THURSDAY JUNE 12, 2025 4:30–6:00 PM			
Poster Board Number	**Abstract Number**	**Presenter**	**Title**
Track 2: MPS for Biomedical Research and Disease Modelling Theme 2.4: MPS for cancer precision medicine			
101	4	Faiqa Nazir	Elucidating chemotherapeutic response and fibroblast dynamics via drug-nanoconjugate carrier in high-throughput 3D tumor microenvironments
103	6	Madre Meyer	Novel applications of senolytics to prevent treatment resistance in cervical cancer
105	7	Cayleigh de Sousa	Dual-targeted therapy: Novel interventions to inhibit metastasis and chemoresistance in cervical cancer
107	8	Erik Maquoi	Optimization of a 3D spheroid model to study the migration of cancer-associated fibroblasts in fibrillar collagen
109	10	Valentin D. Wegner	Modulation of CAR T-cell efficacy by short-chain fatty acids in a ROR1-positive intestinal adenocarcinoma-on-chip model
111	18	Su Liu	A vascularized glioblastoma-on-a-chip model for the evaluation of CAR-T cell therapy
113	29	IQRA MUNIR	Thermo-responsive nanocarriers for targeted drug delivery in microphysiological systems: Leveraging 3D spheroids and organ-on-chip models to enhance cancer therapeutics
115	35	Joanna Burdette	The impact of ovulation on early events in ovarian cancer development using microfluidics
117	39	Vidhi Mathur	Metoclopramide-loaded 3D bioprinted GelMA supplemented with decellularized human esophageal matrix as in vitro model system for reflux associated motility disorder
119	65	Fatemeh Mirzapour-Shafiyi	Flow-induced vascular remodeling on-chip: Insights into anti-VEGF therapy optimization
121	70	Yuji Nashimoto	Evaluation of endothelial-to-mesenchymal transition using a three-dimensional vascular model
123	87	Andrea Bezze	Engineering human-relevant glioblastoma microenvironment models for the optimisation of advanced drug delivery systems
127	95	Devrim Pesen Okvur	MPS for cancer research
129	117	Giulia Amos	A 3D hydrogel platform to study the functional integration of glioblastoma into neural networks in vitro
131	133	Nathalie Brandenberg	Bladder cancer-on-chip: A 3D model to study human urothelial tumors under physiological stretch
133	163	Alice M. Leroy	Blood vessels-on-chip for studying the effects of anti-cancer therapies on the vascular barrier
135	166	Ibtihal Hezili	Blood vessels-on-chip for the study of the effects of anti-cancer therapies on angiogenesis
137	172	Marianna Peditto	A 3d bioprinted in vitro model of neuroblastoma: A vascularized platform for drug testing and personalized medicine
139	173	Sara Micheli	Integrating microfluidic BBB-on-chip with 3D glioblastoma spheroids to assess autologous monocytes loaded with a next-generation oncolytic HSV-1
141	174	Charlotte M. de Winde	Lymphoma-on-chip model reveals that lymph node stromal cells promote diffuse large B-cell lymphoma survival and migration
143	182	Jie-Yun Tseng	Photothermal enhancement of tumor-specific T-cell expansion through dendritic cell activation using GCS-PPy nanoparticles
145	184	Yang-Wei Liu	Redefining metastasis models: Advanced hydrogel platforms to investigate and inhibit cancer cell homing
147	190	Wen Kang	A transwell-based alginate hydrogel organ-chip model for analyzing gastric cancer cell homing and metastatic behavior
149	210	Xiao-yann Huang	A human systemic model for simultaneously evaluating antibody-drug conjugates efficacy and the risk of interstitial lung disease
151	216	Helene Le	Patient-derived tumor ex vivo models for immuno-oncology drugs

Poster Board Number	Abstract Number	Presenter	Title
153	247	Franziska Linke	Modelling prostate cancer bone metastasis using organ-on-chip
155	248	Erick Solorio González	Development of an osteosarcoma-on-a-chip device that mimics the osteosarcoma tumour microenvironment
157	269	Stefaan Verbruggen	Multi-omics qualification of an organ-on-a-chip model of osteolytic bone metastasis
159	329	Satomi Matsumoto	Comparative evaluation of vascular formation by endothelial cell types in an on-chip angiogenesis model of alveolar soft part sarcoma using random displacement amplification sequencing
161	343	Orégane Bajeux	Development of a 3D microfluidic model of pancreatic adenocarcinoma integrating the mechanical stimuli of the tumor microenvironment
