

Inserm Workshop 280

Exploiter le potentiel des NANOBODIES® : d'outils de recherche à agents thérapeutiques
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Exploiting the full potential of NANOBODIES®: from research tools to therapeutics
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25-27 Septembre 2024 / September 25-27 ■ Bordeaux, France

Mercredi 25 Septembre 2024 ■ **Wednesday September, 25 2024**

14:00 - 14:30	Reception of participants
14:30 - 14:45	Welcome and presentation by the organizers
Keynote Lecture 14:45 - 15:30	Route planner to generate best possible NANOBODIES® as a tool in research applications, diagnostics or therapeutics Serge Muyldermans (Vrije Universiteit Brussel, Brussels, Belgium)
SESSION I	NANOBODIES® IN STRUCTURAL BIOLOGY
15:30 - 16:15	Engineering NANOBODIES® for structural biology, molecular pharmacology & drug discovery Jan Steyeart (Vrije Universiteit Brussel, Brussels, Belgium)
16:15 - 17:00	Use of NANOBODY®-binding Fab (NabFab) for high-resolution cryo-EM studies of membrane proteins Kaspar Locher (ETH, Zurich, Switzerland)
17:00 - 17:30	Coffee break
17:30 - 18:15	NANOBODIES® as crystallization chaperones Philippe Leone (LISM, Marseille, France)
18:15 - 19:00	Cryo-electron microscopy to engineer NANOBODIES® against variable bacterial surface structures Guillaume Dumenil (Institut Pasteur, Paris, France)
19:00 - 19:45	POSTER SESSION
19:45	Dinner

Jeudi 26 Septembre 2024 ■ **Thursday September, 26 2024**

06:30 - 08:30	Breakfast
SESSION II	NANOBODIES® IN CELL BIOLOGY AND IMAGING
08:30 - 09:15	Nano- and Chromobodies: versatile probes to modulate, visualize and quantify proteins in vitro and in vivo Ulrich Rothbauer (University of Tübingen, Tübingen, Germany)
09:15 - 10:00	Opportunities and challenges of NANOBODIES® in targeted protein degradation Laura Dassama (University of Stanford, Stanford, USA)
10:00 - 10:30	Coffee break

10:30 - 11:15	Strategies for imaging multiple targets using engineered NANOBODIES® with erasable signals Felipe Opazo (University of Gottingen, Gottingen, Germany)
11:15 - 12:00	Engineering NANOBODIES® for intracellular applications John Dingus (University of Harvard, Boston, USA)
12:00 - 12:45	Round table: Immune, non-immunized or synthetic libraries to generate specific NANOBODIES®?
12:45 - 14:45	Lunch and POSTER SESSION
SESSION III	NANOBODIES® AS DIAGNOSTIC TOOLS
14:45 - 15:30	NANOBODY®-based fluorescent contrast agents for rapid and specific intra-operative tumor visualization Sophie Hernot (Vrije Universiteit Brussel, Brussels, Belgium)
15:30 - 16:15	Non-invasive imaging of the immune response using NANOBODIES® modified for use in positron emission tomography Ploegh Hidde (Boston Children's Hospital, Boston, USA)
16:15 - 17:00	Coffee Break
17:00 - 17:45	TBD Pierre Lafaye (Institut Pasteur, Paris, France)
17:45 - 18:30	Improvement of histopathological diagnostics using non-destructive 3D histopathology and NANOBODY® technology René Hägerling (Institute of Medical and Human Genetics, Charité - Universitätsmedizin Berlin, Berlin, Germany BIH Center for Regenerative Therapies, Berlin Institute of Health, Berlin, Germany)
18:30 - 19:15	Round table: Contribution of Next-Generation Sequencing (NGS) for the selection of antigen-specific NANOBODIES®
19:15 - 20:15	Cocktail
20:15	Dinner

Vendredi 27 Septembre 2024 ■ **Friday September, 27 2024**

07:00 - 09:00	Breakfast
SESSION IV	NANOBODIES® AS THERAPEUTICS
09:00 - 9:45	Targeting multiple myeloma with NANOBODY®-based heavy chain antibodies, bispecific cell engagers, chimeric antigen receptors and adeno-associated viral vectors Friedrich Koch-Nolte (University Medical Center Hamburg, Hamburg, Germany)
9:45 - 10:30	NANOBODIES® modulating human and viral chemokine receptor function Martine Smit (Amsterdam Institute for Molecular and Life Sciences, Vrije Universiteit Amsterdam, Amsterdam, Netherlands)
10:30 - 11:00	Coffee Break
11:00 - 11:45	Single domain antibodies as novel therapeutic agents for brain diseases Philippe Rondard (Institute of functional genomics, Montpellier, France)
11:45 - 12:30	Advances in Gamma Delta T Cell-Targeting Bispecifics for The Treatment of Cancer Pauline van Helden (LAVA Therapeutics, Utrecht, Netherland)
12:30 - 14:00	Lunch
14:00	Departure