



University of
Zurich^{UZH}

Invitation Kick-Off Event New University Research Priority Programs

Tuesday, 23 March 2021
17.30 – 19.00

Registration by
16 March 2021

Online

17.30 Opening

Prof. Dr. Michael Schaepman,
President University of Zurich

Prof. Dr. Elisabeth Stark,
Vice President Research University of Zurich

17.45 University Research Priority Programs since 2013

Film

18.00 URPP Digital Religion(s) – Communication, Interaction and Transformation in the Digital Society

Prof. Dr. Thomas Schlag,
Faculty of Theology

18.10 URPP Human Reproduction Reloaded | H2R

Prof. Dr. Andrea Büchler,
Faculty of Law

18.20 URPP Equality of Opportunity

Prof. Dr. David Dorn,
Faculty of Business, Economics and Informatics

18.30 URPP ITINERARE: Innovative Therapies in Rare Diseases – Challenges and Opportunities

Prof. Dr. Janine Reichenbach,
Faculty of Medicine

18.40 URPP Adaptive Brain Circuits in Development and Learning

Prof. Dr. Esther Stoeckli,
Faculty of Science

18.50 Closing

Prof. Dr. Elisabeth Stark,
Vice President Research University of Zurich



**University of
Zurich** ^{UZH}

University Research Priority Programs – Past, Present, and Future

Prof. Dr. Elisabeth Stark

Vice-President Research



University Research Priority Programs: Objectives and Premises

- **Research at the highest level**
supporting excellent researchers
- **Advancement of junior researchers**
promoting PhDs, postdocs and assistant professorship
- **Interdisciplinarity and cross-faculty collaboration**
building successful networks
- **Sustainability and long-term structures**
changing the research landscape
- **Reputation of the UZH**
increasing national and international visibility and attractiveness
- **Societal impact**
generating relevant knowledge and expertise for Zurich and Switzerland





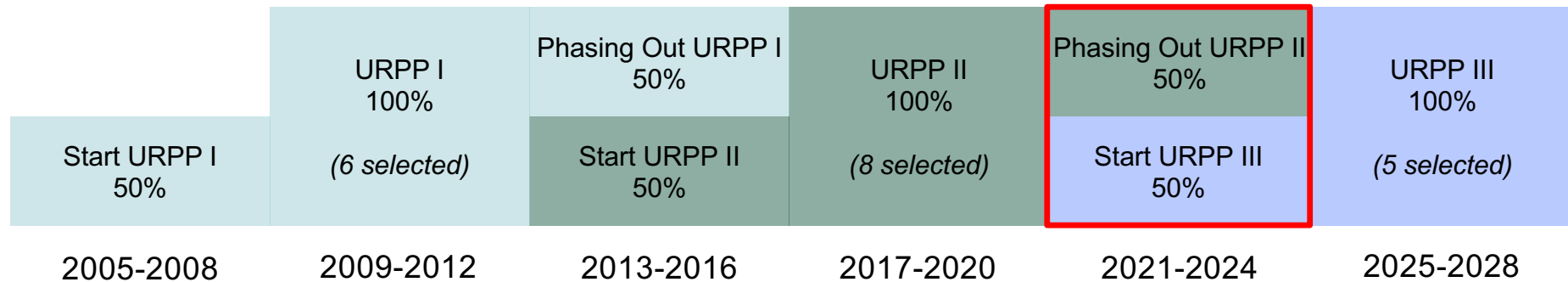
Funding Criteria

- **Potential and relevance of the research topic for the UZH**
- **Scientific excellence, originality and innovation potential** ("high risk")
- **Added value of interdisciplinary collaboration** (at least two faculties involved)
- **Alignment with the strategic planning of the faculties and the university**
- **Reputation and previous academic performance of the participating researchers**
- **Plausibility of goals and measures in the areas of career advancement, gender equality and outreach** (particularly establishment of URPP assistant professorships, especially with tenure track)



Funding model URPP

- URPP are limited in time (maximum duration: 12 years), but are supposed to create long-term structures
- URPP are funded in four-year phases (extension in case of positive evaluation)
- Full funding in phase II





Series I: 6 University Research Priority Programs 2005 – 2016

- **URPP Asia and Europe** (MNF, PhF, RWF, ThF)
- **URPP Ethics** (MeF, MNF, PhF, ThF, WWF)
- **URPP Finance and Financial Markets** (PhF, RWF, WWF)
- **URPP Foundations of Human Social Behavior: Altruism and Egoism** (PhF, ThF, WWF)
- **URPP Integrative Human Physiology** (MeF, MNF, Vetsuisse)
- **URPP Systems Biology / Functional Genomics** (MeF, MNF)



Sustainable impact on research at UZH (and beyond)

URPP Asia and Europe

- Establishment of the Institute of Asian and Oriental Studies (since 2013)
- Interdisciplinary Doctoral Program Asia and Europe
- 5 appointments of URPP early career researchers as professors at foreign universities

URPP Ethics

- Graduate program “Justice in practical contexts” (“Gerechtigkeit in praktischen Kontexten”).
- Collaboration of the Center for Biomedical Ethics with Medical Law: joint PhD program “Biomedical Ethics and Law”.
- Continuation of the URPP in the Center for Ethics (a UZH center of competence)



Sustainable impact on research at UZH (and beyond)

URPP Integrative Human Physiology

- Zurich Center for Integrative Human Physiology (ZHIP) – UZH center of competence
- 4 assistant professors: now all full professors at UZH or elsewhere
- PhD program in Integrative Molecular Medicine (imMed)
- Research facility Zurich Integrative Rodent Physiology (ZIRP)
- NCCR Kidney.CH (2010-2022)

URPP Systems Biology / Functional Genomics

- Establishment of the Functional Genomics Center (today 40 employees): key technology platform for the UZH and ETH Zurich
- 6 assistant professors: 5 now full or associate professors at UZH, 1 at Uni Basel
- Appointments of systems biologists as full professors at UZH
- Initiation of 2 PhD programs, now fully integrated into the Life Science Zurich Graduate School



Sustainable impact on research at UZH (and beyond)

URPP Finance and Financial Markets

- 2 assistant professors: now all full professors at UZH

URPP Foundations of Human Social Behavior: Altruism and Egoism

- Zurich Center for Neuroeconomics (ZNE) incl. SNS Lab
- 3 assistant professors: now all full professors at UZH

↳ shorter funding period due to permanent continuation within the Faculty of Business,
Economics and Informatics as Faculty Research Priority Program



Series III: 5 University Research Priority Programs 2021 – 2032

- **URPP Adaptive Brain Circuits in Development and Learning**
(MeF, MNF, PhF, WWF)
- **URPP Digital Religion(s) - Communication, Interaction and Transformation in the Digital Society**
(PhF, RWF, ThF, WWF)
- **URPP Equality of Opportunities**
(PhF, RWF, WWF)
- **Human Reproduction Reloaded I H2R**
(MeF, MNF, PhF, RWF, ThF, WWF)
- **URPP ITINERARE: Innovative Therapies in Rare Diseases – Challenges and Opportunities**
(MeF, MNF, PhF, RWF, ThF)



