

Single Domain Antibodies Come of Age

Programme

Thursday October 14, 2010

08:30 Registration, poster set-up and welcome coffee

09:15 Conference Opening and Welcome Address

Prof. Serge MUYLDERMANS (VUB-VIB, Brussels, Belgium)
Dr Hilde REVETS (ABLYNX, Antwerpen , Belgium)

09:30 Welcome Address

Dr Edwin MOSES
(CEO, ABLYNX, Ghent, Belgium)

Session 1: The Rise of Single-Domain Antibodies

Session Chair

Prof Martin FLAJNIK
(UNIVERSITY OF MARYLAND, Baltimore, United States)

09:35 Keynote Address: Raymond Hamers

Prof. Serge MUYLDERMANS (VUB-VIB, Brussels, Belgium)
Dr Hilde REVETS (ABLYNX, Antwerpen , Belgium)

10:00 From Whole Monoclonal Antibodies to Single Domain Antibodies: Think small

Dr Jean-Luc TEILLAUD
(CENTRE DE RECHERCHE DES CORDELIERS UNIVERSITÉ PIERRE ET MARIE CURIE PARIS 6, Paris, France)

10:30 Discovery of Camelid Heavy-chain Only Antibodies and Generation of Nanobodies

Prof. Serge MUYLDERMANS
(VUB-VIB, Brussels, Belgium)

11:00 Coffee Break and Poster Viewing

11:20 Overview of Ig-NARs and Generation of V-NARs

Prof Martin FLAJNIK
(UNIVERSITY OF MARYLAND, Baltimore, United States)

Session 2: Crossing the Barriers: BBB and Membranes, Intracellular Targeting

Session Chair

Dr Danica STANIMIROVIC
(INSTITUTE FOR BIOLOGICAL SCIENCES, Ottawa, Ontario, Canada)

11:50 Single Domain Antibodies Targeting the BBB and the Brain Vasculature

Dr Danica STANIMIROVIC
(INSTITUTE FOR BIOLOGICAL SCIENCES, Ottawa, Ontario, Canada)

12:20 Cell Penetrating Anti-GFAP VHH Spontaneously Cross the BBB and Specifically Recognizes Astrocytes

Dr Pierre LAFAYE
(INSTITUT PASTEUR PARIS, Paris, France)

12:50 Networking Lunch and Poster Viewing

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14:00 A Nanobody targeting the N-terminal alpha-helical Multimerization Domain of HIV-1 Rev prevents Viral Production

Dr Dirk DAELEMANS
(REGA INSTITUTE FOR MEDICAL RESEARCH, Leuven, Belgium)

14:30 A Novel and Unique Method to introduce Nanobodies Inside a Cell

Dr Luis Angel FERNÁNDEZ-HERRERO
(CENTRO NACIONAL DE BIOTECNOLOGIA, Madrid, Spain)

Session 3: Alternative Delivery of Single Domain Antibodies

Session Chair

Dr Daniel CHRIST
(GARVAN INSTITUTE OF MEDICAL RESEARCH, Sydney, Australia)

15:00 Lactobodies: Lactobacilli Expressing Variable Domain of Llama Heavy-chain Antibody Fragments (Lactobodies) Confer Protection against Rotavirus-induced Diarrhea.

Prof. Lennart HAMMARSTRÖM
(KAROLINSKA INSTITUTE, Stockholm, Sweden)

15:30 Engineering of Aggregation-resistant Human Antibody Domains by Phage Display

Dr Daniel CHRIST
(GARVAN INSTITUTE OF MEDICAL RESEARCH, Sydney, Australia)

16:00 Pulmonary Delivered Domain Antibodies: anti-TNFR1 dAb for Lung Diseases

Dr Peter MORLEY
(GLAXOSMITHKLINE, Stevenage, United Kingdom)

16:30 Coffee Break and Poster Viewing

Session 4: Selected Abstracts for Oral Presentation

Session Chair

Prof. Serge MUYLDERMANS
(VUB-VIB, Brussels, Belgium)

16:50 OC 1 - Inhibition of Actin Filament Capping by a CapG SDA restrains Cellular Migration and Invasion

Dr katrien VAN IMPE
(UGENT, Gent, Belgium)

17:10 OC2 - Development of SDA against the HIV-1 ENV Glycoprotein to inhibit Infection of CD4+ Cells

Ms Julie MATZ
(INSERM, marseille, France)

