

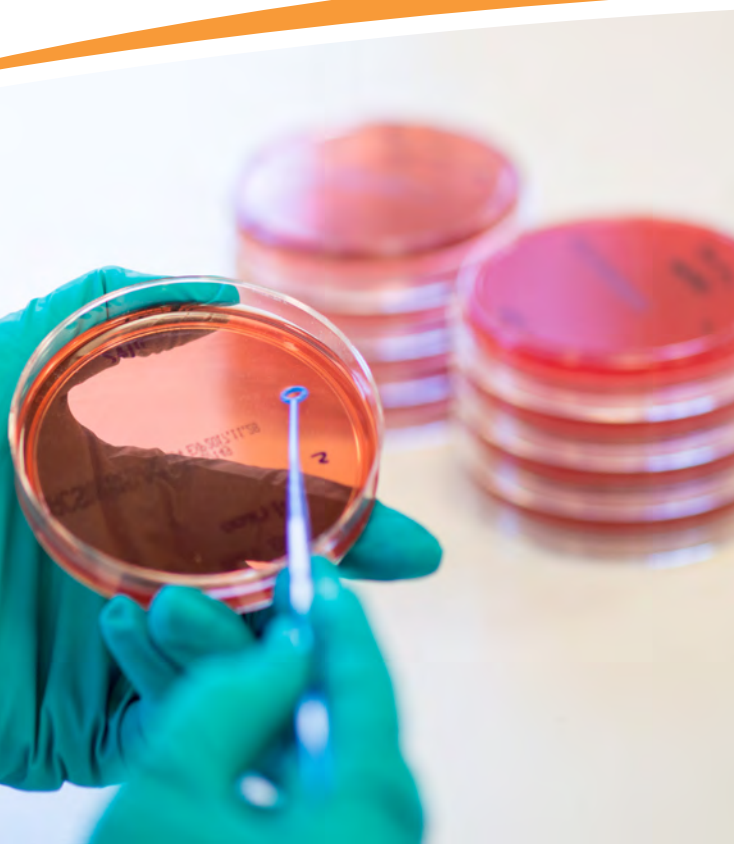
E X P E R T S C I E N C E • E X C E L L E N T S E R V I C E



Animal &
Plant Health
Agency



Products and services for scientists around the world





The Animal and Plant Health Agency (APHA) is an executive agency of the Department for Environment, Food and Rural Affairs (Defra). APHA is an internationally recognised centre of scientific excellence providing a wide range of research and consultancy to the UK Government and commercial customers.

We specialise in diseases of livestock and plants, diagnosis of disease and surveillance of new and emerging disease.



Animal &
Plant Health
Agency

Our scientists have had a significant influence on the development of animal health and food safety strategy in both the UK and Europe and have achieved International Reference Laboratory status for many important animal diseases.

To enhance its scientific activity APHA develops commercial products and services and makes them available to organisations globally. These are brought together under APHA Scientific to ensure the products and services are delivered effectively to customers.

APHA's mission is to safeguard animal and plant health for the benefit of people, the environment and the economy.

APHA was created in 2014 following the merger of the Animal Health and Veterinary Laboratories Agency (AHVLA) and part of the Food and Environment Research Agency (FERA) including the Bee Inspectorate, Plant Health and Seeds Inspectorate, Plant Variety and Seeds Group and the GM Inspectorate.



The expanded activities of the new agency broaden the commercial services of APHA Scientific to include wildlife management and plant health expertise alongside its extensive range of veterinary, scientific and other services.

APHA Scientific provides business development managers, a customer service team, scientific research and reagent production groups to ensure that the products and services offered are delivered effectively to our customers. They are also able to bring scientific expertise, high quality service, innovative methods and, in many cases unique products and services to the market.

If you require further information on any products and services, please contact our Customer Service Team on:

+44 (0)3000 600001
aphascientific@apha.gov.uk
www.aphascientific.com

APHA Scientific products and services available include:

- Biological reagents and diagnostic kits for animal diseases
- Proficiency Testing for veterinary laboratories - VETQAS
- Wildlife management and radar detection
- Laboratory diagnostic testing
- Vaccine development and testing
- Virus discovery
- Pathology and bio-imaging
- Bacterial identification and characterisation
- Veterinary research and development
- Access to APHA generated intellectual property through licensing





Over
**150 different
reagents**
are available
for sale

Biological Reagents

Over many years, APHA has developed a wide range of specialist veterinary diagnostic reagents and test kits for effective, reliable laboratory testing.

