Practical course:
BIOINFORMATICS

PROGRAM

I day November 11, 2019 (Monday)

12.00 – 12.10 Opening speech
Prof. Azis Pollozhani – Rector of Mother Theresa University

12.10 – 12.30 Aims and expectations from the course
Prof. Zoran T. Popovski – Moderator

1\2.30 – 12.45 Coffee break

12.45 – 13.30 Introduction to Bioinformatics and to the Main Biological Databases
Massimo Deligios, PhD – University of Sassari

13.30 – 15.00 Set up laptops, use of tools online (Practical work)

II day November 12, 2019 (Tuesday)

12.00 – 12.30 Database and Pairwise Sequence Alignment
Massimo Deligios, PhD – University of Sassari

12.30 – 13.30 Searching in database (Practical work)

13.30 – 13.45 Coffee break

13.45 – 14.00 Basic Local Alignment Search Tool (BLAST)
Massimo Deligios, PhD – University of Sassari

14.00 – 15.00 Blast practice

III day November 13, 2019 (Wednesday)

12.00 – 12.30 Advanced BLAST
Massimo Deligios, PhD – University of Sassari

12.30 – 13.30 Use of the advanced tools inside BLAST (Practical work)

13.30 – 13.45 Coffee break

13.45 – 14.00 Multiple Sequence Alignment
Massimo Deligios, PhD – University of Sassari

14.00 – 15.00 Use of tools for alignment on line and local (Practical work)

IV day November 14, 2019 (Thursday)

12.00 – 12.30 Molecular Phylogeny and Evolution
Massimo Deligios, PhD – University of Sassari

12.30 – 13.30 Use of tools for tree construction (Practical work)

13.30 – 13.45 Coffee break

13.45 – 14.00 DNA Analysis: Microarrays and Next Generation Sequencing
Massimo Deligios, PhD – University of Sassari

14.00 – 15.00 Use of tools for assembling and annotating the genomes (Practical work)

V day November 15, 2019 (Friday)

12.00 – 12.30 RNA Analysis: Microarrays and Next Generation Sequencing
Massimo Deligios, PhD – University of Sassari

12.30 – 13.30 Use of tools for RNA sequencing

13.30 – 13.45 Coffee break

13.45 – 14.00 Proteomics and protein structure
Massimo Deligios, PhD – University of Sassari

14.00 – 14.30 Evaluation of the course and certificate ceremony