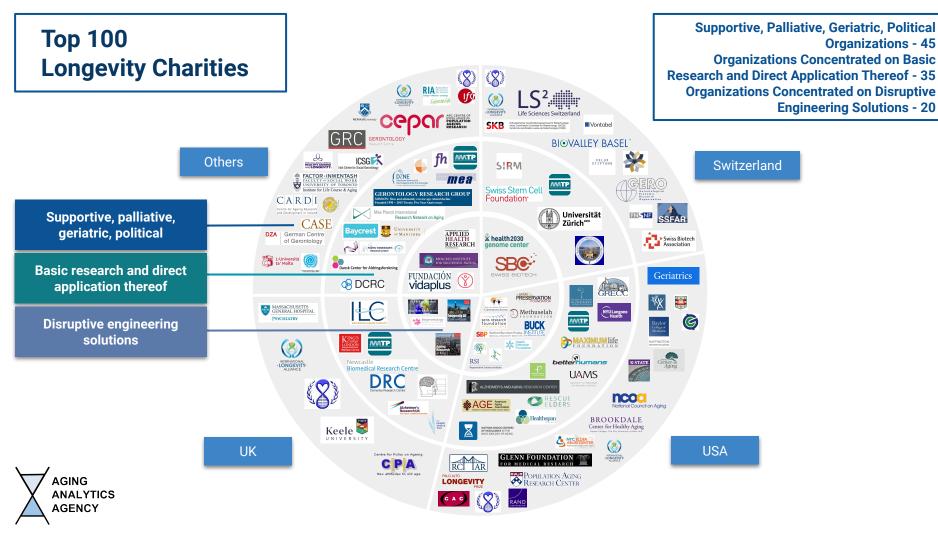
The fight against age-related disease, and the politics of old age and social care in general, have, since the middle of the 20th century, traditionally been associated with the non-profit sector. But in fact the nonprofit sector has been a catalyst for reform at every stage in metamorphosis of Longevity from a science to technology, and from the technology to the industry.

It was disease charities such as Alzheimer's Research UK and American Aging Association, which led the early social and biomedical crusades against familiar diseases of aging, and in so doing become familiar names themselves.

And it was biomedical non-profits such as the Buck Institute for Aging and the Max Planck Institute for Biology of Ageing which created and developed the tech sectors which have since come to comprise the current, multi-faceted industry.

But more importantly, it was the nonprofit sector which dominated the industry until perhaps only three years ago, and laid the groundwork for the modern commercial industry. It was the nonprofit sector which brought the repair approach to bear on aging, and the set in motion to shift toward restorative and preventive interventions. The technological revolutions that made possible the industrialization of Longevity documented by **Aging Analytics Agency** in this report and others, owes much of its momentum, media presence, reputation and vocabulary to the early work done by non-profits such as the **SENS Research Foundation**, **Life Extension Advocacy Foundation**, **Lifespan.io**, **Biogerontology Research Foundation**, and many others who advocated the exploration of new avenues in geroscience research and development, and conducted public relations for the fledgling industry. The nonprofit influence on the Longevity Industry ranges from the palliative to the political, and from the medical to the biomedical, all the way through to the technological and digital revolutions.

The purpose of this report is to allow readers to navigate this landscape by identifying the key nonprofit players in this industry, past and present. To this end, the infographics and lists in this report present non-profits in specific categories which reflect this diversity: biogerontology and geroscience, clinical translation, social impact of ageing, Al technologies within Longevity and ageing research, aging biomarkers, research into dementia / Alzheimer's disease. This in turn reflects the diversity of the industry as a whole, a testament to the comprehensive role of the charity sector in Longevity.



### **Executive Summary**

"Top-100 Longevity Charities" is an h open-access special analytical case study and encyclopedic format dossier **Analytics** Agency that idelivers an in-depth and thorough; review of the current landscape in the non-profit ground of the Longevity Industry, with the purpose of providing I a formal update on the status of health and biomedical charities, and their key! ractors, by depicting the topography of the disruptively amplified and extended playing field in which they are involved, systematically examining tractionary expansive phenomenon of abrupt industrialization unleashed in I the Longevity scene that propelled this nonprofit Longevity ecosystem existing for over 50 years - towards unforeseen commercial settlement ! underway during the last triennium.

Biotechnology, biomedical and overall health non-profits are critical drivers of the constituency process of the Longevity Industry. The BioTech Industry has mushroomed since 1992, with US health-care biotech revenues increasing from USD 8 billion in 1992 to 50 billion in 2005, and globally (medical and nonmedical uses) reaching 98 billion in 2014 and 108.8 billion in 2018 according to BioWorld and IBISWorld. This escalation in growth and development has been given by the breakthrough and subsequent predominance of today's conventional tools used in biotechnology and biomedical sciences; these methodological interfaces and procedures where the cause of the 90s' expansive explosion of that recently appeared bio-market. This is, the well-known chemical and physical methodologies now applied to the various purposes of BioTech; spectrometry, nuclear magnetic resonance, chromatography, PCR, immunoassays using fluorescent probes and so on. These then-new presentations, first implemented in the non-profit scientific research space, allowed the leap into a new industrial dimension, today in fullness and apogee.

On the other hand, the last two decades have witnessed how the rising last generation biotech developments have ended up plunging into a death's deep valley, where the promise of such things like stem-cell therapies and genome editing, and even gene panels and high throughput sequencing due to interpretative challenges related to massive data, one by one found limitations and walls in practical health-care implementation. This, without any doubt, has put a ceiling on the BioTech Industry, a roof whose collapse we are already witnessing. Not out of nowhere: the technical constraints involving aggregation and interpretation of such vast amounts of data needed to give sense and utility to these technologies have been torn down by the data science staging and now the empowerment of AI platforms, resources that will cause the second great expansion of this industry.

## Top-100 Longevity Charities. **Distribution by Region**



The chart illustrates the locations of the top Charities across the globe. The USA, Switzerland and UK excel for their high concentration of entities, while the accumulation of all countries with fewer than five groups does not reach any of these three alone.

