The Unit of Animal Genomics is seeking applicants for two immediately available PhD positions in the area of genomic selection of livestock.

The objectives of the first research project are (i) to participate in the generation and analysis of ATAC-Seq data in multiple bovine tissues to identify cis-acting regulatory elements in the bovine genome, (ii) to mine available whole genome sequence data from 750 Holstein-Friesian animals (ERC Damona project to M. Georges) to identify candidate causative variants affecting the function either of regulatory elements or of protein coding genes, (iii) to develop SNP arrays in combination with imputation strategies to interrogate the corresponding variants in large cohorts of phenotyped animals, (iv) to perform GWAS analyses to identify variants affecting agronomically important traits, and (v) to evaluate the effect of inclusion of the corresponding variants on the accuracy of genomic selection in Holstein-Friesian dairy cattle. The project will be conducted in close interaction with CRV, the largest dairy cattle breeding company in the Netherlands. The project will be conducted in collaboration with the teams of Professors Mike Goddard and Ben Hayes in Australia, which the successful candidate is expected to visit several weeks per year. The project will be conducted under the supervision of Dr. Carole Charlier and Dr. Michel Georges.

The objectives of the second project are (i) to contribute to the development of breeding schemes for purebred Belgian Blue Cattle that optimally combine information from genomic selection for polygenic production traits with information on known major genes underlying gene defects, embryonic lethality, and meat quality, while minimizing unwanted genetic erosion, and (ii) to develop tools that will enable breeders to actively participate and take maximal advantage of genomic information in managing their herd. The project will be conducted in close interaction with AWE, the largest Belgian Blue Cattle breeding organization in Belgium. It will be conducted in close collaboration with the most advanced research centers in the world in the area of breeding design, which the successful candidate is expected to visit several weeks per year. The project will be conducted under the supervision of Dr. Tom Druet and Dr. Michel Georges.

Applicants are expected to be highly motivated and to have a master's degree in animal, veterinary, computer science or related fields. All application documents (motivation letter, detailed curriculum vitae, contact details of three references) should be emailed to Prof Michel Georges ("michel.georges@ulg.ac.be") with "marilou.ramospamplona@ulg.ac.be" in cc, with the subject heading: "PhD-2016". Candidate screening and interviews will commence immediately and will continue until suitable candidates are identified.