



Contribution ID: 145

Type: **Talk**

## DIPLOMICS: An Overview

*Tuesday, 5 December 2023 13:30 (20 minutes)*

DIPLOMICS (DIstributed PLatform in OMICS) is a research infrastructure established by the Department of Science and Innovation through its South African Research Infrastructure Roadmap (SARIR). “OMICS”, the study of a collection of biological molecules, e.g. genomics, proteomics and metabolomics, often involves high-throughput, large-scale data generation. Our objectives are to enable and strengthen Omics capacity, improve the quality of research and increase access to Omics technology and expertise. With our network partner labs, we pursue our goals by developing programmes as vehicles for training and method development. For instance, DIPLOMICS is in the pilot phase of one of these high-impact, high-visibility programmes – 1KSA: Decoding South Africa’s Biodiversity – which is using Oxford Nanopore Technology to sequence the genomes of over 1000 South African species important to biodiversity and conservation. CLARITY, a bioinformatics marketplace made possible by DIPLOMICS, will assist with developing workflows to assemble the genome of each of these species. During the pilot phase of 1KSA, we explore the challenges and feasibility of large-scale data transfer, analysis and storage in the country. NICIS has a significant role in making this a success and has provided guidance and support thus far. 1KSA aims to ultimately generate a national resource of genomic data for South African scientists. The lessons learned, solutions created, and skills gained will benefit other large-scale genomic initiatives in South Africa.

### **Student or Postdoc?**

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**Session Classification:** HPC

**Track Classification:** Bioinformatics and Biological Sciences