Series II: 8 University Research Priority Programs 2013 – 2024

URPP Dynamics of Healthy Aging (MeF, PhF)

- Innovation Cluster Healthy Longevity

URPP Evolution in Action: From Genome to Ecosystem (MeF, MNF, PhF)

- Continuation of PhD program in evolutionary biology, new professorship in statistical bioinformatics

URPP Financial Market Regulation (RWF, WWF)

- New professorship in financial market law

URPP Solar Light to Chemical Energy Conversion (MNF)

- New professorship in renewable energy and sustainable chemistry



Series II: 8 University Research Priority Programs 2013 – 2024

URPP Global Change and Biodiversity (MNF, PhF)

- New professorships in earth system science and aquatic ecology, planned sustainable network structure (Center, Center of Competence, Institute)

URPP Language and Space (MNF, PhF)

- NCCR „Evolving Language“, LiRI as a UZH TPF, "Languages in Switzerland"

URPP Social Networks (PhF, WWF)

- New professorship in network science, establishment of sustainable structures for long-term interdisciplinary research projects (structure for collecting data, setting up experiments, online facilities, software packages)

URPP Translational Cancer Research (MeF, MNF)

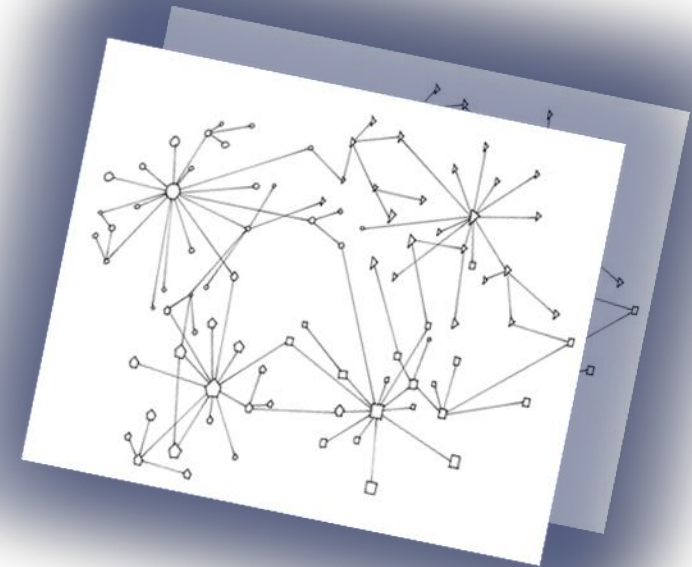
- Transition of translational URPP structures into Comprehensive Cancer Center Zurich CCCZ (collaboration, biobank, PhD program)



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URPP «Digital Religion(s)»

«Digital Religion(s)». Communication, Interaction and Transformation in the Digital Society



**Präsentation zur Auftaktveranstaltung «Neue Universitäre Forschungsschwerpunkte»
Dienstag, 23. März 2021, 17.30 – 19.00 Uhr**

Prof. Dr. Thomas Schlag, Theologische Fakultät



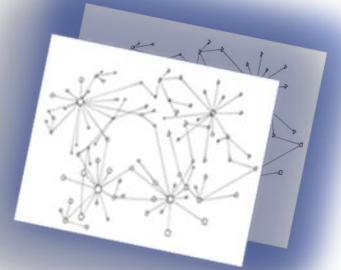
«Digital Religion(s)»: Aktuelle Relevanz

Religion als relevanter Faktor für...

- existenzielle Fragen
- gesellschaftliche und globale Entwicklungen in Politik, Wirtschaft, Bildung

Religiöse Praxis in digitalen Zeiten...

- wird durch «Social Media» transformiert
- bildet neue Resonanzräume und Online-Offline-Netzwerke



NZZ am Sonntag

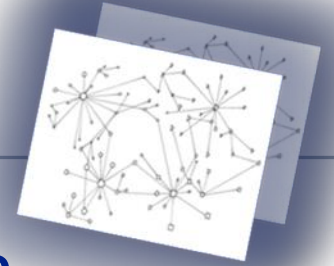
19.02.2021, 03.00 Uhr

Hören Merken Drucken Teilen

Wollen Sie etwas loswerden, weil es Sie belastet? Betreten Sie unseren virtuellen Beichtstuhl!



Jeder hat Dinge getan, die er bereut und für die er sich schämt. Wollen Sie etwas loswerden, weil es Sie belastet? Die «NZZ am Sonntag» sucht Menschen, die ihr Gewissen erleichtern und endlich reinen Tisch machen wollen.



Leitbegriff «Digital Religion(s)» als «umbrella term» und die Forschungsziele

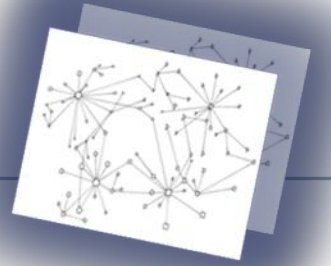
«Digital Religion(s)» meint:

- Neue Formen gelebter Religion in einer *Kultur der Digitalität*
- Religion «onlife (24/7)» als *kommunikative* Alltagspraxis



Forschungsziele sind:

- Dynamiken neuer Formen von «*Identität*», «*Gemeinschaft*», «*Autorität*» und «*Religion*»
- Wirkungen auf Individuen und Gesellschaft: *Konflikte und Radikalisierung – Dialog und Anerkennung*



Zwei Module und zwölf Projekte (2021-2024)

Modul A: Interne Dynamiken (6 Projekte)

Phänomene individueller «gelebter Religion» und hybrider Religionsgemeinschaften

P1: Trauer im Internet (*C. Dürscheid/PhF*)

P2: Eschatologische Raumsemantiken digitaler Friedhöfe (*M. Wüthrich/ThF*)

P3: Digitale soziale Dynamiken von Spiritualität und Religiosität (*T. Friemel/PhF*)

P4: Digitale «Corporate Governance» religiöser Organisationen (*K. Rost/PhF*)

P5: Digitale Beziehungen und lokale Religionsgemeinschaften (*D. Lüddeckens/R. Walthert/ThF*)

P6: Christlich-religiöse Sinnstiftung in einer Kultur der Digitalität (*S. Müller/ThF*)





Zwei Module und zwölf Projekte (2021-2024)

Modul B: Externe Dynamiken (6 Projekte)

Phänomene öffentlicher «gelebter Religion» in Bildung, Recht, Gesundheit

P7: Religion(en) im Cyberspace: Rechtliche Perspektiven (*L. Langer/C. Kaufmann/RWF*)



P8: Automatische Erkennung von Intoleranz und Extremismus («religious hate speech») (*M. Volk/G. Schneider/PhF/WWF*)



P9: Interreligiöses Lernen in der Digitalen Gesellschaft (*T. Schlag/J. Suhner/ThF*)

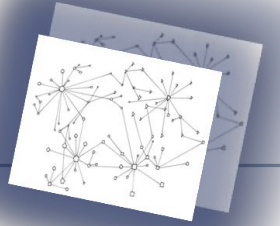
P10: Informationstechnologie im Kirchen- und Staatskirchenrecht (*A. Thier/RWF*)

P11: Digitalisierung seelsorglicher Spiritual Care (*S. Peng-Keller/ThF*)