The reagents are manufactured in a dedicated reagent production unit certified to ISO 9001 and many of them are currently used by national and international reference laboratories.

Our scientists have a unique breadth of veterinary and scientific expertise and a comprehensive knowledge of animal and zoonotic diseases.

Over 150 different reagents are available for sale, either from our network of distributors or direct from APHA Scientific. The reagents include antisera, antigens, monoclonal antibodies and various diagnostic kits.

Viral and bacterial isolates of animal pathogens are also available (see Culture Collection).

Please see our on-line Biological Reagents Catalogue for further details: science.vla.gov.uk/Reagents/Default.aspx



VETQAS Proficiency Testing

VETQAS is the APHA's independent, accredited, proficiency testing service. We offer a wide range of schemes principally directed towards farm animals and equine species. There are also schemes for companion animals and fish diseases.

VETQAS is the international market leader in proficiency testing for veterinary laboratories and works to the ISO 17043 standard. To view our list of schemes and which ones are covered by this standard, please visit www.vetqas.com

Participation in proficiency testing schemes supports your accreditation to ISO 17025 and demonstrates a commitment to improving performance, which is of value in maintaining a good reputation for delivering reliable and accurate results.

Each year thousands of samples are issued by VETQAS to laboratories around the world for a variety of tests including microbiological and biochemical analysis, ELISA and PCR.

PT schemes are available for several test and sample types – which include:

- Antibody detection and Microbiology
- Virology and Haematology
- Parasitology and Clinical chemistry
- Feed tests and Histopathology

VETQAS schemes are an independent and confidential verification of your testing practices enabling you to anonymously compare your performance with other participating laboratories. This helps to improve consistency between laboratories and maintains and improves your laboratory's performance.



0004

Laboratory Testing

APHA's national network of laboratories provides diagnostic testing for a wide range of customers.

This service runs alongside our national and international role in disease surveillance to support the control of endemic and exotic diseases.

The testing service includes:

- Bacteriology, Parasitology and Virology
- Serology
- Animal feed testing
- Antimicrobial testing and associated extensive culture collections
- A wide range of bulk and specialist testing
- Our tests are supported by experienced scientists and veterinary disease experts. To find out which of our tests are internationally recognised to the ISO 17025 please visit our website www.aphascientific.com

A UKAS accredited testing laboratory provider No.1769.





Wildlife Management

With the largest concentration of vertebrate ecologists in the UK and state-of-the-art facilities, our scientists are leaders in wildlife management, which enables us to deliver high quality research and consultancy services.

The service includes:

General wildlife management research and advice

Development and evaluation of new management methods to resolve human wildlife conflicts. Assessment of the costs of human-wildlife conflicts and the costs and benefits of different possible management techniques. Advice on the selection and implementation of techniques to control specific wildlife problems.

Wildlife Fertility Control

A new emerging approach for wildlife management.

Control of Invasive Non-Native Species

We can carry out unique large-scale field control and monitoring projects.

Renewable Energy Planning

Our experience in traditional ornithology and radar detection play an important part in environmental impact assessments.

Bird Detection Radar

We operate the only two mobile bird detecting radars available for civilian use in the UK. This equipment can be deployed either on land or at sea and collects data on bird movements around the clock, whatever the weather.

Animal Welfare

Management using non-invasive measurement of physiology.

We develop new and improved wildlife management strategies based on sound science and integrating our expertise in wildlife biology and animal welfare. We also provide evidence based support for wildlife policy development by both UK Government and the European Commission and advise commercial parties on wildlife management and human awareness issues.



We develop new and improved wildlife management strategies based on sound science and integrating our expertise in wildlife biology and animal welfare.

Vaccine Development and Testing

APHA Scientific can help you throughout your vaccine development, from identifying vaccine candidates right through to batch testing on the finished product.

We have a wealth of experience of invitro techniques and can work on a wide range of organisms including those requiring high containment disease security facilities, both in vitro and in vivo.

