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Babraham Institute

WORK WITH US, LEARN WITH US

CAREERS IN **ANIMAL TECHNOLOGY** AT THE BABRAHAM INSTITUTE

The Babraham Institute
Registered Office:
Babraham Hall, Babraham, Cambridge, Cambridgeshire, CB22 3AT
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BBSRC bioscience for the future

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Why work at the Babraham Institute?

If you enjoy working with animals and have an interest in science and technology then a career as an Animal Technician in the Babraham Institute's Biological Support Unit will give you exciting and rewarding opportunities to learn as you work. You will receive a competitive salary and benefits including accommodation and subsidised travel, and a chance to earn nationally-recognised qualifications. Working as part of a close-knit team, in a stimulating and supportive environment, your career will develop as you gain qualifications and experience, supporting the cutting-edge research of a world-renowned science institute.

Cover image: Chromosomes from mouse embryonic fibroblasts (MEFs) stained for DNA (blue) and a histone modification, H3 lysine 9 tri-methylation (red).

Image by Fatima Santos

Inside cover: Animal technician performing daily health check.

HOW CAN I PROGRESS IN THIS CAREER?

A career in animal technology is both exciting and rewarding. At the Babraham Institute you'll work in a state-of-the-art facility with the opportunity to learn modern animal care techniques and to gain nationally recognised qualifications.

Career progression at the Babraham Institute

- Trainee Animal Technician
- Animal Technician
- Senior Animal Technician
- Deputy Supervisor
- Supervisor
- Deputy Unit Manager
- Unit Manager
- Deputy Head of Facility
- Head of Facility

The list shows a typical career pathway within an animal facility. Training is fundamental to career progression and is relevant at all levels.

Training comprises of various elements, such as nationally recognised qualifications from the Institute of Animal Technology (IAT) as well as bespoke internal and external courses tailored to the industry's requirements.

In addition to this you can choose to attend lab talks, conferences and trade days as well as contributing to discussion groups, team meetings and social events.

WHAT DO THE DIFFERENT JOBS INVOLVE?

Entry-level – Trainee Technicians or Apprenticeships

We employ staff with a proven interest in animal care at trainee level. You will be mentored closely throughout your initial twelve months. During this time you will be trained in basic animal care, record keeping and routine duties as set out in our standard operating procedures. You can also attend day-release training for Institute of Animal Technology national qualifications.

Experienced Technicians

This is the standard grade expected for all animal care staff once they have been through the initial twelve-month mentoring period. Experienced Technicians have animal husbandry duties and also use their Home Office Personal Licences to perform regulated procedures. They assist in the training and mentoring of new staff members and take on additional duties to assist in the day-to-day running of the facility.

Unit Supervisors

Unit Supervisors are animal technicians who have gained, through experience, a high level of expertise and knowledge in animal care and welfare. They are responsible for the day-to-day running of areas within the facility and deputise in the absence of their Unit Manager.

Unit Managers

Unit Managers have responsibility for overall management of an animal unit, ensuring service levels to research are maintained and performance is audited. Managers ensure individual and team development programmes are in place to allow continuous advancement in work quality for the benefit of animals in scientific research.

Managers fulfil the role of Named Animal Care and Welfare Officer for the unit they manage, prioritising animal welfare needs at all times. They are also expected to remain abreast of advancements within the industry and support the process of sharing best practice.

A DAY IN THE LIFE OF AN ANIMAL TECHNICIAN

Laura is an Experienced Animal Technician who has been working at the Babraham Institute for three years. She is part of the team looking after our breeding colonies. Laura is currently attending college one day a week, working towards her Level 2 Diploma in Laboratory Animal Science and Technology alongside colleagues from other institutions. Here she describes her normal working day and other parts of her role.

My day starts at about 8.00 when I shower into the unit and change into a clean uniform; this helps protect the health barrier of the building.

From 8.30 onwards I check every cage in my section individually to ensure there is food and water available and that all animals within the cage are healthy. These checks are performed daily, including at weekends.

By 10.00 the checks are complete and I move on to daily husbandry tasks which include setting up new mating pairs, weaning pups from their parents and cleaning out animal cages.

