

NINTH WORLD CONFERENCE
THE FUTURE OF SCIENCE™



Secrets of Longevity

VENICE, SEPTEMBER 19 - 21, 2013

Fondazione Giorgio Cini, Isola di San Giorgio Maggiore, Venezia

Longevity is one of the most topical phenomena of our age, bringing about profound changes on the social, cultural, medical and scientific level. Every stage of our life is undergoing deep transformations as traditional roles and phases evolve, with largely unexplored consequences from a demographic, economic and biological perspective.

The ninth edition of "**The Future of Science**" World Conference will attempt to unveil the **secrets of longevity**. From 19 to 21 September, some of the world's leading experts will gather on the Island of San Giorgio Maggiore in Venice to discuss the most pressing issues arising from a longer lifespan.

For information and registration info@thefutureofscience.org - www.thefutureofscience.org

CONFERENCE COMMITTEES

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Conference is organized by:



THURSDAY – SEPTEMBER 19TH , 2013 – h. 5.00/7.00 p.m.

Welcome Addresses

Umberto Veronesi	President The Future of Science
Giovanni Bazoli	President Giorgio Cini Foundation
Marco Tronchetti Provera	President Silvio Tronchetti Provera Foundation
Kathleen Kennedy Townsend	Vice President The Future of Science
Chiara Tonelli	Secretary General The Future of Science

Opening Lectures

<i>The Longevity Project: Life-long Paths to Long Life</i>	Howard S. Friedman , Professor of Psychology, University of California, Riverside
<i>Molecular genetics of Longevity</i>	Pier Giuseppe Pelicci , Director, Department of Experimental Oncology, Istituto Europeo di Oncologia, Milano

WELCOME COCKTAIL – FONDAZIONE CINI, h. 19.00

FRIDAY – SEPTEMBER 20TH , 2013 – h. 9.00 a.m./1.00 p.m.

Chairs: **Chiara Tonelli**, Secretary General The Future of Science; Professor of Genetics, Vice-Rector for Research, University of Milano **and** **Pier Giuseppe Pelicci**, Director Department of Experimental Oncology, Istituto Europeo di Oncologia, Milano

It is a well-known fact that the **interaction of genetic and environmental factors affects the lifespan of an individual**. But it still unclear how this process takes place. **Studies in evolution have shed some light on it. Why and how did the selection of lifespan regulating genes occur? Are longevity genes the same for body and mind?** Gene-environment interaction opens another major question, that is how to control environmental risk by acting on people's lifestyles, in order to slow down the ageing process and prevent common diseases, including cancer.

<i>The Evolutionary Foundation of Ageing and Longevity</i>	Thomas Kirkwood , Associate Dean for Ageing, Institute for Ageing and Health, Newcastle University
<i>Seeking the Fountain of Youth: Is Dietary Restriction the Key to a Longer and Healthier Life?</i>	Luigi Fontana , Professor, Department of Medicine, Salerno University, Italy and Washington University School of Medicine, USA
<i>Metabolically normal and abnormal obesity and aging</i>	Samuel Klein , Professor of Medicine and Nutritional Science, Director, Center for Human Nutrition, Washington University School of Medicine, USA
<i>Lifespan extension in human evolution: Intelligence, Inter-generational Transfers, and Health in Old Age</i>	Hillard S. Kaplan , Professor, Department of Anthropology, University of New Mexico

AIRC LECTURE

Chromosome Ends, Cancer and other Diseases of Aging

Elizabeth Blackburn, Professor, Dept. of Biochemistry and Biophysics, University of California, San Francisco; Nobel Prize in Medicine 2009

FRIDAY – SEPTEMBER 20TH , 2013 – h. 2.00 p.m./5.30 p.m.

Chair: **Michela Matteoli**, Professor of Pharmacology, University of Milano and Director of Neuroscience Program, Humanitas Clinical and Research Center

The brain allows animals to adapt to changeable environments, and is subject to environmental influences affecting its development. **There is a correlation, especially in mammals, between life expectancy and the brain-to-body mass ratio.** Species with larger brain size develop more slowly, reach maturity later, and have a longer life expectancy. In addition, **it is now apparent that, unlike body cells, neurons do not suffer from ageing.** In the absence of pathological conditions, the lifespan of neurons is limited only by that of their host's body. This session will focus on **molecular mechanisms for the storage of information in the brain, particularly in relation to the capability of neurons to adjust their function according to past experiences and environmental influences.**

Madness, Genius and Origin of the Brain

Seth Grant, Professor of Molecular Neuroscience, Centre for Clinical Brain Sciences and Centre for Neuroregeneration, The University of Edinburgh, UK

Epigenetic mechanisms in learning and memory

David Sweatt, Chair, Dept. of Neurobiology, University of Alabama at Birmingham

Chair: **Gabriella Pravettoni**, Professor of Cognitive Psychology, University of Milano; Director Psychology Unit, Istituto Europeo di Oncologia, Milano

Over the past two decades, research in medicine and neuroscience has highlighted a significant increase in life expectancy. We need to rethink **longevity as a phase of life requiring a new approach. Our focus must switch from preventing cognitive decay to ensuring the well-being and quality of living for the elderly**, promoting social initiatives that may enhance their cognitive resources and "healthy" habits, by expanding their areas of interests, values, ideals and desires, with subsequently lower costs for the health sector.

Aging and Memory: how to foster successful functioning in Old Age

Lars Bäckman, Professor of Cognitive Neuroscience of Aging, Aging Research Center, Karolinska Institute, Stockholm, Sweden

Over 65 and working: the impact of working beyond retirement age on health and wellbeing

Mark Cropley, Professor of Health Psychology, University of Surrey, UK

ROUND TABLE

Longevity: Resource for Society

Mariella Enoc, **Giovanni Scapagnini**,
Angelo Ferro, **Marcella Logli**

COCKTAIL E CONCERT – SCUOLA GRANDE DI SAN ROCCO, h. 20.00

SATURDAY – SEPTEMBER 21st, 2013 – h. 9.00 a.m. – 2.00 p.m.

Chairs: **Francesco Billari**, Professor of Sociology and Demography, Head Dept. of Sociology, University of Oxford, UK *and* **Kathleen Kennedy Townsend**, Vice President The Future of Science

In the past 30 years, life expectancy in industrialised countries has increased by six hours per day. This phenomenon poses a number of relevant issues about how to predict the future of human longevity and which strategies may guarantee a longer and better life. **In this context, it is essential to address the economic consequences on the retirement systems, the international capital flows generated by heterogeneous demographic structures among different countries, and the management of systemic risk arising from individuals living a longer life.** This interdisciplinary session will present the contributions of biodemography and economics to answering such topical questions.

<i>Active and Healthy Ageing: the European Innovation Partnership</i>	Sergio Pecorelli , Chancellor, Università degli Studi di Brescia; President AIFA
<i>The Biodemography of Longevity</i>	James W. Vaupel , Executive Director, Max Planck Institute for Demographic Research, Rostock, Germany
<i>Economics of Ageing</i>	Agar Brugiavini , Professor of Economics, Università Cà Foscari, Venezia
<i>The Economic Consequences of Longevity</i>	Carlo Ambrogio Favero , Director, Professor, Financial Department, Università Bocconi, Milano

The official languages of the Conference are English and Italian. Simultaneous translations into Italian and English will be provided.