

**GENESIS FARADAY PARTNERSHIP
Farm Animal Genetics and Genomics**

**Guidance notes and call for applications for
Genesis Faraday CASE Studentships to start in 2010/2011**

Introduction

CASE (Co-operative Awards in Science and Engineering) studentships involve post-graduate students studying for a PhD through research with both an academic institution and a commercial company. The student is predominantly based with the academic institution, but the research project is relevant to the needs of the industrial partner. The industrial partner is expected to provide joint supervision of the student, a financial contribution to the project and relevant industrial placement(s) during the four years of the project.

Genesis Faraday¹ has been awarded five BBSRC Industrial Partnership CASE awards for each of the three academic years beginning 2009-2011. Provided certain BBSRC conditions are met, these studentships will be awarded by the Genesis Faraday Research and Development Committee through a competitive process.

These studentships are expected to be of four years duration.

Applicants should note that this call has a wider remit than some previous Genesis Faraday CASE application calls – namely, genetics and genomics of all domestic animals (and their pathogens) in relation to animal breeding and animal health.

This note explains the process for the allocation of the five Genesis Faraday studentships available to start anytime in academic year 2010/11. The approximate timetable is as follows:

Call for applications	May 2009
Closing date for applications	Midnight 2 nd September 2009
Notification of successful applications	1 November 2009
Student start date	Anytime in academic year 2010/11

If all five awards are not allocated from this first round a second call will be published; probably in November 2009, with a closing date of end January 2010.

¹ Please note; Genesis Faraday will become a Knowledge Transfer Network in 2009. However, despite a change in structure and name, the new organisation will implement the CASE call as described in this document.

Applications need to be submitted in the Word-forms which can be requested from info@genesis-faraday.org

The Academic Partner:

- Must be a member of the Genesis Faraday Partnership at the time of application
- Must be a UK University, a BBSRC sponsored Research Institute or another body eligible to receive BBSRC funds and already operating a BBSRC Doctoral Training Account
- Must achieve the required standard of 70% of students submitting their PhD thesis each year (BBSRC will make no exceptions)
- Will, in collaboration with the industrial partner, provide skills training to the student in line with BBSRC requirements as detailed at: http://www.bbsrc.ac.uk/funding/studentships/studentship_handbook.pdf
- Will provide information as required by BBSRC in order for the administrative process to be completed.

The Industrial Partner:

- Must be a member of the Genesis Faraday Partnership at the time of the application
- Must be a company registered for business and trading in the UK with a UK research or manufacturing base. Sole traders and partnerships are not eligible. Levy bodies and foreign-owned companies without UK research facilities will be considered on a case-by-case basis and the BBSRC will be the final arbiter on eligibility.
- Will provide an industrial placement for the student of more than six months and less than 18 months duration during the studentship. This placement should form an integral part of the project to be undertaken by the student.
- Will provide training for the student related to understanding the wider business context of their research activity
- Will pay for expenses (including accommodation) of the student whilst on the industrial placement
- Will make a financial contribution to the project costs of the academic partner (as agreed with the academic partner) of at least £1,400 per year
- Will make a payment direct to the student as a supplement to the stipend awarded by BBSRC of at least £2,500 per year
- Will make a single payment of £1,000 to the Genesis Faraday Partnership to cover the costs of providing the student with up to 8 days specialist business related training over a four-year period². This sum should be paid on receipt

² The cost of this training was previously covered using Genesis Faraday core funds, but is no longer an eligible expense.

of an invoice from Genesis Faraday once the student has started their training.

- Will provide a joint supervisor for the student who is jointly responsible for overseeing the student's research activity
- Will provide information as required by BBSRC in order for the administrative process to be completed.

The Student:

- Must be settled in the UK, for details see http://www.bbsrc.ac.uk/funding/studentships/studentship_eligibility.pdf
- Must have a first or upper second class UK Honours or Veterinary Medicine/Science degree, or equivalent
- Must be prepared to travel as necessary in order to undertake the industrial placement
- Will be expected to present their work at relevant Genesis Faraday workshops and conferences
- Must acknowledge BBSRC sponsorship in published work.

