**POSTDOCTORAL POSITION**

**Molecular ecology**

**JOB ENVIRONMENT**

◾ **Research unit** :

UMR1213 Herbivores is a joint research unit associating INRAE and VetAgro Sup. It contributes to the design of sustainable farming systems for herbivores that seek to reconcile production efficiency, product quality and socio-economic viability with environmental protection and valuation, and animal welfare. UMR1213 Herbivores assesses both on-farm practices and predominant and alternative systems of herbivore farming and proposes innovative techniques with high environmental value. To achieve this aim, UMR1213 Herbivores analyses and integrates the underlying biological mechanisms, and establishes laws for animal responses with approaches ranging from high-throughput techniques to modelling and decision support tools for various stakeholders (producers, consumers, citizens, and policy-makers).

◾ **Context** :

MASTER – Microbiome Applications for Sustainable food systems through Technologies and EnteRprise is a project funded by the European Union’s Horizon 2020 research and innovation programme. A work-package of this proposal focuses on manipulating rumen microbes for optimal animal performance (feed efficiency and methane production). In animal (or cattle) studies, the rumen microbial community structure is characterised using next-generation sequencing (amplicon 16S or RNASeq). Additionally, data on fermentation parameters, enteric methane emissions, microbial metabolism, metabolomics and animal performances are collected. This project will produce enough data to identify and characterise microorganisms involved in feed efficiency and methane production using powerful statistic tools.

We are searching for a highly motivated candidate to exploit this large dataset of existing amplicon sequencing and RNASeq data to assess the relationship between microbial diversity and function and ruminant’s phenotype. The candidate should hold a PhD or have post-doc experience in molecular ecology of microorganisms (eukaryotes and/or prokaryotes) from bioinformatics data processing to statistical analysis (such as Co-occurrence Networks, Heatmap, PCA…). Knowledge of the statistics software package R well as verbal and written communication skills in English, is a prerequisite.

◾ **Website of the unit** :

<http://www1.clermont.inra.fr/urh/>

**REQUIRED QUALIFICATIONS**

We are looking for a highly motivated individual with:

* PhD / Engineering degree in microbial ecology
* Experience with bioinformatics
* RNAseq desired experience
* Advanced use of R software

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| 🡮 Reception conditions  ◾ Research unit : UMRH  ◾ Location : INRAE – UMRH – Theix – 63122 St Genes Champanelle (France)  ◾ Type of contract : Postdoctoral (CR)  ◾ Duration : 18 months (renewable)  ◾ Starting date : June 2021  ◾ Gross Salary : from 2516 to 2938€ / month, based on experience  **🞭** Deadline for application: **09/04/2021** | 🡮 How to apply  Send a motivation letter and a CV to :    Milka Popova [milka.popova@inrae.fr](mailto:milka.popova@inrae.fr)  Diego Morgavi [diego.morgavi@inrae.fr](mailto:diego.morgavi@inrae.fr)  ◾ Phone number  0473624727 |