P12: Kommunikation und Reputation in Zeiten des digitalen Wandels (*M. Eisenegger/PhF*)





Ausstrahlung des UFSP: Kommunikation nach aussen und dynamische Planung

Kommunikation nach aussen

- Mitgestaltung öffentlicher Debatten und Politikberatung
- Seismographic Think Tank mit «Digital Shapers» aus Politik, Wirtschaft, ICT, Kultur usw.
- Universitäre Weiterbildung für Angehörige unterschiedlicher Religionsgemeinschaften



Online-Gottesdienst 2020

Dynamischer Forschungsverbund

- Schnelle Reaktion auf Entwicklungen: «Churches Online in Times of Corona» (CONTOC)



Religious Robot 'Mindar'



Dystopian novel: 2019

Weiteres Modul «Conceptual Dynamics»:

- Religion und Artificial Intelligence
- «Religious Robots»
- Fragen des Transhumanismus



Gehe zu

- Personen
- Geschäftsstelle
- Newsletter

Social Media Digital Religion(s)

- Twitter

UFSP Digital Religion(s)

Der UFSP "Digital Religion(s)" untersucht, wie die gegenwärtigen Digitalisierungsdynamiken die Religionspraxis von Individuen und Institutionen beeinflussen, prägen und transformieren. Themen und Inhalte der Forschung sind u.a. religiöse Identitätsbildung und die Entwicklung von gemeinschaftlichen online-offline Netzwerken, mediale Kommunikationspraktiken des Trauerns und der Seelsorge sowie Phänomene religionsbezogener digitaler Bildung.



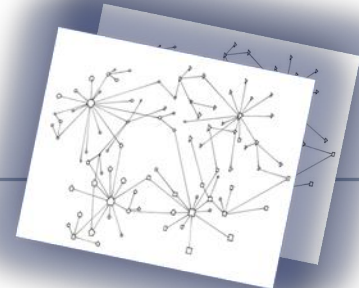
<https://www.digitalreligions.uzh.ch/de.html>

Aktuelles

- UFSP Auftaktveranstaltung am 23. März 2021
- SRF Podcast "Kirchlicher Digitalisierungsschub dank Corona?"

Kontakt

UFSP Digital Religion(s)
c/o Theologische Fakultät
Kirchgasse 9
CH-8001 Zürich
→ Kontakt Administration





URPP Human Reproduction Reloaded | H2R

URPP Kick-off Event, 23 March 2021

Prof. Dr. Andrea Büchler, Director URPP H2R, Co-Leader Empirical and Normative Knowledge & Data Centre

Prof. Dr. Gerald Schwank, Co-Leader SP 4 CRISPR Technology in Human Reproduction

www.humanreproduction.uzh.ch





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URPP Human Reproduction
Reloaded | H2R

...why we do what we do...

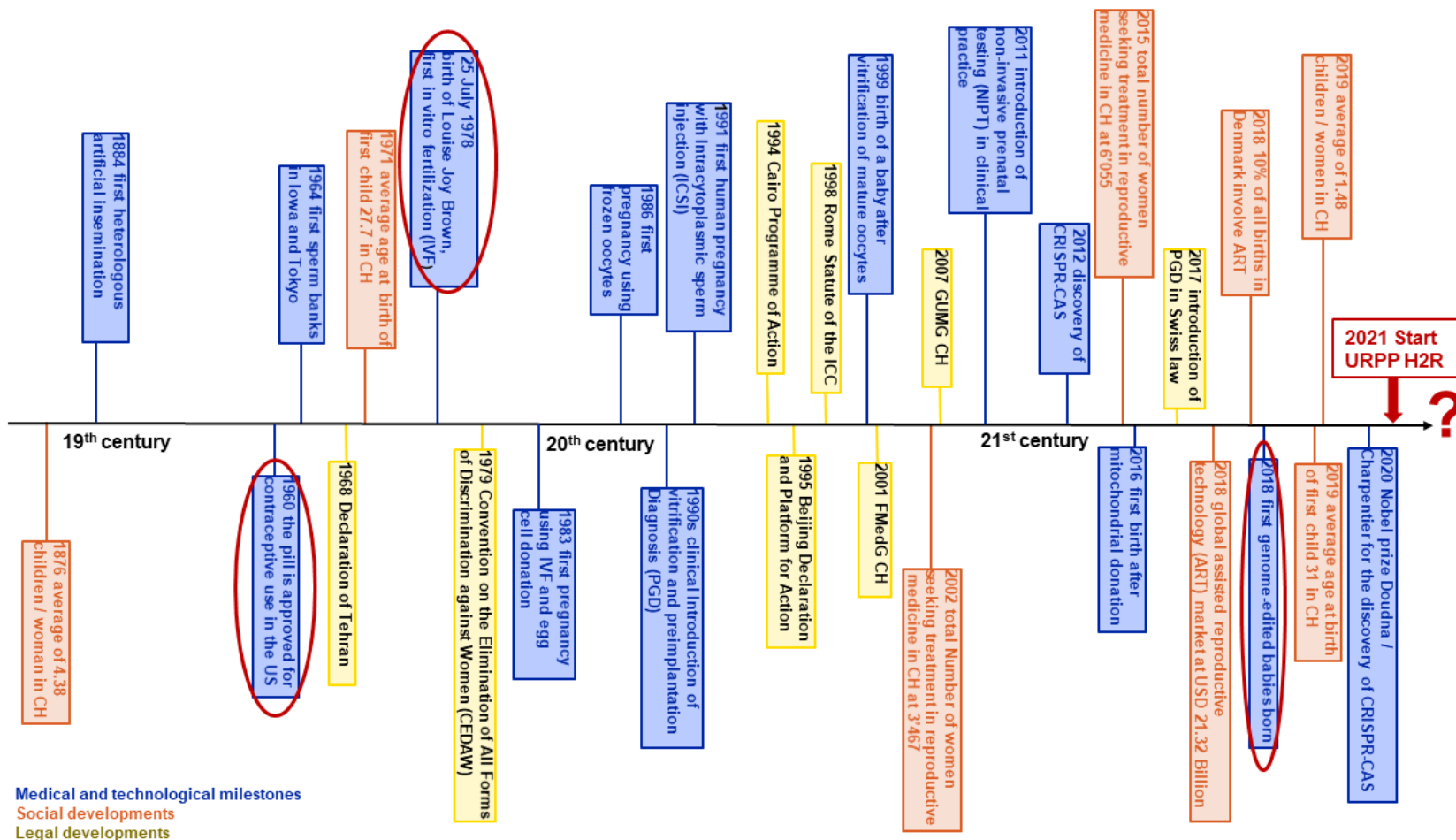




Reproduction is the locus of some of the most pressing conceptual, moral, and legal quandaries in contemporary society. (Joan C. Callahan 1995)

Chance- Choice - Design

It has developed from a matter of **chance** to a matter of **choice** to a matter of **design**.