The Project:

- Must fall within the remit of the BBSRC
- Must involve original research that makes a substantial contribution to knowledge in the field of genetics and genomics of domestic animals (including companion animal and aquaculture species) and/or their pathogens relevant to animal breeding or animal health. Projects in all areas of this remit are encouraged. However, applications in the area of pathogen genetics and genomics are particularly encouraged.
- If you are unsure whether your proposed project will fall into this remit or if you would like assistance finding a partner for a project, please contact the Genesis Faraday office on 0131 527 4358, or one of the Technology Translators (listed later in this document). In addition, as a guide to the type of projects that have been previously funded, a list of projects recently funded can be found in Appendix B.

BBSRC:

- Will provide fees to the Academic Partner of £3,300 per year (plus other eligible fees)
- Pay a stipend to the student of £12,940 per year (£14,940 for an academic institution in London, or £19,970 for a student with a veterinary qualification) plus relevant young dependants or disabled students allowances
- Note that these fees may increase by the time these studentships commence in academic year 2010/11

- BBSRC funds will be provided through the academic partner's BBSRC Doctoral Training Account

The application should identify:

- The industrial and academic partners (including University partners for BBSRC and other eligible Institutes)
- Details of the % submission rate within four years of registration of previous students
- The academic and industrial supervisors
- A brief description of the project (<2 sides A4) sufficient to identify the relevance and potential benefits of the project to the Genesis Faraday Partnership and BBSRC. This should include descriptions of any hypotheses to be tested and should allow the identification of scope for the student to innovate. Any special facilities, information or materials to be made available to the project by the industrial partner should also be described.
- Confirmation that the resources needed for the project (e.g. animals, consumables) are available
- Brief details of how joint supervision will be organised
- Details of the training to be provided to the student by both partners
- The expected duration and schedule of the industrial placement together with an outline of the work to be done during this time
- The annual financial contributions to be paid to the student and academic partner by the industrial partner
- The fall-back position should the project not be completed within the proposed timescale
- Any relevant details of the student if already identified
- Application forms can be requested from and should be submitted to info@genesis-faraday.org

General Rules:

- Unless the number of applications of sufficient quality is limiting, no more than one Genesis Faraday allocated Industrial Partnership CASE Award will be made to any Genesis Faraday member in any one year
- Complete and in-order applications received on or before Midnight 2nd September 2009 will be considered by the Genesis Faraday Research and Development Committee³. The decisions of the Committee on which applications are selected will be final, but in the event of applications of otherwise equal merit, applications will be selected in the order that the Genesis Faraday office received them.

³ Or any equivalent Committee created as part of the new Knowledge Transfer Network

Unsuccessful Applications:

- Provided there are more applications that meet the minimum standards required by the Research and Development Committee than the number of available awards, a short reserve list of applications will be maintained. Allocated CASE Awards will be made available to the reserve projects in order of their score rank order, should any of the selected projects not progress to full BBSRC Award.

Further information:

Please contact info@genesis-faraday.org for an application form. Contact one of our Technology Translators with any questions and comments or for an informal discussion about potential studentships.

The Genesis Faraday Technology Translators are:

Dr David Telford	tel: 0131 527 4329	david.telford@genesis-faraday.org
Carol Telford	tel: 0131 527 4358	carol.telford@genesis-faraday.org
Dr Huw Jones	tel: 0131 527 4236	huw.jones@genesis-faraday.org
Dr Tom Skinner	tel: 0131 527 4365	tom.skinner@genesis-faraday.org

Selection Process

The terms of the Genesis Faraday agreement with BBSRC state that in deciding on the allocation of studentships Genesis Faraday will take into account the quality of the science of the proposed project, the likely industrial relevance of the work and the quality of the training (both scientific and industrial) to be provided.

The process for selecting the studentships to be funded each year has been designed to be fair and transparent, and is carried out by the Genesis Faraday Research and Development Committee (RDC). It will take into account any special terms of that year's call for CASE applications previously agreed and notified to applicants.

In summary, the process will be as follows:

- Applications will be checked for basic eligibility (e.g. are the applicants eligible to receive BBSRC funds) by staff.
- Applications and score sheets will be distributed to Committee members two weeks before the scheduled September 2009 Committee meeting for scoring of the applications. Scoring will be based on the Genesis Faraday 9-point scoring system (see appendix A).
- Committee members with vested interests in any applications will not score projects in which they have an interest.
- On the day of the RDC meeting, proposals will be discussed and Committee members will have the opportunity to modify their scores before they are averaged and the proposals ranked according to average score.
- To be eligible for funding an application must have an average score of 7.0 or higher. The highest ranked applications will be awarded a CASE studentship according to the number of available studentships and subject to the 'one award per member' rule.
- Any studentships scoring above 7.0 that have not been selected are placed in order of priority and will be 'reserve' studentships in the event that any of the selected studentships do not progress for some reason.
- Only one CASE studentship will be awarded to each Genesis Faraday Member in any one year unless the number of quality applications is limiting.

