EUSAAT

European Society for Alternatives to Animal Testing

The European 3Rs Society

EUSAAT 2022

The European Congress on 3Rs

September 26 – 28 **www.eusaat.eu**

Program

Monday, 26th September 2022

Day 1

10:00	*Start of Registration*	
11:30 – 12:30	*YOU Event – Meet-up for Young Scientists*	HALL 3
13:00 – 13:15	*Opening*	
13:15 – 13:45	KEYNOTE LECTURE **Susanna Louhimies (European Commission):** *"Development of the 3Rs field in Europe"* *Chairs: Winfried Neuhaus & Horst Spielmann*	HALL 1

14:00 – 15:30 *Scientific sessions in Hall 1, Hall 2, Hall 3*

HALL 1 – HS 1 (ground floor)

Covid-19 pandemic and the 3Rs
Chairs: Merel Ritskes-Hoitinga & Dilyana Filipova

14:00 – 14:20 Merel Ritskes-Hoitinga: *"Never waste a good crisis: Case study revealed faster regulatory approval of COVID-19 vaccine with fewer animal studies and more alternatives. Let's continue this promising road."*

14:20 – 14:40 Stefan Hippenstiel: *"Human lungs show limited permissiveness for SARS-CoV-2 due to scarce ACE2 levels but virus-induced expansion of inflammatory macrophages"*

14:40 – 15:00 Stefanie Dichtl: *Cilgavimab/ Tixagevimab as alternative therapeutic approach for BA.2 infections"*

15:00 – 15:15 Viktoria Zaderer: *"Optimizing animal-free 3D lung model for SARS-CoV-2 research and drug testing"*

15:15 – 15:30 Dilyana Filipova: *"Role of non-animal technologies in COVID-19 research"*

HALL 2 – HS 2 (ground floor)

NAMs for Developmental Neurotoxicity
Chairs: Ellen Fritsche & Martin Paparella

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14:00 – 14:20 Martin Paparella: *"An analysis of the limitations and uncertainties of in vivo developmental neurotoxicity testing and assessment to identify the potential for non-animal-methods approaches"*

14:20 – 14:40 Ellen Fritsche: *"Human Test Methods for Developmental Neurotoxicity (DNT) Evaluation: Set-up, Scientific Validation and Statistical Analyses"*

14:40 – 15:00 Iris Mangas: *"Lessons Learned from EFSA AOP informed IATA Case Studies Integrating in vitro data for DNT Risk Assessment"*

15:00 – 15:15 Katharina Koch: *"An in-vitro approach to assess endocrine modes of action leading to developmental neurotoxicity"*

15:15 – 15:30 David Pamies: *"Human IPSC-Derived Model to Study Myelin Disruption"*

HALL 3 – Seminar room (first floor)

Preregistration / Best Practise
Chairs: Arti Ahluwalia & Györgyi Szabó

14:00 – 14:20 Jan Lauwereyns: *"Tracking the Validity of Animal Models for Biomedical Research"*

14:20 – 14:40 Lisa Grohmann: *"Sharepoint Refinement: Internal platform for improved Refinement implementation"*

14:40 – 15:00 Julia M. L. Menon: *"Preregistration of animal research protocols: insights into preclinicals.eu 3-years development"* YSTA

15:00 – 15:15 Céline Heinl: *"Preregistration in animal research – Animal welfare and scientific progress"*

15:15 – 15:30 Sabine J. Bischoff: *"Increase the quality of animal research with CIRS-LAS – Research before the study, report during the study and discuss after the study"*

15:30 – 16:00	*Coffee break*

16:00 – 17:30 *Scientific sessions in Hall 1, Hall 2, Hall 3*

HALL 1 – HS 1 (ground floor)

3Rs Policy
Chairs: Susanna Louhimies & Horst Spielmann

16:00 – 16:20 Sandra Coecke: *"How Food Science, Next Generation Life Science Methods and Artificial Intelligence relates to European regulatory decision-making on food systems for sustainable health?"*

16:20 – 16:40 Laurence Walder: *"Improving Member States reporting on the implementation of Directive 2010/63/EU"*

16:40 – 17:00 Samantha Saunders: *"The RAT list: a tool for highlighting areas of animal use ready for replacement"*

17:00 – 17:15 Mathieu Vinken: *"The European ONTOX project: safer chemicals using less animals"*

HALL 2 – HS 2 (ground floor)

Novel Technologies
Chairs: Nathalie Jung & Jordi Grifols Ronda

16:00 – 16:20 Philipp Paulitschke: *"New non-invasive, label-free monitoring approach for high cell culture and assay quality"*

16:20 – 16:40 Nathalie Jung: *"Enabling non-invasive and chemically-selective analysis of organoid cultures using confocal Raman microscopy"*

16:40 – 17:00 Nicole Guazzelli: *"Integrated Strategies for the Design of Core-Shell Structures as Advanced Barrier Models"* YSTA

17:00 – 17:15 Sebastian Eggert: *"cellasys #8: A microphysiometric test to identify serum-free cell culture media"*

HALL 3 – Seminar room (first floor)

Refinement
Chairs: Adrian Smith & Annemarie Lang

16:00 – 16:20 Adrian Smith: *"An overview of guidelines for better preclinical research"*

16:20 – 16:40 Giuseppe Chirico: *"An in-vivo engineered chip as a smart intravital multiphoton imaging window for new validation protocols of biomaterials"*