Medical and technological milestones
Social developments
Legal developments



Objectives

The URPP H2R seeks to **understand and provide policy guidance on the societal impact and legal challenges of rapidly changing medical technology on human reproduction**. It also seeks to explore the aspirations, limitations, and ethical considerations of **assisted reproductive technologies (ART)**. Its target **objectives** are threefold:

- 1. To research and analyse *reproductive decisions***: their legal, medical, and social prerequisites, contexts, and effects; their consequences for the individual person as well as for families and society; and their economic implications, technical-medical limitations, and normative assumptions.
- 2. To pay particular attention to *newer reproductive options***, including egg freezing, genetic selection, germ cell donation, and gene editing.
- 3. To contribute** to a better understanding of the future challenges of reproduction, fostering ***meaningful conversations among stakeholders and the wider public*** that **situates science and technological advances more clearly in the context of values and norms**.



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URPP Human Reproduction
Reloaded | H2R

...who we are...





Organisation

Director: Andrea Büchler - supported by General Secretariat
Executive Committee: Andrea Büchler, Katja Rost (Deputy Director), Ulrike Babusiaux, Tanja Krones, Brigitte Leeners, Assistant Professors URPP



Empirical and Normative Knowledge and Data Centre
Co-leaders: Büchler / Rössel



ASSEMBLY OF PROFESSORS

- Sub-project 1:** Normativity of Human Reproduction
Co-leaders: Babusiaux / Gächter
- Sub-project 2:** Human Reproduction in Societies and Markets
Co-leaders: Rost / Ehlert
- Sub-project 3:** Ethnography of Human Reproduction and Single Case Studies in Threshold Areas – **Co-leaders:** Krones / Derks
- High-risk Sub-project:** CRISPR Technology in Human Reproduction – an Interdisciplinary Approach – **Co-leaders:** Leeners / Schwank

RESEARCH COLLOQUIUM

ADVISORY BOARD

Six Faculties Involved: Faculty of Law | Faculty of Arts and Social Sciences | Faculty of Medicine | Faculty of Science | Faculty of Theology | Faculty of Business, Economics and Informatics

Regular **Research Colloquia** | Summer Schools | PhD Program Biomedical Ethics and Law

Support: Competence Centre Citizen Science

Network: Competence Centre of Medicine–Ethics–Law Helvetiae (**MERH**) | Clinical Research Priority Program **Praeclare** | Digital Society Initiative (**DSI**)

International Advisory Board



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URPP Human Reproduction
Reloaded | H2R

...what we ask and how we do it...





Sub-Projects

Sub-Project 1: **NORMATIVITY** “Normativity of Human Reproduction” (Babusiaux/Gächter)

Research Question: How can a normative framework adequately take into account the interests of the individual and of society as a whole? How can the legitimate objectives of medical advances be reconciled with fundamental values of ethics and law?

Methodological Approach: philosophical/ethical, historical, and comparative legal analyses

Disciplines: law, philosophy, ethics, history, gender studies

Sub-Project 2: **SOCIETAL PERSPECTIVES** “Human Reproduction in Societies and Markets” (Ehlert/Rost)

Research Questions: How do reproductive decisions, individual biographies, societies, and labour markets interrelate? What are the consequences of new fertility treatments for women, parents, children, families, economies and ethical and social norms?

Methodological Approach: quantitative research methods, including panel study that combines standardized questions, vignette and survey experiments, biomarkers, and behavioural measures by using quasi-experiments

Disciplines: sociology, psychology, economics, medicine

Sub-Project 3: **INDIVIDUAL PERSPECTIVES** “Ethnography of Human Reproduction and Single Case Studies in Threshold Areas” (Krones/Derks)

Research questions: Can exploring human reproduction at the current normative and technological boundaries help unravel the effects of reproductive technologies on what it means to be human? To what extent does the prospect of genome editing change these notions?

Methodological Approach: qualitative empirical research methods, including participant observation, interviews, and multi-site and archival research

Disciplines: social anthropology, clinical ethics, history, religious studies, sociology

Sub-Project 4 | High Risk „CRISPR Technology in Human Reproduction – an Interdisciplinary Approach“ (Leeners/Schwank)



Empirical and Normative Knowledge and Data Centre (Büchler/Rössel)

- Fosters a **common understanding** of **key empirical and normative concepts**
- Combines **insights** from social sciences, medicine, law, and humanities **to identify research questions** and **to discuss and understand the data**;
- Embraces a **citizen-science approach**, supporting activities that maximize **the collaboration between citizens and scientists** in all phases of the research process;
- Organizes the **data sampling process**;
- Hosts a **longitudinal database** and all the **data samples** gathered; and provides the data to all the sub-projects within the URPP H2R.



Sub-Project 4 | High-Risk: CRISPR Technology in Human Reproduction – an Interdisciplinary Approach (Leeners/Schwank)

- **Research Questions:** Can we improve the precision, reliability, and safety of CRISPR to a point where we can consider its use in human embryos? Do we understand enough about complex genetic diseases to be able to delay or suppress their onset? Can modifying the human germline ever be ethically defensible?
- **Methodological Approach:** Medical-technological research; data science workflow; legal, ethical-philosophical and social investigation
- **Disciplines:** biology, medicine, artificial intelligence/machine-learning, embryology, genetics, philosophy, theology, law, sociology
- **Goals:**
 - To assess the efficiency and precision of available CRISPR technologies and to develop improved variants
 - To evaluate the technical feasibility of introducing multiple precise genetic changes in a single cell or zygote
 - To systematically introduce and study disease-associated allele variants in mouse models and ex vivo organoid models
- **Concurrent:**
 - Interdisciplinary legal, ethical-philosophical, psychological, and social investigation
 - Review of fundamental issues like autonomy, human dignity, equality, welfare of the child
 - Risk Evaluation



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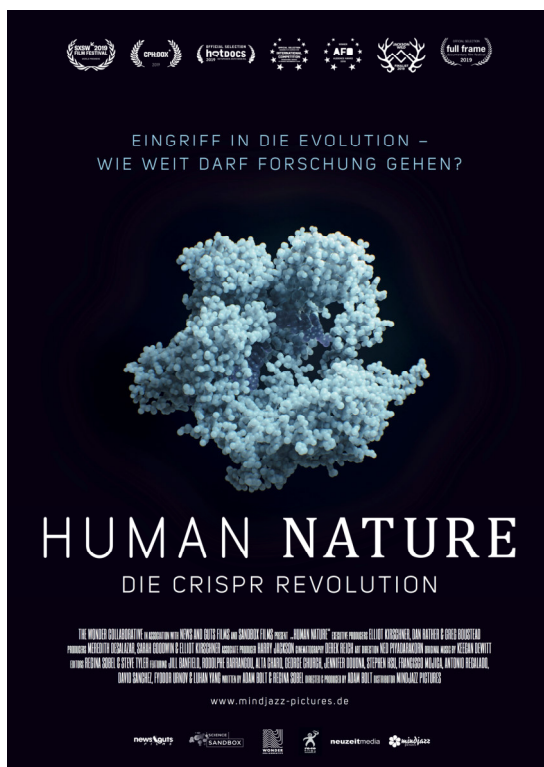
URPP Human Reproduction
Reloaded | H2R

...what is coming up...





