

# Call for Abstracts

## Conference

### *Human Enhancement and Evolution*

#### Scientific, Technological, Policy & ELS Considerations

Lisbon

13<sup>th</sup> - 14<sup>th</sup> December 2017.

**Host Institution:** Centre for Philosophy of Science of the University of Lisbon (CFCUL)  
[<http://cfcul.fc.ul.pt/>], C1, 3<sup>rd</sup> floor

The Conference will have two parts:

#### **1. Evolution and the Sciences and Technologies of Human Enhancement**

Organismal dynamics are such that organisms incontrovertibly affect the very evolutionary pressures that shape them, even if only indirectly. But seemingly, amongst all organisms and perhaps owing to their cognitive evolution, humans became exceptionally fine controllers of both theirs and other organisms' evolutionary processes. In virtue of the sciences and technologies of human enhancement, more effective exertion of control over evolution is nowadays becoming evident, and this is shown among others by the rise of new technics such as genetic editing tools. However, human enhancement and its broad evolutionary effects are still understudied.

We invite contributions to the effort of understanding the plethora of ways in which evolution relates to human enhancement. As such, topics of interest may include, but are not limited to:

- The human evolutionary possibilities: predictive models, challenges and limitations;
- Directed evolution, both gene driven (e.g. genetic engineering, induced mutagenesis, and reprogenetics) or non-germline based;
- Evolutionary trade-offs of assisted modes of human reproduction, immunity engineering, medical and health technologies, and of longevity enhancements (interferences in senescence and lifespan), their demographics and population dynamics;
- Natural and artificially induced reticulate evolution (e.g. human-non-human transgenesis);
- Present & future human evolution (e.g. k-selection and speciation);
- The impact of technological evolution *qua* niche construction on human evolution and ecology (e.g. geoengineering; non-Earth-bounded evolution);
- Non-carbon-based evolution (including AIs of all kinds & alien);
- The evolution of 4E and scaffolded cognition;
- The relation between fitness and human enhancement (e.g. does human enhancement enhance fitness?);
- Working definitions of "human enhancement" for Evolutionary Theories;
- Is there actual control over evolution? How could we understand it?
- Human evolution in relation to Technology evolution (e.g. human-machine interfaces);

Keynote Speaker(s): Professor John Harris; *TBA*.

Invited Speaker(s): *TBA*.

Local Organizing Committee: João Pinheiro [CFCUL]; Dr. Alexander Gerner [CFCUL].

## **2. Policy & ELSA of Genome Editing and Human Enhancement**

Genome editing is a technology with the potential to promote and enhance health and understand disease. However, as many other disruptive advances in science, it also brings challenges at an ethical, legal, social, and political level, particularly regarding the treatment of hereditary diseases and the integrity of the human germline. The possibilities of genome-editing and its limits and consequences, specifically to therapeutic applications and targeted interventions in ecosystems are being broadly discussed by many. It will be important to contribute to the debate in a critical and transparent way with the participation of scientists, society and policy-makers. This will provide a platform to better assess the benefits and potential risks of the technology to help support the development of sound policies in the future.

We invite reflections upon the following themes (but not limited to):

- Ethical, legal, political and social challenges associated with genome-editing;
- Genetic editing: evolution of technology and medicine and its Implications for human health, and the natural environment;
- Socio-ethical and policy-related questions about the acceptability of germline modification;
- Challenges on defining “Genetic identity”, parenthood and respective responsibilities: limits and consequences;
- “Human enhancement” potential of genetic editing: Implications and scientific-technological feasibility thereof;
- Responses to the challenge of established norms.

Keynote Speaker(s): Professor Bartha Maria Knoppers; *TBA*.

Invited Speaker(s): *TBA*.

Local Organizing Committee: Dr. Alexander Gerner [CFCUL]; Dr. Mara Almeida [CFCUL].

**Scientific Committee:** Professor Philip Kitcher; Professor Gregory Stock; Professor Susan Kelly; Professor Kevin M. Esvelt; Professor Rita Zilhão; Dr. Nathalie Gontier; Professor Maria Fernanda Palma.

### **Abstract submission**

For your submission please make sure to provide two separate documents: (1) Information Document with all authors' names and affiliations, a working address for the corresponding author, and respective e-mail address; (2) Anonymized Document with a title and an abstract of 500 words max. (excluding bibliographical references). Both documents should be sent to [philhumtech@gmail.com](mailto:philhumtech@gmail.com) until the 20<sup>th</sup> of October under the heading of “Submission to Conference Human Enhancement and Evolution”.

The announcement of the results is set to the 31<sup>st</sup> October. The selected abstracts will be invited for a 20min. presentation.

Authors of selected abstracts to the 1<sup>st</sup> part of the conference will later be invited to contribute to a peer reviewed volume in the Springer Book Series *Interdisciplinary Evolution Research on*

the topic of *Evolution and the Sciences and Technologies of Human Enhancement* [<http://www.springer.com/series/13109>]. The contributors to the 2<sup>nd</sup> part of the conference will also be considered for publication.

**Registration and attendance are free of charge.**

Conference dinner is scheduled for the 14th December in Lisbon.

The conference is organized by the Philosophy of Human Technology Strategic Research Line of the CFCUL and will be held in English at the Faculty of Sciences of the University of Lisbon, Campo Grande, Amphitheatre ID-Ciências, Building C1, 3<sup>rd</sup> floor, Lisbon, Portugal.

Please feel free to contact the organizers in case you have any doubts or use the general e-mail address: [philhumtech@gmail.com](mailto:philhumtech@gmail.com).

Kind regards from Lisbon,  
The organizing committee,

Dr. Alexander Gerner [[amgerner@fc.ul.pt](mailto:amgerner@fc.ul.pt)]

Dr. Mara Almeida [[msalmeida@fc.ul.pt](mailto:msalmeida@fc.ul.pt)]

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