- 37 USA
- 16 Switzerland
- 14) UK
- 8 Canada
- 7 Germany
- 5 Australia
- 3 International
- 3 Ireland
- 2 Denmark
- 2 Malta
- 1 Russia
- 1 Spain
- 1 Sweden
- 1 Belgium
- 1 Cyprus

### **Executive Summary**

These novel resources and frameworks previously mentioned are challenging the conventional methodologies in drug and biomarker discovery and development, aggregation and analysis of endpoint data in preclinical and clinical trials in any of its phases, even the use of animal models in biomedical research and development, as well as the practice of health care itself; machine and deep learning, and AI are giving sense to pre-existing and even non-validated techniques and technologies for end up raising a new industrial framework, which ensures a 2.0 growth escalation never seen before. Not only could this not have been achieved without the accelerating force of the work done in the nonprofit field, but this biotechnological revolution that engenders the novel Longevity Industry has caused a renewed boost to the charitable field. The underlying purpose of this advanced report is to systematize and evaluate those changes that have restructured the nonprofit sector since the advent of the Longevity Industry, byproduct and final stage of the conjunction between cutting edge biotechnology along with precision, preventive, personalized and participatory medicine (P4 Medicine). This analytical and taxative framework will also allow extrapolating conclusions and practical recommendations regarding the for-profit sector of the Longevity Industry, accurately assessing its recent growth and future trends for coming years, pointing out multiple market-ready and upcoming commercially available presentations, and emphasizing their potential impact on health care and the health market - that of new technologies, products and therapies, and new criteria to evaluate health and disease trajectories during aging.

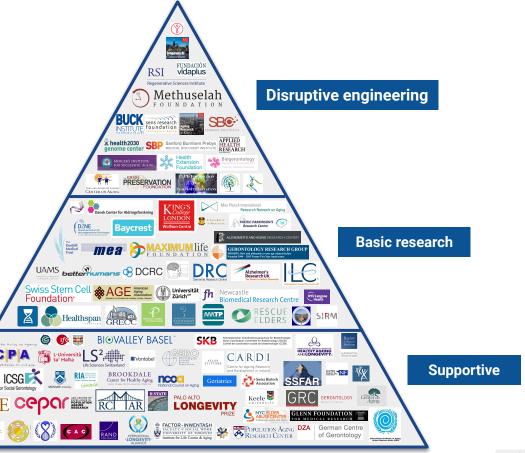
Biotechnology investments, including Longevity-related, in for-profit firms and development programs are characterized by moderate to high risks, a consequence of multiple converging factors as the usual lack of significant scientific and regulatory certainty. For instance, the average costs of drug development to be approved by the US Food and Drug Administration before 2010 were more than USD 1 billion including failure costs. Biotechnology companies are significantly more likely to experience phase III clinical trial failures than the traditional pharmaceutical industry —74% compared with 5%, according to Czerepak et al. (2008). These high failure rates have directed the attention and enthusiasm of investors toward later stages of development in the BioTech Industry. There have been multiple stagnation events of venture capital investment throughout these time lapses, but they have always been overcome by the intrinsic traction of a sector that remains on the rise, emerging, still constituting itself. All these opposing forces have retracted biotechnology development to areas that meet specific investment criteria, as commercial firms necessarily require the expected profits related to product development programs to be large enough to cover, in a timely manner, R&D giant outgoings associated in almost all cases to conventional routines of preclinical and clinical trials. These difficulties are very accentuated in such an even more incipient and markedly more sophisticated industry as Longevity.

## Top-100 Longevity Charities. **Distribution by Category**



Here are represented a range of non-profits which have proved central to the cause of healthy Longevity, arranged according to the degree to which they seek to disrupt or merely support current approaches.

Supportive or palliative approaches seek to ameliorate the discomfort and disadvantage of old age by political or basic medical means, basic research seeks to understand the underlying causes of aging and disease with a view to developing comprehensive biomedical solutions, and disruptive engineering seeks to repair restore and reengineer the human tissues and genetics to ensure these diseases never gain a foothold ever again.



### **Executive Summary**

As a result of the above, as the biotechnology industry has developed by pursuing the maximum possible profit margins and guaranteeing profitability, companies have focused their efforts and investments more and more on advanced clinical trial programs consisting of novel candidate drugs with a moderate to high degree of success chances; the closest thing to the pharmaceutical industry in operational terms. And the Longevity Industry is not exempt from suffering the same restrictive effect during its first stage of growth. Thus, developments in this industry has been characterized by being convenient in any of the following ways:

- Regarding the potential law loopholes and associated regulatory instances there are clearly defined and legally defensible intellectual property clauses that guarantee protection and profitability;
- The target population is large enough to potentially benefit from treatment, as willing and able to pay for treatment innovation; this has configured the current one-size-fit-all medicine system, in which patients are classified or grouped by disease subtypes, risk profiles, demographics, general and not personal clinical features, socio-economic risk factors and so on;
- Scientific uncertainty is minimized.

The treatment of prevalent, chronic conditions primarily affecting the populations of developed countries, particularly the health care associated with the elderly and with those having insurance coverage, and very particularly the palliative treatment of these chronic pathologies, are ideal conditions and targets from this criteria — and those forces helped shape the blockbuster-drug era and the proliferation of the "me-too" therapies; the therapies we will all use, someday. Be that as it may, the size of the target population, the uncertainty associated with scientific opportunity, the nature of insurance coverage and reimbursement policy, and the protection of intellectual property seem to be critical determinants of investment; but the hard core of this key issues must be addressed: most of these conditions are directly due to the high costs of the prolonged and tedious development processes associated with preclinical and clinical trials. If medicine has not been able to become entirely personalized, preventive and precisive, it is because commercial firms have not been able to replace this paradigm that is the cornerstone of the biomedical for-profit arrangement. So, as a response to missing markets is that nonprofit biomedical and biotechnology companies appear as a real opportunity, even for the commercial sector, and not only for social benefit in both the developed and developing world. This is particularly valid with respect to P4 Medicine, the correction of age-related diseases and geriatric syndromes, and globally the Longevity Industry.

