

CENTRE FOR INFECTIONS

VIRUS REFERENCE DEPARTMENT

USER MANUAL

Version	4
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Authorised By	Prof. David Brown
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Virus Reference Department Director's Foreword

The HPA Virus Reference Department (VRD) is a national and international reference centre for a wide range of virus infections. We receive clinical samples and viral isolates from public health departments, National Health Service and commercial laboratories across the UK and internationally for specialist testing, virus characterisation and susceptibility testing. During 2007/8 more than 215,000 reference specimens were investigated in VRD which reflects the value of VRD services to clinicians, microbiologists, consultants in communicable disease control, and HPA Surveillance colleagues.

The department is made up of ten units, including the Respiratory Virus Unit – which includes the UK National Influenza Laboratory, the Enteric Virus Unit – which includes the National Polio Laboratory, the Zoonotic Virus Unit - which houses a high containment laboratory, the Immunisation and Diagnosis Unit – which includes a WHO global measles reference laboratory, the HIV and Antiviral Group – which houses the WHO Collaborating Centre for Laboratory and Diagnostic Support, and the Human Hepatitis and Papillomavirus Units. Members of VRD staff sit on a number of national and international panels and provide advice to the WHO, FSA, Dept. of Health, European Union as well as to other HPA departments, and provide assistance and advice in national and international outbreak investigations.

The main focus of the laboratory's work is to provide reference and specialist diagnosis services. The expertise developed through the provision of this reference service supports a substantial applied research and development programme. We also provide support for outbreak investigations in the UK and internationally. VRD was involved in the development and evaluation of oral fluid testing for HIV, hepatitis and measles, mumps and rubella. The resultant national diagnostic service offered to primary care plays an important role in monitoring vaccine programmes and infection in hard to reach groups. During 2003 the laboratory played a key role in the international response to the SARS outbreak. The WHO National Influenza Laboratory has been involved in establishing the H5N1 influenza diagnostic network and is playing a key role in the investigation of recent avian influenza outbreaks and the current swine flu (H1N1) epidemic.

Professor David Brown
Director VRD

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Amendment History

Version No.	Date	Sections Affected	Pages Affected
2	Jan 2008	Major update	All
3	Mar 2008	Addition of page numbers and minor formatting	All
4	May 2009	Major update, addition of AVU and HPV/HCV Unit	All

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The VRD is a national reference and research laboratory comprising the following components:

RVU – Respiratory Virus Unit

EVU – Enteric Virus Unit

IDU – Immunisation and Diagnosis Unit

VZU – Viral Zoonoses Unit

BBV – Blood Borne Viruses Unit

HHU – HPV / HCV Unit

TSE – Transmissible Spongiform
Encephalopathy Unit

SSU – Seromolecular Services Unit

SDU – Serological Development Unit

AVU – Antiviral Unit

Please check the appropriate unit's web page for the most up to date information.

The Department provides clinical advice and investigations for a wide range of human and non-human primate virus infections. VRD has particular expertise in the detection of sexually transmitted and blood borne virus pathogens, in the molecular detection and characterization of enteric and respiratory viruses and in determining antiviral susceptibility. The department offers a wide range of assays for the assessment of human immune responses to viruses, and has a substantial wide-ranging research portfolio.

The Department's work also embraces both reference functions supporting NHS and public health activity and applied research in virology and in the spongiform encephalopathies. The Department's laboratories have been fully CPA accredited (CPA 2904).

The Department holds substantial research contracts and grants, and in the last financial year the Department generated over 1.8m pounds sterling in income derived from diagnostic testing. It currently holds over £4 million in externally awarded grants from sources such as the MRC, Leukaemia Research Foundation, Meningitis Research Trust, Wellcome Trust, WHO, DoH, FSA and several other agencies. Each year several students successfully present PhD theses to University authorities and currently 9 staff are registered for PhDs. The Department has active collaborations with industry in assessment of immune responses to vaccines and natural infection, and a wide range of academic collaborators in Universities nationally and internationally.