16:40 – 17:00 Kerstin E. Auer: *"Effect of group size and cage cleaning interval on male aggression level and wellbeing in two mouse strains"*

17:00 – 17:15 Angelique Wolter: *"Evaluation of a new microparticulate depot formulation of buprenorphine for sustained post-surgical analgesia"* YSTA

17:15 – 17:30 **Susanna Louhimies:** *t.b.a.*	**17:15 – 17:30** **Katrin Colleselli:** *"An optogenetic approach to characterise human TLR2 homo, -and heterodimers in THP-1 and THP-1 derived macrophages"* YSTA	**17:15 – 17:30** **Jürgen Alphonsus:** *"Development of 3D-printed surgical guides to standardize, refine and reduce animal experiments in osseointegration research (The 'PRECISE' project)"*

18:00 – 19:00	ROUND TABLE / PANEL DISCUSSION *"The rise and role of 3Rs centres in Europe"*	HALL 1 – HS1 ground floor
19:00 – 21:00	*Welcome Reception*	AULA
20:00 – 21:00	*YOU Event – Meet the Mentor*	HALL 3 – Seminar room first floor

Tuesday, 27th September 2022

Day 2

9:00 – 9:30	KEYNOTE LECTURE **Merel Ritskes-Hoitinga (University of Utrecht, NL):** *"Evidence-based transition to animal-free innovations: let's make it happen!"* *Chairs: Kristina Wagner & Doris Wilflingseder*	HALL 1

9:40 – 11:10 *Scientific sessions in Hall 1, Hall 2, Hall 3*

HALL 1 – HS 1 (ground floor)	HALL 2 – HS 2 (ground floor)	HALL 3 – Seminar room (first floor)
3Rs Policy: Accelerating the Transition to Innovation without the Use of Animals *Chairs: Kristina Wagner & Doris Wilflingseder*	***Replacement: Lung* in vitro *Models*** *Chairs: Claus-Michael Lehr & Stefan Hippenstiel*	***NAMs for Risk Assessment*** *Chairs: Helena Kandarova & Kristin Schirmer*
09:40 – 10:00 **Luísa F. Bastos:** *"Transition to non-animal science – Current state of play in the EU"*	**09:40 – 10:00** **Pauline Zamprogno:** *"IPF-on-chip: An alternative to animal models"* YSTA	**09:40 – 10:00** **Jan Markus:** *"Development of physiologically relevant in vitro inhalation model to predict acute respiratory toxicity of mists and volatile liquids"*
10:00 – 10:20 **Ingrid J. Visseren-Hamakers:** *"Accelerating the transition to animal-free innovation: A transformative governance approach"*	**10:00 – 10:20** **Léa Todeschini:** *"A barrier-on-chip model with integrated 3D stretching to support preclinical decision making"*	**10:00 – 10:20** **Caroline Frädrich:** *"Identifying endocrine disruptors via a HTS platform based on the Sandell-Kolthoff reaction"*
10:20 – 10:40 **Iris Mangas:** *"Implementing New Approach Methodologies in EFSA's Next Generation Risk Assessment"*	**10:20 – 10:40** **Michelle Mueller:** *"Human induced pluripotent stem cell-derived alveolar epithelial cells: a comparative gene and protein expression analysis between 2D- and 3D-differentiation"*	**10:20 – 10:40** **Kristin Schirmer:** *"Fish cell lines as animal-free and resource-efficient alternatives to fish in environmental risk assessment"*
10:40 – 10:55 **Evangelos Daskalopoulos:** *"Innovative models in biomedical research"*	**10:40 – 10:55** **Lorenz Latta:** *"AELVi ‚Arlo' – A novel monoclonal human alveolar epithelial cell line with reproducible barrier function"*	**10:40 – 10:55** **Ignacio J. Tripodi:** *"Turning AOPS into testable hypotheses with natural language processing and tissue-specific knowledge graphs"*
10:55 – 11:10 **Lisa Hara Levin:** *"Outcomes from a Multistakeholder Engagement to Address the Challenges Associated with the Development, Regulatory Approval, and Implementation of Non-Animal Methods in Safety Testing and Biomedical Research"*	**10:55 – 11:10** **Vanessa Almonti:** *"Evaluation of cytotoxicity and pro-inflammatory effects of Russian chrysotile fibres on the EpiAirway In Vitro Human Airway Model"*	**10:55 – 11:10** **Mieke Van Mulders:** *"RE-Place: stimulating knowledge sharing on New Approach Methodologies via an open access database in Belgium"*

11:10 – 11:40	*Coffee break*

11:40 – 13:10 *Scientific sessions in Hall 1, Hall 2, Hall 3*

HALL 1 – HS 1 (ground floor)	HALL 2 – HS 2 (ground floor)	HALL 3 – Seminar room (first floor)
3Rs Centers – International *Chairs: Winfried Neuhaus & Yasuyuki Sakai*	***Cancer Models*** *Chairs: Giuseppe Chirico & Anna Sebestyén*	***Ecotoxicolgy*** *Chairs: Christopher Faßbender & Stefan Scholz*
11:40 – 12:00 **Winfried Neuhaus:** *"Updates of the EU3Rnet"*	**11:40 – 12:00** **Michael J. Ausserlechner:** *"3D bioprinted, vascularized neuroblastoma microenvironment for studying tumor-angiogenesis and metastatic processes in fluidic chip devices"*	**11:40 – 12:00** **Stefan Scholz:** *"A Bayesian Network tool for Predicting Fish Acute Toxicity – can simple behaviour tests in fish embryos used to increase confidence in predicted effect concentrations?"*
12:00 – 12:20 **Yasuyuki Sakai:** *"Latest activities of JSAAE and Asian organization"*	**12:00 – 12:20** **Tine Haesen:** *"Ex Vivo Human Precision-Cut (Tumor) Lung Slices as a Tool for the Evaluation of CD109 in Non-Small-Cell Lung Cancer"*	**12:00 – 12:20** **Cinta Porte:** *"Development of fish liver PLHC-1 spheroids and its applicability to investigate the toxicity of plastic additives"*

