

AIMMS 2017 Annual Meeting: encouraging insights into the future

On Thursday 13 April 2017, the 7th Annual Meeting of the Amsterdam Institute for Molecules, Medicines and Systems (AIMMS) took place. For the first time, the AIMMS Annual Meeting was organized in the O|2 Lab Building, currently housing the majority of the AIMMS research groups. The theme of this year's meeting was 'AIMMS: Facing the Future'.

The Annual Meeting of AIMMS was attended by more than 120 staff members, post-docs, PhD, Master's and Bachelor's students. TEDx-like presentations by six "O|2 researchers" (of which four from AIMMS research groups) in the morning focused on the large diversity of research performed within O|2, with topics ranging from microbiology and immunology, to bio-organic, environmental, and medicinal chemistry. The poster competition during lunch and the oral communication competition between AIMMS PhD-students in the afternoon revealed the talent of AIMMS' future scientists. The programme was completed with an exciting lecture by Dr Scott Lusher from Janssen Pharmaceutica NV (Beerse), and the award ceremony by the recently appointed FEW/FALW Director of Research Prof. Jacqueline Broerse.

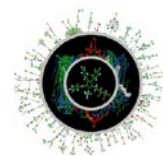
Opening

Traditionally, the meeting was opened by AIMMS director Prof. Nico Vermeulen, who focused on AIMMS, its research themes and recent developments, amongst others the movement into the O|2 Lab Building the past year, and the integration of the Department of Environment and Health within AIMMS as of January 2017.



Science in O|2 session

The programme continued with the "Science in O|2" session. Dr Dirk Bald (Structural Biology) started off with a lecture on his research on oxidative phosphorylation as an emerging new target for tuberculosis treatment. Next, Prof. Leendert Hamoen (SILS-UVA) highlighted some key characteristics of bacterial cells and showed how this knowledge can be used in the search for new antibiotics. Dr Heather Leslie (Environmental Chemistry and Toxicology) provided an interesting overview of plastic pollution – and its effects – in our environment, and highlighted the need for interdisciplinary teams to deal with this problem.

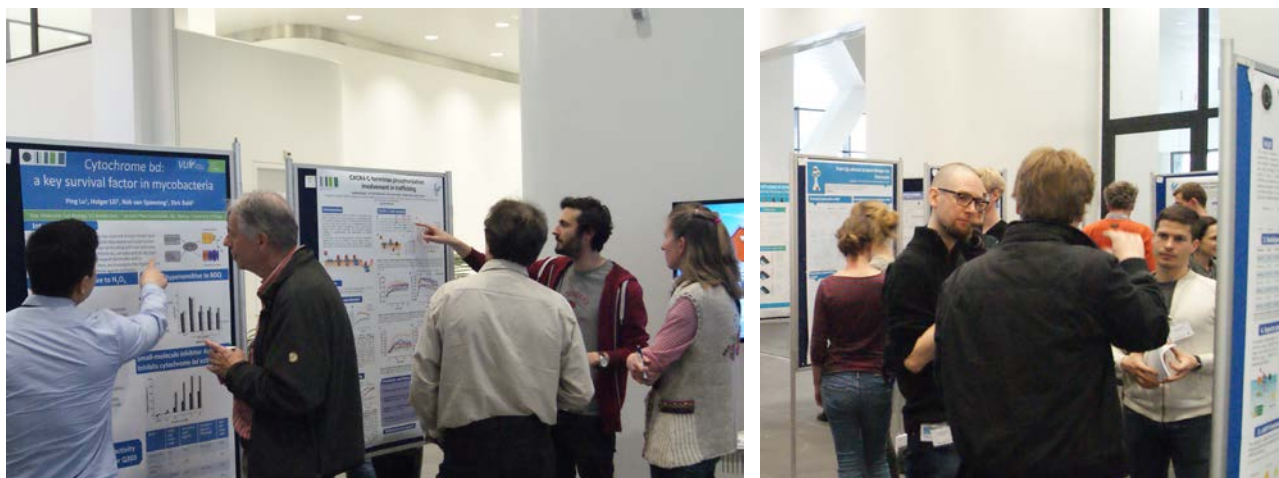


After a short break, Dr Chris de Graaf provided an overview of the latest research results obtained within the Medicinal Chemistry research group, mentioning the PDE4NPD project results and the recent [Grassroots prize](#) granted to colleagues Maikel Wijtman and Albert Kooistra. Dr Juan Garcia Vallejo (Molecular Cell Biology and Immunology-VUmc), presented his business model for sharing cell sorting FACS laboratory facilities, enabling the use of expensive high-end technologies at an affordable cost for individual researchers. The morning session was closed by Dr Eelco Ruijter (Synthetic & Bio-organic Chemistry), explaining synthetic methodologies to generate molecular probes and discussing the potential of synthetic chemistry for innovative multidisciplinary research.