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SERVICES AVAILABLE

The department undertakes tests for the infections listed below:

INVESTIGATION	UNIT	Page(s)	INVESTIGATION	UNIT	Page(s)
Adenovirus (enteric)	EVU	11	Measles	IDU	13
Adenovirus (respiratory)	RVU	15	Mumps	IDU	13
Astrovirus	EVU	11	Norovirus	EVU	11
Avian Influenza	RVU	15	Parainfluenza	RVU	15
Coronavirus	EVU	11	Parvovirus B19	IDU	14
CJD	TSE	21	Poliovirus	EVU	11
Electron Microscopy	EVU	11	Polyomavirus BK / JC	IDU	14
Enteroviruses	EVU	11	Poxviruses	VZU	22
Hepatitis A, B, C, D and E	SSU / BBVU	18, 10	Rabies (exposure advice)	Rabies clerk	22
Herpes Simplex virus	SSU / AVU	19, 9	Rhinovirus	RVU	16
Herpes B virus	VZU	22	Rotavirus	EVU	11
Human Herpesvirus 6 / 7	IDU	13	RSV	RVU	15
Human Herpesvirus 8	SSU	19	Rubella	IDU	14
Human Metapneumovirus	RVU	15	Sapovirus	EVU	11
HIV 1 and 2	SSU / AVU	20, 9	SARS	RVU	16
HTLV I/II	SSU	20	Viral haemorrhagic fevers	VZU	22
Influenza	RVU	15	Varicella-zoster virus (VZV)	IDU	14
LCM	VZU	22			

The Centre for Infections, Health Protection Agency provides various areas of specialist and reference microbiology and information on these can be found at :

<http://www.hpa.org.uk/vrd>

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HOW TO OBTAIN SERVICES

1. Hours of service

The Department is open from 9 a.m. to 5 p.m. Monday to Friday. No routine services are available outside these hours. The Department is closed on public holidays.

A 24 hour on-call service for the urgent diagnosis of viral haemorrhagic fevers, smallpox and avian influenza is available. Contact the CfI Duty Doctor on telephone 020 8200 4400

2. Specimen Transportation

Specimens sent by post or by courier must be in a sealed container, surrounded by sufficient absorbent packing material to take up any leakage in the event of damage during transit, sealed in a plastic bag and placed in an approved outer container which meets current postal or other transport regulations. Contact the laboratory safety officers for further information ([Mark Broughton](#) or [Pamela Litton](#) on 020 8327 6017). Department of Health guidance on the transport of infectious substances may be found at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_075439

Special arrangements are required for the collection and transportation of specimens involving suspected hazard group 4 agents – contact the department for further details.

3. Specimen Submission Guidelines

Specimens

All specimens **must** be labelled with the following:-

Surname/Forename or other Unique Patient Identifier
Date of Birth
Sender's Sample Number
Date of Collection of Specimen

Specimen Submission Guidelines (continued)

Request Forms

VRD specific request forms are available from the [Cfl website](#), with guidelines for the completion of forms. Users are advised to use these forms for all requests and to complete them with the details below.

Forms **must** match the information on the sample and include the following information:

Tests required

Specimen type and site where appropriate

Hazard group, if known or suspected to contain Hazard Group 3 pathogens (**special arrangements apply for specimens suspected of harbouring hazard group 4 agents – see section on specimen transportation above**).

Sender's Sample Number

Contact information of requester (vital for urgent requests)

Consultant or GP (if applicable)

Request Forms should also have:-

Date of dispatch

Sex

Relevant clinical information including details of any antiviral therapy

Date of onset

Vaccination history

NHS number

Reference to any previous VRD reports (please give VRD laboratory number if known)

For investigations of maternal transmission, please identify the linked mother or child where relevant

Please complete the forms in BLACK ink (NOT red or any other colour)

Failure to comply with our specimen submission guidelines may lead to specimen rejection and/or delay of reports.



