GDRI PhyGHA - Physiology and Genetics of healthy aging
GDR multi-organismes - Longévité et vieillissements (GDR CNRS 3662)

Joint meeting 2016

Evolution of cognition and longevity: Adaptation to a new technological environment

Paris, October 27-28, 2016

Auditorium of the "Grande Galerie de l'Évolution"

National Museum of Natural History

36 Rue Geoffroy-Saint-Hilaire, 75005 Paris - France

Two distinctive features of *Homo sapiens* are extended lifespan and large brain size, associated to higher cognitive functions such as reasoning, metacognition and articulated language. It has been proposed that these two human-specific characters are the products of coevolutionary selection.
Although several mathematical and demographic models exist for the coevolution of intelligence and longevity, the underlying physiological and genetic mechanisms remain still to be determined.
The recent, impressive, progresses in the analysis genomic variations from thousands of individuals and from ancestral hominids (including *Homo neandertaliensis* and great apes) permits to unveil some of the genetic features that might have supported this coevolution.
The identification of genomic determinants of the coevolution of longevity and cognition is now supported by the large amount of data deriving from the analysis of aging cohorts and the identification of pathology-related variations.
The aim of this meeting is to bring together sociologists, geneticists, physiologists and specialists of human evolution to present to their colleagues, in an easily understandable way, the latest progress in their respective fields.
Session of the meeting will be devoted to the impact on aging and cognition of the rapidly evolving technological landscape and to the impact of environmental factors on human development.

Topics that will be addressed include the interaction between physiological, genetic, epigenetic and environmental factors on the development of cognitive capacities and longevity from conception to death.

PRELIMINARY PROGRAM

October 27, 2016

10.00-10.20 Introductory remarks – ***Jean-Marie ROBINE, Giovanni LEVI***

10.20-11.35 -S1 - Palaeoanthropology

10.20-10.45 Dominique GRIMAUD-HERVE / Antoine BALZEAU – MNHN – Brain, calvarium, cladistics: A new approach to an old question, who are modern humans and Neandertals?

10.45-11.10 David RAICHLEN – University of Arizona – Exercise, APOE genotype, and the evolution of the human lifespan.

11.10-11.35 Viviane SLON – Department of Evolutionary Genetics - Max Planck Institute for Evolutionary Anthropology – Title to be communicated

11.35 – 11.40 Coffee Break

11.40-13.00 -S2- Co-evolution of intelligence and longevity

11.40-12.10 James R. CAREY – University of California, Davis – Evolutionary interconnections of longevity, sociality and intelligence"

12.10-12.35 Martin VORACEK – University of Vienna – The Flynn effect – To be confirmed

12.35-13.00 Michael MUTUKRISHNA – LondonSchool of Economics and Political Sciences – Evolutionary processes that underlie culture and how culture is transmitted

Lunch 13:00 – 14:30 Grande Mosquée de Paris

14.30-16:00 –S3- Ecology

14.30-14.55 Hervé CHNEIWEISS – UPMC – Impact of environment on our brain (environmental neuroethic)

14.55-15.20 Barbara DEMENEIX – MNHN – Thyroid hormone, brain evolution and environmental chemicals

15.20-15.45 Donata LUISELLI – University of Bologna – Nutrition and cognition in human evolution

15.45 – 16.10 Coffee Break

16:10-18:00 –S4- Biodemography / The longevity revolution in human species

16.10-16.35 Jean-Marie ROBINE, GDR INSERM/EPHE – The human adult longevity revolution

16.35-17.00 Kaare CHRISTENSEN, Danish Aging Research Center – Cognition and Survival at the Highest Ages

17.00-17.40 Speaker to be defined

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10:00-11:30 –S5- Genetics of longevity and cognition

10.00-10.25 Claudio FRANCESCHI – GDRI – University of Bologna – Inflammaging and neurodegenerative diseases within an evolutionary perspective

10.25-10.50 Ian DEARY – Edimbourgh – Evolutionary conserved longevity genes and human cognitive abilities in elderly cohorts

10.50-11.15 Paolo GARAGNANI – GDRI – University of Bologna – Proximate and remote determinants of human longevity

11.15 – 11.25 Coffee Break

11:25-13:00 –S6- Epidemiology / Trends in cognition

11.25-11.50 Eileen CRIMMINS – University of Southern California Davis School of Gerontology – Title to be communicated

11.50-12.15 Dorly J.H. DEEG – VU University Center – Amsterdam – Twenty-year trends in cognitively health life years

12.15-12.40 Carol BRAYNE – CFAS study – Dementia and cognition across time and geography

12.40-13.05 Carole DUFOUIL – University of Bordeaux – Title to be communicated

Lunch 13.15 – 14.30 Grande Mosquée de Paris

14.30 – 16.00 –S7- New technologies / Use of new technologies by old and oldest-old people

14.30-14.55 Filippo CAVALLO – Scuola Superiore Sant'Anna – Pisa A Cloud Robotics Solution to Improve Social Assistive Robots for Active and Healthy Aging

14.55- 15.20 Rodolphe GELIN – *EVP Chief Scientific Officer* ***SoftBank Robotics, France*** – Assistant robots for elderly people

15.20-15.45 Noelle CALIZOT, Jean MARIANI – Neuradom Pharm, UMR 8256 B2A Biological Adaptation and Ageing – UPMC Neurorehabilitation after either stroke or neurodegenerative disease

15.45 – 16.05 Coffee Break

16:05-17.45 -S8- Anthropology, sociology and psychology

16.05-16.30 Armelle VIARD – U INSERM–EPHE–UNICAEN U1077, CAEN – Title to be communicated *(Evolution and new technology: a same fight, increasing memory?)*

16.30-16.55 Frédéric BALARD – GDR, Nancy – Cognitive decline as a mean to adapt to a very long life and protect his/her quality of life

16.55-17.20 Macia ENGUÉRAN – GDR Africa – Title "Transformation of the body and its impact on identity of older adults during the 20th century"

17.20-18.00 General discussion, future perspectives.