12:20 – 12:40 **Stefan Hippenstiel:** *"Einstein Center 3R – a joint initiative of Berlin research institutions"*	**12:20 – 12:40** **Yuval Daskal:** *"An Automated Platform for Creating Patient-Derived Glioblastoma Organoids and High Throughput Drug Screening"* YSTA	**12:20 – 12:40** **Julia Nöth:** *"Screening of vascular disruptors as an endpoint to predict developmental toxicity using zebrafish embryos"*
12:40 – 12:55 **Arti Ahluwalia:** *"The challenges and successes of promoting 3Rs in teaching and research in Italy: a Centro 3R update"*	**12:40 – 12:55** **Djenana Vejzovic:** *"Short and long term patient-derived sarcoma models – to study the variety of soft-tissue tumors"*	**12:40 – 12:55** **Inska Reichstein:** *"Application of a Biotechnological Metabolisation System to Improve the Forecast Power of the Fish Embryo Acute Toxicity Test (FET)"*
12:55 – 13:10 **Birgit Reininger-Gutmann:** *"A3RC – Austrian 3R Center Update"*	**12:55 – 13:10** **Beate Rinner:** *"Protein Arginine Methylation as a therapeutic Target on patient derived autologous Clear Cell Sarcoma Model"*	**12:55 – 13:10** **Sanjin Kovacevic:** *"ZembryoAnalyser software – novel tool for analyzing morphometrical and cardiovascular functional parameters during early development of zebrafish"*

13:10 – 14:00 ***Lunchtime including Business lunch sponsored by RepRefRed***

14:00 – 15:30 ***Poster session 1 (Details on page 6)*** First floor

15:30 – 17:00 *Scientific sessions in Hall 1, Hall 2, Hall 3*

HALL 1 – HS 1 (ground floor)	HALL 2 – HS 2 (ground floor)	HALL 3 – Seminar room (first floor)
Stem Cell Models *Chairs: Jürgen Hescheler & Bettina Seeger*	**In silico *Toxicology*** *Chairs: Arti Ahluwalia & Ashwani Sharma*	***Liver & Intestine Models*** *Chairs: Gabriele Scholz & Armin Wolf*
	Sponsored by THE 2022 LUSH PRIZE SUPPORTING ANIMAL-FREE TESTING	
15:30 – 15:50 **Elodie Vandenhaute:** *"Bridging the gap between in vitro & in vivo testing: 3D cell culture taking into account the extracellular matrix"*	**15:30 – 15:50** **Arti Ahluwalia:** *"In silico methods: empowering and mainstreaming alternative methods"*	**15:30 – 15:50** **Armin Wolf:** *"The human 3D liver spheroid model is a pragmatic DILI hazard identification approach for early drug discovery phases"*
15:50 – 16:10 **Kristina Bartmann:** *"Assessment of human neuronal network formation and function using 2D and 3D hiPSC-derived cell systems"*	**15:50 – 16:10** **Ashwani Sharma:** *"Machine learning based drug-induced Genotoxicity prediction model by evaluating physiochemical descriptors: Artificial Intelligence (AI) Approach"*	**15:50 – 16:10** **Tim Kaden:** *"Evaluation of drug-induced liver toxicity of trovafloxacin and levofloxacin in a human microphysiological liver model"* YSTA
16:10 – 16:30 **Lisa Nguyen:** *"Puromycin aminonucleoside induces kidney injury in iPSC-derived kidney organoids"*	**16:10 – 16:30** **Pedro Matos-Filipe:** *"Building virtual cohorts via the integration of public data"*	**16:10 – 16:30** **Valerie Beneke:** *"Microbiota dependent modulation of immune mediators in intestinal tissue slices ex vivo"*
16:30 – 16:45 **Jördis Klose:** *"Phenomics and transcriptomics applied for key event identification resulting in an AOP network for developmental neurotoxicity"*	**16:30 – 16:45** **Elena Lo Piparo:** *"Increasing confidence in NAMs through the integration of in silico and in vitro data: Pyrrolizidine Alkaloid (PA) case study"*	**16:30 – 16:45** **Brigitta Loretz:** *"Leaky Gut Model for the Investigation of Productive Delivery of JAK-1 siRNA"*
16:45 – 17:00 **Bettina Seeger:** *"High sensitivity of stem cell-derived motor neurons to pharmaceutically relevant Botulinum Neurotoxins A1, B1, E1 and F1"*	**16:45 – 17:00** **Ermes Botte:** *"Advanced in silico approaches for designing human-relevant organ models"* YSTA	**16:45 – 17:00** **Nathalie Jung:** *"Tuning tissue characteristics and complexity in in vitro models of the human intestinal mucosa"*
17:00 – 17:15 **Julia Kapr:** *"In vitro disease modeling of the Cockayne Syndrome B neuropathology using patient-derived iPSC – a 3R implementation approach"* YSTA	**17:00 – 17:15** **Vijay K. Gombar:** *"OrbiTox – Interactive Visualization of Multi-domain Experimental and Predicted Data for Translational Discovery"*	**17:00 – 17:15** **Sabrina Schnur:** *"In vitro assay-based drug efficacy testing for the treatment of Inflammatory Bowel Disease (IBD)"*