UNIT	SERVICES AVAILABLE	KEY STAFF	PATHOGEN	ASSAY / INVESTIGATION	SPECIMEN REQUIRED	TARGET TURNAROUND TIME*	TEST SCHEDULE
<p style="text-align: center; font-size: 2em; font-weight: bold;">A V U</p> <p>Antiviral Unit</p>	<ul style="list-style-type: none"> HIV drug resistance testing by standard methods and for minority mutants Analysis of HIV transmission events for public health-related investigations HIV subtyping by sequencing HSV drug resistance testing 	<p>Unit Head: Prof. Pat Cane 020 8327 6099 01890 612866 pat.cane@hpa.org.uk</p> <p>Dr. Andrew Buckton 020 8327 6470 andrew.buckton@hpa.org.uk</p> <p>Dr. Jean Mbisa 020 8327 6470 jean.mbisa@hpa.org.uk</p> <p>Dr. Chris Parry 020 8327 7812 chris.parry@hpa.org.uk</p>	HIV-1	Genotypic resistance testing	EDTA plasma (>1ml)	21 days	Contact laboratory
				Detection of minority drug resistance mutants	EDTA plasma (>1ml)	21 days	Contact laboratory
				HIV-1 sequencing and sequence comparison	EDTA plasma (>1ml)	Contact laboratory	
			HSV	Phenotypic drug resistance	Virus isolate	21 days	Contact laboratory

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B B V BLOOD BORNE VIRUS UNIT	<ul style="list-style-type: none"> Molecular epidemiology of Hepatitis B and C transmission incidents and outbreaks Research work on Hepatitis Viruses B, C, and E. 	Unit Head Prof. Richard Tedder 020 8327 6553 richard.tedder@HPA.org.uk Hepatitis Viruses Research Group: Dr. Siew Lin Ngui 020 8327 6555 siewlin.ngui@hpa.org.uk Dr. Samreen Ijaz 020 8327 6554 samreen.ijaz@hpa.org.uk	HEPATITIS A VIRUS	RNA	Serum, Plasma (300µl)	Contact Laboratory
			HEPATITIS B VIRUS	HBV Genetic Differentiation Studies	Serum, Plasma (200µl)	Contact Laboratory
			HEPATITIS C VIRUS	HCV Genetic Differentiation Studies	Serum, Plasma (200µl, separate from clot within 4hrs)	Contact Laboratory
			HEPATITIS E VIRUS	RNA	Serum, plasma (200µl)	Contact laboratory



UNIT	SERVICES AVAILABLE	KEY STAFF	PATHOGEN	ASSAY / INVESTIGATION	SPECIMEN REQUIRED	TARGET TURNAROUND TIME*	TEST SCHEDULE
E V U Enteric Virus Unit	<ul style="list-style-type: none"> Advice on investigation and management of hospital and food borne virus outbreaks Genetic and morphological characterisation of human caliciviruses, rotaviruses, enteric adenovirus and enteroviruses Investigation of suspected poliomyelitis by neutralisation and PCR 	Unit Head: Dr. Jim Gray 020 8327 6025 jim.gray@hpa.org.uk Dr. Chris Gallimore 020 8327 6154 chris.gallimore@hpa.org.uk Dr. Miren Iturriza 020 8327 6225 miren.iturriza@hpa.org.uk Dr. Hazel Appleton 020 8327 6212 hazel.appleton@hpa.org.uk	Astrovirus	RT-PCR Genotyping on request	Faeces (<5 days post-onset)	Contact laboratory	
			Electron Microscopy	Virus detection	Contact laboratory		
			Enteric Adenoviruses	PCR	Faeces (<5d)	Contact laboratory	
			Enteroviruses	RT-PCR	Serum, CSF (>200µl), throat swab, faeces. Others by arrangement with laboratory.	RT-PCR: 10 days	Contact laboratory
				Culture Typing		Culture: 28 days Typing: contact lab	
			Norovirus	RT-PCR Genotyping	Faeces (<5d) Environmental samples	Contact laboratory	
			Poliovirus	RT-PCR	Viral isolates, faeces, throat swabs, CSF (acute, 200µl) Others by arrangement	RT-PCR: contact lab	Contact laboratory
				Genotyping Culture Intratypic neutralisation		Genotyping: contact lab Culture: contact lab Neutralisation: 10 days	
Rotavirus	RT-PCR P&G typing VP6 and NSP4 genotyping	Faeces (<5d), CSF (200µl)	Contact laboratory				
Sapovirus	RT-PCR Genotyping on request	Faeces (<5d)	Contact laboratory				