### Top-100 Longevity Charities. Distribution by Main Field of Research

#### **Biogerontology**



#### **Clinical Translation**



#### **Social Impact of Aging**



#### Al Technologies within Longevity and Ageing Research



#### **Aging Biomarkers**



# Research of AD and Dementia



### **Executive Summary**

Innovative nonprofit ventures and charities are increasingly being established to address these concerns. At the same time, there is an undeniable tendency to rely on public policy to help lead the for-profit biotechnology and biomedical industry to undertake socially valuable and sometimes not as profitable or financially secure research and development programs; i.e., schemes that does not meet those investment criteria previously listed. Regarding the latter, although evaluations have established that these policies are mixed in effectiveness and from time to time associated with unintended consequences, this is not the only model of financial participation and safekeeping that can be applied to face these issues; joint participation of both, the profit-making sectors and the nonprofit ones, has the potential to fill this gap left in the market because of the understandable needs of the first. There are multiple leading nonprofit biomedical companies and charities that directly finance the development and testing of medical products, which can potentially be integrated into the development schemes of the for-profit sector; in that way, it is possible to establish a bilateral flow of value-added goods and services capable of reinforce the two agendas and solve the particular demands of each one.

For the nonprofit companies and charities, a shared focus in a given set of neglected diseases or subpopulations at risk allows for coordinated efforts to raise funds and to identify, prioritize, and invest in complementary scientific agendas aimed at maximizing social value but also profitability. There are multiple firms and entities of these characteristics, if not countless, that primarily act as nonprofit biomedical, biotechnology and applied health companies, financing and coordinating development efforts in partnership with academic and for-profit enterprises. This comprehensive report seeks to attend to them, particularly the Top 100 charities among the Longevity Industry, to identify lines of work, strengths, challenges and opportunities, in pursuit of complementarity with the for-profit counterpart.

In Aging Analytics Agency we try to show how the establishment of more nonprofit biomedical charities focused on the development of diagnostics and therapeutics for illnesses, and particularly for age-related diseases and conditions, has a propelling effect in lucrative purpose sectors, over the entire biotech and pharma markets, and ultimately on the Longevity Industry which due to such high levels of complexity and risk can be extremely favored in terms of shortening deadlines in the escalation to a state of satisfactory commercial resilience. In essence, this idea is an integrated market-based approach to addressing the market failures engendered by current financing incentives subordinated to extreme multi-parameter complexity by efficiently integrating founding, financing and novel product development. The ultimate goal would be for firms to be financially self-sustaining, at least in part through revenues from product sales, and our greatest interest is that the Longevity Industry also achieves such self-sustainability as a result of the former, and as soon as possible.

### **Report Methodology**

#### **Stage 1: Data Aggregation**

A long list of charities was collected, including non-profit organizations, foundations and research labs, which performance relates to Longevity industry, particularly research on aging process and age-related, seeking a more comprehensive understanding of the biology of aging itself.

#### Stage 2: Classification of Organizations

Based on general description and gathered qualitative data all foundations were divided into three main categories:

- Supportive, palliative, geriatric, political
- Basic research and direct application thereof
- Disruptive engineering solutions

#### **Stage 3: Quantifying Leadership of Longevity Charities**

Six main areas of activity were identified:

- Biogerontology and Geroscience: take a different approach, seeking to understand the genetic, molecular, and cellular mechanisms that make aging a major risk factor and driver of common chronic conditions and diseases of older people.
- Clinical Translation: research that leads to better understanding of disease, and/or development of new diagnostic tests or treatments.

- Social Impact of Ageing: research problems related to the elderly include financial instability, poverty, victimization, isolation, dependency, lack of access to appropriate health care and inadequate housing.
- 4. Al Technologies within Longevity and Ageing Research: use modern deep learning techniques that offer new possibilities for diverse data types to develop longevity and ageing predictors etc.
- 5. Aging Biomarkers: research of biological parameter of an organism that either alone or in some multivariate composite will, better predict functional capability at some late age than will chronological age.
- Dementia and Alzheimer's Disease: research of deterioration in cognitive function (i.e. the ability to process thought) beyond what might be expected from normal ageing.

If organization devotes its activity to a particular area mentioned above, it gets 1 point. If not, than 0. Sum of the points gives the assessment of specific focus or diversification of foundations' performance.

**Top 100 Longevity Charities** were chosen based on computed marks and review of management team and scientific associates. The main purpose was to identify those organizations which work to develop, promote, and ensure widespread access to therapies that cure and prevent the diseases and disabilities of aging.

# Al for Longevity, Precision Medicine, and Biomarkers of Aging as Most Prospective Field for Charities

Metabolomics, proteomics, microbiomics and beyond are offering substantially more biological data and insights on unique trajectories of diseases. Significant growth of market penetration of wearables raises the possibility for more precise behavioral data, and medical-grade vital signs monitoring offers even more analytical opportunities to assess risk and monitor the progression of age related diseases. Additionally, the growing number of social determinants that data analytics incorporates would improve ability to match elderly patients with not only appropriate interventions, but broader care pathways and social supports. More granular data means more finely tuned ways of performing risk stratification for assignment to different care regimens and shift from sick care to preventive medicine.

This shift from treatment to prevention is ultimately leading to a coming age of precision health, where patients are empowered with the tools necessary to become the CEOs of their own health, through the application of P4 medicine in response to continuous monitoring of fluctuations in biomarkers of aging for the maintenance of the optimal state of health until the very end of life. "Precision health" denotes the continuous stabilization of health and the maximum obtainable maintenance of a young biological age via the routine application of micro-interventions in response to ongoing fluctuations in biomarkers of aging and health.

The high degree of complexity associated with precision medicine, the development of biomarker panels for aging to determine what P4 technologies are effective, and the role of AI in achieving this means that progress in creating a comprehensive system of precision health is less of a biotechnology problem, and more of a data mining, analysis and management issue. Translating the tremendous growth in data into clinical insights with help of AI (artificial intelligence)/ML (machine learning) platforms will contribute to growth in investment in AI and cloud computing to create the foundations for the precision health market of the future.

Since utilizing Artificial Intelligence for defining biomarkers of ageing, the cost of whole genome sequencing has fallen from tens of millions of dollars to around \$1,000 per genome today. All may perhaps have the greatest effect on precision medicine in the near future by enabling genetic defects to be edited out of the genome and resulting in the elimination of diseases with defined genetic abnormalities. In the next few years, several technologically advanced small technocratic states will emerge as global competitors in the **development of integrated longevity industry ecosystems**, some of which will focus on specific sectors tuned to their unique strengths, while others will seek to create fully integrated hubs encompassing the entire multifaceted scope of the longevity industry.