17:15 – 17:45 ***Coffee break***

17:45 – 19:15 **Prof. Horst Spielmann Session** *Chair: Winfried Neuhaus* Hall 1 – HS 1 (ground floor)

- **Introduction**
- **Horst Spielmann:** *"Pluripotent stem cell assays: modalities and applications for predictive embryotoxicity"*
- **Jürgen Hescheler:** *"The application of the stem cell concept in basic and applied research in the life sciences"*
- **Ellen Fritsche:** *"Horst Spielmann's foster child: the human DNT in vitro tests"*
- **Helena Kandarova:** *"Difficult roads often lead to beautiful destinations – lessons learnt at ZEBET"*
- **Malte Spielmann:** *"The contribution of single cell technologies to the 3Rs"*

20:00 – 24.00 ***Gala dinner*** Neues Rathaus

Wednesday, 28th September 2022

Day 3

9:00 – 9:30 KEYNOTE LECTURE — **Sasha Mendjan (IMBA, AUT)**
"Cardioids unravel human heart development and defects"
Chairs: Martin Paparella & Markéta Dvořáková
HALL 1

9:40 – 11:10 *Scientific sessions in Hall 1, Hall 2, Hall 3*

HALL 1 – HS 1 (ground floor)

Non-animal Methods for Cardiac Toxicity
Chairs: Martin Paparella & Ronette Gehring

09:40 – 10:00 **Martin Paparella:** *"Towards an Integrated Approach to Testing and Assessment for cardiotoxicity"*

10:00 – 10:20 **Monica Boffito:** *"Designing 3D bioengineered in vitro cardiac tissue models as reliable tools for the evaluation of chemical cardiotoxicity"*

10:20 – 10:40 **Edoardo Luca Viganò:** *"Computational modelling for cardiac toxicity"*

10:40 – 10:55 **Ronette Gehring:** *"The role of physiologically-based kinetic models within the new approach methodologies framework for predicting cardiotoxicity"*

10:55 – 11:10 **Mohammad Ghosheh:** *"The Electro-Mitochondrial Coupling of a Microphysiological Human Heart"* YSTA

HALL 2 – HS 2 (ground floor)

Biological Barrier Models for Infection Studies
Chairs: Claus-Michael Lehr & Jens Kurreck

09:40 – 10:00 **Claus-Michael Lehr:** *"Modelling Biological Barriers for Improving the Delivery of Novel Anti-infectives"*

10:00 – 10:20 **Jana Wächter:** *"A novel three-dimensional in vitro biofilm model in combination with human tissues – towards predictive chronic infection modeling"* YSTA

10:20 – 10:40 **Jens Kurreck:** *"Bioprinting of Organ Models for Infection Studies"*

10:40 – 10:55 **Samy Aliyazdi:** *"3D-(Bio-) Printing for Advanced in Vitro Systems to Investigate Nano-Antibiotics against Bacterial Infections"*

10:55 – 11:10 **Mareike Ahrends:** *"Effect of CDE in RSV-infected human lung tissue ex vivo as alternative for animal-free testing of antiviral therapeutics"*

HALL 3 – Seminar room (first floor)

3Rs and Education
Chairs: Christa Thoene-Reineke & David Pamies

09:40 – 10:00 **Nick D. Jukes:** *"DVM: Training the Animal Doctor' – a documentary film series"*

10:00 – 10:20 **Julia Menon:** *"Young TPI: the Dutch initiative for empowering the new scientific generation to go animal-testing-free"* YSTA

10:20 – 10:40 **Stephanie Krämer:** *"Improve your Skills" – the innovative 3R-Skills Lab of the 3R-Centre Giessen"*

10:40 – 10:55 **David Pamies:** *"Promoting 3Rs Public Awareness in a Young Audience"*

10:55 – 11:10 **Maximilian Nuber:** *"Modeling the In Utero Electroporation and surgical techniques beyond for the Replacement of animals in teaching"*

11:10 – 11:40 *Coffee break*

11:40 – 13:10 *Scientific sessions in Hall 1, Hall 2, Hall 3*

HALL 1 – HS 1 (ground floor)

3D in vitro Models
Chairs: Winfried Neuhaus & Horst Spielmann

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11:40 – 12:00 **Glauco R. Souza:** *"Magnetic 3D Bioprinting as a Surrogate to Aorta Ring Assay"*

12:00 – 12:20 **Dongwei Wu:** *"3D bioprinted cancer model as an efficiently applicable drug testing platform"* YSTA

12:20 – 12:40 **Elisa Ceccherini:** *"A dynamic in-vitro model of smooth muscle and endothelial cells cultures for vascular calcification study"*

12:40 – 12:55 **Moritz Pfeiffenberger:** *"Development of an innovative cartridge bioreactor for parallelized cultivation and stimulation of complex tissue models"*

12:55 – 13:10 **Tobias Weigel:** *"3D multi-layered epithelial models based on animal free fibrous scaffolds"*

