Título de las prácticas (Title of the internship):

Bioinformatic analysis of hemiptera insects present in the olea europea population in Andalusia

Descripción de las funciones del alumno (Description of the student´s tasks)

1. To determine whether the hemiptera has fed with the olive tree through mapping the lectures of DNA obtained from whole insects taken from these trees
2. The presence of Xilella fastidiosa reads in the reads obtained from whole insects
3. To determine the species by assembling draft genomes obtained from these insects
4. To partialy annotate these draft genomes

Requisitos (Prerequisites): *(indicar titulación y curso) (give Grade and academic year); otros requisitos adicionales (idiomas, informática, otros conocimientos, etc) (other aditional prerequitistes (languages, informatics, other knowledge, etc)*

Student in the Grade of ……., Orientation, course….
A degree with a student having knowledge and skills on bioinformatics and basic System Biology

Proyecto formativo (Training Project)

Module EXTERNAL PRACTICES. The fundamental goal of the external practices is to guide the student in applying his previously adquired knowledge to real tasks in a group work environment the realistically represents the work conditions the the students will encounter in their future roles. In this way, the student will be able to get familiar with a working environment (work schedule, responsability, attitude, organization, etc),and with the adequate working methodology in profesional reality, contrasting and applying the acquired academic knowledge.

Actividades a desarrollar en la práctica académica (Activities that will be performed in the academic internship):

1. Filtering of reads taken from DNA isolated from whole insects (2 different insects)
2. Mapping and analysis of the lectures to the olive and Xilella genomes.
3. Analysis by IGV and BLAST and by means of a multiple sequence aligment will be conducted to identify the origen of these reads. Search for putative orthologs conserved into plants and insects
4. Search of KO (KEGG) codes and pathway enrichments of these lectures as a way to identify their origen.
5. Assembling to get the first draft genomes. Selection of the assembler. Use of similar genomes and or long sequences if present in the SRA database as references. Partial annotation of such genomes as a way to identify and characterize the insect species

Nº de plazas: **(Nr. of places)**	1
¿El alumno tendrá trato habitual con menores? **(Has the student dealings with underage persons?)**	No
Fecha de inicio: **(Starting date)**	3-02-2021
Fecha de fin: **(End date)**	21-05-2021
Horas semanales: **(Weekly hours)**	25
Horario jornada laboral: **(Working hours)**	9:00 - 14:00
Importe Ayuda/Bolsa de estudio: **(Amount of fellowship / remuneration)**	0 **€/mes**
Tutor académico:	

(Academic tutor (UPM)) Email:	
Departamento tutor académico: **(Dept. of academic tutor)**	
Tutor empresa: **(External tutor)**	Antonio Rodríguez Franco Meelad Yousef Yuosef
Email tutor empresa: **(Email external tutor)**	arfranco@uco.es z12yonam@uco.es
Departamento tutor empresa: **(Dept. of external tutor)**	Departamento de Bioquímica y Biología Molecular Departamento de Agronomía
Ubicación de la estancia de las practicas **(Location of the internship)**	Campus de Rabanales. Edificio Severo Ochoa
ENTIDAD COLABORADORA: **(Collaborating Entity)**	Universidad de Córdoba
A cumplimentar por Oficina Prácticas ETSIAAB: **Créditos a reconocer (Nº ECTS)**:	

Enviar por email a: OFICINA DE PRÁCTICAS ACADEMICAS EXTERNAS – ETSIAAB
secretaria.pei.etsiaab@upm.es – Secretarias: Visitación Pérez / Susana Pardo - Tfno: 913363686)