

Report on the 27th Congress of the South African Society of Biochemistry and Molecular Biology or SASBMB 2022.

Conference Organisation by the University of Pretoria

Following the 26th SASBMB congress held in 2018 at Northwest University, Potchefstroom, Northwest Province, and a call for universities to host the 2020 congress (SASBMB Council Minutes, March 2019), the University of Pretoria was asked to organize the 27th congress in 2020 (SASBMB Council Minutes, June 2019). Colleagues from the Department of Biochemistry, Genetics and Microbiology of the University of Pretoria met in June 2019 to constitute the Local Organising Committee (LOC):

Prof Wolf-Dieter Schubert (Chair)

Prof Lyn-Marie Birkholtz* (Programme)

Dr Ntombenhle (Ntombi) Gama

Dr Jandeli Niemand (Conference organisers)

Dr Annel Smit (Webpage and delegate registration)

Dr Dina Coertzen

Ms Sonya September (Facilities and catering)

Ms Sandra van Wyngaard (Finances and exhibitors)

*Prof Birkholtz withdrew from the LOC in January 2020 due to competing commitments.

The dates for the 2020 congress were agreed with SASBMB council: 5 to 8 July 2020 (SASBMB Council Minutes, August 2019). The venue would be the Groenkloof campus (Faculty of Education) of the University of Pretoria providing extensive gardens, two 500 seat venues for the opening, plenaries and closing, as well as five 100 to 250 seat venues for parallel sessions, plus other venues for social events. Two high-rise university residences on the same campus were booked to accommodate up to 300 delegates. Plenary speakers (Kelly Chibale, Lynn Morris, Lyn-Marie Birkholtz) accepted the invitation to speak and multiple sponsors had pledged their support.

In early 2020, first news about a novel infection in China emerged, rapidly growing into a worldwide pandemic named COVID-19. Most countries including South Africa closed their borders and placed populations under lockdown. In March 2020, the SASBMB council in conjunction with the SASBMB 2020 LOC agreed to postpone the congress by 12 months to July 2021. In October 2020, the LOC suggested to the SASBMB council that the congress be moved to the summer of 2021/2022 to allow for an in-person congress, on the basis that COVID-19 might follow the pattern of flu infections that are more pronounced in winter months than during the warmer summer (SASBMB Council Minutes, February 2021). The dates of 21 to 25 January 2022 were agreed as this would precede the commencement of academic activities at most South African universities. In May 2021, SASBMB council decided in favour of a fully virtual congress rather than a hybrid event due to the uncertainty brought about by the continuing pandemic, the fact that the lockdown had been extended, the restrictions placed on gatherings and institutions of tertiary education, and the associated financial risk of cancelling an in-person conference.

The first round of organising the congress had been complicated due to the University of Pretoria Policy on Conferences requiring that university infrastructure be used in organising events including the using the UP website, completing all financial transactions through the university, etc. In organising the 2022 conference these requirements were sidestepped by hiring the services of the commercial conference organisers “Turners Conferences”.

The Turners conference team designed the webpage based on the original one, handled all financial aspects and registration procedures, finalised the virtual exhibition spaces and payments by commercial exhibitors. During the conference they set up all sessions and coordinated all presentations. Their team of experienced professionals included Gill Slaughter (director), Kerry Firmani (general manager), Liezl Erasmus (finances), Leanne Armoogam (registrations), Joanne Audi (website design).

SASBMB 2022 Congress

The entirely virtual 27th Congress of SASBMB officially commenced at 17:30 on Sunday, 23 January 2022 with the Opening Session starting with the welcoming address by the SASBMB President Prof Paul Abidemi Kappo. Prof Wolf-Dieter Schubert as the chair of the LOC then provided a brief overview of the conference and reminded delegates to pay particular attention to the poster contributions and the commercial exhibitors. This was followed by the main event of the evening the address by Nobel Prize laureate Prof Frances Arnold, with a presentation entitled “Innovation by evolution: Bringing new chemistry to life”. Prof Arnold was introduced to the audience in a very personal manner by Prof Stephanie Burton, the previous Vice-Rector of Research of the University of Pretoria. Professor Burton also provided the word of thanks for the presentation and closed the session with a virtual glass of wine.

Monday, 24 January 2022 or the second day of the conference started off with two presentations by the SASBMB Silver and Gold medallists, Dr Fidele Tuqizimana and Prof Don Cowan. While Dr Tuqizimana gave a live presentation, on “Metabolomics and its applications in plant science”, Prof Don Cowan addressed the audience through a slick pre-recorded presentation entitled “Life at the edge: The biochemistry and applied microbiology of extreme environments”.

The plenary session was followed by parallel sessions on Viral Diseases, Phytomedicine and Drug Development, and Understanding and Treating Cancer I. After a lunch break during which delegates could chat in virtual chat rooms, visit the exhibitors or listen to the pre-recorded poster presentations. After lunch three sessions again ran in parallel under the topics of Molecular Structure and Function, Hereditary and Degenerate Diseases, and Environmental Biochemistry and Phytomedicine. The official presentations were brought to a close by a highly topical presentation by Prof Nenad Ban from the Swiss Federal Institute of Technology on “Structural basis of protein synthesis in eukaryotes: From basic principles to translation in coronavirus infected cells” and by Prof Sithandiwe Mazibuko-Mbeje, NWU on “Insulin resistance and mitochondrial dysfunction in type 2 diabetes”. The plenary session was chaired by Prof Ed Sturrock from UCT. This was followed by the conference quiz night presented by Dr Jandeli Niemand, won by Ms Jessica van der Westhuizen from NW University.