HALL 2 – HS 2 (ground floor)

Replacement of Animal-derived Products
Chairs: Christopher Faßbender & Jan van der Valk

11:40 – 12:00 **Tilo Weber:** *"Animals in the (Petri) Dish: Towards a Truly Animal-free Laboratory"*

12:00 – 12:20 **Manuela Cassotta:** *"A worldwide survey on the use of animal-derived materials and reagents in scientific experimentation"*

12:20 – 12:40 **Andreas Schiwy:** *"Animal-free in vitro – Replacement of animal-derived products within the OECD TG 487 and 455 – Phase 1 report"*

12:40 – 12:55 **Johannes Hackethal:** *"Perspectives and Challenges by use of Human Placenta derived Biomaterials in Cell Culture and Regenerative Medicine"*

12:55 – 13:10 **Barbara Jozef:** *"A serum-free medium that supports cultivation of fish cell lines: case study about RTgill-W1 going serum-free"* EPAA Student grantee

HALL 3 – Seminar room (first floor)

3Rs Centres and Implementation
Chairs: Kristina Kejlová & Arti Ahluwalia

11:40 – 12:00 **Markéta Dvořáková:** *"3Rs Centre Czech Republic at National Institute of Public Health in Prague"*

12:00 – 12:20 **Karin Schmelz:** *"Evaluation of Charité 3R measures to implement 3Rs in biomedical research at Charité using online surveys and personal interviews"*

12:20 – 12:40 **Melissa K. Valussi:** *"3R-SMART: Schooling Platform for Methodological Approaches to Reduce Animal Tests"*

12:40 – 12:55 **Mieke Van Mulders:** *"The Innovation Center for 3Rs (IC-3Rs) in Belgium"*

12:55 – 13:10 **Sara Capdevila:** *"Implementation of the 3Rs program in the Comparative Medicine and Bioimage Centre of Catalonia."*

13:10 – 14:00	*Lunchtime including Business lunch sponsored by BioTechne*	biotechne®
14:00 – 15:30	*Poster session 2 (Details on page 8)*	First floor
15:30 – 17:00	*Scientific sessions in Hall 1, Hall 2, Hall 3*	

HALL 1 – HS 1 (ground floor)	HALL 2 – HS 2 (ground floor)	HALL 3 – Seminar room (first floor)
Skin and Eye* in vitro *Models *Chairs: Silvia Letasiova & Kristina Wagner*	***3Rs Projects: Quality Aspects and Funding*** *Chairs: Anna Maria Bassi & Rebecca Ram*	***Human Disease Models*** *Chairs: Paula Braun & Christian Lotz*
15:30 – 15:50 **Franciska Erdő:** *"Comparative analysis of chemical composition and permeability properties of artificial and excised skins – Reduction and Replacement"*	**15:30 – 15:50** **Maren Hülsemann:** *"Quality enhancing measures in organ model research"*	**15:30 – 15:50** **Christian Lotz:** *"Focus on efficacy: In vitro tissue models for preclinical research"*
15:50 – 16:10 **Marek Puskar:** *"An epidermal model containing melanocytes for skin pigmentation and lightening studies."*	**15:50 – 16:10** **Jens Kurreck:** *"Animal Components in Life Sciences and their Alternatives"*	**15:50 – 16:10** **Eva I. Reihs:** *"Bioengineering the inflammatory and degradative cross talk environment in arthritic diseases with patient-derived heterotypic joint-on-a-chip systems"* YSTA
16:10 – 16:30 **Tommaso Sbrana:** *"A new highly representative in-vitro model of human skin"*	**16:10 – 16:30** **Melanie-Jasmin Ort:** *"The relevance of human primary material in animal free research – orthopedic trauma as an example"*	**16:10 – 16:30** **Michael J Burgum:** *"Developing new-approach in vitro toxicology methods to elucidate the DNA damage mechanisms of nanofibres"*
16:30 – 16:45 **Silvia Letasiova:** *"Identification and Sub-categorization of Ocular Irritants Using the EpiOcular Tissue Model – Prediction Models for Liquids and Solids"*	**16:30 – 16:45** **Rebecca Ram:** *"Lush Prize 2012-2022 and beyond: Supporting human relevant, animal-free research"*	**16:30 – 16:45** **Lilas Courtot:** *"The Future of Parkinson's Disease Research: A New Paradigm of Human-Specific Investigation Is Necessary"*
16:45 – 17:00 **Nicola Knetzger:** *"Impedance Spectroscopy as tool to determine concentration-dependent eye irritation effects"*	**16:45 – 17:00** **Herwig Grimm:** *"Advancing 3Rs: The National Research Programme 79 of the Swiss National Science Foundation"*	**16:45 – 17:00** **Dilyana Filipova:** *"No improvement in 60 years: drug failure rates from the 1960s to the 2010s"*