We have available a wide range of viral, parasitic and bacterial cultures and our services include:

- Primary research
- Antigen development
- Testing for attenuation
- Antibody and antigen detection
- Extraneous agents testing
- Efficacy and safety testing

We comply with Good Laboratory Practice, Good Manufacturing Practice and Good Clinical Practice (veterinary).

We are able to test starting materials for extraneous agents including substances of animal origin, viruses and bacteria. We also have available a range of bacterial, parasitological and viral disease challenge models.



Pathology and Bio-Imaging

APHA Scientific offers our customers a comprehensive veterinary pathology and bio-imaging service for research and diagnostic purposes.

The service includes:

- Anatomic pathology
- Molecular, cellular and histopathology
- Histology and immunohistochemistry
- Laser capture micro dissection
- Transmission and scanning electron microscopy
- Confocal laser scanning microscopy
- Image analysis and digital micrography

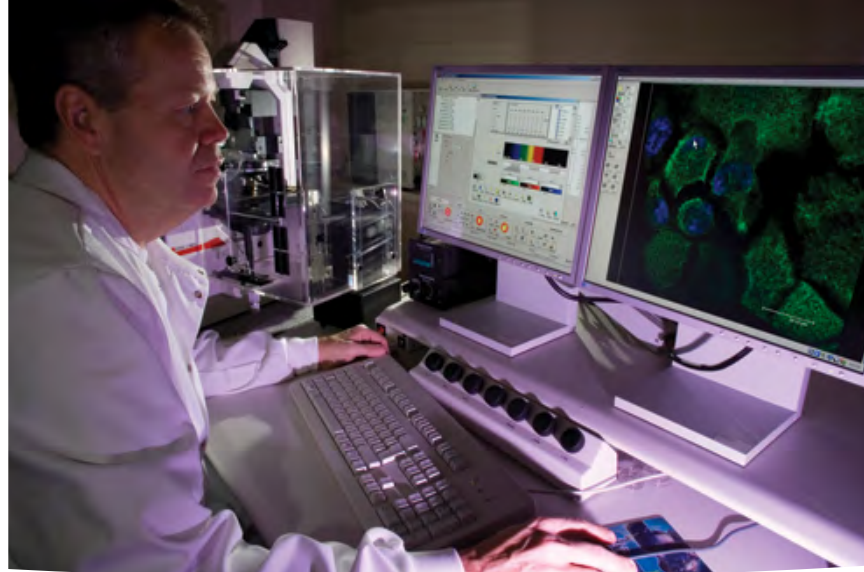
Our specialist veterinary pathologists and scientists have a wide range of expertise in collaborative, policyrelated research and consultancy at both national and international level. They also offer specialist input to proposal development, project design and interpretation of results.

Our veterinary pathology service is uniquely placed to offer high quality research and a diagnostic capability, which includes a variety of modern techniques for large scale and specialist studies of host-pathogen interaction.

High disease security containment facilities, for a range of pathogens, are also available. Our veterinary pathology service unit is certified to ISO 9001 quality standards and the facilities are Good Laboratory Practice (GLP) compliant.

Many of our tests are accredited to ISO 17025 (UKAS accredited testing laboratory provider No.1769). To find out which tests are internationally recognised to the ISO 17025 please visit our website www.aphascientific.com.





APHA Scientific offers a high quality, pan-viral microarray service for the laboratory investigation of clinical samples to identify unknown viral pathogens.

Research and Development

APHA is internationally recognised as a centre of excellence for applied and innovative research. By combining the unique expertise of our disease consultants, researchers and highly trained technicians, state-of-the-art facilities, international networks and innovative development of new techniques we can offer you an unrivalled and comprehensive service to complete your R&D programmes.

Our integrated multi-disciplinary approach can add value to your project and help you achieve your research objectives.

Intellectual Property

The Agency has conducted research and surveillance of animal disease for many years and this has resulted in new discoveries, new techniques and the accumulation of considerable expertise over a diverse range of disciplines.

As a result, an extensive portfolio of Intellectual Property (IP) has been generated and exists as 'know-how' in the form of products and techniques as well as that formally protected by patents. This is available to customers through an active licensing programme.

Virus Discovery

APHA Scientific offers a high quality, pan-viral microarray service for the laboratory investigation of clinical samples to identify unknown viral pathogens.