URPP H2R Kick-Off Event, 23 June 2021, 05:30 pm



Public Streaming of the Documentary „Human Nature – The CRISPR Revolution“

Panel Discussion with

- Prof. Dr. Andrea Büchler
- Prof. Dr. Michael Coors
- Prof. Dr. Martin Jinek
- Prof. Dr. Brigitte Leeners
- Prof. Dr. Gerald Schwank

Followed by an **Apéro**

Location: University of Zurich, Aula and Lichthof

More information as well as a registration form will be available on our webpage soon.



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URPP Human Reproduction
Reloaded | H2R

Please get in touch!





Contact Information

Homepage: www.humanreproduction.uzh.ch

Email: info@humanreproduction.uzh.ch

Contact Director:

Prof. Dr. Andrea Büchler

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+41 44 634 48 46

Contact Managing Director:

PD Dr. Nina Jakoby

nina.jakoby@uzh.ch

+41 44 634 59 23

Follow us on Twitter:



[@UZH_H2R](https://twitter.com/@UZH_H2R)

URPP H2R Brown Bag Lunch
with **Prof. Dr. Arkadiusz Wudarski**,
Visiting Scholar at the Faculty of Law, UZH

29. April 2021, 12:15 am – 01:30 pm

Topic:

« Die Rechtsstellung des biologischen
Vaters auf dem Prüfstand –
rechtsvergleichende Perspektive »

More information on the event is available
on our **Homepage**. The event will be held
in **German**.



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UFSP Equality of Opportunity

UFSP Equality of Opportunity

Prof. Dr. David Dorn





Umfang und Organisation der Forschung

Wir untersuchen **soziale und wirtschaftliche Ungleichheiten** in westlichen Ländern

Arbeitsgruppe A

“Interdisziplinärer
Bezugsrahmen”



Arbeitsgruppe B

“Interdisziplinäre
Messungen und Daten”



Modul 1

Wirtschaftlicher
Wandel



Modul 2

Gesellschaft-
licher Wandel



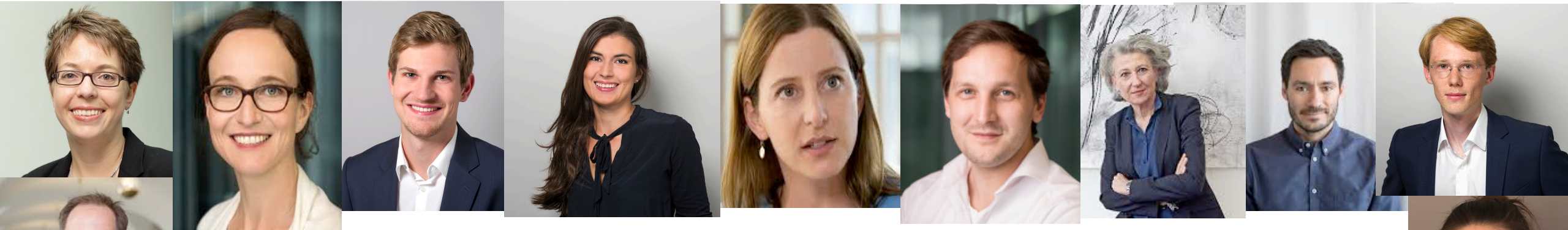
Modul 3

Öffentliche
Massnahmen

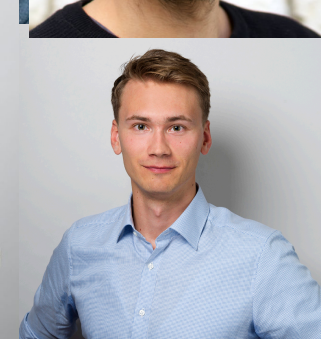


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UFSP Equality of Opportunity



30+ Forscher*innen aus den Disziplinen
Wirtschaft · Politik · Recht · Philosophie · Soziologie · Geschichte





Folgen Sie uns auf unserer
Webpage!

www.urpp-equality.uzh.ch

info@equality.uzh.ch



URPP Equality of Opportunity

Research • People



URPP Equality of Opportunity

What we do

The University Research Priority Program "Equality of Opportunity" studies the economic and social changes that lead to inequality in society, and public policies that foster greater equality of opportunity.

[→ find out more about the project](#)

Our team

We combine the expertise of leading researchers based on the University of Zurich's Faculty of Arts and Social Sciences, the Faculty of Business, Economics and Informatics, and the Faculty of Law.

[→ meet our team](#)

News

January 2021 - Launch of the new URPP Equality of Opportunity.

Contact

URPP Equality of Opportunity
Schönberggasse 1
8001 Zürich

Email info@equality.uzh.ch
Phone [+41 44 634 55 77](tel:+41446345577)

Events

URPP Kick-off Event, 23 March 2021 Five new University Research Priority Programs

In January 2021, the five new University Research Priority Programs (URPP) of the third series have started their work. At a kick-off event, the projects will be presented in more detail and we cordially invite to participate.

[→ Information and Registration](#)



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URPP ITINERARE



ITINERARE

- Innovative therapies in rare diseases -

**A new University Research Priority Program (URPP)
of the University of Zurich**

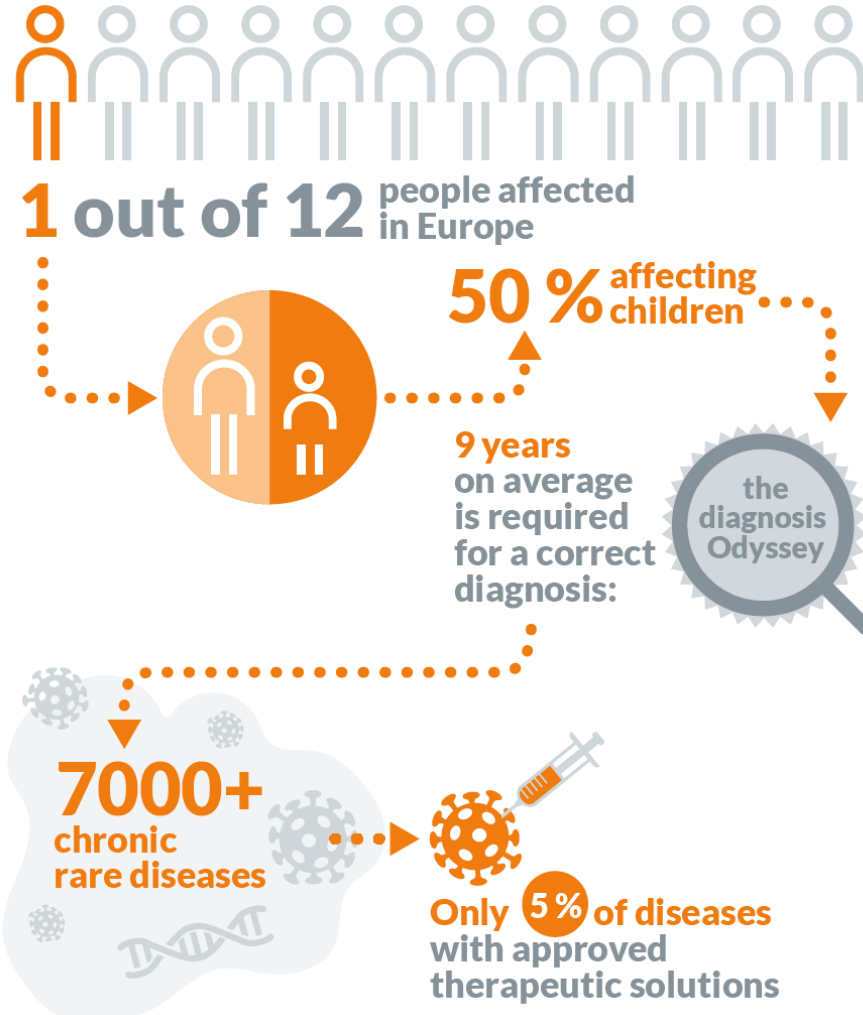
WWW.ITINERARE.UZH.CH



@itinerare_uzh



Rare Diseases – not that rare



Challenges of Rare Diseases

- High family and social impact
- Sever, cronic and disabling
- Limited knowledge
- Difficult to diagnose
- Limited interest from industry
- No casual treatment
- No standard of care