17:15 – 18:30	*YSTA Awards / Announcement WC12 / Farewell*

Poster Session 1: Tuesday, 27.9.22, 14:00 – 15:30, first floor

1	**Investigation of ADHD-associated alterations of the neurovascular unit by aid of hiPSC-derived *in vitro* models**	*Markus Glaser, Zora Schickardt, Sabrina Oerter, Rhiannon McNeill, Carolin Koreny, Christian Lotz, Sarah Kittel-Schneider, Antje Appelt-Menzel*
2	**Identifying skin sensitizers with an innervated 3D-skin model**	*Wiebke Bergforth* YSTA *, Maren Schenke, Bettina Seeger*
3	**Rational design and evaluation of electrospun scaffolds as cell culture substrates for the cultivation of human induced pluripotent stem cells**	*Felix Rohde* YSTA *, Karin Danz, Nathalie Jung, Sylvia Wagner, Maike Windbergs*
4	**Penetration of topical aminophosphonates through the dermal barrier – "skin-on-a-chip" development with an emphasis on animal number reduction**	*Dorottya Kocsis* YSTA *, Rusul Keshwan, Franciska Erdő*
5	**Dry powder aerosols crossing the pulmonary barrier *in vitro* – Powder Atomizer aims for predicting human pharmacokinetic profiles**	*Marius Hittinger, Janina Osti, Annika Dehne, Sarah Wengschick, Thorsten Preisegger, Daniel Primavessy, Marielle Fink, Marc Mamier, Tobias Krebs*
6	**Characterization of human brain endothelial cells for the development of *in vitro* blood-brain barrier models.**	*Natascha Santacroce, Floriana Burgio, Laura Suter-Dick*
7	**Immunocompetent 3D model of human airways as predictive tool for clinical outcomes**	*Martina Di Fede, Giulia Realini, Bruna Clemente, Serena Tondi, Marianna Taccone, Sonia Budroni, Martina Canè, Andrea Ariolli, Kevin Pete Buno, Francesca Schiavetti, Michela Brazzoli, Daniela Rinaudo, Isabel Delany, Raffaella Cecchi, Tommaso Pasquali, Shahjahan Shaid, Silvia Rossi Paccani, Alfredo Pezzicoli*
8	**Using an innovative *in vitro* platform to investigate the early effects of oxidative stress and increased pressure on human trabecular meshwork cells**	*Sara Tirendi, Anna Maria Bassi, Vanessa Almonti, Sonia Scarfi, Mario Passalacqua, Stefania Vernazza*
9	**Interaction and transport of small extracellular vesicles across human biological barrier *in vitro* models**	*Adrián Klepe, Ana Špilak, Sophia Theresa Kriwanek* YSTA *, Andreas Brachner, Christa Nöhammer, Winfried Neuhaus*
10	**Animal-Free Plant-Derived Nanofibrillar Cellulose Hydrogels for Cell-Based Assays with Stem Cell and Organoid Cultures**	*Lauri Paasonen, Essi M. Niemi, Jonathan Sheard, Tony Kiuru*
11	**Humanized 3D cell culture materials – the next generation of *in vitro* testing**	*Catarina Custódio, Inês Deus, Cátia Monteiro, Sara Santos, João Mano*
12	**Human platelet lysate as a replacement for fetal bovine serum in biological barrier *in vitro* models**	*Andreas Brachner, Christina Gruber, Malgorzata Burek, Anja Neuhoff, Claudia Bernecker, Peter Schlenke, Winfried Neuhaus*
13	**Using perinatal tissues as a sustainable source of xeno-free platforms for cell culture**	*Inês Araújo Deus* YSTA *, Catarina Almeida Custódio, João Filipe Mano*
14	**Fostering Awareness, Accessibility, and Acceptance of Animal-Free Antibodies**	*Niamh Haslett, Michael Cook, Jesus Calvo-Castro, Stewart Kirton, Jarrod Bailey*
15	**Lysosomal trapping measurement in multiple cell types using High Content Screening System**	*Johanna Pacsuta, Katalin Jemnitz, Gábor Nagy, Zsuzsanna Gáborik*
16	**Risk assessment of medical devices for the oral cavity using a human oral mucosa epithelium model**	*Ana Špilak, Peter Pôbiš, Lada Svobodová, Alena Moulisová, Andreas Brachner, Markéta Dvořáková, Helena Kandarova, Dagmar Jirová, Kristina Kejlová, Winfried Neuhaus*
17	**Landscape New Approach Methodologies (NAMs) for safety assessment of chemical substances**	*Victoria C. de Leeuw, Jelle Vriend, Lianne de Wit-Bos, Jacqueline van Engelen, Anne Kienhuis*
18	**Effects of nanoplastics on cells of the neurovascular unit**	*Aleksandra Chmielewska, Marie-Therese Leiningen-Westerburg, Lukas Wimmer, Lea Ann Dailey, Malavika Manju Sudheer, Despina Fragouli, Ana Špilak, Andreas Brachner, Winfried Neuhaus*
19	**Generation of reporter models for rapid oxidative stress induction measurement *in vitro* and application to 3D bronchial tissue cultures**	*Marion Alriquet, Giulia Fonti, Karsta Luettich, Marco van der Toorn, Stefan Frentzel, Joanne Chua*
20	**Use of organotypic gingival cultures for the assessment of nicotine pouches**	*Filippo Zanetti, Marion Alriquet, Laura Ortega Torres, Laurent Neau, Fabio Maranzano, Claudius Pak, Amandine Schmutz, Carole Mathis, Nazan Gunduz, Joanne Chua*
21	**Reducing the number of controls in fish early life stage toxicity tests when solvents are used**	*Christopher Faßbender, John W Green, John Handley, Thomas H Hutchinson, Lennart Weltje, Daniel Faber, Gilly Stoddart*