### **Top-100 Longevity Charities**

- 1. Ageing Research at King's (ARK)
- 2. Alliance for Aging Research
- 3. Alzheimer's and Aging Research Center
- 4. Alzheimer's Research UK
- 5. American Aging Association
- 6. ARC Centre of Excellence in Population Ageing Research (CEPAR)
- 7. Baycrest Research Centre for Aging and the Brain
- 8. Betterhumans
- 9. Biogerontology Research Foundation
- 10. BioValley
- 11. Brain Preservation Foundation
- 12. Brookdale Center for Healthy Aging
- 13. Buck Institute for Research on Aging
- Center for Aging & Community (CAC), University of Indianapolis
- 15. Center on Aging
- 16. Centre for Ageing and Supportive Environments (CASE)
- 17. Centre for Ageing Research and Development in Ireland (CARDI)
- 18. Centre for Policy on Ageing (CPA)
- 19. Centre for Social Gerontology
- 20. Centre on Aging
- 21. Danish Aging Research Center (DARC)
- 22. Danish Centre for Molecular Gerontology (DCMG)
- 23. Dementia Collaborative Research Centres (DCRC)
- 24. Dementia Research Centre (DRC)
- 25. Donald W. Reynolds Institute on Aging and Department of Geriatrics

- 26. ELPIs Foundation for Indefinite Lifespans
- 27. European Centre for Gerontology
- 28. Fischer Center for Alzheimer's Disease Research
- 29. Flinders Centre for Ageing Studies (FCAS)
- 30. Forever Healthy Foundation
- 31. Fundación Vidaplus
- 32. Geneva Foundation for Medical Education and Research
- 33. Geriatric Research Education and Clinical Centers (GRECC)
- 34. Geriatrics (Yale University)
- 35. German Centre for Neurodegenerative Diseases (DZNE)
- 36. German Centre of Gerontology (DZA)
- 37. Gerontological Economic Research Organization (GERO)
- 38. Gerontology Research Center (GRC)
- 39. Gerontology Research Group (GRG)
- 40. Gerontology Research Unit
- 41. Glenn Foundation For Medical Research
- 42. Global Healthspan Policy Institute
- 43. Harvey A. Friedman Center for Aging
- 44. Heales
- 45. Health 2030 Genome Centre
- 46. Health Extension Foundation
- 47. Huffington Center on Aging (HCOA)
- 48. Institute for Life Course and Aging
- 49. Institute of Gerontology (IFG)
- 50. International Institute on Ageing
- 51. International Longevity Alliance

- 52. International Longevity Centre UK
- 53. International Research Centre for Healthy Ageing and Longevity
- 54. Irish Centre for Social Gerontology
- 55. K-State Center on Aging
- 56. Landon Center on Aging
- 57. Life Extension Advocacy Foundation
- 58. Life Sciences Switzerland
- 59. Lifespan.io
- 60. LongeCity
- 61. Longevity Al Consortium (LAIC)
- 62. Major Mouse Testing Program
- 63. Max Planck International Research Network on Aging (MaxNetAging)
- 64. Max Planck UCL Centre for Computational Psychiatry and Ageing Research
- 65. Maximum Life Foundation
- Mercer's Institute for Research on Ageing (MIRA)
- 67. Methuselah Foundation
- 68. Monash Research for an Ageing Society (MonRAS)
- 69. Munich Center for the Economics of Aging (MEA)
- 70. Nathan Shock Center of Excellence in the Basic Biology of Aging
- 71. National Council on Aging
- 72. Neuroscience and Aging Research Center
- 73. Newfoundland & Labrador Centre for Applied Health Research (NLCAHR)
- 74. NIHR Newcastle Biomedical Research Centre
- 75. NYC Elder Abuse Center (NYCEAC)

- NYU Langone's Center for Cognitive Neurology and Silberstein Alzheimer's Institute
- 77. Pacific Parkinson's Research Centre (PPRC)
- 78. Palo Alto Longevity Prize
- Parkinson's Institute and Clinical Center
- 80. Population Aging Research Center
- 81. RAND Center for the Study of Aging
- 82. Regenerative Sciences Institute
- 83. Resource Centers for Minority Aging Research (RCMAR)
- 84. Schlegel-UW Research Institute for Aging (RIA)
- 85. Science for Life Extension Foundation
- 86. SENS Research Foundation
- 87. Society for the Rescue of our Elders
- 88. Swiss Biotech Association
- 89. Swiss Biotech Center SA
- 90. Swiss Coordination Committee for Biotechnology
- 91. Swiss Institute for Regenerative Medicine
- 92. Swiss National Science Foundation
- 93. Swiss Society for Aging Research
- 94. Swiss Society of Gerontology
- 95. Swiss Stem Cell foundation
- The Dunhill Medical Trust
- 97. University of Zurich (UZH) Institute for Regenerative Medicine
- 98. Velux Stifling
- 99. Vontobel Foundation
- 100. Wolfson Centre For Age-related Diseases

