

CRISPR/Cas9 is the most efficient new tool for genome editing. It is simple and cost-effective. There is great hope for curing severe genetic diseases using CRISPR/Cas9. Moreover, there are several ground-breaking practical applications possible such as improved somatic gene therapy, germline modification, and management of disease-bearing insect populations (e.g. mosquitos) in the wild.

While scientists are working to establish technical safety of CRISPR/Cas9 i.e. to minimize or even eliminate off-target effects, we also need to consider the ethical, medical, and legal implications of such interventions.

Since its publication by Jennifer Doudna and Emmanuelle Charpentier in Science 2012, the scientific community has discussed ethical issues, in particular those which affect following generations: Special focus has been given to germline modifications. But there is another application, the modification of insect populations, namely the "gene drive" system targeting female reproduction in the malaria mosquito vector *Anopheles gambiae*.

As human beings we have a moral duty towards ourselves, but also to conserve and protect the integrity of the ecosystem. This conference is a follow-up meeting of the INSERM Conference in March 2016 in Paris. It is focussed on the influence and the ethical and societal consequences of this potential malaria control tool, on the burden of disease and the environment. Its goal is to develop recommendations for further research in this area.

For registration & information please contact:
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 26th August 2016



In cooperation with:



Österreichische UNESCO-Kommission
 Austrian Commission for UNESCO

Medical University of Vienna



UNESCO
 United Nations
 Educational, Scientific and
 Cultural Organization

uniTwin
 UNESCO Chair
 on Bioethics,
 Medical University of Vienna

MEDICAL
 UNIVERSITY
 OF VIENNA

Medical University of Vienna

Invitation

Fighting Malaria with CRISPR/Cas9: Ethical Implications

7th September 2016
 Josephinum
 Währinger Straße 25, 1090 Vienna

www.meduniwien.ac.at

Programme

9.30 – 10.00 a.m.

Registration & Coffee

10.00 – 10.15 a.m.

Welcome

Christiane Druml, UNESCO Chair on Bioethics at the Medical University of Vienna, Austria

Eva Nowotny, Austrian Commission for UNESCO
Markus Müller, Rector of the Medical University of Vienna

10.15 – 10.35 a.m.

Introduction & Results of the Paris Meeting March 16, 2016

Hervé Chneiweiss, INSERM and IBC of UNESCO, France

10.35 – 12.15 a.m.

Background

Chair: Peter Kremsner, University Hospital Tübingen, Germany

Burden of Malaria

Francine Ntoumi, Fondation Congolaise pour la Recherche Médicale (FCRM), Brazzaville, Republic of Congo

Malaria Control Tools

Selidji Agnandji, Centre de Recherches Médicales de Lambaréné (CERMEL), Gabon

Genetical Engineering (Gene Drive) to Fight Malaria

Nikolai Windbichler, Imperial College, London, UK

Total Eradication of Mosquitos: Potential Impact on the Environment

Konrad Fiedler, Tropical Ecology and Animal Biodiversity, University of Vienna, Austria

Comparing CRISPR/Cas9 with other Techniques: Aspects of Prospective Technology Assessment

Wolfgang Liebert, Institute of Safety and Risk Sciences, Ethics Platform of the University of Natural Resources and Life Sciences, Vienna, Austria

12.15 a.m. – 1.15 p.m.

Discussion

1.15 – 2.30 p.m.

Lunch

2.30 – 3.10 p.m.

Ethical Considerations

Chair: Maria do Céu Patrão Neves, Universidade dos Açores, Portugal

UNESCOs Declaration on Bioethics and Human Rights

Dafna Feinholz, UNESCO, Paris, France

WHO's Experiences in this Field

Andreas Reis, WHO, Geneva, Switzerland

3.10 – 4.30 p.m.

Panel Discussion:

Fighting Malaria with CRISPR/Cas9

Moderation: Trish Groves, BMJ, London, UK

Panel Members:

Michael Makanga, EDCTP, The Hague, Netherlands

Andreas Reis, WHO, Geneva, Switzerland

Nikolai Windbichler, Imperial College, London, UK

Christiane Druml, UNESCO Chair on Bioethics at the Medical University of Vienna, Austria

Wolfgang Liebert, Institute of Safety and Risk Sciences, Ethics Platform of the University of Natural Resources and Life Sciences, Vienna, Austria

4.30 – 5.00 p.m.

Wrap-up & Outlook

Christiane Druml, UNESCO Chair on Bioethics at the Medical University of Vienna, Austria

Hervé Chneiweiss, INSERM and IBC of UNESCO, France