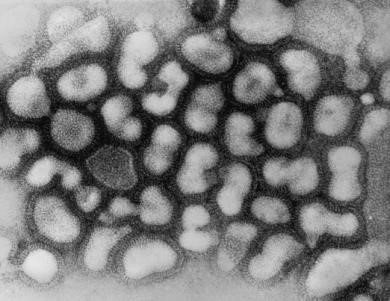
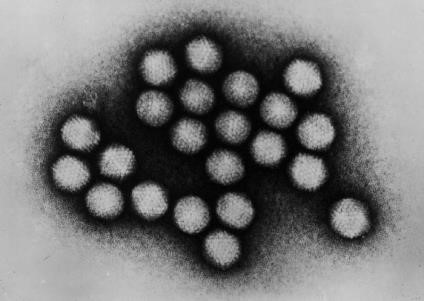
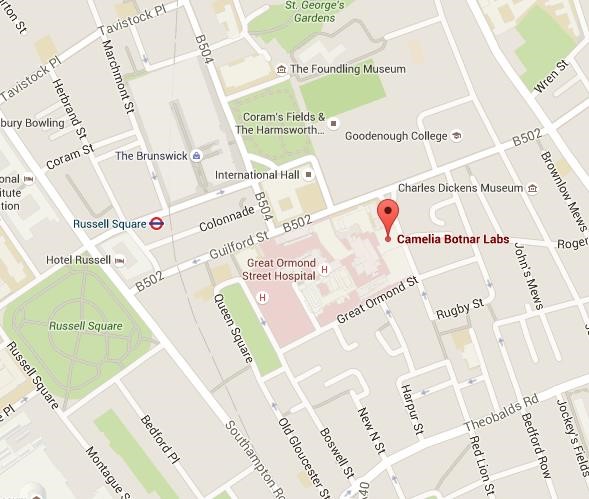
Virology Department

User Manual



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**General Information**

# Location

Department of Microbiology, Virology and Infection Control

Level 4

Camelia Botnar Laboratories

Great Ormond Street Hospital

Great Ormond Street

London

WC1N 3JH

**Hays DX Number: GOSH DX 6640203, Bloomsbury 91 WC**

**Intranet:** [**http://goshweb.pangosh.nhs.uk/clinical\_and\_research/clinical-ops/Laboratory%20Medicine/Infectioncontrol/Documents/virology\_user\_manual.pdf**](http://goshweb.pangosh.nhs.uk/clinical_and_research/clinical-ops/Laboratory%20Medicine/Infectioncontrol/Documents/virology_user_manual.pdf)

|  |  |  |
| --- | --- | --- |
| **Camelia Botnar Laboratories** | **Level** | **Room number** |
| Specimen Reception | 4 | P4.042 |
| Virology Laboratory | 4 | P4.036 and P4.040 |

# An Overview

Great Ormond Street Hospital (GOSH) Laboratory Medicine offers a range of unique clinical laboratory services. Our expert teams support the tertiary paediatric services provided at Great Ormond Street Hospital as well as acting as a specialist referral centre for hospitals, clinics and clinicians across the world.

Our teams are comprised of medics, clinical scientists, researchers, technologists and administrative support staff. Our laboratory teams play an essential role in the diagnosis and treatment of childhood illness. We also provide some services for testing of adult samples.

A key part of our service is the expert clinical advice that supports the delivery of results and diagnosis. Close links are also maintained with clinical colleagues and researchers at the UCL Institute of Child Health (ICH).

The laboratories and associated facilities are housed within a purpose-built facility on the GOSH site. Our services are fully accredited with UKAS against ISO 15189: 2012 and conform to all the legal and statutory regulatory requirements of the Human Tissue Act and MHRA. The laboratories subscribe to national and international quality assurance schemes for all assays where available.