163	368	Chien Yu Huang	Advancing precision oncology and drug development through clinical validation of organ-on-a-chip and automated drug delivery platform
165	370	Sofia Tartaro	Micro-physio/pathological system as a preclinical model to replicate pancreatic tumor microenvironment
167	381	Clara Bayona	Tumor microenvironment as a modulator of the immune response in a glioblastoma-on-chip model
169	391	Francesca Gervaso	The study of cellular crosstalk in glioblastoma multiforme by means of a 3D co-culture in vitro model-on-chip
171	420	Martina Karasova	Substrate stiffness as a modulator of cellular behavior in ovarian cancer cells
173	421	Andrea Pavesi	Biomimetic microphysiological system (MPS) unveils complex pancreatic tumor microenvironment dynamics: Advancing in cancer modeling and therapeutic discovery
175	437	Iris Schilt	CAR-T migration and cytotoxicity in a vessel-cancer co-culture
177	442	Priyanka Fernandes	Development of a 3D immunocompetent breast cancer model to accelerate drug testing and personalised medicine
179	464	Kerem Çoban	Development of a lymphoma-on-chip model for studying tumor-stromal interactions
181	466	Vincent van Duinen	Targeting HCC tumor microenvironment interactions using an advanced HCC patient-derived on-chip model
183	497	Emmanouil Angelidakis	Colorectal cancer patient-derived organoids to elucidate the impact of Wnt/β-catenin signalling on CAR-T cell cytotoxicity in vitro
185	498	Claudia Olaizola-Rodrigo	A novel multicompartment barrier-free microfluidic device to study the immune-tumor interactions in glioblastoma
187	502	Dima Ghannoum	Microphysiological systems to investigate tumor heterogeneity: A focus on the immune compartment
189	507	Sofia Tomza	Building a liver sinusoid-on-a-chip model for metastatic research: The initial steps
191	511	Bassel Alsaed	Ex vivo modeling of precision immuno-oncology responses in lung cancer
193	532	Kyusuk Baek	Engineering a vascularized tumor immune microenvironment using microphysiological system for immuno-oncology drug evaluation
195	573	David Barata	Combinatorial micro-scaffold printing for on-chip modelling of osteosarcoma
197	586	Vira Sharko	Open-port barrier-free microphysiological system for exploring tumor microenvironment effects on spheroid invasion and drug response
199	635	María García-Díaz	Metastasis-on-chip: Engineering a hydrogel-based 3D model to study metastatic cell extravasation in colorectal cancer
201	636	Giacomo Cretti	Development of a microfluidic platform to generate vascularized colorectal cancer spheroids-on-chip
203	639	Mohammad Jouybar	A breast duct-on-chip model for emulating invasive ductal carcinoma and testing therapies

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205	643	Ane San Martin	Advancing a physiologically relevant co-culture model for chronic lymphocytic leukemia using a microfluidic system
207	644	Patrick Sandoz	Decoding immune cell dynamics in 2D and 3D microtumor models
209	654	Viviana Secci	A vascularized microphysiological system reproducing endochondral ossification in vitro to study Ewing sarcoma proliferation and migration
211	664	Keqian Nan	Ex vivo kidney 3D immune-microtumors show tissue cell type retention and enable functional precision immunotherapy and combination therapy testing
213	669	Odile Filhol-Cochet	Assessing metastatic potential and drug response of patients' renal carcinoma-on-a-chip: META-predict
215	677	Jana Zielinski	Enabling studies of circadian rhythm of the human lung tumour cell line A549 in vitro through entrainment delivered via multiplexed perfusion
217	694	Amélie Paillereau	A cancer-on-chip model reproducing activation and polarization of T cells, B cells and macrophages by the tumor microenvironment of pancreatic ductal adenocarcinoma
219	723	Juliana Navarro Yepes	Advancing immuno-oncology with a 3D bioprinted vascularized tumor-on-a-chip model: Recapitulating the tumor microenvironment and immune cell dynamics
221	729	Bumsoo Han	Discovery and validation of therapeutic targets in pancreatic cancer using microphysiological pancreatic cancer-associated coagulation models
223	731	Kim Gwang Myeong	3D printed in vitro lung cancer invasion model