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UNIT	SERVICES AVAILABLE	KEY STAFF	
<p style="text-align: center; font-size: 2em; font-weight: bold;">H H U</p> <p>HPV / HCV UNIT</p>	<p>Specialist Reference and Translational Research of:</p> <ul style="list-style-type: none"> • Hepatitis C Virus (HCV) • Genital Human Papillomavirus (HPV) 	<p>Unit Head: Professor John Parry 020 8327 6208 john.parry@hpa.org.uk</p> <p>HPV R&D Section Head: Dr Simon Beddows 020 8327 6169 simon.beddows@hpa.org.uk</p>	<p>Hepatitis C Virus: The unit is involved in developing and validating novel serological and molecular tests for hepatitis C virus, including tests on oral fluid and dried blood spot samples. Testing using these methods is currently by special arrangement only – please contact the unit for details.</p> <p>Human Papillomavirus: We currently do not offer a diagnostic service for HPV. Our primary focus is the participation in a national HPV surveillance programme to monitor the impact of the HPV vaccine(s) on the UK population. We also have a small Research and Development team to examine the immune responses generated to HPV vaccines and issues related to HPV pathogenesis</p>



UNIT	SERVICES AVAILABLE	KEY STAFF	PATHOGEN	ASSAY / INVESTIGATION	SPECIMEN REQUIRED	TARGET TURNAROUND TIME*	TEST SCHEDULE			
<p style="text-align: center; font-size: 2em; font-weight: bold;">I D U</p> <p>Immunisation and Diagnosis Unit</p>	<ul style="list-style-type: none"> Reference serum & saliva antibody test for rash illnesses Advice on management of rash outbreaks Investigation of adverse effects following vaccination Antigenic and genetic characterization of measles, mumps, rubella and B19 infections Same-day testing for measles 	<p>Unit Head: Dr Kevin Brown 020 8327 6023 kevin.brown@hpa.org.uk</p> <p>Heather Lawson 020 8327 6253 heather.lawson@hpa.org.uk</p> <p>Dr. Li Jin 020 8327 6020 li.jin@hpa.org.uk</p> <p>Dr. Wendy Knowles 020 8327 6020 wendy.knowles@hpa.org.uk</p>	Measles	IgG and IgM serology for recent infection	Serum or plasma (100µl), oral fluid (Oracol) CSF as part of paired sample (50µl)	10 days	Contact laboratory			
				IgG antibody status	Serum or plasma (100µl)	15 days	Contact laboratory			
				PCR and genotyping	Oral fluid (Oracol) throat swabs, NPA, urine or CSF (150µl)	PCR – 10 days Genotyping – contact lab	Contact laboratory			
				Same day testing	Oral fluid (Oracol)	24 hours	Contact medical staff prior to collection of specimen			
				Plaque reduction neutralisation assay	Serum or plasma (200µl following consultation with laboratory)	Consult laboratory				
				Virus culture	NPA, throat swabs or urine following consultation with laboratory	Consult laboratory				
			Mumps				IgG and IgM serology for recent infection)	Serum or plasma (100µl), oral fluid (Oracol)	10 days	Contact laboratory
							IgG antibody status	Serum or plasma (100µl)	15 days	Contact laboratory
							PCR	Oral fluid (Oracol), throat swabs, NPA, urine or CSF (150µl)	10 days	Contact laboratory
							Virus culture	NPA, throat swabs or urine following consultation with laboratory	Consult laboratory	
			Human Herpesviruses 6 and 7				Antibody testing	Serum or plasma (100µl for each assay)	Consult laboratory	

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UNIT	SERVICES AVAILABLE	KEY STAFF	PATHOGEN	ASSAY / INVESTIGATION	SPECIMEN REQUIRED	TARGET TURNAROUND TIME*	TEST SCHEDULE			
I D U Immunisation and Diagnosis Unit continued	<ul style="list-style-type: none"> Determination of immune status for measles, mumps and rubella Reference strain bank for measles and rubella 	See previous page for details	Parvovirus B19	Serology (IgG / IgM)	Serum or plasma (200µl)	10 days	Contact laboratory			
				PCR and genotyping	Serum or plasma (150µl), amniotic fluid (150µl), placenta, foetal tissue	10 days	Contact laboratory			
			Polyomavirus BK	Serology	Serum (150µl)	10 days	Contact laboratory			
				PCR	Serum, plasma, urine (150µl)	10 days	Contact laboratory			
			Polyomavirus JC	Serology	CSF, serum (150µl)	10 days	Contact laboratory			
				PCR	CSF, urine (150µl) tissue	10 days	Contact laboratory			
			Rubella	IgG and IgM serology for recent infection	Serum or plasma (50µl), oral fluid (Oracol)	10 days	Contact laboratory			
				IgG antibody status	Serum or plasma (100µl)	15 days	Contact laboratory			
				PCR	Oral fluid (Oracol), throat swabs, NPA, urine, CSF (150µl), amniotic fluid (150µl), placenta, foetal tissue	10 days	Contact laboratory			
				Virus culture	NPA, throat swabs or urine following consultation with laboratory	Contact laboratory				
			Varicella-Zoster Virus	Contact laboratory for further information						