## Key Contacts

|  |  |  |  |
| --- | --- | --- | --- |
| **Microbiology and Virology Telephone Numbers** | | **Telephone extension** | **Bleep / direct line** |
| **Laboratories**  Microbiology Laboratory |  | 5280/ 8661 | Direct line 020 7829 8661  Bleep 0670 |
| Virology Laboratory |  | 8506 | Direct line 020 7813 8506 |
| **Senior laboratory staff**  Lead Laboratory Manager | Christine Morris | 8664 | Direct line 0207 829 8664 |
| Laboratory Manager | Francis Yongblah | 5287 | Direct line 0207 813 8468 |
| Principal Clinical Scientist | Dr. Julianne Brown | 0437 | Direct line 0207405 9200 |
| Senior Clinical Scientist | Laura Atkinson | 5929 | Direct line 0207 405 5929 |
| Quality Lead | Paula Keelan | 8507 | Direct line 0207 813 8507 |
| Training Lead | Donna Andrews | 8507 | Direct line 0207 813 8507 |
| Health and Safety Lead | Hannah Brosnan | 8506 | Direct line 0207 813 8506 |
| **Clinical advice**  Microbiology and Virology Specialist Registrar | On rotation | 5282 | Direct line 0207405 9200 |
| Microbiology and Virology Consultants | Dr. James Hatcher (Clinical  Lead)  Dr. John Hartley  Dr. James Soothill  Dr. Garth Dixon  Dr Surjo K De  Prof. Judy Breuer (Virology only) | 8594    7930  5237  4583 7930 n/a | Direct line 0207 813 8594    Direct line 0207 813 7930  Direct line 0207 813 5237  Direct line 0207 813 4583  Direct line 0207 813 7930  Mobile 07880 793143 |

# Laboratory Service

|  |  |
| --- | --- |
| **Routine Working Hours** | |
| **Normal Working hours** | |
| Monday to Friday | 08:00 – 17:30 |
| **Clinical advice**  The laboratory specialist registrars and consultants are contactable for clinical advice from 09:00 – 17:30 Monday to Friday. See table above for contact numbers. At all other times a Specialist Registrar and Consultant are on call and contactable via the switchboard. 020 7405 9200 **Saturday and Bank holiday service**  08:00 – 15:00 Reduced service – Please see table below. | |

|  |
| --- |
| **Tests Available Out of Hours** |
| **Saturday and Bank holiday service** |

**Viral respiratory PCR including PCP PCR for BALs**

**Viral gastroenteritis PCR**

***Clostridium difficile* PCR**

**Varicella contact IgG testing**

**Needlestick injury testing of donor (HIV antibody, HCV antibody and Hepatitis B surface antigen) Viral neurological PCR screen on CSF (VZV, HSV, Parecho and enterovirus)**

**Out of hours Monday to Sunday**

**Needle-stick injury testing and VZV contact testing is available out of hours. Please contact the Microbiology department to arrange. BLEEP 0670**

## Laboratory Advisory Services Clinical advice

The laboratory Specialist Registrars and Consultants are contactable for clinical advice including:

* clinical indications and choice of appropriate tests
* advice on individual clinical cases
* professional judgement on the interpretation of the results of examinations

Please refer to the above table for contact details.

## Scientific and Technical Advice

Biomedical Scientists in the laboratory are available for scientific and technical advice. Please refer to the above table for contact details.

The laboratory calculates and monitors measurement uncertainty values for all assays that involve a quantitative element, applying these where deemed appropriate for result interpretation. Details of measurement uncertainty values and application can be obtained from the laboratory upon request.

## Test Requesting

**Internal** All test requests must be made through EPIC, following appropriate local protocols.

### External Test Requests

It is important that full contact details are provided on the request form, so that contact can be made if necessary and to allow the accurate and timely release of results and reports.

## Sample Labelling

Samples should be clearly labelled, using the labels generated by EPIC. Missing or inaccurate patient data will lead to delays in testing/ rejection of sample.

All samples must be taken and labelled in accordance with the Clinical Procedure Guidelines, which are available on the hospital intranet (GOS web).

Please place the label on the sample container so that it does not obscure the view of the sample.

In instances where a sample fails to meet laboratory acceptance criteria, the requesting ward or doctor will be contacted and a statement to that effect documented in the report. Please refer to the policy:Accepting unlabelled and mislabelled samples available in the GOS web document library

## Rejection of Samples

Although every effort is taken to avoid rejecting samples received in the lab, in some circumstances specimens cannot be accepted for testing. Reasons include, but are not limited to;

* Missing/ incomplete/ illegible patient identifiable information
* Incorrect or un-matching patient identifiable information
* Leaking specimens
* Incorrect sample type
* Insufficient sample
* Compromised sample integrity e.g. haemolysis of blood specimen, age of specimen, incorrect sample transport

**Dry swabs are not appropriate for virology testing except SARS-CoV-2 PCR**. Please use Sigma Virocult, green or red topped tubes which contain virus transport medium. Please contact the lab on 8506 to arrange swabs to be sent via the chute or collect from Level 4, CBL.