A tradition of Rare Disease Research

2012: Clinical Research Priority Program radiz
Swiss Rare Disease Registry



2015: Drug Discovery Network Zurich

2016: Inception of application for
National Center of Competence in Research AcceleRare



2019: Shortlisting of AcceleRare by SNSF
AcceleRare not prioritized by SERI / SBFI

Clinical Research Priority Program *ImmuGene*
Zentrum für seltene Krankheiten Zürich



2021:
ITINERARE
Rare Diseases



Our goal: reducing the burden of rare disease!



The ITINERARE Team



Prof. Gerald Schwank



Prof. Hans-Ulrich Zeilhofer



Prof. Cristina Nevado



Prof. Olivier Devuyst



Prof. Janine Reichenbach



Prof. Matthias Baumgartner



Prof. Anita Rauch



Prof. Felix Beuschlein



Prof. Johannes Häberle



Prof. Robert Steinfeld



Prof. Markus Landolt



Prof. Brigitte Tag



Prof. Michael Coors



Prof. Nikola Biller-Andorno

Involved faculties

- Medicine
- Science
- Law
- Arts and Social Science
- Theology



Management Office



Dr. Elisabetta Vannoni



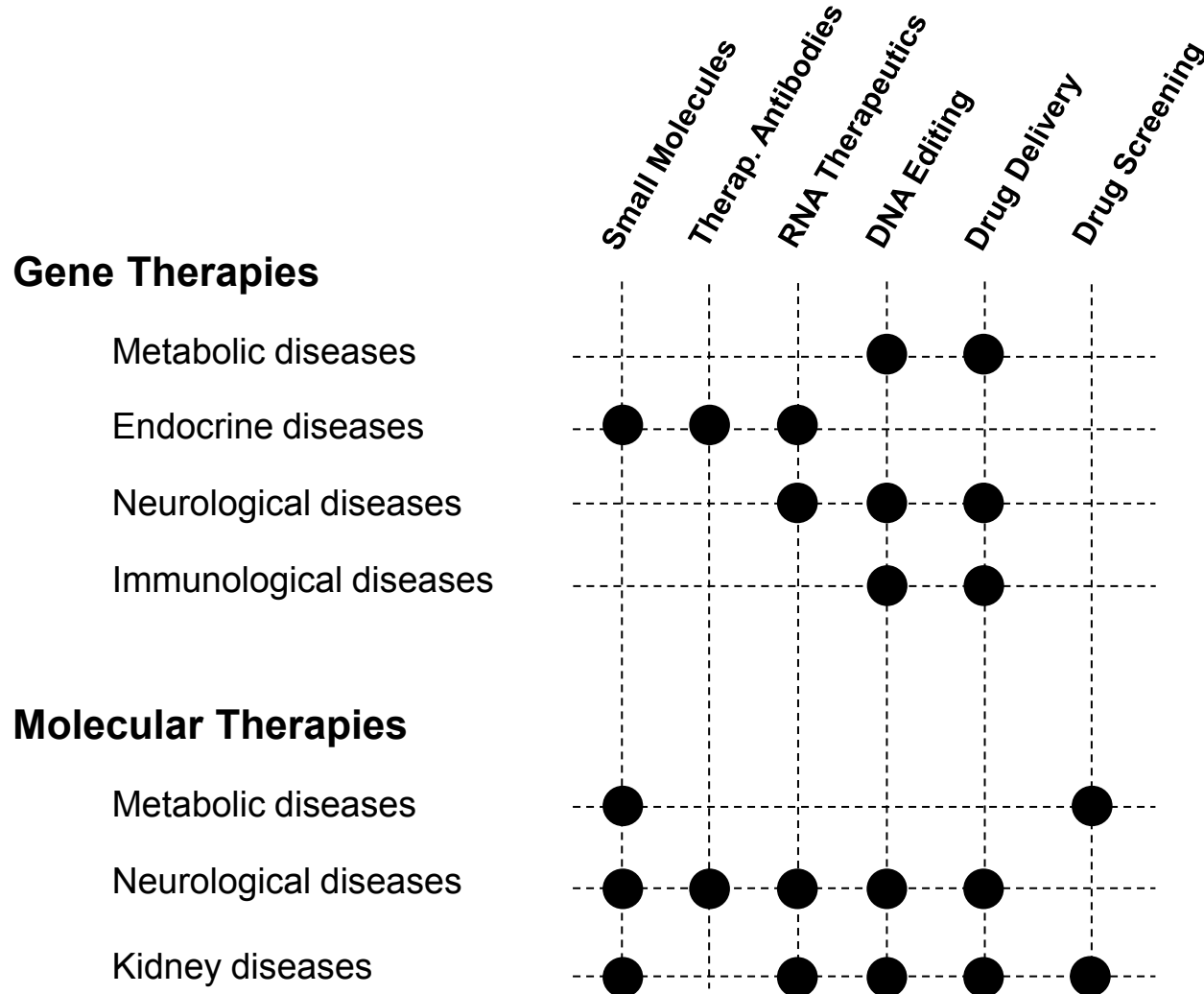
Ms. Antje Hennings



Dr. Wino Wijnen



ITINERARE's Interdisciplinary Concept



- Paradigmatic rare diseases
- Innovative Technologies and Therapeutic Modalities
- Integration of ethics, social and legal aspects (ELSI)
- Joint educational program
- Patient involvement