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R V U RESPIRATORY VIRUS UNIT	<ul style="list-style-type: none"> Antigenic & genetic analysis of influenza isolates Diagnostic virus PCR, culture and serology Investigation of outbreaks of respiratory virus infection Genetic characterisation of respiratory viruses 	<p>Unit Head: Vacant</p> <p>Scientific Leads: Dr. Joanna Ellis 020 8327 6239 joanna.ellis@hpa.org.uk</p> <p>Dr. Alison Bermingham 020 8327 7429 alison.bermingham@hpa.org.uk</p> <p>Technical Manager: Ruth Reith 020 8327 6089 ruth.reith@hpa.org.uk</p>	Influenza	Virus detection by Multiplex PCR	Fluid from respiratory secretions, nose & throat swabs	3 Days in season	Daily in season
				Strain typing HAI	Fluid from respiratory secretions, nose & throat swabs, tissue culture fluid	14 days in season	2-3 runs /week in season
				Antibody response HAI	Paired acute & convalescent sera (2ml)	14-28 days	2-3 runs/month in season
			Avian Influenza	Confirmation of regional lab H5, H7 or H9 virus detection	Respiratory sample in lysis buffer Fluid from respiratory secretions, nose & throat swabs	24 hours	Consult laboratory
				Antibody response	Paired sera (minimum 2ml)	Consult laboratory	
			R.S.V.	Virus detection by Multiplex PCR	Fluid from respiratory secretions, nose & throat swabs	3 days in season	Daily in season
			Human Metapneumovirus	Virus detection by PCR / sequencing	Fluid from respiratory secretions, nose & throat swabs	3 days in season	Daily in season
			Respiratory Adenovirus	Virus detection by PCR / sequencing	Fluid from respiratory secretions, nose & throat swabs, tissue culture fluid	Consult laboratory	
			Parainfluenza	Virus detection by PCR / sequencing	Fluid from respiratory secretions, nose & throat swabs	Consult laboratory	
			Coronavirus	Virus detection by PCR / sequencing	Fluid from respiratory secretions, nose & throat swabs	Consult laboratory	

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UNIT	SERVICES AVAILABLE	KEY STAFF	PATHOGEN	ASSAY / INVESTIGATION	SPECIMEN REQUIRED	TARGET TURNAROUND TIME*	TEST SCHEDULE
R V U CONTINUED	See previous page for information	See previous page for information	SARS	Contact laboratory			
			Unknown Haemadsorbing Agents	Virus detection by PCR	Tissue Culture fluid	Consult laboratory	
			Rhinovirus	Virus detection by PCR	Fluid from respiratory secretions, nose & throat swabs	Consult laboratory	

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<p>S D U</p> <p>SEROLOGICAL DEVELOPMENT UNIT</p>	<ul style="list-style-type: none"> • Advice on serological assay development • Development of near-patient tests • Monoclonal antibody generation and immunochemical modifications 	<p>Unit Head:</p> <p>Dr Dhan Samuel 020 8327 6254 dhan.samuel@HPA.org.uk</p> <p>Lenesha Warrener 020 8327 6254 lenesha.warrener@HPA.org.uk</p>	<p>Viral and bacterial pathogens – contact unit for details.</p>	<p>Lateral Flow</p> <p>Immunoassays</p>	<p>Serum Plasma Oral fluid CSF</p>	<p>Contact laboratory for further details regarding testing schedules and assay availability.</p>