The microarray contains over 60,000 oligonucleotide probes corresponding to approximately more than 3,000 viral species, enabling the screening of clinical samples for a large number of viral pathogens, simultaneously. The service also includes bioinformatic analysis to interrogate output files and any positive findings are verified using PCR and sequencing.

This service has been designed for investigating unusual or unknown viral infections in farm animals and pets, as well as exotic mammalian and avian species in wildlife parks and zoos.

Bacterial Identification and Characterisation

APHA Scientific offers a comprehensive service that provides detailed sequence-based bacterial identification and characterisation for a variety of applications including the development of vaccines, characterisation of probiotics and intellectual property protection.

The services available include includes:

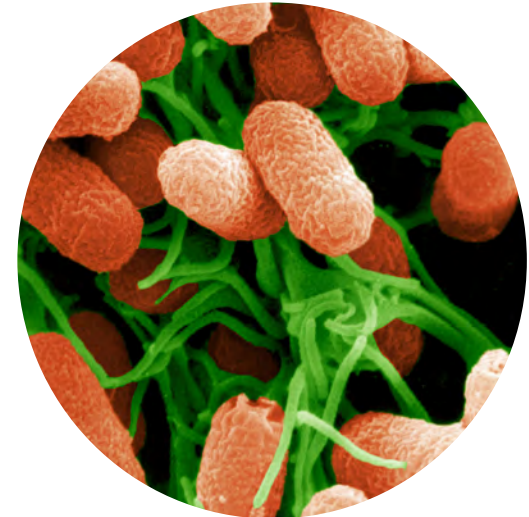
- Strain identification by 16S rRNA gene sequencing
- MultiLocus Sequence Typing (MLST)
- Whole genome sequencing
- Community Profiling - determining the bacteria present in a mixed sample (e.g. clinical material or environmental samples).

Our scientists have expertise in a wide range sequencing of technologies and access to extensive bacterial isolate libraries and data sources. They also have in-depth knowledge of animal and zoonotic diseases, wide experience of food safety, environmental and public health issues and a commitment to high quality standards including ISO 9001 and ISO 17025.

Bacterial and Viral Culture Collection

APHA Scientific offers a wide range of bacterial and viral isolates to support your studies and research. The collection contains a large number of current field strains from a wide geographical areas within the UK and many of these isolates are associated with clinical data such as number of animals infected, post mortem findings etc.

The extensive bacterial collection has over 29,000 recent and historic isolates of animal pathogens including aerobes and anaerobes from all livestock species and represents typical and atypical isolates from respiratory, enteric and other diseases. Many of these isolates already have established antibiotic sensitivity profiles, so we can selectively test organisms with known characteristics. We can also provide collections of recent isolates to meet your requirements and collect isolates if you have a specific need not covered by the current collection. There are a number of bespoke collections of veterinary/ food/ feed origins, for example the Salmonella



collection numbers over 200,000 isolates including a wide range of serovars dating back to 1992 and we have over 5,000 Campylobacter isolates.

We also offer an anti-microbial susceptibility service using several minimum inhibitory concentration (MIC) assays, performed under ISO 17025. Up to date profiles for a wide range of currently marketed or research antimicrobials are available, which are suitable for product registrations, claim extensions or marketing.

29,000+ recent and historic isolates of animal pathogens

200,000+ Salmonella isolates including a wide range of serovars

5,000+ Campylobacter isolates



Additional Services

APHA Scientific has access to a wide range of resources, which include:

- High containment biosecurity laboratories
- High containment disease security animal accommodation for large and small animals

It also has access to extensive knowledge and capabilities in many other specialist areas including:

- Epidemiological studies
- Data science
- Risk analysis



Animal &
Plant Health
Agency



To contact APHA Scientific Customer Service Team:

Telephone: +44 (0)3000 600001

Email: aphascientific@apha.gov.uk

APHA Weybridge,
New Haw,
Addlestone,
Surrey KT15 3NB
United Kingdom

www.aphascientific.com

APHA Scientific is the commercial department of the Animal and Plant Health Agency (APHA), which is an executive agency of the Department for Environment, Food and Rural Affairs (Defra) to safeguard animal and plant health for the benefit of people, the environment and the economy.