### 45 Supportive, Palliative, Geriatric and Political Charities



Geriatrics



Alliance for Aging Research



ARC Centre of Excellence in Population Ageing Research



BioValley Basel



Brookdale Center for Healthy Aging



Center for Aging and Community, University of Indianapolis



Center on Aging



Centre for Ageing and Supportive Environments



Centre for Ageing Research and Development in Ireland



Centre for Policy on Ageing



Centre for Social Gerontology



Geriatrics, Yale European Centre for Gerontology University





German Centre of Gerontology



Gerontological Economic Research Organization



Gerontology Research Center



Gerontology Research Unit at Massachusetts General Hospital



Glenn Foundation for Medical Research



Global Healthspan Policy Institute



Harvev A. Friedman Center for Aging



Heales



**Huffington Center** on Aging



Institute for Life Course and Aging



Institute of International Institute Gerontology on Ageing



International Longevity Alliance



International Research Centre for Healthy Ageing and Longevity



Irish Centre for Social Gerontology



K-State Center on



Life Sciences Switzerland



LongeCity



Monash Research for an Ageing Society



National Council on Aging



NYC Elder Abuse Center



Palo Alto

Longevity Prize

Population Aging Research Center

POPULATION AGING

RESEARCH CENTER

A CONTRACTOR



RAND Center for the Study of Aging



Resource Centers for Minority Aging Research



Schlegel-UW Research Institute for Aging



Swiss Biotech

Association

Swiss Coordination Committee for Biotechnology

SKB



Swiss National Science Foundation



Research



Swiss Society for Aging Swiss Society of Gerontology



■ Vontobel

Velux Stiftung

Vontobel

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Alliance for Aging Research	Sue Peschin	To advance science and enhance lives through a variety of initiatives—from policy issues to provider and consumer health programs— that generate knowledge and action on age-related issues.	USA	Washington, DC
ARC Centre of Excellence in Population Ageing Research	Marc de Cure	Their innovative research is providing global solutions to the economic and social challenges of population aging, and building a new generation of leading researchers.	Australia	Sydney
BioValley Basel	Matthias Staehelin	Connecting professionals in the Basel Life Science Cluster and the Tri-National BioValley; ensuring favorable conditions for the life sciences industry.	Switzerland	Basel
Brookdale Center for Healthy Aging	N/A	To explore the social, political, legal, and economic climate affecting health of older adults, and identify inequities in the access to care. Developing educational curricula and training for aging professionals.	USA	New York
Center for Aging and Community, University of Indianapolis	Robert Manuel	To provide consulting service, and develop partnerships between higher education and business organizations. To conduct research.	USA	Indianapolis
Center on Aging	Joan Ferrini-Mundy	To promote activities on ageing in the areas of education, research and evaluation, and community service. Serve as a consultative resource and clearinghouse for aging information and training needed.	USA	Bangor
Centre for Ageing and Supportive Environments	Susanne Iwarsson	Produces research focused on the elderly in relation to the environment, and aging populations, with the goal to ensure direct impact on older people's everyday lives.	Sweden	Lund
Centre for Ageing Research and Development in Ireland	Roger O'Sullivan	It focuses on the connections between public health and ageing. It carries out research and policy analysis relating to ageing and public health as well as providing information on ageing research developments.	Ireland	Belfast
Centre for Policy on Ageing	Gillian Crosby	The Centre works in partnership to influence policy and encourage debate on issues affecting older people.	UK	London
Centre for Social Gerontology	Miriam Bernard	To conduct research and teaching focussing on social gerontology and applied health research, and to translate findings into policies and practices that improve the lives of older people.	UK	Keele
European Centre for Gerontology	Marvin Formosa	International leader for the study of gerontology and geriatrics	Malta	Msida

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Geriatrics at Yale University	Mary Tinetti	To improve life quality of older persons through research, interventions to improve function, clinical initiatives, and teaching activities in health care improvement and clinical investigation.	USA	New Haven
German Centre of Gerontology	Clemens Tesch-Römer	An institute for scientific research in the field of social gerontology and applied health, in order to use this knowledge for scientifically independent consultation, social reporting, policy advice and information services.	Germany	Berlin-Tempelhof
Gerontological Economic Research Organization	Reinhard Schmitz-Scherzer	A free and independent research endowment foundation set up to promote international scientific research in the fields of gerontology, geriatrics, and related sciences. The most recent worldwide research and data on aging are analyzed and then realized as GERO research projects by using state-of-the-art communications technologies.	Switzerland	Kreuzlingen
Gerontology Research Center	Scott Lear	A focal point for research, education and information on social gerontology and applied health studies. They maintain an active publications program regarding Aging and the Built Environment, Changing Demography and Lifestyle, Health Promotion/Population Health and Aging, Prevention of Victimization, Exploitation of Older Persons and Technology and Aging.	Canada	Burnaby
Gerontology Research Unit at Massachusetts General Hospital	Deborah Blacker	Offers a multidisciplinary and individualized approach to the diagnosis and study of memory disorders, cognitive aging and Alzheimer.	UK	London
Glenn Foundation for Medical Research	Paul F. Glenn	To extend the healthy years of life through research on biogerontology, with the objective of translating research into clinical interventions. The Glenn Award provide unsolicited funds to researchers investigating the biology of aging.	USA	La Jolla
Global Healthspan Policy Institute	Edwina Rogers	Leading the charge in bold new policy initiatives on Capitol Hill and around the world, ensuring that billion dollar funds be used to address the systemic and underlying causes of aging-related disease.	USA	Washington, DC
Harvey A. Friedman Center for Aging	Nancy L. Morrow-Howell	Works toward a global society where all older adults have maximum opportunity for health, security, and engagement.	USA	St. Louis
Heales	João Pedro de Magalhães	Raise awareness of new developments in the area of biogerontology. Promote and support anti-aging research.	Belgium	Brussels
Huffington Center on Aging	Hui Zheng	To improve health quality of elders through research, education and patient care programs in Baylor College of Medicine. To increase the knowledge of the general public. Biogerontology and translational medicine.	USA	Houston

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Institute for Life Course and Aging	Esme Fuller-Thomson	The first aim of the Institute is to conduct applied interdisciplinary research on aging using a biopsychosocial approach. Focus on the on the processes of aging and population aging. Also, to provide graduate education in aging.	Canada	Toronto
Institute of Gerontology	Andreas Kruse	Research of inter and intraindividual variability; plasticity in dimensions of competence; theoretical integration and empirical analysis of biological - physiological, psychological, and social ageing, among others.	Germany	Heidelberg
International Institute on Ageing	Marvin Formosa	Empower low-income countries to cope with the challenges of the consequences of mass longevity in the next decades. Establishment of training centres providing national and international training key personnel.	Malta	Valleta
International Longevity Alliance	Maria Entraigues Abramson	To create the world where every person can obtain healthy longevity and ageing control through disruptive technologies.	International	International
International Research Centre for Healthy Ageing and Longevity	John D. Weller	To promote longevity through interdisciplinary collaboration amongst world's leading experts on the science of health, ageing, and longevity; to disseminate evidence-based knowledge throughout the nations.	Australia	Byron Bay
Irish Centre for Social Gerontology	Ciarán Ó hÓgartaigh	A multidisciplinary applied health and social gerontology research centre on ageing at NUI Galway. ICSG focuses on research, education and training in the field of social gerontology in Ireland and internationally.	Ireland	Galway
K-State Center on Aging	Gayle Doll	Strives to promote and conduct applied research on issues of aging with particular emphasis on the social, economic, psychological and environmental factors that may improve the quality of life for older adults.	USA	Manhattan
Life Sciences Switzerland		Advancing biological sciences and to addressing the social, ethical, and economic issues raised by the rapid progress of the biomedical sciences.	Switzerland	Zurich
LongeCity	Sebastian Caliban Sethe	Community supporting impactful research efforts for unlimited lifespans. They provide a 'crowdsourcing' platform for a diverse range of projects.	International	International
Monash Research for an Ageing Society	Christina Mitchell	Research and development of health and support-services, technologies, therapies, policies and programs that address age-related diseases. Focus on translational research and biotechnology.	Australia	Victoria
National Council on Aging	James Firman	The first charitable organization in the US providing a national voice for elderly.	USA	Arlington
NYC Elder Abuse Center	Risa Breckman	Provide a streamlined and rapid response to elder abuse cases. Serve as a resource by offering case consultations, education, speakers and research.	USA	New York
Palo Alto Longevity Prize	Joon Yun	Administer USD 1 million of cash prizes. Encourage collaboration, foster innovation, and build a community to address the underlying causes of aging.	USA	Palo Alto