UNIT	SERVICES AVAILABLE	KEY STAFF	PATHOGEN	ASSAY / INVESTIGATION	SPECIMEN REQUIRED	TARGET TURNAROUND TIME *	TEST SCHEDULE	SPECIMEN REQUIRED BY:
<p style="text-align: center; font-size: 2em; font-weight: bold;">S S U</p> <p>SERO-MOLECULAR SERVICES UNIT</p>	<p>Diagnostic reference work relating to:</p> <ul style="list-style-type: none"> HIV-1 and HIV-2 Hepatitis Viruses A, B, C, D and E HSV 1 and 2 HTLV HHV-8 <p>For genetic sequencing and resistance testing, please refer to the following units' pages:</p> <p>HIV, HSV – AVU</p> <p>Hepatitis viruses - BBVU</p>	<p>Unit Head</p> <p>Steve Harbour 020 8327 6109 steve.harbour@hpa.org.uk</p> <p>Technical Manager:</p> <p>Dr. Gary Murphy 020 8327 6935 gary.murphy@HPA.org.uk</p> <p>Clinical enquiries:</p> <p>HIV, HTLV, HSV - Jenny Tosswill 020 8327 6274 jenny.tosswill@HPA.org.uk</p> <p>Hepatitis, HHV-8 – Dr. Siew-Lin Ngui 020 8327 6555 siewlin.ngui@HPA.org.uk</p>	<p style="text-align: center;">HEPATITIS B VIRUS</p>	HBsAg	Serum, Plasma (300µl)	8 Days	2-3 times weekly	PM – Previous Day
				HBeAg	Serum, Plasma (200µl)	8 Days	2-3 times weekly	PM – Previous Day
				Anti-HBc total antibody	Serum, Plasma (100µl)	8 days	2-3 times weekly	PM – Previous Day
					Saliva (OraSure)	Contact lab	Contact lab	Contact lab
				Anti-HBc IgM	Serum, Plasma (100µl)	8 Days	2-3 times weekly	PM – Previous Day
				Anti-HBs	Serum, Plasma (200µl)	8 Days	AM – Mon	Fri PM
				Anti-HBe	Serum, Plasma (200µl)	8 Days	2-3 times weekly	PM – Previous Day
			HBV DNA Viral Load	Serum, Plasma (200µl)	8 Days	PM – Mon PM - Thur	PM- Fri AM - Wed	
			<p style="text-align: center;">HEPATITIS C VIRUS</p>	Anti-HCV IgG	Serum, Plasma (100µl)	8 Days	AM – Tue, Thu	PM – Previous Day
				HCV RNA (qualitative PCR)	Serum, Plasma (200µl, separate from clot within 4hrs)	8 Days	Mon Thu	Thu PM Tue PM
				HCV Viral Load	Serum, Plasma (1ml, separate from clot within 4hrs)	8 days	Mon Tue Thu	PM – previous day
				HCV Genotyping	Serum, Plasma (200µl, separate from clot within 4hrs)	8 days	Tue Fri	Thu PM Tue PM

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UNIT	SERVICES AVAILABLE	KEY STAFF	PATHOGEN	ASSAY / INVESTIGATION	SPECIMEN REQUIRED	TARGET TURNAROUND TIME*	TEST SCHEDULE	SPECIMEN REQUIRED BY:
S S U continued	See previous page for information	See previous page for information	HEPATITIS D VIRUS	Anti-HDV IgG	Serum, Plasma (200µl)	15 days	2 nd and 4 th Mon in Month	PM – preceding Fri
				Anti-HDV IgM	Serum, Plasma (200µl)	Contact Lab	Quarterly	
			HEPATITIS A VIRUS	Serology (IgG / IgM)	Serum (300µl)	8 days	PM – Mon	PM - Fri
			HEPATITIS E VIRUS	IgG	Serum, Plasma (250µl)	8 days	PM – Fri	AM - Fri
				IgM	Serum, Plasma (250µl)	8 days	PM - Fri	AM - Fri
			HERPES SIMPLEX VIRUS	Type Specific Serology	Serum, Plasma (500µl)	15 Days	Wed	PM - Preceding day
				IgG anti-HSV	Serum, Plasma (100µl)	15 Days	Mon	PM - Fri
				IgM anti-HSV	Serum, Plasma (100µl)	By arrangement	Contact laboratory	
			HUMAN HERPESVIRUS 8 (HHV-8)	Quantitative DNA PCR	Whole blood on EDTA (1ml)	15 days	Contact laboratory	

