

Echoes of the XXII International Congress of Genetics

Márcia Margis-Pinheiro^{1,4}, Samuel Goldenberg² and Philip Batterham^{3,4}

¹*Universidade Federal do Rio Grande do Sul (UFRGS) Porto Alegre, RS, Brazil.*

²*Fundação Oswaldo Cruz, Instituto Carlos Chagas, Curitiba, PR, Brazil*

³*University of Melbourne, Melbourne, Vic., Australia.*

⁴*International Genetics Federation (IGF).*

In 2018 the International Congress of Genetics (ICG) was held in South America for the first time. The Brazilian Genetics Society (SBG), the Latin American Association of Genetics (ALAG), and the International Genetics Federation (IGF), welcomed more than 1,300 participants to Foz do Iguaçu in September 2018 for the XXII International Congress of Genetics (ICG). The ICG has a long and prestigious tradition. It has been hosted by cities around the world once every five years since 1899. The overarching theme of the XXII ICG was "Genetics for a World in Evolution". It was a timely theme as revolutionary genomic tools are impacting our understanding of genetic diversity, allowing us to tackle many of the agricultural, environmental and medical challenges faced by humankind. During the XXII ICG we had an academic program that covered basic and applied genetics in microbes, plants and animals. As a way to bringing the GMB readers a sample of what was presented at the Congress we selected original, review or opinion articles that were gathered and are being published in

Genetics and Molecular Biology as a special issue (http://www.scielo.br/scielo.php?script=sci_issuetoc&pid=1415-475720200003&lng=en&nrm=iso).

In the article that opens this special issue "The future of plant biotechnology in a globalized and environmentally endangered world", Prof. Marc Van Montagu highlights the importance of science-based agriculture in understanding how science has formed the basis for the modern civilization. Among the original articles, the team of Prof. Mara Hutz describes the Identification of environmental and genetic factors that influence the effectiveness of warfarin as a therapeutic. Two original articles on plant genetics underscore the enormous strength of plant research presented at the Congress. Prof. Diego Hojsgaard and his group present the article "Ecological setup, ploidy diversity, and reproductive biology of *Paspalum modestum*, a promising wetland forage grass from South America", in which they characterize the reproductive biology of the species and the implications for breeding. The group of Prof. Rogério Margis contributed to the

“Identification of soybean trans-factors associated with plastid RNA editing sites, a pioneering study in soybean”. Finally, Prof. Marcia Giambiagi-de Marval and her team present evidence that *Staphylococcus* species, usually referred to as harmless or opportunistic pathogens represent a threat to human and animal health for acting as reservoirs of antimicrobial resistance genes. This is presented in the review article “Underrated *Staphylococcus* species and their role in antimicrobial resistance spreading”.

We are very grateful to Célia Maria de Almeida Soares, Igor Schneider and Rogério Margis who coordinated the revision by peers of the submitted manuscripts, and selected the papers that compose this special GMB issue.

We hope that these excellent articles will please GMB readers and encourage them to participate in the XXIII International Congress of Genetics that will take place in 2023 in Australia in Melbourne. We call on the geneticists worldwide to support research in the field of genetics and to promote science, especially in developing countries.