225	732	Robert Storm	Semi-automated, scaffold-free organoid culture workflow
227	735	Estelle Bastien	Integrating 3D tumor model and hydrogel-based microfluidics for temporal and spatial metabolic control
229	736	Nicole Anderle	Microfluidics-based development and characterization of tertiary lymphoid structure (TLS-on-chip)
231	762	Elliot Lopez	Growth and study of tumor spheroids behavior in a biomimetic vascularized platform
233	791	Lisa Hoelting	Unlocking the potential of 3D patient-derived tumor microtissues as reliable and scalable in vitro pre-clinical models
235	807	Shaun Wootten	Advancing tumor-on-a-chip technology: A cost-effective 3D-printed MPS for cancer studies
237	817	Adriana Barroso	Collagen-based hydrogels with multiple ions as osteoporosis 3D model
239	818	Rafaela Seabra	Hybrid multi-functional based 3D model for investigating bone diseases
241	825	Johanna Schreiber	Developing a 3D human bone marrow model for hematological disease research and drug screening
243	828	Miguel Coelho	In silico osteosarcoma model for advanced disease research
245	838	Jan Guzowski	Bioprinting of self-assembling hydrogel droplet-arrays for automated ultra-high-throughput screening of cancer microenvironments with gradients in cellular composition
247	839	Daniel Ferreira	Early cancer detection in hereditary diffuse gastric cancer through organ-on-a-chip technology
249	849	Martina Poppa	3D-printed master templates enable rapid fabrication of micropatterned scaffolds for gut in vitro modelling
251	851	Daniela Gaebler	A human in vitro vascularized micro-tumor model of ovarian cancer for investigating tumor-stromal interactions
253	854	Bhuvanesh Dave	Tumor organoid models with functional immune system physiological oxygenation improve preclinical assessment of drugs
255	860	Sarah Shelton	Modeling the tumor microenvironment in pancreatic cancer reveals opposing functions of cancer-associated fibroblast subtypes

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257	865	Elizabeth Lipke	Highly consistent tissue-engineered colorectal cancer microspheres support patient-derived xenograft tumor cells for automated drug screening
259	866	Dilara Perver	Bone marrow mimetic MPs for malignant progressions and resistance to therapeutic interventions
261	944	Ecem Saygili	Target, treat, and track: A multifunctional microfluidic platform for lung cancer therapy
263	949	Dik C. van Gent	Functional ex vivo paclitaxel sensitivity assays for breast cancer tissue with in vivo validation
265	963	Eloïse Bouges	Patient derived tumor organoid in microphysiological systems to model rectal cancer under radiotherapy
267	990	Subin Choi	Investigation of pancreatic cancer heterogeneity by inkjet-printed single cell-derived organoid
457	469	Silvia Scaglione	Targeted drug delivery with erythrocyte-derived nanovesicles in an organ-on-chip tumor model
Track 2: MPS for Biomedical Research and Disease Modelling Theme 2.5: Understanding the brain with MPS			
269	45	Eun U Seo	Aging of the blood-brain barrier (BBB) via reactive oxygen species (ROS) stimulation
271	75	Margaret Magdesian	Multiparametric neuronal and mitochondrial analysis using human in vitro model enables faster drug screening and modeling for neurological diseases
273	149	Lotta Isosaari	Exploring multicellular dynamics in glioblastoma: A 3D open-top chip model with integrated neurovascular networks for drug testing
275	154	Patrick C. Hurley	Medical imaging-informed device design: Toward lymphoid-like brain follicles on-a-chip
277	156	Valentin Tallandier	High-throughput in vitro evaluation of synaptic density to enhance and accelerate preclinical drug discovery for neurogenerative diseases
279	162	Eva Veiss	Contribution of microfluidics in modeling human vascularized brain organoids in the context of neonatal hypoxia-ischemia
281	164	Inês P. Silva	A microphysiological approach to study dopaminergic injury and inflammation interplay in Parkinson's disease
283	168	Begum Gokce	Evaluation of the passage of monocytes in a 3D blood-brain barrier (BBB)-on-a-chip model
285	239	Ludovica Montesi	A 3D printed organ-on-a-chip model to study cerebral blood flow alterations and their effect on vascular endothelial functions