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S S U SERO-MOLECULAR SERVICES UNIT continued	See preceding pages for information	See preceding pages for information	HIV 1 & 2	HIV antibody screen / confirmation	Serum, Plasma (500µl)	8 Days	PM - Tue, Wed, Fri	AM - Test day
				HIV proviral DNA	Unseparated EDTA blood	8 Days	PM - Tue, Thu	PM - Preceding day
				HIV RNA quantification (viral load)	EDTA Plasma (1ml, separated from clot within 4hrs)	8 Days	Thu	PM - Preceding day
				HIV p24 Ag with neutralisation	Serum, Plasma (500µl)	8 Days	AM – Mon, Fri	PM - Fri, Thu
				HIV incidence testing (HIV avidity)	Serum, plasma (600µl)	Testing only by special arrangement. Contact laboratory.		
			HTLV I & II	HTLV antibody screen / confirmation	Serum, Plasma (250µl)	8 Days	Screen – every two days Confirmation – Thurs PM	PM - Preceding day
				HTLV type-specific PCR	Unseparated EDTA blood	Contact Lab	Contact Lab	

* Turnaround times are from day of receipt to issue of reports in calendar days. The turnaround times shown are the typical turnaround times achieved by the laboratory but may be longer or shorter depending on the availability of staff and the complexity of the investigation. VRD staff are committed to the fastest possible issue of reports, consistent with accuracy, on the specimens they examine. Turnaround times may vary during seasonal outbreaks; testing may be conducted more frequently during epidemic seasons. Contact the appropriate unit for full details.

T
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 TRANSMISSIBLE
SPONGIFORM
ENCEPHALOPATHY
UNIT

- Virus discovery in encephalitis
- National Anonymous Tonsil Archive (NATA; CJD prevalence studies)

Unit Head:

Dr. Jonathan Clewley
020 8327 6245
jonathan.clewley@hpa.org.uk

NATA:

Kelly Vogliqi
020 8327 6238
kelly.vogliqi@hpa.org.uk

Encephalitis Virus**Discovery:**

Dr. Helen Ambrose
020 8327 6071
helen.ambrose@hpa.org.uk

Laboratory diagnosis of CJD is dependent on demonstration of the presence of the protease resistant form of the prion protein PrP^{Sc} or PrP^{res}

Tests include Western blot or modifications of ELISA methods. Please contact the laboratory directly for information on available tests.



<p>V Z U</p> <p>VIRAL ZOOONOSIS UNIT</p>	<p>Diagnosis of:</p> <ul style="list-style-type: none"> • Viral haemorrhagic fevers • Poxviruses • LCM • Herpes B virus 	<p>Unit Head:</p> <p>Dr Robin Gopal 020 8327 6437 robin.gopal@hpa.org.uk</p> <p>Pam Litton 020 8327 6222 pamela.litton@hpa.org.uk</p>	<p>Special arrangements are required for the collection and transport of specimens potentially harbouring these agents.</p> <p>Contact the laboratory for information on sample type and method of transportation.</p>
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<p>CONSULTANT MEDICAL</p>	<ul style="list-style-type: none"> • Advice on: Management of suspected rabies exposure 	<p>Rabies Clerk 020 8327 6204</p>
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IF THERE IS A PROBLEM, OR YOU ARE NOT SATISFIED WITH THE SERVICE YOU HAVE RECEIVED:

In the first instance contact the appropriate Unit Head. Contact details are given in the sections for each unit within VRD.

Otherwise contact:

Director: Prof. D. Brown (020 8327 6018), email david.brown@hpa.org.uk

or

Operations Manager: Mr S. Harbour (020 8327 6432) email: steve.harbour@hpa.org.uk

Our endeavour is to be responsive to the changing needs of all users of our services. We welcome comments on how we can improve the provision of these services. Please contact the department if you have any queries.

