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E.T.S. DE INGENIERÍA AGRONÓMICA,
ALIMENTARIA Y DE BIOSISTEMAS

Título de las prácticas (Title of the internship):

Analysis of the genomic diversity of yeasts of the *Metschnikowia* clade

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

The students will join the floral microbiology group at Complutense University of Madrid (UCM) and they will analyze genomic data obtained from *Metschnikowia* yeasts, a diverse and ubiquitous fungal group which is often involved in plant-insect interactions.

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

Students of the Master Program on Computational Biology. Previous knowledge on bash/R/Python programming. Proficiency in English. Interest in pursuing a career in research will be considered a plus.

Proyecto formativo (Training Project)

Module EXTERNAL PRACTICES. The fundamental goal of the practices is to guide the students in applying their knowledge to real tasks in a real-life mixed (computational and wet-lab) work environment. The tasks will offer not only experience in data analysis, but also in the direct interaction with end users, collecting data, specifications, understanding problems, issuing solutions, and presenting them to end users in a user-centred way. Students will learn to work using Linux and R.

Module TFG/TFM. The students will be assigned a main task according to their interests. They will be responsible for understanding the problem, collecting all required information, and trying, choosing, and implementing the best solution approach, all with discussion, guidance, and advice from their supervisor.

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

The work plan for this internship will include the following activities:



POLITÉCNICA



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- Literature review and software installation. Analysis of published pipelines for phylogenomic analysis of yeasts.
- Data acquisition and curation: WGS of *Metschnikowia* spp. and/or retrieval and quality checking of genome assemblies from the NCBI data bases. Submission of new sequence data to public repositories.
- Phylogenomic analysis using available software and/or homemade scripts in bash, Python3 and R languages.
- Manuscript writing and review. Preparation of supplementary materials (documents, images, slides, etc.).

Additionally, the students may be invited to collaborate in dissemination and training activities. In any case, the proposed tasks will be adapted to the background and interests of the students.

Nº de plazas: (Nr. of places)	1-2
¿El alumno tendrá trato habitual con menores? (Has the student dealings with underage persons?)	No
Fecha de inicio: (Starting date)	01/02/2024 (or earlier, depending on the students' availability)
Fecha de fin: (End date)	31/05/2024
Horas semanales:	To be agreed with the students



POLITÉCNICA



E.T.S. DE INGENIERÍA AGRONÓMICA,
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(Weekly hours)	
Horario jornada laboral: (Working hours)	To be agreed with the students (possibility of remote work)
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)	Sergio Álvarez Pérez
Email tutor empresa: (Email external tutor)	sergioaperez@ucm.es
Departamento tutor empresa: (Dept. of external tutor)	Departamento de Sanidad Animal
Ubicación de la estancia de las practicas (Location of the internship)	Facultad de Veterinaria – UCM Avda. Puerta de Hierro s/n 28040 Madrid



POLITÉCNICA



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ENTIDAD COLABORADORA: (Collaborating Entity)	Universidad Complutense de Madrid
<i>A cumplimentar por Oficina Prácticas ETSIAAB:</i> Créditos a reconocer (Nº ECTS):	

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