Day three of the conference, Tuesday 25 January 2022 started at 8:30 with a commercial presentation by Inqaba Bioscience. This was followed by a Plenary session chaired by Prof Francois van der Westhuizen. The first talk was by Prof Timothy Noakes discussing a study from the “Women’s health initiative” on “Low-fat, high-cholesterol prudent diets in postmenopausal women with insulin resistance”. This was followed by a presentation by Prof Mervin Meyer from the University of the Western Cape on “Nanotechnology in diagnostics and therapeutics”. Three morning parallel sessions focussed on “Metabolism and Enzymology I”, “Understanding and Treating Cancer II”, and “Technical Biochemistry”, followed by lunch and three afternoon sessions on “Parasitic Diseases”, “Molecular Cell Biology” and “Metabolism and Enzymology II”. The evening plenary session was chaired by Prof Pete Meissner from UCT. He introduced Prof Lynn Morris, WITS/NICD, speaking on “How basic science research beat COVID” and Prof Brett Pletschke, from Rhodes University giving an overview of “Energy synergism for the bio-economy”.

The day’s proceedings were followed by the 2022 SASBMB AGM.

The last day of the conference, Wednesday, 26 January 2022, again kicked off with a commercial presentation by The Scientific Group. The last plenary session was chaired by Prof Trudi O’Neill from Free State University. She introduced Prof Lyn-Marie Birkholtz, UP, speaking on “Know thy enemy: Malaria parasite biology as a catalyst for antimalarial drug discovery” and finally Dr Thomas Wollert from the Pasteur Institute in Paris, France, giving details about “Cellular recycling in health and disease – Molecular principles of autophagy.” The last three parallel sessions were entitled “Molecular Omics and Bioinformatics”, “Understanding and Treating Cancer II” and “Metabolism, Enzymology and Structure”.

The conference closing ceremony involved short addresses and words of thanks by SASBMB president Prof Kappo and SASBMB LOC chair Prof Schubert. This was followed by the virtual awarding of prizes for best poster and oral presentations prizes by Dr Ntombi Gama.

Prizes and Committees:

Winners of the Poster prizes were:

- 1st prize: Shana Edith de Bruyn Orr (CPUT)
- 2nd prize: Jessica van der Westhuizen (NWU)

Oral Presentation prize winners:

- MSc 1st prize: Francois Kruger (UWC)
- MSc 2nd prize: Rachelle Bester (NWU)
- PhD 1st prize: Blessing Mabate (RU)
- PhD 2nd prize: Victoria Damerell (UCT)

The Poster Prize Committee members:

- Dr Dina Coertzen (UP)
- Dr Adewale Fadaka (UWC)
- Monray Williams (NWU)

The Oral Presentation Award Committee members:

Dr Jandeli Niemand (UP)
Dr Gerda Fourie (NWU)
Dr Ntombi Gama (UP)
Dr Emmanuel Mukwevho (NWU)

Conference Summary:

Chairs of the Nobel and plenary sessions:

Prof Stephanie Burton (UP)
Prof Paul Abidemo Kappo (UJ)
Prof Ed Sturrock (UCT)
Prof Francois van der Westhuizen (NWU)
Prof Pete Meissner (UCT)
Prof Trudi O'Neill (UFS)

Chairs of parallel scientific sessions:

Dr Ntombenhle Gama (UP)
Prof Moganavelli Singh
Prof Adrienne Edkins (RU)
Dr Carmien Tolmie (UFS)
Dr Pontsho Moela (UP)
Prof Ian Dubery (UJ)
Prof Theresa Coetzer (UKZN)
Prof Karl Storbeck (SU)
Prof Samantha Gildenhuis (Unisa)
Dr Jandeli Niemand (UP)
Prof Raymond Hwer (UKZN)
Dr Samkelo Malgas (UP)
Dr Riaan den Haan (UWC)
Prof Mandeep Kaur (WITS)
Prof Idowu Jonas Sagbo (CPUT)

Overall the conference included:

1 Nobel Prize presentation
1 SASBMB Gold Medallist presentation
1 SASBMB Silver Medallist presentation
8 Plenary presentations (2 international, 6 national)
15 Parallel scientific sessions
15 Invited speakers
72 Selected speakers
80 Poster presentations
192 Scientific authors
357 Delegates
30 Qualifying SASBMB bursaries awarded

7 Commercial exhibitors (Ascendis Medical/The Scientific Group, Inqaba Bioscience, Separation Scientific, Merck, Cape Bio, Diagnostec, Wirsam Scientific)

Finances: (final breakdown to be provided)

Attachments:

Programme

Abstract Book including detailed scientific programme, list of posters, author index, abstracts, list of delegates, commercial exhibitors