### Sample Transport to the Laboratory

The pneumatic chute system should be the primary mode of transport for the delivery of pathology samples. In addition, the Site Services department provides a routine specimen transport service.

# Virology/Microbiology chute number 041

Certain samples require hand delivery and **must not be placed in the chute.**

|  |  |  |
| --- | --- | --- |
| **Samples requiring hand delivery** | **Delivery location** | **Room number** |
| **Post mortem samples**  **Respiratory samples (NPA, BAL)** | **Specimen Reception**  **Specimen Reception** | **P4.042**  **P4.042** |

**If the chute is unavailable**

Site Services can be contacted on ext 8282 to arrange an urgent delivery.

Ward staff may bring specimens to the laboratories, which are located on level 4 Camelia Botnar Laboratories.

## Delivery of samples from external sources

Samples can be delivered to the Virology Department by Royal Mail, a trusted courier or Hays DX. (Please refer to General Information for the address)

Please ensure that all samples are packaged appropriately in suitable containers with enough absorbent material present to absorb any spillage that may occur in the event of a leak or damage to the packaging. Relevant request forms and paperwork should be included, outside of the sample containment as to avoid spoilage in the event of a leak.

**It is the responsibility of the sender to ensure that samples are sent in an appropriate manner to protect the health and safety of the chosen delivery service.**

The following link has links to appropriate guidance and legislation for the transport and handing of infectious material.

<http://www.dft.gov.uk/vca/dangerousgoods/useful-links.asp>

The following link provides guidance from the Royal Mail on using their services: <http://www.royalmail.com/business/services/sending/parcels-uk/safebox>

## Accessing Results

We endeavour to produce and report all of our results in a timely manner, fitting in with turnaround times stated with our listed investigations.

Results will not be communicated directly to patients.

## Internal Computer Access to Results

Results are accessible via EPIC. Significant results are phoned or emailed by the Microbiology medical team.

Please refer to the tables on the following pages for turnaround times for each test.

## External results

For external requesting laboratories who have not signed up to the results portal, result reports are printed and posted to the address of the requesting laboratory or GP supplied on the request form.

If results are required urgently, copies of the report can be emailed using the NHS encrypted email system. Results can be released over the phone to Doctors, Nurses and other healthcare professionals in line with current Caldicott legislation.

For interpretation of results, clinical guidance can be given from the appropriate sources (see above for a list of contacts).

## Results portal - Outreach

GOSH offers an online web-based results portal, allowing external health care providers to view the results and reports for their patients. This is a secure service; access is granted by registration and creation of an account.

Once an account is set up, paper reporting will be turned off.

Full details on the service and how to **set up an account** can be found at the following website:

<https://www.gosh.nhs.uk/wards-and-departments/departments/laboratory-medicine/>

### Biological Reference Intervals

|  |  |
| --- | --- |
| **Investigation** | **Reference interval** |
| Rubella IgG | >10 IU/ml is considered protective |
| Hepatitis B surface antibodies | >100 IU/ml is considered protective  10-100 IU/ml is considered partially protective, a booster vaccination is recommended |

**Requesting additional investigations**

If additional investigations are required after the specimen has been dispatched or processed by the laboratory, please telephone as soon as possible. There is a practical time limit for requesting additional investigations, as the laboratory stores specimens for variable time periods before disposal. Please note that some specimens deteriorate in storage rendering them unsuitable for further investigation. In addition to this, sample volume may be insufficient to carry out additional testing.

|  |  |
| --- | --- |
| **Sample retention times** |  |
| Molecular | 1 Year |
| Serology | 10 Years |

### Limitations and Factors Effecting Testing

The accuracy of results can be impacted by a number of factors, many of which can be controlled or avoided.