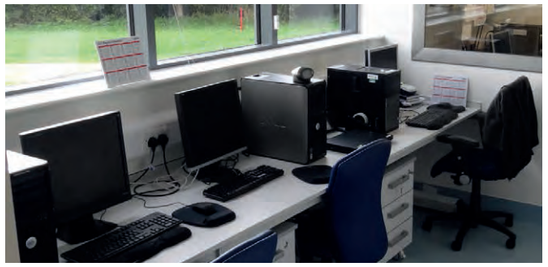
Cleaning out involves moving animals into a new cage with fresh bedding, nesting material and cage enrichments and taking the opportunity to carry out in-hand checks on each animal.

Break times are flexible, though I usually have lunch between 1.00 and 1.30 with the rest of the team. It's great that our opinions were considered in the design of the staff rooms.

After lunch I work until 3.30 on any requests sent in by researchers concerning their animals. This may include tasks such as transferring animals to other units or setting up new breeding pairs.

By 4.00, when my day's work is complete, my work areas must be cleaned ready for use the next day. This involves cleaning down any work stations, cleaning and disinfecting the floors and general tidying up in order to maintain the standards of cleanliness within the facility.

OTHER PARTS OF MY JOB



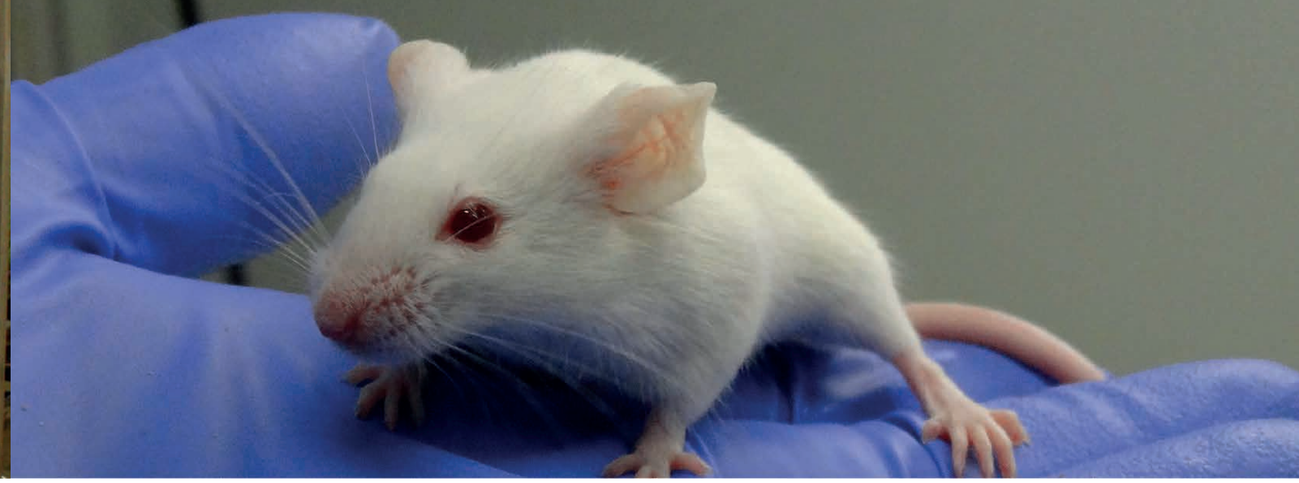
I care for the mice of a particular group of researchers and so I look after the same colonies over a period of time. This means that I have become familiar with the characteristics of each colony, allowing me to give them the best possible care and ensure breeding programmes are as efficient as possible. By understanding how well each colony performs I can help the researchers ensure we provide them with appropriate numbers of animals for their work.

Other aspects of my work (approximately one day per week) involve performing regulated procedures which require a personal licence granted by the Home Office after attending and passing relevant training modules. In addition, animals need to be individually identified, which is done with a microchip.

We are required by law to keep accurate records of every animal. The records include details of regulated procedures and when animals are allocated to researchers. A key part of my job is to ensure that accurate records are kept at all times.