Patient involvement



ELSI



Education



Patient involvement

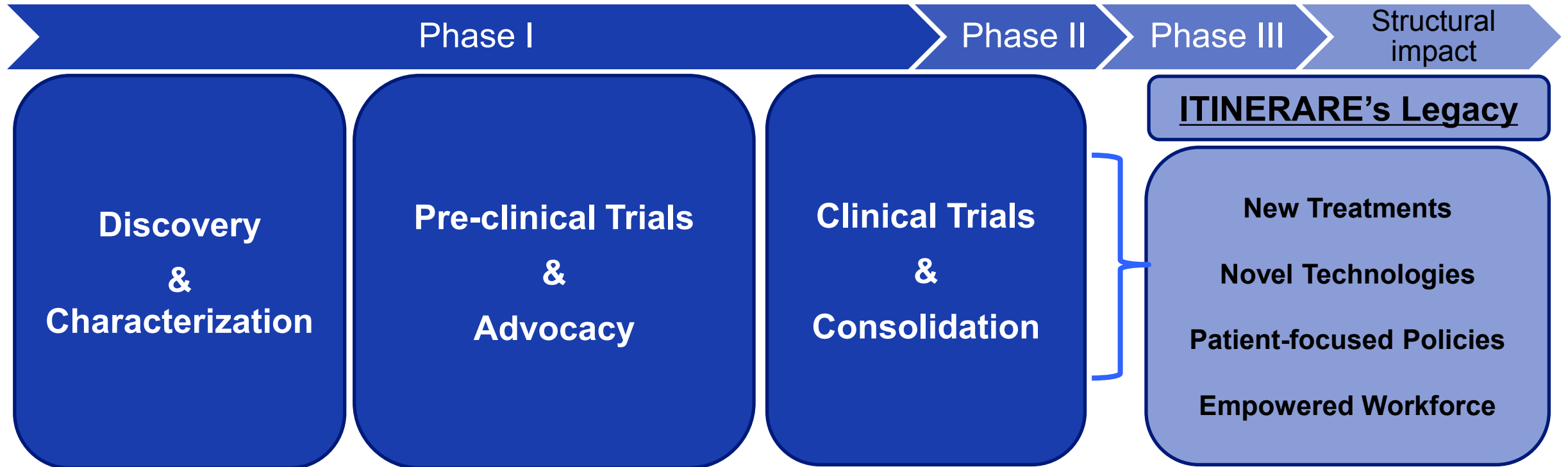


Research *for* and *with* patients

- Representatives in the program
- Study participants in tailored clinical trials
- Involvement in education and training
- Engage in citizen science projects



UZH engagement: 12-years program to develop new therapies for and with patients





Structural measurements



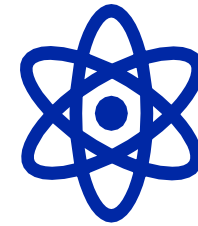
Equal Opportunities

- Leading by Example
- Supportive Measures
- Best Practices in Recruitment
- Raising Awareness



Career Advancement

- Dual Supervision
- Young Scientists Board
- Transferable Skills Training



Open Science

- Open Access Publication
- FAIR Data Management
- Technology Transfer
- Citizen Science



University of Zurich ^{UZH}

URPP ITINERARE



A strong network open to collaborations and synergies



University of Zurich ^{UZH}



UNIVERSITÄTS-
KINDERSPITAL
ZÜRICH



UniversitätsSpital
Zürich

Swiss Academic
Collaborators

ETH Zürich



UNIVERSITÉ
DE GENÈVE

EPFL

Research
Networks



DDNZ



Swiss Institute of
Bioinformatics



IRDiRC
INTERNATIONAL
RARE DISEASES RESEARCH
CONSORTIUM



acceleRare

ADVANCING DRUG DISCOVERY FOR RARE DISEASES



European
Reference
Networks



swiss rare
disease registry

radiz - Rare Disease Initiative Zürich

Patient Networks
& Advocacy
Groups

PRORARIS



Alliance Maladies Rares - Suisse
Allianz Seltener Krankheiten - Schweiz
Alleanza Malattie Rare - Svizzera



FÖRDERVEREIN
FÜR KINDER MIT
SELTENEN KRANKHEITEN

RE(ACT)
Community

The scientific knowledge sharing
and crowdfunding platform
for rare diseases

AIRG
Suisse

Association pour l'Information
et la Recherche sur les maladies
rénales Génétiques

TELETHON ⁺



NORD[®]
National Organization for Rare Disorders

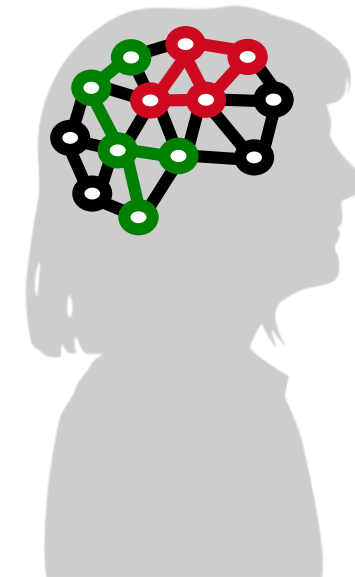
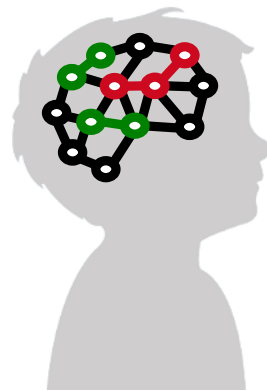
Member of
EURORDIS
Rare Diseases Europe

AdaBD – Adaptive Brain circuits in Development and Learning

Lernen ist ein zentraler
Aspekt unseres Lebens

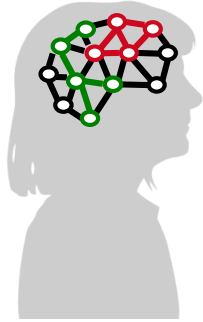
-
lebenslang

-
trotzdem sind die molekularen
Mechanismen des Lernens
noch nicht verstanden





Biologie des Lernens - Wie adaptieren sich die Netzwerke in unserem Gehirn?



Verhalten/Lernen



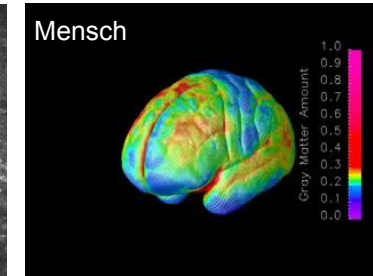
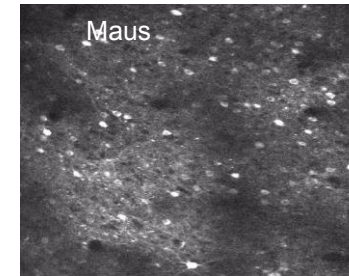
Dynamik der
Signalübertragung



Struktur
der Netzwerke



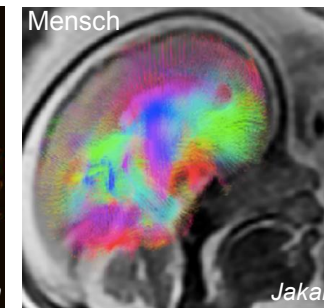
Gene/Moleküle



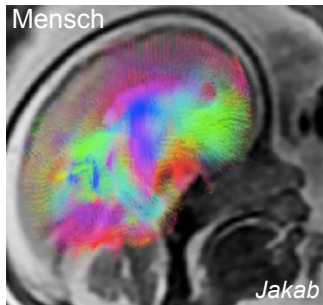
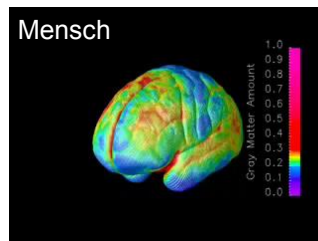
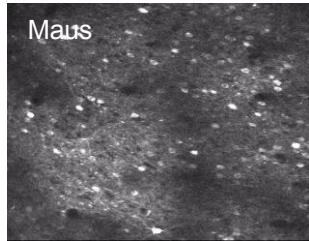
Funktion
von Netzwerken



Struktur von
Netzwerken



Ueber ihren Einfluss auf die Struktur und Funktion von neuronalen Netzwerken beeinflussen Moleküle unser Verhalten und unsere Fähigkeit zu lernen.