* Extended delay between collection and receipt into the laboratory – extended delays in receipt of specimens can result in a deterioration of the specimen quality and therefore the quality of the result. Correct storage of samples is key to maintaining integrity. Please ensure that samples are delivered to the laboratory in a timely manner after collection
* Haemolysed, heat inactivated, lipaemic or bacterial/ fungal contaminated samples may produce inaccurate results
* Small volume samples – small volume samples may need to be diluted, therefore affecting the accuracy of the result and a repeat, larger volume may need to be sent for confirmation
* In early acute phases of infection, markers of viral infection may not be detectable and therefore a negative result does not exclude the possibility of an active infection.
* Specimens from patients receiving therapeutic doses of **Vitamin H (biotin)** may interfere with the assay used for **HCV antibody** detection; such results should be interpreted with care
* Specimens from patients receiving therapeutic doses of **Vitamin H (biotin)** may give false negative results with the assay used for **HIV antibody**, during acute HIV infection; such results should be interpreted with care.
* Specimens from patients receiving preparations of **mouse monoclonal antibodies** for therapy or diagnosis may interfere with the assays used for **HBsAg** and **CMV IgG** detection; such results should be interpreted with care.

**Consent**

Verbal agreement from parents for HIV testing is required and must be detailed in the patient notes

### Patient preparation

Please follow GOSH guidelines/local trust policy on appropriate patient preparation when taking samples

**Further information on sample types and collection can be found at the following address:**

[**http://www.gosh.nhs.uk/health-professionals/clinical-guidelines/specimen-collection-microbiology-and-virology**](http://www.gosh.nhs.uk/health-professionals/clinical-guidelines/specimen-collection-microbiology-and-virology)

### Quality Assurance and Accreditation

The GOSH Virology department operates a robust quality management system, following trust policy as outlined below:

The GOSH Virology department currently maintains accreditation from the following bodies: • UKAS (Schedule of Accreditation is available [here)](https://www.ukas.com/wp-content/uploads/schedule_uploads/00007/8675%20Medical%20Single.pdf)

• IBMS

The laboratory currently subscribes to external quality assurance panels provided by UK National External Quality Assessment Scheme (UKNEQAS), Quality Control for Molecular Diagnostics (QCMD), Instand and Labquality. Certification to confirm participation is available upon request.

The laboratory also carries out internal quality assurance in the form of anonymous resubmission of previously tested samples.

#### Laboratory Complaints Procedure

The medical and senior management staff in the Department of Paediatric Laboratory Medicine work very closely with users both within the Hospital Trust and with external referring clinicians. In order to provide the best service to its users, the department encourages both positive and negative feedback. The laboratory manager can be contacted to discuss concerns.

The Trust also has a general complaints policy, which can be located on the GOS web document library

#### Laboratory Policy on Protection of Personal Information

The laboratory adheres to the Trust’s Policy on Information Governance to ensure compliance with the key principles of Information Governance. The Trust wishes to ensure all patients and service users to have confidence that their records will be maintained securely and will not be disclosed or shared inappropriately.

Details of the Trust’s Information Governance Policy can be located on the GOSH web document library.

#### In-house Laboratory Services

**Please refer to page 12 for limitations applicable to CMV IgG, HCV antibody, HBsAg and HIV antibody testing in some patients**.

The table below outlines the testing provided by the GOSH Virology department that is carried out in-house; further or additional testing that is tested by an external laboratory are noted.

**Unless otherwise stated, minimum volumes are as follows:**

**EDTA Whole blood 3ml, Serum 3ml, CSF 300ul, Urine 3ml**

In cases where only a small sample volume can be acquired, please contact the lab to discuss.

