

## VLA'S CORE FUNCTIONS AND CAPABILITIES

Disease Prevention & Control	Environmental & Public Health Protection	Reference & Specialised Testing	Supporting Regulation & Policy Development & Quality Improvement	Animal Health Related Research	Enabling Partnerships and Communication
<p>To provide reference microbiology &amp; surveillance for:</p> <ul style="list-style-type: none"> <li>- Bacteria</li> <li>- Viruses</li> <li>- Fungi</li> <li>- Parasites</li> <li>- Prions</li> </ul> <p>International reference services support</p> <p>Support disease outbreak investigation</p> <p>Detect &amp; monitor emerging &amp; imported infectious diseases and antimicrobial resistances</p> <p>Search for new pathogens</p> <p>Vector-borne diseases</p> <p>Zoonoses</p> <p>General &amp; on-call support and expert advice</p> <p>Vaccine production</p> <p>Introduction of immunisation programmes, monitoring of vaccine efficacy &amp; vaccine coverage</p> <p>Evaluation of new antimicrobials against 'problem' isolates</p>	<p>Zoonoses</p> <p>Vector-borne infections</p> <p>Environmental monitoring</p> <ul style="list-style-type: none"> <li>- Radiation</li> <li>- Chemical</li> <li>- Animal food-stuffs</li> </ul> <p>Risk assessment</p> <p>Food safety</p> <p>Disinfectant testing</p> <p>Decontamination confirmation</p> <p>Effects of climate change</p>	<p>Typing of organisms</p> <p>Confirm laboratory test results (including atypical results)</p> <p>Serodiagnosis &amp; molecular assays</p> <p>Identification of unusual or difficult &amp; dangerous (containment level 4) pathogens</p> <p>Antimicrobial resistance confirmation &amp; mechanism determination</p> <p>National &amp; international official designation reference services</p> <p>National &amp; international reference collections</p> <p>Detection of pathogenicity and virulence determinants (including biotoxins)</p> <p>Specialist <i>in vivo</i> and <i>ex vivo</i> assays</p> <p>Forensic pathology</p> <p>Esoteric assays, otherwise unavailable elsewhere</p>	<p>Contribute to national &amp; international guidelines and policy development</p> <p>National and international quality assurance schemes</p> <p>Establishment of quality systems</p> <p>Provision of specialist biological reagents</p> <p>Development of standards</p> <p>Development of testing algorithms</p> <p>Evaluation of diagnostic kits/tests/methods</p> <p>Development of new kits/tests</p> <p>Provision of assay controls &amp; performance panels</p> <p>Assessment of new technologies</p> <p>Development of standard operating procedures</p>	<p>Evaluate &amp; develop diagnostic and reference technologies</p> <p>Search for new pathogens, &amp; antimicrobial resistances &amp; mechanisms</p> <p>Undertake research, &amp; support the work of others, in animal infections</p> <p>Vaccine development &amp; evaluation</p> <p>Epidemiology of rare &amp; common pathogens</p> <p>Sero-epidemiology &amp; sero-prevalence studies</p> <p>Mathematical models of the spread of infectious diseases</p> <p>Economic evaluation of control programmes</p> <p>Pathology investigations</p>	<p>Develop partnerships between animal health professionals, academia, industry, food manufacturers, ALBs &amp; public health services.</p> <p>Contribute to national strategic policy planning &amp; development</p> <p>Maintain &amp; develop further international networks, particularly in Europe &amp; interactions with e.g World Organisation for Animal health (OIE), World Trade Organisation, European Food Safety Authority (EFSA)</p> <p>Provide expert advice to farming industry, specialist &amp; general press</p> <p>Interactions with agencies &amp; government departments e.g. devolved administrations, Environment Agency, Department of Health, Food Standards Agency, Ministry of Defence etc.</p> <p>International interactions with e.g European Commission, EFSA, OIE</p>
	<b>Emergency Preparedness &amp; Response</b>		<b>Supporting International Trade</b>	<b>Expert Advice &amp; Consultancy</b>	<b>Training &amp; Education</b>
	<p>Animal intoxication and chemical safety of food</p> <p>Infectious disease emergencies</p> <p>High volume testing</p> <p>Deliberate release response</p> <p>Mathematical models, risk assessment &amp; scenario planning</p> <p>Analytical &amp; predictive epidemiology</p> <p>All hours emergency on-call</p> <p>Service continuity provision to public health</p>		<p>Animal &amp; animal feed compliance with import controls</p> <p>Export compliance certification testing</p>	<p>Provision of expert advice on:</p> <ul style="list-style-type: none"> <li>- Animal health &amp; welfare</li> <li>- Microbiology</li> <li>- Technical issues</li> <li>- Outbreak control</li> <li>- Policy</li> <li>- Biosecurity</li> <li>- Biosafety</li> <li>- Chemical hazards</li> <li>- Radionucleotide hazards</li> <li>- Pathology</li> </ul>	<p>Maintain competency &amp; improve scientific &amp; technical skills of microbiologists &amp; veterinary practitioners</p> <p>Participate in training at international level of lab scientists</p> <p>Participate in post graduate research training</p> <p>Organise &amp; contribute to, national and international training workshops &amp; meetings</p> <p>Contribute to the public understanding of science</p>
<b>Epidemiology &amp; Surveillance</b>					
<p>International surveillance</p> <p>Detection of national outbreaks</p> <p>Syndromic surveillance for new &amp; emerging diseases</p> <p>Sero epidemiology</p> <p>Risk assessment</p>					