287	255	Adriana C. Toma	Coupling compartmentalized microfluidic platforms with MEA for advancing neuromuscular junction modeling
289	256	Sandra Tenreiro	Exploring the role of α-synuclein in retinal pathophysiology using retinal organoids
291	260	Stéphanie Boder-Pasche	"Hold me tender": Multi-well plate inserts for parallelized and long-term 3D cell model immobilization
293	272	Angelica Sabogal Guaqueta	Body barriers—Developing a novel multiorgan chip: Neurotoxicity testing in human pluripotent stem cells
295	274	Yağmur Filiz	Engineering 3D bioartificial muscles to model neuromuscular junction formation
297	300	Michelle Trempel	Using microporous substrates to model blood-brain barrier vulnerabilities with the µSiM platform to understand post-operative delirium superimposed on dementia
299	301	Paulina Villanueva	Development of a functional microphysiological model that recapitulates hallmarks of neuronal senescence and Alzheimer's disease for therapeutic testing
301	305	Morteza Roodgar	Development of cynomolgus macaque iPSC-derived neurons as a nonhuman primate model for ALS drug discovery and toxicology

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303	313	Huiting Zhang	A microfluidic blood-brain barrier model with in vivo-like functional properties for streamlined drug permeability screening
305	315	Heli Susanna Narkilahti	Towards modeling epilepsy and epileptic seizure-like activity in vitro
307	324	Se Eun Jang	Comparative modelling of 3D human blood-brain barrier with iPSC-derived and primary astrocytes on microfluidic chip
309	180	Samarah Harb	3D bioprinted intestinal model for predictive toxicity assessments
311	353	Hillary Linda Schulz	Developing a co-culture model of the blood-brain barrier: Translating static approaches to a dynamic platform
313	364	Thomas Sivier	Development of a complex vascular microarchitecture in a physiological microdevice to study the impact of a tumoral context on the brain angiogenesis and blood-brain barrier
315	379	Fikret Emre Kapucu	MEMO platform for modeling pathological and functional alterations in neuronal networks
317	398	Anete Romanauska	Impact of extracellular vesicles from pathogenic gut bacteria on brain-vascular barrier permeability
319	486	Simon Konig	A microfluidic blood-brain barrier model for investigating disease mechanisms and enhancing CNS drug delivery
321	540	Joël Küchler	Investigating the feasibility of in vitro biological neural networks for computation
323	542	Dara Khosrowshahi	Advancing pain-on-chip technology: A human in vitro model for neural sensing using high-density multielectrode arrays
325	543	Noah Goshi	Human and rat neural microphysiological systems to evaluate chemical and biological threats
327	555	Blandine Clément	A high-density MEA-based multicompartment platform to study human nociceptor signal propagation in co-culture with keratinocytes
329	557	Yoke Chin Chai	Optimization of co-culture conditions of hiPSC-derived brain-specific endothelial cells and pericytes on silicon micromesh blood-brain barrier chip
331	666	Johanna Laakkonen	Towards blood-brain barrier-on-chip to study vascular dysfunctions in neurological diseases and for drug discovery
333	670	Jean-Philippe Frimat	The role of mechanosensitive Piezo1 channels in focused ultrasound activation of in vitro cell cultures
335	672	Justina Venckute Larsson	Fabrication and validation of 3D printed molds for production of PDMS chips to facilitate organ-on-chip studies
337	730	Kartik Balachandran	Towards the development of an isogenic blood-brain barrier chip system to study the effects of traumatic brain injury
339	808	Teng PAN	A spatially constrained organ-on-chip model to assess human OPC-driven remyelination and therapy efficacy
341	822	Fabio FF Garrudo	Brain-on-a-chip platforms to evaluate neural cell health in real-time
343	835	Brittany Robaina-Caicedo	Development and validation of a functional hiPSC-derived Human-On-a-Chip® model of complement-mediated autoimmune polyneuropathy
345	842	Joseph Ciurca	Development of an in vitro iPSC-derived functional neuronal circuitry model for Parkinson's disease