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Population Aging Research Center (PARC)	Hans-Peter Kohler	online working paper series accessible over the Internet.	United States	Philadelphia
RAND Center for the Study of Aging	Michael D. Hurd	The Center aims to help improve policy through primary data collection and secondary data analysis. Its research agenda focuses on the interrelationships among health, economic status, socioeconomic factors, and public policy.	United States	Santa Monica
Resource Centers for Minority Aging Research (RCMAR)	Steven Wallace	RCMAR are designed (1) to enhance the diversity of the aging research workforce, and (2) to develop infrastructure to promote advances in these areas.	United States	San Francisco
Schlegel-UW Research Institute for Aging (RIA)	Josie d'Avernas	RIA supports practice-relevant research and mobilizes research evidence so it can inform programs, be integrated into education and training, and influence practice and policy.	Canada	Kitchener
Swiss Biotech Association	Dominik Escher	Swiss biotech companies are leading the way in developing and commercializing innovative medicines, diagnostics, healthcare treatments, services and enabling technologies.	Switzerland	Zürich
Swiss Coordination Committee for Biotechnology	Jan Lucht	SCCB serves as an umbrella for leading biotechnology organizations in Switzerland. It encourages the development of a sustainable biotechnology sector in the country.	Switzerland	Zürich
Swiss National Science Foundation	Felicitas Pauss	The SNSF's strategic goals are: support high-quality research; bring research funding closer into line with the researchers' needs; support the spread of knowledge in society, and demonstrate the value of research.	Switzerland	Bern
Swiss Society for Aging Research	Collin Ewald	Bridge and promote the scientific exchange between scientists in aging research across academic and medical institutions, as well as industry within Switzerland and with other countries.	Switzerland	Zurich
Swiss Society of Gerontology	Delphine Roulet Schwab	It is is a multidisciplinary organization devoted to research and education in all aspects of gerontology: medical, biological, psychological and social.	Switzerland	Bern
Velux Stifling	Lukas von Orelli	The foundation wants to create impact by supporting research projects addressing relevant problems with a high potential for change and leverage.	Switzerland	Zürich
Vontobel Foundation	Herbert J. Scheidt	They provide a comprehensive foundation management service, extending from its initial set-up to managing it in line with the foundation purpose.	Switzerland	Zürich

### 35 Basic Research Charities





Alzheimer's and Aging Research Center



Alzheimer's Research UK



American Aging Association



Baycrest Research Centre for Aging and the Brain



**Betterhumans** 



Centre on Aging



Danish Aging Research Center



Danish Centre for Molecular Gerontology



Dementia Collaborative Research Centres



Dementia Research Centre



Donald W. Reynolds Institute on Aging



Fischer Center for Alzheimer's Disease Research



Flinders Centre for Ageing Studies



Forever Healthy Foundation



**GFMER** 



Geriatric Research Education and



German Centre for Neurodegenerative Diseases



Gerontology Research Group



International Longevity Centre -UK



Maior Mouse **Testing Program** 



MaxNetAging



Max Planck UCL Centre



Maximum Life Foundation



Munich Center for the Economics of Aging



**Clinical Centers** 

Nathan Shock Center



NIHR Newcastle Biomedical Research Centre



NYU Langone's Center



Pacific Parkinson's Research Centre



Parkinson's Institute and Clinical Center



Society for the Rescue of our Elders



Swiss Institute for Regenerative Medicine



Swiss Stem Cell foundation



The Dunhill Medical Trust



UZH Institute for Regenerative Medicine



Wolfson Centre For Age-related Diseases

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Alzheimer's and Aging Research Center	N/A	It funds research which is focused on finding treatments for Alzheimer's disease and other aging-related diseases, and provides information to the scientific community and to the general public worldwide, via scientific publications and presentations, brochures, a website, and other reports.	United States	Port St. Lucie
Alzheimer's Research UK	Hilary Evans	Alzheimer's Research UK is the UK's leading dementia research charity, dedicated to causes, diagnosis, prevention, treatment and cure.	United Kingdom	Great Abington
American Aging Association	Rozalyn Anderson	The American Aging Association is committed to providing a harmonious conference environment based on mutual respect, dignity and support. It recognizes a crucial, compelling need to promote diversity in the aging research workforce.	United States	Grandville
Baycrest Research Centre for Aging and the Brain	Robert C. Kay	The center facilitates collaborations among scientists, clinicians, educators, students, clients, older adults and volunteers who come together to seek and discover ways to improve human brain function and the journey of aging.	Canada	Toronto
Betterhumans	James Clement	It is the world's first specifically-transhumanist bio-medical research organization. Its goal is to develop therapies that can be offered at the lowest cost possible.	United States	LaFayette
Centre on Aging	Michelle Porter	The dynamics of an aging society is investigated using rigorous scientific standards. Community representatives contribute to projects, and the Centre distributes its findings to administrators, policy makers, practitioners, and older adults to assist them in making decisions.	Canada	Winnipeg
Danish Aging Research Center (DARC)	Kaare Christensen	The center conducts research in human aging processes from cross-disciplinary angles. We combine aging research from both quantitative and qualitative fields.	Denmark	Odense
Danish Centre for Molecular Gerontology (DCMG)	Tinna Stevnsner	The scientific aims of DCMG are to identify molecular and cellular mechanisms involved in the ageing process and in the origin of age-related diseases, to search for methods for recovery of lost biological activity during ageing.	Denmark	Aarhus
Dementia Collaborative Research Centres (DCRC)	Kaarin Anstey	This framework serves to grow partnerships and strengthen ties with consumers and service providers, in order to progress prevention, assessment, care and translation of knowledge into everyday practice, as well as building the next generation of dementia researchers.	Australia	Sydney