I enjoy how the job varies between manual tasks and work requiring both thought and initiative. It can be very interesting and a lot can be learnt from the researchers and their work.

On occasions we are invited into the Institute's laboratories or to scientific presentations to learn about the research we support.



WHAT SKILLS/QUALIFICATIONS DO I NEED?

For a Trainee Animal Technician

Qualifications

- Minimum 5 GCSEs at Grade A-C or equivalent (including Science, Maths and English) and a proven interest in animals.
- Or relevant experience of working in an animal care environment.

Skills

- Basic animal husbandry skills e.g. handling, cleaning out, feeding and watering, breeding and weaning animals (inside or outside a working environment).
- Keen observational skills.
- Good communication skills.
- Good computer skills.
- Ability to prioritise work when under pressure.

Other requirements

- Must be prepared to study for IAT qualification.
- Must be prepared to gain and use a Home Office Personal Licence for regulated procedures.

Choosing what to study at school/college

GCSEs

- English, Mathematics and Science(s).

A Levels/HNC/BTEC

- Biology, Animal Care/Husbandry.

Choices after sixth-form

- Diploma in Laboratory Animal Science & Technology from the IAT.
- Apprenticeships.

Other things to consider

- A general interest in animals.
- Work experience e.g. veterinary services.
- Volunteering e.g. animal shelters.

WHAT QUALIFICATIONS CAN I GAIN?

The Institute of Animal Technology aims to advance knowledge and promote excellence in the care and welfare of animals in science and to enhance the standards and status of those professionally engaged in the care, welfare and use of animals in science.

Modules

- Laboratory animal housing and routines.
- The production of laboratory animals.
- Laboratory animal nutrition.
- Introduction to ethics and laboratory animal facility legislation.
- Laboratory animal health and husbandry.
- Laboratory animal biology.
- Animal facility physical science.
- Numeracy for animal technologists.
- Communication for animal technologists.
- Information Communication Technology for animal technologists.

Level 2 would be studied as either an apprentice or a Trainee Animal Technician.

The Level 3 Diploma in Laboratory Animal Science & Technology builds on the animal husbandry knowledge gained in the Level 2 Diploma to give candidates a broad understanding of key scientific principles.

Modules

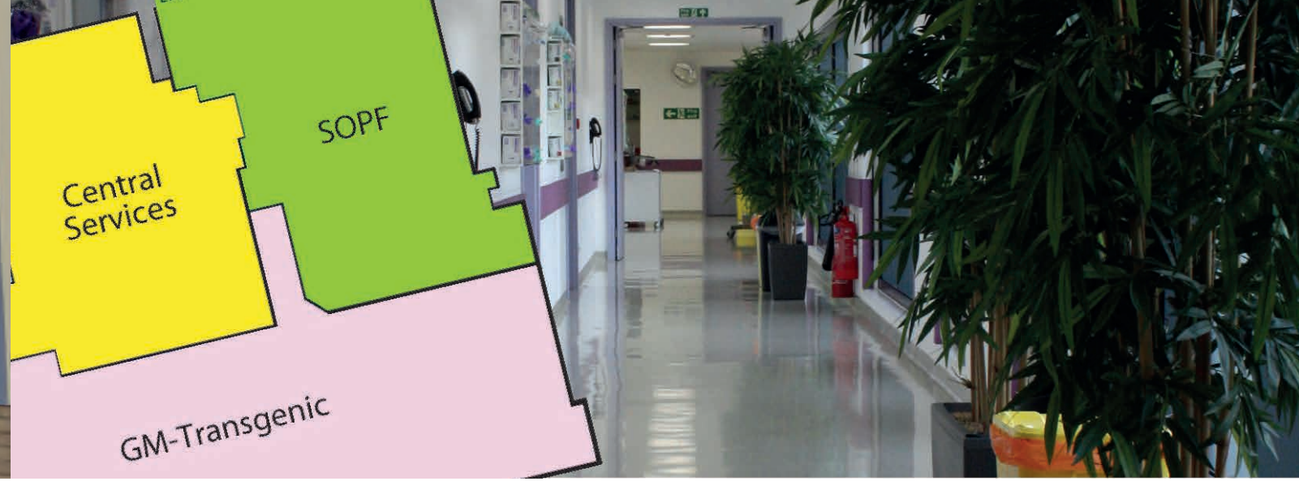
- Housing and biosecurity barriers in laboratory animal facilities.
- Disease control.
- Laboratory animal welfare.
- Management of breeding colonies.
- The use of GA animals in research.
- Scientific procedures.
- Ethics and laboratory animal facility legislation.
- Animal transportation.
- Animal cell biology.
- Laboratory animal physiology.