Serological screening tests for a range of antibodies will require larger sample volumes. Below are the available screening panels and required sample volumes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Screening Panel** | **Antibodies/ antigen detected** | |  | **Volume required** |
| **Leukaemia Screen** | HSV IgG  Measles IgG | VZV IgG  EBV VCA IgG | CMV IgG | 5ml Brown top serum tube (minimum) |
| **Renal Transplant Screen** | VZV IgG  CMV IgG  Measles IgG | HCV Antibodies  HIV1 and 2 Antibodies  EBV VCA IgG | HBsAg | 5ml Brown top serum tube (minimum) |
| **Heart/lung**  **Transplant**  **Assessment** | HSV IgG  VZV IgG  CMV IgG  Measles IgG | Toxoplasma total Ab  HCV Antibodies  HIV 1 and 2 Antibodies  Rubella IgG | HBsAg  EBV VCA IgG | 5ml Brown top serum tube (minimum) |
| **Hepatitis Screen** | EBV VCA IgG  EBV VCA IgM  CMV IgG | Hep A total Ab  HBsAg  HCV Ab/Ag | CMV IgM  Anti-HBc total Ab | 5ml Brown top serum tube (minimum) |
| **Haemophiliac Screen** | HIV 1 and 2 Ab Anti-HBsAb | Hep A total Ab  HCV Ab |  | 5ml Brown top serum tube (minimum) |
| **Gene therapy serology** | HTLV 1 and 2 Ab  HIV 1 and 2 Ab  HBsAg | Anti-HBc total Ab  HCV Ab/Ag  Syphilis serology |  | 5ml Brown top serum tube (minimum) |
| **Sibling donor BMT** | HBsAg  HIV 1 and 2 Ab  CMV IgG | Anti-HBc total Ab  Syphilis serology  EBV VCA IgG | HCV Ab/Ag  Hepatitis E serology/ PCR  HTLV 1 and 2 Ab | 6ml Brown top serum tube (minimum)  5ml EDTA red top (minimum) |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Virus** | Test method | Sample types | Turn around time | Special instructions |
| **Adeno Virus** | Real time PCR | EDTA whole Blood  Urine  NPA  CSF  Faeces  Eye swab | 48 Hours |  |
| **Borrelia - Lyme** | Serology – IgM and IgG | Brown top serum tube | 48 Hours |  |
| **Clostridium difficile *(tested routinely as part of the gastroenteritis panel)*** | Real time PCR | Stool sample (Approx. walnut size) | 48 Hours |  |
| **Cytomegalovirus (CMV)** | Real time PCR          Serology – IgM and IgG    Referred – Resistance testing | EDTA whole blood  Urine  NPA  CSF    Brown top serum tube    EDTA whole blood | 48 Hours          48 Hours    14 Days |  |
| **Enterovirus** | Real time PCR            Referred - IgM Serology    Referred – Typing | EDTA Whole blood  NPA  CSF  Faeces  Throat swab    Serum    As appropriate | 48 Hours            14 Days    Variable |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Epstein Barr Virus (EBV)** | Real time PCR          Serology – IgM and IgG      Referred serology  (EBNA) | EDTA whole Blood  CSF  BAL      Brown top serum tube      Brown top serum tube | 48 hours          48 hours      14 days |  |
| **Faecal Pancreatic Elastase** | Serology | Formed stool sample (Approx.  walnut size) | 7 Days | Liquid stools are not appropriate for testing. Samples can be stored for 3 days at 4°C. Samples received from external sources should arrive on ice or dry ice to maintain sample integrity |
| **Gastroenteritis Virus panel –**  **This panel tests for Astro**  **Virus, Noro virus G1 and G2,**  **Rota virus, Sapo virus and Adeno virus. *Clostridium difficile is also routinely tested as part of this panel.*** | Real time PCR | Stool sample (Approx. walnut size) | 48 hours |  |
| **Hepatitis A Virus (HAV)** | Serology – IgM and  Total antibody    Referred - PCR and reference | Brown top serum tube      Brown top serum tube | 48 hours      7 Days |  |
| **Hepatitis B Virus (HBV)** | Real time PCR      Serology – HBsAb,  HBsAg, HBcT, HBeAg/  Ab    Referred – HBcore IgM, | 5ml EDTA whole blood      Brown top serum tube      Brown top serum tube | 48 hours      48 hours      14 Days | Ensure sample reaches laboratory within 24 hours after collection |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | HBsAg confirmation |  |  |  |
| **Hepatitis C Virus (HCV)** | Real time PCR      Serology – antibodies      Referred - Confirmation testing  Referred - genotyping | 5ml EDTA whole blood      Brown top serum tube      5ml EDTA whole blood    5ml EDTA whole blood | 48 hours      48 hours      14 Days    14 Days | Ensure sample reaches laboratory within 24 hours after collection |
| **Herpes Simplex Virus (HSV)** | Real time PCR            Serology - IgG | EDTA whole blood  Mouth Swab  CSF  Lesion swabs  Eye swabs    Brown top serum tube | 48 Hours            7 Days |  |