17:30 OC 3 - ART-2 Blocking Nanobodies Protect Regulatory T Cells from NAD-induced Cell Death

Mr Björn RISSIEK
(UNIVERSITY MEDICAL CENTER HAMBURG-EPPENDORF, Hamburg, Germany)

17:50 OC 4 - Analysis of BBB Permeability for Nanobodies using Microdialysis

Dr Ralph CLINCKERS
(VUB, Jette - Brussel, Belgium)

18:10 Closing Remarks from Co-Chairs

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18:20 Networking Drink with Lite Bites

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Session 5: Engineering Single Domain Antibodies for Improved Function

Session Chair

Prof. Guus VAN DONGEN
(VU AMSTERDAM, Amsterdam, The Netherlands)

09:00 Improved Tumor Targeting of Anti-EGFR Nanobodies through Albumin Binding

Prof. Guus VAN DONGEN
(VU AMSTERDAM, Amsterdam, The Netherlands)

09:30 Engineering Nanobodies for Improved Treatment of Infectious Diseases

Dr Michiel HARMSSEN
(CENTRAL VETERINARY INSTITUTE OF WAGENINGEN, Lelystad, The Netherlands)

10:00 Using dAbs to Control in Vivo Exposure of Metabolic Peptides

Dr Laurent JESPERS
(GSK, Cambridge, United Kingdom)

Session 6: Targeting Less Accessible Antigens Including Certain Membrane-associated Proteins, Enzymes, Ion Channels and G-protein Coupled Receptors that weave in and out Cell Surfaces

Session Chair

Dr Friedrich KOCH-NOLTE
(INSTITUTE OF IMMUNOLOGY, UNIVERSITY MEDICAL CENTER HAMBURG-EPPENDORF, Hamburg, Germany)

10:30 Inhibitory and Stimulatory Nanobodies Against a Nucleotide-gated Ion Channel

Dr Friedrich KOCH-NOLTE
(INSTITUTE OF IMMUNOLOGY, UNIVERSITY MEDICAL CENTER HAMBURG-EPPENDORF, Hamburg, Germany)

11:00 Coffee Break and Poster Viewing

11:20 CXCR4-specific Nanobodies Selectively and Potently Inhibit Chemotaxis and HIV Entry

Prof. Martine SMIT
(VU AMSTERDAM, Amsterdam, The Netherlands)

11:50 'Engineering Nanobodies that Bind to Human Lysozyme and Inhibit its Conversion to Amyloid Fibrils: Prospects in Systemic and Neurodegenerative Protein Aggregation Diseases

Dr Mireille DUMOULIN
(UNIVERSITY OF LIÈGE, Liège, Belgium)

12:20 Llama Single Domain Antibodies as Rugged Countermeasures for Filoviruses and BoNT

Dr Andrew HAYHURST
(SOUTHWEST FOUNDATION FOR BIOMEDICAL RESEARCH, San Antonio, United States)

12:50 Networking Lunch and Poster Viewing

13:30 Nanobodies with G protein like properties stabilize a G Protein-Coupled Receptor Active State

Prof. Jan STEYAERT
(VUB-VIB, Brussels, Belgium)

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Session 7: Imaging Applications of Single Domain Antibodies

Session Chair

Dr Hilde REVETS
(ABLYNX, Antwerpen , Belgium)

14:00 Connecting Biochemistry and Cell Biology with Nanobodies

Dr Tina ROMER
(LMU MÜNCHEN, Martinsried, Germany)

14:30 Molecular Imaging using Nanobodies

Dr Tony LAHOUTTE
(VUB, Brussels, Belgium)

Session 8: Single Domain Antibodies in the Clinic

Session Chair

Dr Josi HOLZ
(CMO, ABLYNX, Ghent, Belgium)

15:00 Considerations for the Manufacture of Nanobodies from Pipeline into the Clinic

Dr Ann BRIGÉ
(ABLYNX, Zwijnaarde, Belgium)

15:30 Nanobodies: Roadmap to Clinical Proof of Concept. Review of Phase I Experience.

Dr Josi HOLZ
(CMO, ABLYNX, Ghent, Belgium)

16:00 Closing Remarks from the Co-Chairs

16:15 Presentation of the Young Scientist Awards & Closure of the Symposium

Dr Edwin MOSES
(CEO, ABLYNX, Ghent, Belgium)