HPA-CfI recognition of Caldicott recommendations

The recommendations of the Caldicott Report (1997) have been adopted by the Health Protection Agency and by the National Health Service as a whole. These recommendations relate to the security of patient identifying data (PID) and the uses to which they are put. The HPA-CfI observes Caldicott guidance in handling PID and has appointed its own Caldicott Guardian for the Centre for Infections. He advises the Director, HPA-CfI, on confidentiality issues and is responsible for monitoring the physical security of PID in all parts of CfI. This also applies to the transfer of results of investigations to and from CfI whether by mail services, telephone or fax. The value of 'safe haven' arrangements or other means of the sender and receiver of information identifying themselves to each other before data is transferred is emphasised. (see attached CfI Policy on faxing and e-mailing reports containing patients' data).

CfI is anxious to audit the security of its PID in collaboration with its customers. Customers are invited to review our arrangements in conjunction with individual laboratory directors and/or the CfI Caldicott Guardian. Customers are also asked to draw to the CfI Caldicott Guardian's attention any instances where PID security has been threatened or has broken down. Uses that PID are put to outside clinical diagnostic services generally allow patient identifiers to have been removed before hand, and when PID is used for research purposes the proposals are considered first by the HPA Research Ethics Committee. All enquiries about the security and use of PID at CfI should be addressed to the Caldicott Guardian, Dr Fortune Ncube (fortune.ncube@hpa.org.uk)

CfI POLICY ON FAXING AND EMAILING REPORTS CONTAINING PATIENTS' DATA

The following guidelines have been prepared having taken into account the Code of Practice on reporting patients' results by fax prepared by the Department of Health and Caldicott recommendations.

1. It is HPA-CfI policy that reports containing patients' data should **not** be sent by fax or email.
2. Emails cannot be relied on to guarantee security of patients' data because they can be intercepted by a third party en route.
3. In **exceptional** circumstances it may be necessary to send a result by fax but not by email. In this case, the following conditions must be adhered to after telephone discussion with the Laboratory. Refer also to "CfI recognition of Caldicott recommendations" on the previous page.
 - The report must be sent to a "safe-haven" fax machine. This means that, if the location is in general use, consideration must be given to ensuring that unauthorised personnel are unable to read reports, accidentally or otherwise. Also, the room housing the fax machine must be kept in a secure location which is locked if it is likely to be unattended at the time the fax is sent.
 - Assurance must be sought from the intended recipient of the faxed report, preferably in writing, that the receiving fax machine is a "safe-haven".
 - Measures must be taken to minimise the risk of mis-dialling, either by double-checking numbers or having frequently used numbers available on the fax machine's memory dial facility.
 - Confirmation must always be sought from the intended recipient that the fax is expected and has been received.

COMPLIANCE WITH THE HUMAN TISSUE ACT: SUBMITTING TISSUE SAMPLES FROM DECEASED PEOPLE

The Centre for Infections is licensed by the Human Tissue Authority (HTA) (Licence number 12459) to store tissues from deceased people for scheduled purposes. Post mortem samples are submitted to CfI by coroners or pathologists for examination to help them determine the cause of death.

As part of our public health remit, we sometimes need to retain these samples for the purpose of public health monitoring which is defined as a scheduled purpose within the [Human Tissue Act 2004](#). Further analysis of these samples may help determine the cause of an outbreak due to an infectious disease or may allow identification of new strains of infectious agents at a later date.

Obtaining consent to remove, store and use human tissues for a scheduled purpose is one of the underlying principles of the Human Tissue Act. CfI receives post-mortem samples from coroners' post-mortems or from NHS establishments across the UK and therefore we are not in a position to either seek consent ourselves or have arrangements in place to confirm that the requirements of the Act have been complied with by the sender.

We would ask coroners and pathologists who send post mortem samples to CfI to provide us with details of consent, and would also ask that consent includes retention of the samples for the purpose of public health monitoring.

When tissue samples from deceased people are received at the Centre for Infections they are retained securely and confidentiality is maintained in compliance with [Caldicott principles](#) as are all samples received at this centre. It is normal practice for tissue samples from the deceased to be disposed of in the same way that all others clinical samples we receive at CfI are disposed of. However, we will adhere to any specific requirements regarding disposal or returning tissue samples if requested by the sending coroner or pathologist.