With more registrations than available seats, the morning lectures were live-streamed to the recently opened “Pop-up space” behind the Auditorium in O|2. Here, additional students and others were able to follow the lectures. Recordings of these sessions are available via [this link](#).

Poster competition

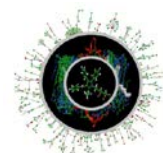
During the lunch break, more posters than ever were presented by younger AIMMS researchers; a total of 56 post-docs, PhD and Master’s students showed their latest scientific results and discussed these with their colleagues. All posters were visited by the AIMMS poster jury, consisting of Dr Dirk Bald, Dr Saskia Nijmeijer, Dr Eelco Ruijter and Dr Edith Houben, who selected the best three posters and their presenters.



Oral communication competition

The programme continued with an oral communication competition between 7 AIMMS PhD-students. All contestants were allowed to explain their research to the audience in 10 minutes, followed by a 5-minute discussion. At the end of the session, the audience ranked the presentations by means of electronic voting.

The competition was started by Barbara Zietek (Analytical Chemistry), who presented a screening platform for the separation and identification of compounds in mixtures that are only available in low volume. Yongjie Zhang (Molecular Toxicology) showed results of his research trying to unravel the underlying mechanism of hepatotoxicity caused by the anti-malaria drug amodiaquine. Then, Nick Zwart



(Environmental Bioanalytical Chemistry) updated the audience on the development of a platform allowing higher-resolution and faster identification of toxicants in water samples. Iraes Rabbers (Systems Bioinformatics) presented possible arguments in favour and against the statement that wildtype *E. coli* is able to reach optimal growth in all environments, and showed how her research results point in favour of the statement. Maurits Dijkstra (Integrative Bioinformatics) continued with his explanation on a new technique to correctly align conserved sequence motifs, and illustrated the application of this technique in DNA analysis. Next, the floor was for Maurice Steenhuis (Molecular Microbiology), who showed targeting of virulence factors as a promising strategy for novel antibiotics. Erik de Heuvel (Medicinal Chemistry) finalised the session with a presentation on the design and synthesis of potential drugs targeting phosphodiesterases for the treatment of African sleeping sickness, performed in the PDE4NPD project.

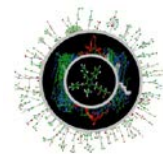
Keynote lecture and Awards winners

This year's keynote speaker was Dr Scott Lusher from Janssen Pharmaceutica NV in Beerse (Belgium). He elaborated on the importance of data-driven drug discovery and development, emphasizing that *generating* relevant data is no longer the primary bottleneck; it is all about data storage and analysis. Given the future of big data analysis in the pharmaceutical industry and beyond, he encourages all AIMMS PhD-students to get involved in data analysis classes to become familiar with this topic.

After this inspiring lecture, Prof. Jacqueline Broerse, Director of Research of FALW-FEW, was invited to announce the prize winners of the Annual Meeting. She started, however, by complimenting AIMMS on its well-founded PhD programme.



Three poster prizes (in random order) were awarded to the best posters and accompanying presentations. Stefan Dekker (Molecular Toxicology, '*Different reactive metabolites of nevirapine require distinct glutathione S-transferase isoforms for bio-inactivation*'), Stephanie van der Lubbe (Theoretical Chemistry, '*Understanding hydrogen bonds from a Kohn-Sham molecular orbital perspective: Pauli matters*') and Maarten Bebelman (Medicinal Chemistry, '*Live cell imaging of endosome-plasma membrane fusion reveals regulation of exosome release by GPCR signaling*') received a certificate and a €200 contribution to spend on a conference of their choice.



Iraes Rabbers (Systems Bioinformatics) had convinced the audience with her interactive presentation '*Is E. coli optimal throughout environments?*' and was awarded the oral presentation prize, consisting of a €600 contribution for attending a scientific conference and the opportunity to represent AIMMS at the upcoming FIGON Dutch Medicines Days early October this year. This year's runner-up was Erik de Heuvel (Medicinal Chemistry), who will therefore represent AIMMS at the VUmc Science Exchange Day later this year. The prize for the best contribution to the plenary discussion was awarded to Stefan Dekker (Molecular Toxicology).

AIMMS director Prof. Nico Vermeulen closed the scientific programme by thanking all presenters and the audience for their contributions to an exciting Annual Meeting. The meeting was finished with an Indonesian buffet, and drinks served by study association VCSVU in the brand new O|2 Eat & Meet facility on the ground floor.



Altogether, the different sessions of the day provided an interesting overview of the diverse research performed within AIMMS, and of the work that was added by the integration of the Department of Environment and Health. Hereby, this 7th annual meeting provided encouraging insights into the future of AIMMS.

The management team of AIMMS would like to thank all attendees for their presence and contributions, and looks forward to meeting all of you again at next year's Annual Meeting, again in our O|2 Lab Building.