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Dementia Research Centre (DRC)	Nick Fox	Work focuses on identifying and understanding the disease processes that cause dementia, the factors that influence these disease processes, ways to improve diagnosis and treatments, and how best to support people with dementia and their families.	United Kingdom	London
Donald W. Reynolds Institute on Aging and Department of Geriatrics	Jeanne Wei	It is one of the larger primary care clinical programs on campus. It operates a robust and successful clinical program that provides superb patient care, and serves as an ideal clinical laboratory for education and clinical research.	United States	Little Rock
Fischer Center for Alzheimer's Disease Research	Barry Sloane	The Foundation is an organization that provides millions of dollars for novel Alzheimer's research primarily conducted by the late Nobel laureate Dr. Paul Greengard and his team at the Fisher Center lab at The Rockefeller University, plus other leading research institutes around the world.	United States	New York
Flinders Centre for Ageing Studies (FCAS)	Stephen Gerlach	The general purpose of the ALSA study is to gain further understanding of how social, biomedical and environmental factors are associated with age related changes in health and well-being of persons aged 70 years and over.	Australia	Adelaide
Forever Healthy Foundation	Michael Greve	The foundation and its resources allow to increase overall efforts, hire dedicated personnel, fund research and accelerate the access to healthy longevity for everybody.	Germany	Karlsruhe
Geneva Foundation for Medical Education and Research	José Villar	It is a non-profit organisation that aims to provide health education and research training, creating programmes that can be applied by developing countries and countries in economic transition.	Switzerland	Geneva
Geriatric Research Education and Clinical Centers (GRECC)	Neil B. Alexander	They have three main missions: (1) to build new knowledge through research; (2) to improve health care through the development of new clinical programs; and (3) to ensure that "VA" staff are educated about aging-related issues.	United States	Washington
German Centre for Neurodegenerative Diseases	Pierluigi Nicotera	DZNE scientists explore the similarities and differences of various brain diseases with the aim of developing new preventive and therapeutic approaches. Fundamental research is closely linked to clinical research, population studies and health care research, to identify new diagnostic markers.	Germany	Bonn
Gerontology Research Group	Johnny Adams	GRG is the foremost authority on the world's oldest humans – specifically supercentenarian research, authentication and database.	Canada	Burnaby

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
International Longevity Centre - UK	David Sinclair	They work with central government, local government, the private sector, and professional and academic associations to provoke conversations and pioneer solutions for a society where everyone can thrive, regardless of age.	United Kingdom	London
Major Mouse Testing Program	Steve Hill	The MMTP is the project to speed up progress in aging research and make a significant contribution towards interventions that can positively affect health and longevity.	International	International
MaxNetAging	James W. Vaupel	The MaxNetAging is a virtual institute for the advancement of research on the causes, patterns, processes, and consequences of aging. It is part of the broad activities carried out by the Max Planck Society in this field.	Germany	Rostock
Max Planck UCL Centre for Computational Psychiatry and Ageing Research	Ray Donald	It is dedicated to studying the causes of psychiatric disorders as well as the causes of individual differences in cognitive development, with an emphasis on adulthood and old age.	United KIngdom	London
Maximum Life Foundation	David Kekich	The Foundation has created a network of scientists, physicians, and biotechnology industry professionals to use their talents and resources to develop a strategic plan to understand and neutralize the causes of senescence.	United States	Newport Beach
Munich Center for the Economics of Aging	Axel Börsch-Supan	The mission is to evaluate, anticipate and accompany the micro- and macroeconomic aspects of demographic change. Empirical models and their resulting projections enable MEA to deliver sound scientific advice for economic and social policy.	Germany	Munich
Nathan Shock Center of Excellence in the Basic Biology of Aging	Felipe Sierra	The Centers provide leadership in the pursuit of basic research into the biology of aging. They do so through a Research Development Core which administers small start-up funds locally, and organizes national annual meetings.	United States	Washington, DC
NIHR Newcastle Biomedical Research Centre	Avan Sayer	The aim of the centre is to comprehensively address the complex health care needs of the older people, based on an advanced understanding of the ageing process and age-related disease.	United Kingdom	Newcastle upon Tyne
NYU Langone's Center for Cognitive Neurology and Silberstein Alzheimer's Institute	Thomas Wisniewski	It is a multidisciplinary center devoted to research, clinical care, and clinical advances in the treatment of neurological diseases affecting cognition, such as memory, language, attention, auditory, visual, and thinking difficulties.	United States	New York

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Pacific Parkinson's Research Centre (PPRC)	M. J. McKeown	The Centre is dedicated to the diagnosis and management of Parkinson's and other related disorders, such as tremor and dystonia. In addition to treatment of patients, we conduct a strong research program that spans preclinical, clinical and population studies.	Canada	Vancouver
Parkinson's Institute and Clinical Center	Brian Coulter	Parkinson's Institute and Clinical Center (PICC) revolutionizes the treatment and research of Parkinson's disease by providing world-class patient care and leading groundbreaking discoveries aimed to close the gap between science and care.	United States	Sunnyvale
Society for the Rescue of our Elders (Age Reversal Network)	Bill Faloon	The purpose of the Age Reversal Network is to exchange scientific information, foster strategic alliances, and support biomedical endeavors aimed at reversing degenerative aging.	United States	N/A
Swiss Institute for Regenerative Medicine	Dominik Escher	It is fully committed to unleash the enormous potential of human body regeneration and thereby develop next-gen therapies and cures that will shape the medicine of the future.	Switzerland	Taverne
Swiss Stem Cell foundation	Gianni Soldati	The Foundation's activities, carried out both at a national and international level, include in particular: research and development of technologies in the pre-clinical phase, consultancy through qualified professionals on new products, the study and development of new tools, medical devices, therapies and, in general, applied research projects, etc.	Switzerland	Gentilino
The Dunhill Medical Trust	Susan Kay	Its objectives contain: the furtherance of medical knowledge and research and the publication of the useful results thereof; the provision of medical care and facilities; the research into the care of older people.	United Kingdom	London
University of Zurich (UZH) Institute for Regenerative Medicine	Simon P. Hoerstrup	Their mission is advancing molecular life sciences into next generation bio-inspired therapies at the Interface of degeneration and regeneration with a major focus on the most relevant human diseases, including neurodegeneration and cardiovascular disease.	Switzerland	Zürich
Wolfson Centre For Age-related Diseases	Brenda Williams	A unifying theme within the Wolfson CARD is interest in neuronal receptors, channels and signalling These are the cellular and molecular mechanisms that result in the altered sensory function cause a variety of pain states and that causes hearing loss and tinnitus.	United Kingdom	London

