



UNIVERSITY ABU BEKR BELKAID TLEMCEN



**FACULTY OF SCIENCES OF NATURE AND LIFE AND SCIENCES OF
EARTH AND UNIVERSAL**

DETAILED PROGRAM

TRAINING IN BIOINFORMATICS

UNDER THE SUPERVISION OF THE PROFESSOR : GAOUAR SEMIR BECHIR SUHEIL

Phone number : +213 559 30 42 76

Training I: Microsatellite markers important in the study of population diversity

Description of the training	Instructor / trainer	Dated	Registration fees
Genalex 6.5 Calculates genetic diversity and divergence. Hardy-Weinberg equilibrium test and linkage imbalances.	Dr. AMEUR A. Abdelkader Phone number : +213 794 62 35 39	April 7 to 11/2019	8000 Da
POPGENE 1.32 Analysis of genetic variation between and within natural populations using codominant and dominant markers and quantitative traits			
Genepop Calculates diversity and genetic divergence. Hardy-Weinberg equilibrium test and linkage imbalances			
Cervus 3.0.3 Analysis of the frequency of the allele : Probability-related kinship tests require allelic frequencies. Simulation and analysis of parents			
MEGA 6 MEGA is an integrated tool for performing automatic and manual alignment of sequences and inferring phylogenetic trees.			
Dendroscope 3 Is designed to visualize phylogenetic trees of all sizes and can be used for a variety of analysis of molecular datasets			
Fstat 2.9.3 Comprehensive program on population genetics indices to assess genetic diversity and divergence. (Wright's F- statistics (F_{IT} , F_{IS} , F_{ST}))			
Harlequin 3.5.2.2 The analyzes of intra-population data (statistical information is extracted independently of each population) and inter-population (the samples are compared to each other).			
Genetix 4.05			

Comprehensive Program on Population Genetic Indices to Evaluate Genetic Diversity and Divergence (Cost AnalysisCorrespondent- AFC)

GeneClass2

Detects migrants and assigns individuals to their original population.

phylip 3696

Calculations of genetic distances between populations, construction of phylogenetic trees (*UPGMA / NeighborJoining*) from distance matrices.

Structure 2.3.4

Identifies groups and assigns individuals to the most likely groups

Harvester structure 0.6.94

The program provides a quick way to evaluate and visualize likelihood values across multiple K values and hundreds of iterations to facilitate the detection of the number of genetic groups that best fit the data.

Training II : Study of genetic diversity By SNP

1. Introduction to PLINK.
2. Use and manipulate in SNP data analysis
3. Draw The MDS plot.

Miss. KaouadjiZoubeyda.
Miss. Meghelli Imane.
Mail : meghillikaouadji@gmail.com

April 7
to 11/
2019

150000 da

Training III : DNA sequence and phylogénétique analysis(haplotype network constriction)

1-the first part: DNA sequence analysis

<ol style="list-style-type: none">1. Cleaning and correction of the DNA sequence2. Alignment of DNA sequences3. Phylogenetic tree <p>(Finch TV, MAFFT,bioEditSeaview,MEGA 7).</p>	M. BOUANDAS Ameur Phone number : +213 669 40 61 16	April 7 to 9 /2019	8000 Da
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2- The second part :Study of phylogeny based on mitochondrial DNA

<p>NETWORK 5.0.0.3 Used to establish the haplotypic (geographic) network and reconstruct the ancient history of the species.</p> <p>DnaSP 6.12.01 Calculation of intra-population and inter-population diversity measures (haplotype number , haplotypic diversity, nucleotide diversity, number of variable sites, etc.), Fu and Li's D * and F * statistical test .</p>	Miss BOUDALI S. F Phone Phone number : +213 799 60 84 19	April 10 to 11 /2019	12000 Da
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Training IV : The Software R Application in the Study of Population Genetics

1. Introduction to plant genetic markers
2. Molecular Data Processing (SSR Case).
 - Data analysis and matrix construction by score.
 - Data management by Powermarker and GeneAlex .
 - Graph construction by Mega 7.
3. Introduction to R Software
 - * Presentation of the R studio.
 - * General On R Studio.
 - * General statistics on R Studio.

M. Medioni Réda Mohammed

Phone number :

April 7
to 11
/2019

6000 Da

Training V: Initiation into SPSS software

1. Generality on SPSS software
2. Installing and starting the software
3. Data coding
4. Quantitative and qualitative type data analysis
5. Descriptive analysis
6. Multivariate analysis
 - PCA
 - MCA
 - ANOVA
 - HCA

M. Labbaci Madani

Phone number :
+213 676 67 31 29

April 7
to 11
/2019

6000 Da