22	**Evaluation of the cytotoxic and inflammatory effect of two size-separated fractions of Russian chrysotile asbestos fibre**	*Serena Mirata, Vanessa Almonti, Stefania Vernazza, Dario Di Giuseppe, Alessandro F. Gualtieri, Anna Maria Bassi, Sonia Scarfi*
23	**Evaluating the toxicity of sea-dumped conventional and chemical munitions to fish and human cells using a combination of cell viability assays**	*João Barbosa, Colin R Janssen, Jana Asselman*
24	**Optimization of skin sensitization testing strategy *in vitro* for medical device extracts**	*Lada Svobodová, Marian Rucki, Alena Vlkova, Kristina Kejlova, Dagmar Jirova, Hana Kolarova*
25	**Prediction of human toxicology with alternative experimental models – zebrafish embryo (EU project PrecisionTox)**	*Stefan Scholz, Riccardo Massei*
26	**Risk assessment of microplastic by *in vitro* genotoxicity assays**	*Clemens Rausch, Elisabeth Simböck*
27	**Hormonal influence on the primordial germ cell proliferation and distribution in the early development of the Medaka**	*Leonie Hobohm, Lukas Strobel, Annika Pätzold, Alexander Froschauer*
28	**Effects of Plastic on the reproductive behaviour of the freshwater snail Biomphalaria Glabrata: an invertebrate *in vivo* study**	*Linda Prähauser, Robin Friedrich, Nevena Lakic, Karoline Schweitzer, Christoph Olscher, Xavier Monforte, Barbara Gepp, Elisabeth Simböck*
29	**Use of Assay Ready KeratinoSens® Cells to test for Skin Sensitization**	*Lukas Focke, Valerie de Boor, Andreas Natsch, Oliver Wehmeier*
30	**Refinement of an *in vitro* testing battery for developmental neurotoxicity assessment by integration of radial glia- and astrocyte-specific endpoints**	*Etta Zühr, Katharina Koch, Ellen Fritsche*
31	**Cross-species-relevance of *in vitro* bioassay battery for the assessment of thyroid hormone disruption**	*Jiri Novak, Puja Kumari, Runze Liu, Klara Hilscherova*
32	**Proteomics reveals mechanisms of metabolic disruptive effects of emerging di-(2-ethylhexyl) phthalate substitutes**	*Alexandra Schaffert, Isabel Karkossa, Elke Ueberham, Rita Schlichting, Katharina Walter, Josi Arnold, Matthias Blüher, John T. Heiker, Jörg Lehmann, Martin Wabitsch, Beate I. Escher, Martin von Bergen, Kristin Schubert*
33	**Cell type and developmental time-dependent effects of genotoxins on neural stem-/progenitor cell functions *in vitro***	*Melanie Pahl, Jördis Klose, Ellen Fritsche*
34	**Retrofitting in vitro test systems for high throughput screening of thyroid disrupting chemicals with external biotransformation systems – a critical review and tiered *in vitro/in silico* approach**	*Sebastian Lungu-Mitea, Andreas Schiwy, Felipe Vidal, Inska Reichstein, Puja Kumari, Miriam N. Jacobs, Klara Hilscherova*
35	**Development of the NPC1ab_RAR_GR assay, an *in vitro* test method to identify putative endocrine disrupting chemicals (EDCs) perturbing glucocorticoid receptor (GR) or retinoic acid receptor (RAR) signaling**	*Kevin Schlüppmann* YSTA *, Saskia Hüsken, Louisa Stark, Arif Dönmez, Eike Keßel, Nils Förster, Katharina Koch, Ellen Fritsche*
36	**Mitochondrial toxicity; AOP-driven extrapolation from *in vitro/in silico* data to regulation**	*Wanda van der Stel, Giada Carta, Julie Eakins, Johannes Delp, Ilinca Suciu, Anna Forsby, Andrea Cediel-Ulloa, Kristina Attoff, Florentina Troger, Hennicke Kamp, Iain Gardner, Barbara Zdrazil, Martijn J.Moné, Gerhard F. Ecker, Manuel Pastor, Jose Carlos Gómez-Tamayo, Andrew White, Erik H. J. Danen, Marcel Leist, Paul Walker, Paul Jennings, Susanne Hougaard Bennekou, Bob van de Water*
37	**A xeno-free *in vitro* 3D synovial membrane model mimicking the pathogenesis of arthritis**	*Julia Beißel, Christina Lubahn, Duc Ha Do Nguyen, Moritz Pfeiffenberger, Frank Buttgereit, Timo Gaber, Alexandra Damerau*
38	**Fluidic shear stress reduces TNFα-mediated cartilage damage in a 3D model of degenerative joint disease**	*Christina Lubahn, Julia Beißel, Duc Ha Do Nguyen, Moritz Pfeiffenberger, Thomas Leeuw, Frank Buttgereit, Timo Gaber, Alexandra Damerau*
39	**VHP4Safety: Assessing the safety of chemicals and pharmaceuticals without using laboratory animals**	*Anne S. Kienhuis, Cyrille A.M. Krul, Juliette Legler and the VHP4Safety consortium*
40	**Twinning towards excellence in alternative methods for toxicity assessment – TWINALT project**	*Zuzanna Sobańska, Joanna Roszak, Tamara Vanhaecke, Maria Dusinska, Elise Rundén-Pran, Marina Marinovich, Edyta Reszka*

