

INTERNSHIP PROJECT: Assessing Horizontal transfer of Antimicrobial Resistant plasmids

Project background: Antimicrobial Resistance is a major concern for human and animal health. But this issue is not restricted to the clinical compartment, as antimicrobial resistant gut bacteria are discharged to the sewer system along with the feces. The proliferation of resistant bacteria is partially mediated by horizontal transfer of plasmids containing diverse antimicrobial resistance genes. Therefore, understanding how this mechanism work and what triggers or diminish it is crucial.

Internship project: the student will perform conjugation experiments to assess the transfer of a fluorescent label plasmid to three natural occurring gut bacteria. This is a GMO class II work. Therefore, previous experience with GMO (e.g., cloning) would be a plus, but is not mandatory.

The internship project is meant to **last 4-5 months (From July 2019 on)**, and the task will include:

- Writing a project proposal (This is a follow-up project, a guideline will be given but is expected that the student will contribute to further develop the experimental proposal).
- Preparation of media, antibiotic and other elements solutions.
- Plating: Previous advance experience is mandatory since this internship requires a large amount of plating in a short period.
- Colony counting + results analysis.
- Might include microscopy and PCR screening occasionally.
- Final report and discussion of results with the supervisor and final presentation of results.

Where: At Wetsus, a water research center in Leeuwarden, the Netherlands. We offer an international environment in which universities and companies are connected. Wetsus offers a **350€ monthly allowance, and Erasmus + internship agreement is possible**. Working language is English.

Candidate's requirements:

- **Only European Union students or Non-EU but already enrolled in a Dutch university can apply, because of Dutch Law. Candidates not complying this requisite will be directly discarded.**
- Microbiology studies (or related areas), the level required is HBO/bachelor.
- Verifiable experience in classical microbiology techniques (media preparation, culturing etc).
- Good organization skills, lab practices, and critical thinking.
- Supervision is provided, but the candidate must be able to work independently, spot and report possible issues to the supervisor.
- Good English level (written and spoken) is required and would be verified in the interview.

For applications, please send a CV and a cover letter (one page) to Rebeca Pallarés Vega Rebeca.Pallares@wetsus.nl, PhD candidate from TU Delft and Wetsus.

Suitable candidates would be invited for a Skype interview. Please note that the vacancy is open until an adequate applicant is selected, or until the defined deadline. If the applicant meets the basic requirements, he/she will be invited for a Skype interview. Only after, and if approved, the candidate will be offered the position.