Level 3 is generally studied as an experienced animal technician.

Higher levels i.e. Level 4, 5 and 6 are available through to BSc qualification.

iat Institute of Animal Technology

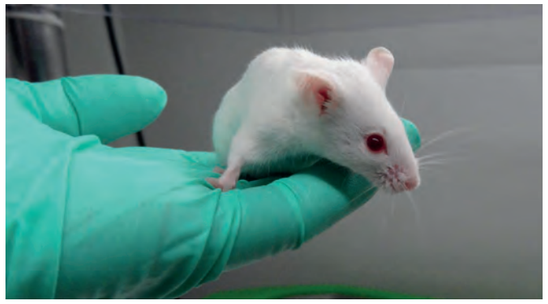
TO FIND OUT MORE PLEASE VISIT: www.iat.org.uk



ABOUT THE BABRAHAM INSTITUTE'S BIOLOGICAL SUPPORT UNIT

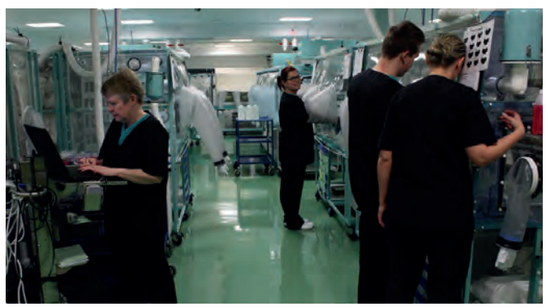
Our state-of-the-art Biological Support Unit (BSU) opened in 2009 and provides housing and care for pathogen-free rodents used in both academic scientific research programmes and by private companies.

Our animal technicians hold Home Office Personal Licences enabling us to provide technical support for researchers. We are committed to upholding the highest standards of animal welfare in all aspects of our work.



The BSU is made up of four bioscience units, each performing a unique role in the provision of flexible services to meet the dynamic requirements of biological research. We have a mix of animal technicians and service technicians who perform daily husbandry duties and provide essential services to the facility.

The bioscience units surround the central services unit which utilises robotic cage-washing technology and automated sterilisation processes to provide equipment and consumables to each of the animal holding areas.



INSIDE THE FACILITY

Pathogen-Free Units

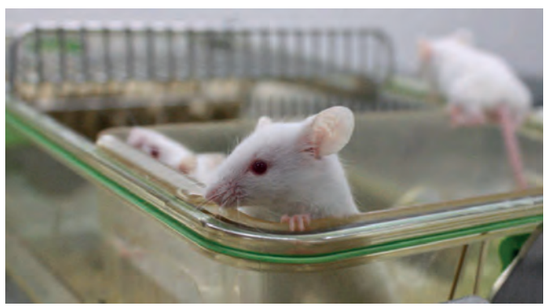
The Specific Opportunist Pathogen Free (SOPF) and GM Transgenics units are the highest health status bioscience units within the facility.

Experimental

The Experimental unit of the BSU is a highly flexible, mixed health status bioscience unit which allows quick access to animals undergoing experimental procedures.

Containment

The Containment unit of the BSU provides quarantine of low health status animals, ensuring total separation from healthy animals held in the other bioscience units.



Central Services

Central Services is a non-animal unit playing a key role within the BSU. The unit provides full automated cage processing and other essential services for the bioscience areas.

TO FIND OUT MORE PLEASE VISIT: www.babraham.ac.uk/science-services/biological-support-unit

WHAT IS THE BABRAHAM INSTITUTE?

