NATAL BIOINFORMATICS FORUM

SCIENTIFIC PROGRAM

MARCH, 29th 2023

09:45h OPENING

10:00h KEYNOTE 1

Chair: João Paulo Matos Santos Lima, UFRN, Brazil.

Systematic benchmarking of omics computational tools and databases.

Serghei Mangul, University of Southern California, USA.

11:00h SYMPOSIUM 1

Omics' data analysis and integration

Chair: Tetsu Sakamoto, UFRN, Brazil.

Biological Data Science.

Alexandre Rossi Paschoal, UTFPR, Brazil.

Major transitions in prebiotic evolution.

Francisco Prosdocimi, UFRJ, Brazil.

Omics applied to petroleum microbiology.

Lucymara Fassarella Agnez Lima, UFRN, Brazil.

12:30h BRUNCH

14:00h TECHNICAL LECTURE

Seqera Labs.

Marcel Ribeiro-Dantas, Developer Advocate for Latin America and the Caribbean.

14:15h KEYNOTE 2

Chair: Gustavo de Souza, UFRN, Brazil.

The virome of vector mosquitoes: arboviruses and beyond.

João Trindade Marques, UFMG, Brazil.

15:00h SYMPOSIUM 2

Environmental resources and management meet Bioinformatics

Chair: Beatriz Stransky, UFRN, Brazil.

Genomics of the Brazilian diversity: The Cupuaçu and Ayahuasca genome projects.

Alessandro Melo Varani, UNESP, Brazil.

RNAi technology for the control of agricultural pests and diseases.

Henrique Marques Souza, UNICAMP, Brazil.

MARCH, 30th 2023

10:00h KEYNOTE 3

Chair: Renan Cipriano Moioli UFRN, Brazil.

The quest for interpretable AI in medical decision support.

Marco S. Nobile, Ca' Foscari University of Venice, Italy.

11:00h SYMPOSIUM 3

Impacts of AI in Bioinformatics approaches

Chair: César Rennó-Costa, UFRN, Brazil.

Present and perspectives of AI in bioinformatics.

Raquel Cardoso de Melo Minardi, UFMG, Brazil.

Ensemble machine learning approaches for the discovery of new antiviral drugs derived from venomous organisms.

Milton Nishiyama Júnior, Butantan Institute, Brazil.

Detecting remote homologs using structural alignment data and machine learning to assist protein annotation. T

Tetsu Sakamoto, UFRN, Brazil.

12:30h BRUNCH & POSTER PRESENTATION

14:00h TECHNICAL LECTURE

DNA GTx Bioinformatics.

Sandro José de Souza, Chief Scientific Officer.

14:15h KEYNOTE 4

Chair: João Paulo Matos Santos Lima, UFRN, Brazil.

From virus to human genome through bioinformatics.

Ana Tereza Ribeiro de Vasconcelos, National Laboratory for Scientific Computing - LNCC, Brazil.

15:00h FORUM 1

Bioinformatics and entrepreneurship: challenges and opportunities

Chair: César Rennó-Costa, UFRN, Brazil.

Carolina Minnicelli, MicroCiclo.

Marcel Ribeiro-Dantas, Seqera Labs.

Rodrigo Romão do Nascimento, Inova Metrópole

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MARCH, 31st 2023

10:00h KEYNOTE 5

Chair: Rodrigo Juliani Siqueira Dalmolin, UFRN, Brazil.

Computer simulations of evolutionary scenarios.

Sandro José de Souza, UFRN, Brazil.

11:00h SYMPOSIUM 4

Using bioinformatics to set new answers for old questions in healthcare

Chair: Rodrigo Juliani Siqueira Dalmolin, UFRN, Brazil.

Spatial single cell analysis applied to oncology and neuroscience.

Helder Nakaya, USP, Brazil.

New insights into the genetic architecture of leprosy.

Leonardo Capistrano Ferreira, UFRN, Brazil.

Single-cell profiling of myeloid-derived cells in the tumor microenvironment: a pan-cancer analysis.

Mariana Lima Boroni Martins, National Cancer Institute - INCA, Brazil.

12:30h BRUNCH & POSTER PRESENTATION

14:00h KEYNOTE 6

Chair: Sandro de Souza, UFRN, Brazil.

The role of informatics in precision medicine.

Lucila Ohno-Machado, Yale University, USA.

15:00h FORUM 2

Bioinformatics: a career for girls

Chair: Lucymara Fassarella Agnez Lima, UFRN, Brazil.

Raquel Cardoso de Melo Minardi, UFMG, Brazil

Ana Tereza Ribeiro de Vasconcelos, LNCC, Brazil

Mariana Lima Boroni Martins, INCA, Brazil

BIOINFORMATICS IN A
POST-PANDEMIC WORLD

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