Excellence in Breeding
Multiple positions available to collaborate with the Excellence in Breeding Platform of the CGIAR to develop a breeding simulation platform to optimise plant breeding programs for low and middle income countries.

The Roslin Institute at The University of Edinburgh is a world-class centre for research and training on the quantitative genetics applied to breeding. Within The Roslin institute, the AlphaGenes group is one of the world's leading labs that combines research in both crop and livestock breeding in close direct collaboration with the breeding industry. Under the supervision of Prof John Hickey, the AlphaGenes group has produced some of the largest crop and livestock datasets globally, and has explored and published innovative breeding strategies taking the use of genomic selection in the breeding to a next level. Within our group, next to a high scientific ambition, we highly value a collaborative spirit and a "can-do" mentality. More info on the group's activities can be found on https://alphagenes.roslin.ed.ac.uk/wp/

For an initial three year period beginning in 2020, the AlphaGenes group will collaborate in the Excellence in Breeding Platform of the CGIAR, funded by the Bill and Melinda Gates foundation, to develop and use a breeding simulation platform to optimise plant breeding programs for low and middle income countries. Scientists based in Edinburgh will lead the work to develop the platform and to use it to design novel approaches to breeding. Scientists based at the Excellence in Breeding Platform headquarters in Mexico will use the platform to optimise breeding programs for multiple crops within the CGIAR and their partners in national agricultural research systems. Part of the team will also be based in the research group of Ass. Prof Jeff Endelman at the University of Wisconsin-Madison.

Therefore the AlphaGenes group would like to strengthen our team by hiring new colleagues in Edinburgh in the following vacant positions:

Two Post-doctoral researchers in quantitative genetics
The postholders will develop the quantitative theory behind the novel breeding simulation platform and develop a substantial part of its modules. Next to this, he or she will conduct research to develop novel breeding strategies suited to breeding programs that are common in low and middle income countries. Given the diverse challenges of this post, the successful applicant may have (or be close to having) a PhD in Breeding, Quantitative Genetics, Statistics or some related area. Experience in development in programming languages such as R, C/C++ or Python is essential. The ability to work within the group and to contribute to the higher level project goals is also essential.

Scientific software engineer
The postholder of this position will work together with the postdoctoral researchers and the broader AlphaGenes and Excellence in Breeding teams to ensure that the novel platform is software of a higher, enterprise level. The post-holder will make major contributions to software design and development, making

sure that the final product is stable, versatile, fast and easily accessible to the users. Next to the development of modules, the postholder will develop a series of graphical user interfaces. We expect candidate to have extensive experience in OOP in several computer languages in a scientific context, and at least some experience in the development within the statistical environment R. The successful candidate will be motivated by solving problems and by relentlessly pursing optimal results.

Successful applicants will become part of a large team of computational biologists, animal and plant breeders, quantitative geneticists, genomicists, computer scientists and bio physicists. Next to the activities in the Excellence in Breeding program, you will actively contribute to the development of methods and tools in other projects within the research group.

The positions are available to start immediately and are funded until October 2022. Appointments may be for one year initially or for the full duration of the funding.

Informal enquires can be made to John Hickey (John.Hickey@roslin.ed.ac.uk), while formal applications should be submitted through The University of Edinburgh website.