As an animal technician, you will be making a contribution to the scientific research of the Babraham Institute. Situated near Cambridge, the Institute's mission is to be an international leader in research focusing on basic cell and molecular biology with an emphasis on healthy ageing through the human lifecycle.

Research at the Babraham Institute addresses fundamental biological questions of how cells and organisms develop and respond to the environment.

A particular focus is how we age and studying the underlying mechanisms controlling this process, for example how the elderly respond differently to infection compared to the young.

To answer these questions we examine the regulation of gene expression, the control of cell function by signalling processes and changes in organ systems including the nervous system. We utilise model systems: yeast, worms and mice as well as studying human cohorts.

The Institute's research is supported by strategic funding from the Biotechnology and Biological Sciences Research Council who fund our four core areas of research: Epigenetics, Lymphocyte Signalling, Nuclear Dynamics and Signalling.

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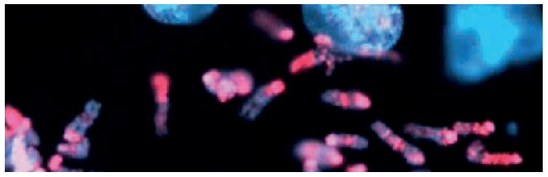
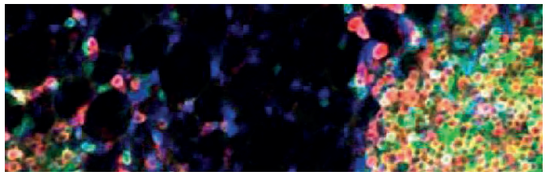
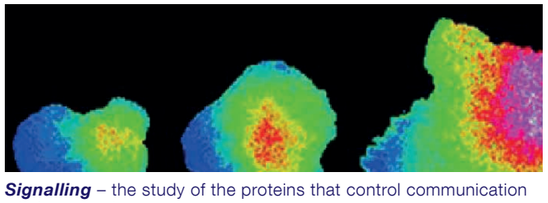


Epigenetics – the study of modifications to DNA that promote changes in gene expression without altering the DNA sequence.



Lymphocyte Signalling – the study of the processes that regulate the development, survival and function of white blood cells.

Nuclear Dynamics – the study of control of genome function in relation to health, immunity and ageing.



Signalling – the study of the proteins that control communication within and between cells.

TO FIND OUT MORE PLEASE VISIT: www.babraham.ac.uk

ANIMAL RESEARCH AT THE BABRAHAM INSTITUTE

Why animals are needed for research

Babraham Institute scientists study fundamental processes in our cells: how they develop, survive, function, age and die. This basic biology underpins future medical advances; without today's basic science there will be no foundation for tomorrow's medical research.

Mammals differ widely in size and shape but their cells and genes are broadly similar. Because of this, information from studies of mice or rats can be relevant to other mammals including humans, pets and farm animals.

UK law regulates research using mammals, birds, fish, reptiles or amphibians. Alternatives must be used wherever possible. Babraham scientists use alternatives on a daily basis and often this also makes our work quicker, cheaper and, to some extent, more informative.

At the Institute we minimise the numbers of animals we use by use of:

- Cell culture.
- Use of simple organisms such as yeast, flies and nematode worms.
- Computer modelling.
- Use of human samples.

Concordat on Openness in Animal Research

The Babraham Institute is a signatory of the Concordat on Openness in Animal Research, an agreement signed by over 100 organisations in the UK to share good practice and work towards transparency about the use of animals in research.

Signatories to the Concordat have agreed to be more open about their use of animals in research, and to abide by the following four commitments:

1. We will be clear about when, how and why we use animals in research.
2. We will enhance our communications with the media and the public about our research using animals.
3. We will be proactive in providing opportunities for the public to find out about research using animals.
4. We will report on progress annually and share our experiences.

All signatories agree that they will work to fulfil the four Commitments, initiating projects and strategies that are relevant and appropriate to their organisations to be more open about their use of animals in research.

For more information about the Concordat visit:
www.understandinganimalresearch.org.uk

Understanding
ANIMAL RESEARCH

TO FIND OUT MORE PLEASE VISIT: www.babraham.ac.uk/about-us/animal-research

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