## **20 Disruptive Engineering Charities**





Ageing Research at King's



Biogerontology Research Foundation



Brain Preservation Foundation



Buck Institute for Research on Aging



ELPIs Foundation for Indefinite Lifespans



Fundación Vidaplus



Health 2030 Genome Centre



Health Extension Foundation



Landon Center on Aging



Life Extension Advocacy Foundation



Lifespan.io



Longevity Al Consortium



Mercer's Institute for Research on Ageing



Methuselah Foundation



Neuroscience and Aging Research Center



Newfoundland & Labrador Centre for Applied Health Research



Regenerative Sciences Institute



Science for Life Extension Foundation



SENS Research Foundation



Swiss Biotech Center

# 100 Longevity Charities **Disruptive Engineering**

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Ageing Research at King's (ARK)	Richard Siow	ARK is a cross-faculty multidisciplinary consortium of investigators which brings together scholarship and research in ageing in several complementary areas. It represents King's world class excellence for research on the biology of ageing, from the basic mechanisms in biogerontology to clinical translation.	United Kingdom	London
Biogerontology Research Foundation	Alex Zhavoronkov	It is leading non-profit focused on Longevity and on expediting the coming paradigm shift from disease treatment to personalized precision prevention.	United Kingdom	London
Brain Preservation Foundation	Kenneth Hayworth	BPF's institutional mission is to promote validated scientific research and technical services development in the field of whole brain preservation for long-term static storage.	United States	Ashburn
Buck Institute for Research on Aging	Eric Verdin	It is the world's first biomedical research institution devoted solely to research on aging. Everything they do revolves around commitment to helping people live better longer.	United States	Novato
ELPIs Foundation for Indefinite Lifespans	Phil Micans	The foundation is a multidisciplinary endeavour aiming to formally study the real and perhaps imminent possibility of the abolition of human ageing, i.e. the achievement of an indefinite lifespan.	United Kingdom	London
Fundación Vidaplus	Txetxu Mazuelas Angulo	It aims to promote a culture of knowledge related to regenerative medicine.	Spain	Madrid
Health 2030 Genome Centre	Emmanouil Dermitzakis	The Genome Center is conceived as a hub for genetics and genomics research to foster collaboration, to increase communication and to promote the sharing of ideas, allowing for the long-term development of major initiatives.	Switzerland	Geneva
Health Extension Foundation	Joe Betts-LaCroix	Health Extension Foundation is a tax exempt organization operating with the mission to promote hard science / deep biology in the aging space, especially where such science can lead to biotechnology startups.	United States	Belmont
Landon Center on Aging	Randolph Nudo	Landon Center on Aging includes a Geriatric Medicine Clinic; facilities for researchers; coursework for the next generation of healthcare providers to learn from faculty about the care of older adults; an optimal location for community participants to engage in a variety of outreach programs.	United States	Kansas City
Life Extension Advocacy Foundation	Keith Comito	Its mission is to promote biomedical technologies that will increase healthy human lifespan. By crowdfunding research efforts and engaging the public, they aim to more quickly bring about a future free from age-related diseases.	United States	New York

# 100 Longevity Charities **Disruptive Engineering**

NAME	HEADSHIP	DESCRIPTION	COUNTRY	CITY
Lifespan.io	Bruce J. Klein	The foundation promotes the advancement of biomedical technologies which could increase healthy human lifespan. It focuses on healthspan, longevity, rejuvenation biotechnology, regenerative medicine, and life extension.	United States	New York
Longevity Al Consortium (LAIC)	Chris Mottershead	Longevity Al Consortium is partnership between Ageing Research at King's and Biogerontology Research Foundation and Insilico Medicine, Deep Knowledge Ventures and Ageing Analytics Agency to utilise the latest Al advances and accelerate innovation and technology transfer.	United Kingdom	London
Mercer's Institute for Research on Ageing (MIRA)	Rose Anne Kenny	The Institute promotes coordinated patient-centred care, coupled with far-reaching educational and training programmes.	Ireland	Dublin
Methuselah Foundation	David Gobel	Their work includes: incubating and investing in early-stage life science companies, funding scientific research, providing fiscal sponsorship, and sponsoring inducement prizes.	United States	Springfield
Neuroscience and Aging Research Center	N/A	The center involves 10 neuroscience labs, that focus on research of diseases of human brain.	United States	La Jolla
Newfoundland & Labrador Centre for Applied Health Research (NLCAHR)	Margaret Steele	NLCAHR is constituted as a research centre within Memorial University. The Centre is funded primarily through an annual grant from the Department of Health and Community Services of the Government of Newfoundland and Labrador.	Canada	Newfoundland
Regenerative Sciences Institute	Jennifer Lei	RSI is developing the regenerative and synthetic bio-technologies necessary to alleviate the infirmities and diseases of aging by creating the tools to program living systems.	United States	Sunnyvale
Science for Life Extension Foundation	Mikhail Batin	It is charitable foundation for support of the scientific research	Russia	Moscow
SENS Research Foundation	Michael Kope	It works to develop, promote, and ensure widespread access to therapies that cure and prevent the diseases and disabilities of aging by comprehensively repairing the damage that builds up in our bodies over time.	United States	San Francisco
Swiss Biotech Center SA	Massimo Nobile	The Swiss Biotech Center has two main areas of expertise: In vitro diagnostics, and particularly point-of-care rapid analytical tests and Biological drugs (biopharmaceuticals).	Switzerland	Monthey



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