Ziele

- Besseres mechanistisches Verständnis von Lernen
- Identifizierung der Ursachen von Entwicklungs- und Lernstörungen
- Verbesserte Diagnose und Therapie



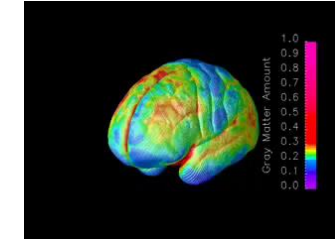
Ansätze

- Überbrücken  Moleküle – Netzwerke  – Verhalten
- Translation  Tier – Mensch 
- Fokus auf multisensorischer Integration  
- Verbinden  Grundlagenforschung – Klinik 



Entwicklungs- und Lernstörungen

In der Developmental Delay Database sind Kinder erfasst, bei denen Lern- und Entwicklungsstörungen diagnostiziert wurden. Genetische Untersuchungen liefern uns Anhaltspunkte, welche Moleküle zu den Lernstörungen beitragen könnten.

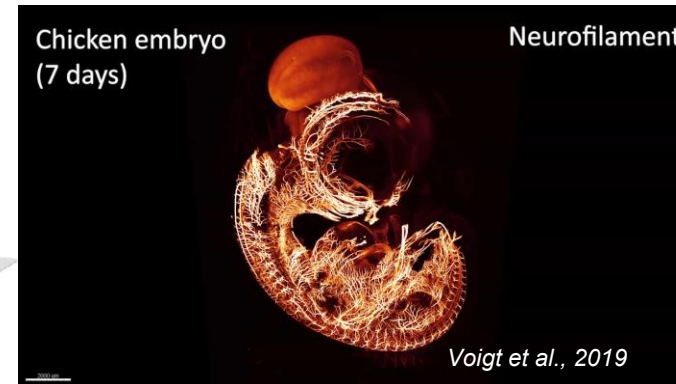
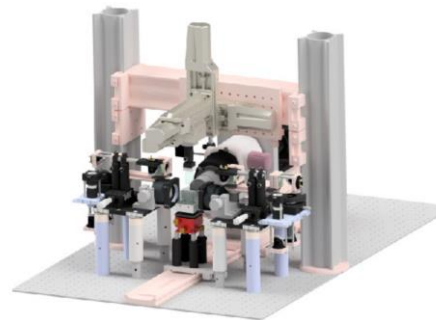


Developmental Delay Database

mesoSPIM – neuartiges Lichtscheiben-Mikroskop

Analyse der Struktur neuronaler Netzwerke

Im Tiermodell werden die identifizierten Gene auf ihren Beitrag zur Struktur und Funktion neuronaler Netzwerke untersucht. Einen entscheidenden Fortschritt liefert das mesoSPIM, eine neue Art von Mikroskopie, die es ermöglicht Netzwerke in 3D darzustellen.



Fabian Voigt
FAN Award 2021



18 Forschungsgruppen

4 Fakultäten

MNF

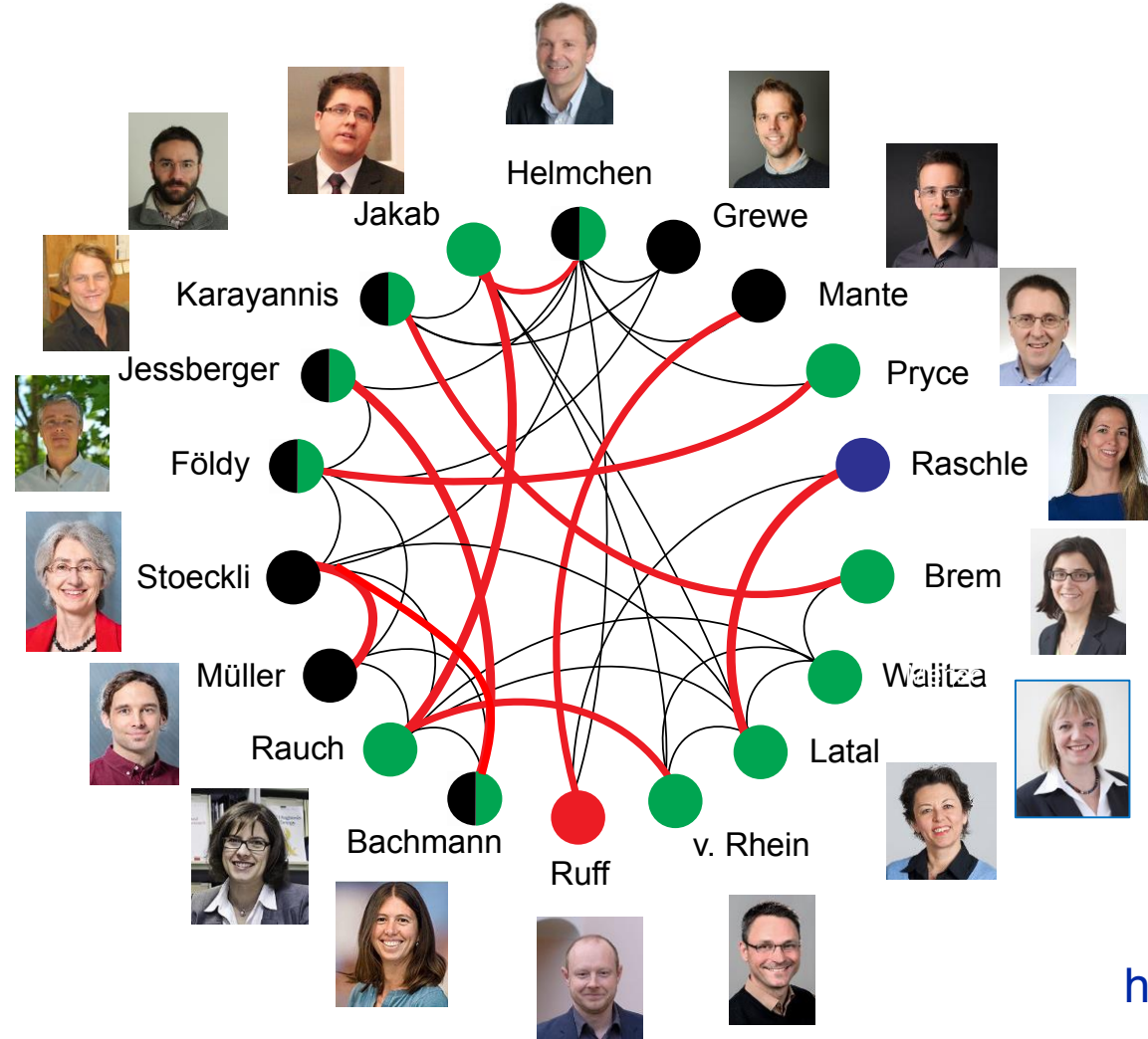
MeF

WWF

PhF

Co-Direktoren

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www.adabd.uzh.ch



https://twitter.com/UZH_AdaBD