Poster Session 2: Wednesday, 28.9.22, 14:00 – 15:30, first floor

41	**A mouse pup model for learning the Phalanx Distalis Amputation and pup handling**	*Maximilian Nuber, Miriam Priester, Nadine Baumgart, Jan Baumgart*
42	**The role of the Animal Welfare Body in ensuring compliance with the 3Rs: a case study of the forced swim test**	*Kimberley Jayne, Julia Baines, Emily R Trunnell*
43	**Target group specific efforts to facilitate replacement of animal experimentation**	*Lisa Andersson, Kaisa Askevik, Elvira Hukasova, Emma Svensk*
44	**Transforming Culture: Culture of Care in Animal Research**	*Katharina Ameli, Stephanie Krämer*
45	**Antibodies: Resistances to overcome on the way to a cruelty-free future**	*Johanna Walter, Tamara Zietek, Corina Gericke*
46	**Modernizing Medical Research to Benefit People and Animals**	*Isobel Hutchinson, Carla Owen, Jarrod Bailey*
47	**Knowledge, skills, attitudes and beyond**	*Nick D. Jukes*
48	**How to address animal methods bias in scientific publishing**	*Catharine E. Krebs, Helder Constantino, Lilas Courtot, Kathrin Herrmann, Ann Lam, Sofia Batista Leite, Janine McCarthy, Brinda Poojary, Kristie Sullivan*
49	**Attitudes towards animal dissection and animal-free alternatives among high school biology teachers in Switzerland**	*Miriam A. Zemanova, Silvia Frey*
50	**TPI.tv: A visual platform for animal-free innovations**	*Victoria C. de Leeuw, Harm J. Heusinkveld, Anne S. Kienhuis*
51	**ReThink3R 2.0 Summer School – Educating the next generation of scientists**	*Annemarie Lang, Lisa Grohmann,Katharina Hohlbaum, Philipp Burt, Alexandra Damerau, Marcel Bermudez, Moritz Pfeiffenberger, Laura Behm*
52	**Animal and Tissue Exchange platform (ATEX)**	*Jan van der Valk, Daan Weustenraad, Wim de Leeuw*
53	**Knowledge and Attitude Towards laboratory animals use and 3Rs: A cross-Sectional Study in Sudan**	*Ahmed Algali, Abednego N. Masai, Fadlalbaseer A. E. Alnoor, Saeed S. A. Ahmed, Ragda A. A. Mohammed, Ali A. Saeed, Banu C. Tel*
54	**Combining antiviral, anti-inflammatory and antibacterial properties of drugs in fighting COVID-19 disease**	*Jana Viskupičová, Petronela Rezbárikova, Marta Šoltesová Prnová, Helena Kandarova, Magdalena Májeková*
55	**Establishment of a human Synovium-on-a-chip for osteoarthritis disease-modeling using animal-free technologies**	*Eva I. Reihs* YSTA *, Reinhard Windhager, Stefan Toegel, Hans P. Kiener, Peter Ertl, Mario Rothbauer*
56	**Single Cell Sequencing To Study IL-1β Induced Changes In Chondrocyte Pellet Cultures**	*Sebastian Kurmies* YSTA *, Antje Vester, Marta Ferreira-Gomes, Gabriela M. Guerra, Frederik R. Heinrich, Carl C. Götzke, Vikram Sunkara, Pawel Durek, Joel D. Boerckel, Mir-Farzin Mashreghi, Annemarie Lang*
57	**A human *in vitro* model for airway epithelial injury and regeneration**	*Ashesh Chakraborty* EPAA Student grantee *, Michal Mastalerz, Hannah Marchi, Raphael Meixner, Rudolf A. Hatz, Jürgen Behr, Michael Lindner, Anne Hilgendorff, Claudia A. Staab-Weijnitz*
58	**Human-derived *in vitro* test systems of inflammatory bowel diseases as an alternative to laboratory animal models**	*Spyridon Damigos, Christina Fey, Nicolas Schlegel, Marco Metzger, Daniela Zdzieblo*
59	**Advanced *in vitro* models to study molecular mechanisms of Alzheimer's disease**	*Zahra Motamed, Carine Gaiser, Laura Suter-Dick*
60	**Cultivation of Human Skin Biopsies for Preclinical Testing on human trabecular meshwork cells**	*Astrid Wurbs, Katrin S. Wallner, Clemens Kittinger, Georg Singer, Beate Rinner*
61	**Enhanced drug metabolisms of hepatocytes with physiological aerobic respiration enabled by a new oxygen-permeable plate as an alternative culture format**	*Yasuyuki Sakai, Masaki Nishikawa, Hiroyasu Ito, Fumiya Tokito, Mathieu Danoy, Takumi Kawanishi, Hiroshi Arakawa, Yukio Kato, Tomoaki Matsugi, Jingjing Yang, Katsuhiro Esashika, Toru Sumita*
62	**Vitamins' B6 and C enhance the huIFN-αn3 induction by the NDV ZG1999HDS or Sendai virus**	*Bratko Filipič, Lidija Gradišnik, Adriana Pereyra, Hrvoje Mazija*
63	**Direct Replacement of Secondary Antibodies by Affimers**	*Isobel Gibson*
64	**Neutralising effects of different antibodies on *Clostridioides difficile* toxins TcdA and TcdB in a translational approach**	*Georg Csukovich* YSTA *, Nina Kramer, Barbara Pratscher, Ivana Gotic, Patricia Freund, Rainer Hahn, Gottfried Himmler, Sabine Brandt, Iwan A Burgener*

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