The Committee is under no obligation to select any particular number of studentships.

Appendix A - The Genesis Faraday 9-point scoring system.

The key criteria in the Genesis Faraday scoring system (modified slightly from the BBSRC CASE studentship system) are:

- **Fit to Faraday Objectives:** To be scored above 7 the studentship should have a clear genetic or genomic element relevant to animal breeding or animal health. The outcomes of the research should have industrial relevance and potentially be of benefit to the wider Genesis Faraday Partnership membership.
- **Science:** The quality of the research proposed. Issues to be considered include whether the work is feasible, whether the work is forward looking and whether there is scope for innovation by the student. To be scored above 7 the project will have a clear hypothesis, will be feasible and provide an opportunity for the student to innovate.
- **Training:** The training programme should provide students with demonstrable research skills and techniques, a good understanding of the research environment and research management. It should also provide training in personal effectiveness, communication skills and networking/team working. The training (including the industrial placement) should also provide students with a good understanding of the industrial context of their work. To be scored above 7 the training provided must meet all or most these criteria and the academic partner should have a good track record of providing such training.

Summary scores for projects are presented below:

SCORE	DESCRIPTION
9	The studentship project meets all the above criteria and is also considered to be one of the top applications and should definitely be supported.
8	The studentship project meets all the criteria above and should be supported.
7	The studentship project meets all the criteria above and the committee would be happy to see the application supported.
6	The proposed project does not fulfil one of the requirements set out above and should not be supported.
5	
4	The proposed project does not fulfil two of the requirements set out above and should not be supported.
3	
2	The proposed project does not fulfil any of the requirements set out above and should not be supported.
1	
0	The project falls outside of the studentship priority areas.

Appendix B – Genesis Faraday CASE Studentships recently funded

CASE Studentships Awarded 2006/07

- *Deciphering the chemokine repertoire in chickens and their role in disease resistance* (Institute for Animal Health and Pfizer)
- *Identification of host factors which restrict African swine fever virus replication* (Institute for Animal Health and Pfizer)
- *Genetic interactions in pig breeding* (Roslin Institute and Newsham Choice Genetics)
- *Genetic selection for health and welfare traits in lambs* (Scottish Agricultural College and Suffolk Sheep Society)
- *Examination of allelic variation in candidate genes thought to encode for fatness* (University of Kent and JSR Genetics)

CASE Studentships Awarded 2007/08

- *Genomic analysis of fundamental control pathways of parasitic nematodes* (University of Glasgow and Pfizer)
- *A reverse genetics approach to study the role of non-neutralising epitopes in FMD vaccine induced protection* (Institute for Animal Health and Intervet)
- *Integrated parasitic control through exploitation of host genetics, nutrition and anthelmintic interventions* (The Roslin Institute, University of Edinburgh and Merial)
- *Genetic control of fat partitioning in pigs* (University of West England and Pfizer)
- *Understanding the molecular basis of innate resistance of ducks to avian influenza* (University of Nottingham and Cherry Valley)
- *Genome wide selection for health and performance in the sport horse* (Roslin Institute in association with the Animal Health Trust and British Equestrian Federation)
- *Genetics of multiple ovulation in broiler breeders* (The Roslin Institute, University of Edinburgh and Aviagen)
- *Implementing genome wide evaluation in the UK beef and sheep breeding sectors* (The Roslin Institute, University of Edinburgh, SAC and Genesis Faraday)

CASE Studentships Awarded 2008/09

- *Energy balance and nutrient partitioning in the modern broiler* (University of Aberdeen and Aviagen)
- *A Genetic baseline for the improvement of in ovo vaccines* (University of Cambridge and Pfizer)
- *Genetic and antigenic diversity of Theileria parva parasites used in a live vaccine* (University of Edinburgh and GALVmed)
- *Selection mapping methods and applications* (The Roslin Institute, University of Edinburgh and Aviagen)
- *Can multi-level selection improve disease control* (The Roslin Institute, University of Edinburgh and Cobb-Vantress Inc)