347	845	Dallas Nash	Change of blood-brain barrier integrity and amyloid clearance function induced by APOE4 astrocytes in an iPSC-derived microphysiological model
349	887	Pawel Romanczuk	Development of a 3D neurovascular unit (NVU) model using Brain-on-Chip technology for drug testing in depression
351	933	Phillip Wright	Explore brain organoid activity with microchip technology
353	945	Nicolai Winter-Hjelm	3D interfaces with embedded nanoporous microelectrodes for studying neural network function and dysfunction

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355	988	Jack Thornton	Establishment of an immunocompetent human brain organoid platform to investigate neurofibromatosis type 1-associated neuroimmune dysfunction
Track 3: MPS for Efficacy, ADME and Toxicity Testing Theme 3.2: Local and acute toxicity			
357	493	Justina Then	A human liver microphysiological system for assessing mechanisms of toxicity
359	566	Andrew LaCroix	Peripheral nerve microphysiological system for screening neuropathy of small molecule and PROTAC chemotherapeutics
Track 3: MPS for Efficacy, ADME and Toxicity Testing Theme 3.4: Pharmaco- and toxicokinetics			
361	779	Murat Cirit	Human multi-tissue chip platform for predictive and mechanistic preclinical ADMET studies on gut-liver-kidney axis
Track 4: MPS for Industrial and Regulatory Testing Theme 4.1: MPS Standardization			
363	179	Lucia Selfa Aspiroz	Enhancing stem cell reproducibility through the implementation of standards
365	187	Sanja Savić	Comparative validation study of 3D lung tissues from three different sources (lab grown, manufactured automatically by an AutoMTPTM unit and purchased from external production specialists)
367	215	Sibel Bahtiri	Transcriptomic profiling of high-throughput kidney organoids to evaluate variability
369	218	Kainat Khan	Transforming drug discovery and development: Overcoming challenges in microphysiological systems for wider adoption
371	271	Jia-Jun Yeh	Micropumping chip module for enhanced modularity in organ-on-chip platforms
373	320	Deborah Stanco	Leveraging a stem cell-derived MPS model and AOPs for mechanistic assessment of nanomaterial-induced intestinal toxicity
375	322	Taku Satoh	The optimization of channel design of MPS device Fluid3D-X®, which consists of double-layered channels separated by a porous membrane
377	333	Elsa Batista	Establishing metrology standards in microfluidic devices: Project impact and future work
379	485	Sanae El Harane	AirLiwell: An air-liquid interface system for reproducible, scalable, and standardized organoid models in personalized medicine and biomedical research
381	509	Marcella van Hoolwerff	Advancing microphysiological systems and organ-on-chip through standardization
383	535	Eric Safai	Intestinal explant barrier chips integrated on the Translational Organ-on-chip Platform (TOP)
385	634	Sandro Meucci	Microfluidic Development Kits: Standardized open-platform technology for the upscaling of modular MPS
387	658	Jingjing Yang	Improved functionality of human hepatocytes using oxygen permeable plates in co-culture systems with different types of culture inserts
389	660	Takahiro Yoshioka	Enhancement of cell adhesion and cell function in hepatocyte culture using the MPS chip with a bilayered microchannel structure: Fluid3D-X®
391	661	Seiichi Ishida	Evaluation of the effect of serum concentration on the activation/deactivation and adhesion of hepatic stellate cells
393	676	Xiaohua Qian	Advancing the use of MPS in regulatory applications: Broad perspectives and a cross-platform DILI project
395	726	Yuji Kimura	On-chip monitoring of the flow rate in a microchannel using optical technology

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397	823	Christine Happel	Validation and Qualification Network (VQN) public-private partnerships for adoption and implementation of new approach methodologies (NAMs)
399	955	Katharina Schimek	Qualification of a Human 3D Liver-on-Chip Model: Establishing a Cross-pharma trial to evaluate ADME and Toxicity Predictions in Pre-clinical Development
401	967	Chihiro Nishiura	Study for the reconstruction of hepatic sinusoid by 3-Dimensional culture using a silica fiver scaffold
