



(last updated 29.01.2024)

Preliminary Program

Workshop “The Technology and Ethics of CRISPR”

Date: 3rd – 6th of March 2024

Place: Monte Verità, Ascona

Responsibility: The workshop is being organized and led in a collaboration of URPP H2R (University of Zurich) and the Center for Life Sciences Law (ZLSR) of the University of Basel

Hosts: Prof. Tommaso Cavazza (Dept. of Reproductive Endocrinology, University Hospital Zurich, Assistant Professor URPP H2R) and Prof. Alfred Früh (Professor of Private Law specializing in Life Sciences Law and Intellectual Property Law, Co-Director ZLSR)

Organization: PD Dr. Nina Jakoby (Managing director URPP H2R) and Dr. Franziska Bächler (Scientific Director ZLSR)

Purpose: More than a decade of research into understanding and characterizing bacterial CRISPR-Cas defense systems has led to the development of the powerful CRISPR-Cas genome editing technology. In recent years, this tool has been used to generate transgenic microorganisms, plants and animals for research and biotechnology applications. In addition, several clinical trials based on CRISPR-Cas genome editing technologies have begun aiming at the treatment of patients suffering from genetic diseases.

While many see the potential of this technology for medical (e.g. somatic gene therapy, genetic modification of embryos) and public health applications (e.g. development of more resistant and nutritious crops), genome modification – and in particular heritable germline modification of human DNA (human germline genome editing) – is highly controversial. Medical research on CRISPR therefore needs to be embedded in a broad societal debate, including ethical, legal and economic considerations. In a joint statement, the UK's Nuffield Council on Bioethics, the French Comité Consultatif National d'Éthique pour les sciences de la vie et de la santé (CCNE) and the German Ethics Council called on governments and stakeholders around the world to "take action" to place ethical considerations at the center of such discussions and global dialogues.



To meet this call, we apply an interdisciplinary approach, combining the knowledge and methods of several disciplines such as medicine, genetics, law and ethics. At the workshop, national and international guest speakers will discuss some of the scientific, socio-ethical, legal, economic and empirical issues with a focus on human germline genome editing.

Audience: approx. 36 participants (selected speakers, participants from H2R, ZLSR as well as junior researchers to be selected following an open Call for Papers)

Format: Short expert presentations, round tables, moderated panel discussions on selected topics among experts, plenum discussions, poster presentations, networking

3rd of March 2024: Arrival

15.00-19.00 Shuttle service from Locarno train station to Monte Verità

Starting from 15.00 Registration, check-in

18.30-19.00 Welcome drink

19.00 Dinner at Monte Verità

4th of March 2024: Perspectives on CRISPR Gene Editing

Starting from 7.30 Breakfast

10.00-10.30 **Opening**

Welcome Address: Prof. Tommaso Cavazza (Professor of Reproductive Medicine and Genome Editing Department of Reproductive Endocrinology, URPP H2R) and Prof. Alfred Früh (Professor of Private Law specializing in Life Sciences Law and Intellectual Property Law, Co-Director ZLSR)

Roman Mezzasalma (<https://www.agentur-ananas.ch>)



- 10.30-10.45 **Video Message from Prof. David Archard** (Emeritus Professor of Philosophy Chair of the Nuffield Council on Bioethics, Queen's University Belfast)
- 10.45-11.30 **The protection of future persons: How CRISPR is transforming the time horizon of legal responsibility (incl. Q&A)**
Speaker: Prof. Bijan Fateh-Moghadam (Professor of Fundamentals of Law and Life Sciences Law, Co-Director ZLSR)
- 11.30-12.15 **Cutting, Editing, Engineering – The German Ethics Council and the Legitimacy of Germline Interventions (incl. Q&A)**
Speaker: Prof. Claudia Wiesemann (Director Department Ethics and History of Medicine, University of Göttingen)
- 12.15-14.00 Lunch
- 14.00-14.45 **Interventions in the human germline: legal framework, challenges and perspectives (incl. Q&A)**
Speaker: Marie-Hélène Peter-Spiess (RA MLaw, Research Associate, URPP H2R)
- 14.45-15.30 **The Patent Governance of Human Genome Editing (incl. Q&A)**
Speaker: Prof. Duncan Matthews (Queen Mary Intellectual Property Research Institute, London)
- 15.30-16:00 Coffee break
- 16.00-16.45 **Roundtable discussions**
- 17.00-18.30 Guided tour / Monte Verità
- 19.00 Dinner at Monte Verità

5th of March 2024: Current Developments / Spotlights on Germline Gene Editing

Starting from 7.30 Breakfast

9.00-9.30 **How to ethically measure the risk of Germline Genome Editing?**
Speaker: Prof. Michael Coors (Professor of Theological Ethics, Head of the Institute of Social Ethics, University of Zurich)



- 9.30-10.00 **Spotlight on Reproductive Justice**
Speaker: Agnes Kandlbinder (PhD, URPP H2R)
- 10.00-10.30 Coffee break
- 10.30-11.00 **Changing and exchanging genomes in the human embryo**
Speaker: Prof. Dieter Egli (Professor of Developmental Cell Biology, Columbia University)
- 11.00-11.30 **Genome editing reveals a role for OCT4 in human embryo development**
Speaker: Dr. Norah Fogarty (UKRI Future Leader Fellow and Group Leader, Centre for Gene Therapy & Regenerative Medicine, King's College London)
- 11.30-12.00 **Gene editing to insert and replace: lessons learnt from the mouse embryo**
Speaker: Dr. Ben Davies (Head of Genetic Modification Service, Francis Crick Institute, London)
- 12.00-13.30 Lunch
- 13.30-14.00 **Translational Challenges in Somatic Gene Editing**
Speaker: Prof. Gerald Schwank (Professor of Neuropharmacology, University of Zurich)
- 14.00-14.30 **The role of AI in genome engineering**
Speaker: Prof. Michael Krauthammer (Chair of Medical Informatics, University of Zurich)
- 14.30-15.00 Coffee break
- 15.00 - 15.30 **Interdisciplinary panel discussion**
The speakers: Dieter Egli, Ben Davies, Agnes Kandlbinder, Norah Fogarty, Gerald Schwank, Michael Coors, Michal Krauthammer
Moderation: Roman Mezzasalma
- 16.00-17.00 **Poster Session**
- 18.30 Dinner Osteria Nostrana (Ascona) (self-paying)



6th of March 2024: Spotlights on Somatic Gene Editing

Starting from 7.30	Breakfast
9.00-9.15	Opening Prof. Alfred Früh (Professor of Private Law specializing in Life Sciences Law and Intellectual Property Law, Co-Director ZLSR)
9.15-9.45	CRISPR patents: Blessing or curse? Speaker: Dr. Martin Wilming (Patent Attorney, HEPP)
9.45-10.15	Regulation of CRISPR-based Therapies Speaker: Dr. Philippe Girard (Vice Director Swissmedic)
10.15-10.45	Coffee Break
10.45-11.15	From Lab to Global Impact: How to Maximize Global Access to Gene Editing Speaker: Dr. Javier Guzman (Center for Global Development, Washington D.C.)
11.15-11.45	Panel Discussion Panelists: Speakers plus Dr. iur. et dipl. sc. nat. ETH Stefan Kohler (Attorney-at-Law, Vischer)
11.45-12.00	Wrap up, closing remarks & thank you Speaker: Prof. Gerald Schwank (Professor of Neuropharmacology, University of Zurich)
12.00-13.00	Lunch
Individual Departure	