Track 4: MPS for Industrial and Regulatory Testin Theme 4.2: Regulatory acceptance of MPS for testing of pharmaceuticals: case studies			
403	593	Hamed Ghazizzdeh	A platform for simultaneous, longitudinal analysis of engineered neuromuscular tissue for applications in botulinum neurotoxin potency testing
Track 4: MPS for Industrial and Regulatory Testing Theme 4.3: Regulatory acceptance of MPS for testing of non-pharmaceutical chemicals: case studies			
405	254	Thibault Honegger	Establishing a humanized in vitro model for pesticide-induced neurotoxicity: A collaborative effort between NETRI and ANSES
407	327	Matthias Gossmann	From neat compounds to complex mixtures: Microphysiological systems for cardiotoxicity safety testing of botanical extracts
409	804	Kristina Bartmann	Neuronal subtype-specific MoA analyses in hiPSC-derived 3D BrainSpheres
Track 4: MPS for Industrial and Regulatory Testing Theme 4.4: Scalability and reproducibility tools			
411	207	Steven R. Talbot	Enhancing 3R principles with Bayesian updating: A new horizon in sample size calculation for replacement methods
413	323	Sei Hien Lim	Development of high-throughput 3D assay-ready angiogenesis kit in microphysiological system
415	510	Amélie Bocquet	Development of µ3D cardiac strips using a biocompatible thermoplastic elastomer platform for drug testing
417	582	Amr Othman	Exploring the benefits of 3D spheroid and organ-on-a-chip technologies with human iPSC-derived cell types
419	674	Sabine Middendorp	NXTGEN Hightech One-Stop-Shop: Towards a value chain for high-tech production and upscaling of MPS within the Dutch ecosystem
421	711	Astrid Michlmayr	Automating organoid culture: A unique platform for iPSC and organoid generation, cultivation, and expansion
423	777	Caroline Culp	Novel high-throughput pump-free organ-disc platform for the study of adaptive immune response in a lymphoid tissue model
425	787	Marie Monchablon	MAC pump: An advanced platform to make commercial organ-on-chip compatible with pharmaceutical industry
427	952	Duncan Alric	seamless automation of human induced pluripotent stem cells maintenance, 3d culture and differentiation into retinal pigmented epithelium
429	982	Yujin Lee	Vascularized Tissue on Mesh-Assisted Platform (VT-MAP)for High-Throughput Drug Screening
Track 4: MPS for Industrial and Regulatory Testing Theme 4.5: MPS developer/end-user dialogue			
431	290	Thomas Fischer	The IQ MPS affiliate: pharmaceutical perspective and overview of activities towards implementation of MPS in drug development
433	390	Simone Perottoni	Conventional probiotics adhesion test implemented by a customizable on-a-chip dynamic tool
435	434	Solène Feyzi	Investigating perceptions on in vitro methods to assess physiological relevance
437	680	Hanna Lammertse	hDMT INFRA: A unique infrastructure focused on driving the implementation of dynamic, human-based organ and disease models

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439	693	Monika Yanovska	Establishment and operation of a core facility for complex microphysiological in vitro models
441	728	Kaoru Sato	Progress in the product implementation of “BBB-NET”, the receptor-mediated transport assay platform incorporating a humanized 3-dimensional (3D) blood brain barrier (BBB) network microphysiological system (MPS)
443	785	Dhanesh G. Kasi	Facilitating organ-on-chip research and adoption
445	827	Federico Nebuloni	Making Lab: Bespoke microfluidics at The Francis Crick Institute
447	843	Madhu Nag	3Rs Collaborative MPS Initiative: Increasing industry adoption and regulatory use of microphysiological systems
Track 4: MPS for Industrial and Regulatory Testing Theme 4.6 MPS for chemical risk assessment			
449	331	Paul Kurtenbach	A miniaturized human iPSC-derived blood-brain barrier model enables in vivo brain permeability estimation for regulatory testing
451	386	Tina Florut	Advancing in vitro inhalation toxicity testing: A collaborative path to regulatory acceptance
453	612	Claudia Hempt	The future of Transport of Dangerous Goods classification in the light of microphysiological systems
455	645	Katharina Nitsche	Evaluating liver-on-chip models for a next generation risk assessment