| **HTLV 1 and 2** | Referred - Real time  PCR      Serology – HTLV 1 and 2 antibodies | EDTA whole blood  Brown top serum tube      Brown top serum tube | 7 Days        7 Days |  |
| **Human Herpes Virus 6 (HHV6)** | Real time PCR      Referred - Serology | EDTA whole blood  CSF    Brown top serum tube | 48 hours      30 Days |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Human Immunodeficiency**  **Virus (HIV)** | Real time PCR      Serology - antibodies      Referred – Confirmation    Referred – Proviral PCR    Referred – Resistance  Genotyping | 5ml EDTA whole blood      Brown top serum tube      5ml EDTA whole blood      5ml EDTA whole blood    5ml EDTA whole blood | 48 hours      48 hours      14 Days      3 Days    14 Days | Ensure sample reaches laboratory within 24 hours after collection |
| **Measles** | Referred - PCR          Serology – IgG    Referred - Serology | Oracol Oral Fluid  Throat Swab  Urine  NPA    Brown top serum tube    Brown top serum tube | 7 Days          48 hours    14 Days |  |
| **Mycoplasma** | Referred - PCR          Serology – IgG and IgM | EDTA Whole blood  CSF  NPA  BAL    Brown top serum tube | 72 Hours          7 days |  |
| **Parechovirus** | Real time PCR | EDTA Whole blood  NPA  CSF  Faeces  Throat swab | 48 hours |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parvovirus B19** | Real time PCR      Serology – IgG and IgM | EDTA whole blood  CSF    Brown top serum tube | 48 hours      14 Days |  |
| ***Pneumocystis jirocecii* pneumonia (PCP)** | Real time PCR | Bronchoalveolar lavage (BAL) | 48 hours |  |
| **Polyoma BK and JC Virus** | Real time PCR        Referred - Serology | EDTA whole blood  Urine  CSF    Brown top serum tube  CSF | 48 hours        21 Days |  |
| **Respiratory Virus Panel: Flu A, B and H1N1, Paraflu 1, 2 and 3, RSV A and B, Human metapneumo Virus, Adeno virus, Rhinovirus and SARSCoV-2**    **Extended Respiratory Panel:**  **Corona, Rhino and Entero** | Real time PCR              Referred - Extended PCR panel | Nasopharyngeal Aspirate (NPA)  Bronchoalveolar lavage (BAL)  Nose and throat swab (NT)          Nasopharyngeal Aspirate (NPA)  Bronchoalveolar lavage (BAL) | 24 hours              4 days | For samples that arrive before 11am Monday to Sunday, every effort will be made to have results released by 17:30 that day.          Coronavirus types included in assay are Coronavirus  229E, Coronavirus HKU1, Coronavirus NL63 and Coronavirus OC43 |
| **Rubella** | Referred - PCR              Serology – IgG    Referred – IgM Serology | Oracol Oral Fluid  NPA  Urine  Throat swab  CSF  Amniotic Fluid    Brown top serum tube    Brown top serum tube  Plasma | 14 Days              48 Hours    7 Days |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Oracol Oral Fluid |  |  |
| **SARS-CoV-2** | Real Time PCR | Nasopharyngeal Aspirate (NPA)  Bronchoalveolar lavage (BAL)  Nose and throat swab (NT | 24 hours | For samples that arrive before 9.30am and 13:30pm Monday to Friday, every effort will be made to have results released by 19:00 hours that day. Saturday and Sunday, samples that arrived before 12:30pm, every effort will be made to have results released by 17:00 hours. |
| **Syphilis serology (VDRL)** | Serology | Brown top serum tube | 48 hours |  |
| **TB Quantiferon** | Serology | Please collect or phone the lab for the correct vacutainers to be sent. | 7 days | Vacutainers must be filled to the appropriate level. Over or under filling will result in inaccurate results leading to delays in testing. Samples must be received into the lab within 16 hours of being taken and taken in the correct order. A guidance sheet is available upon request. |
| **Toxoplasma** | Serology – IgG    Referred - PCR        Referred - IgM | Brown top serum tube      EDTA Whole Blood  CSF    Brown top serum tube | 48 hours      3 Days      14 days |  |
| **Varicella Zoster Virus (VZV)** | Real time PCR        Serology - IgG | EDTA whole blood  NPA  CSF  Vesicle/Eye Swab  Brown top serum tube | 48 hours        48 hours | Additional reference services are available for VZV, please see below.      In contact cases, please phone discuss with the lab for urgent testing. |

The following PCR panels can be requested by PIMS:

|  |  |  |
| --- | --- | --- |
| **Panel** | **Investigations included** | **Sample type and volume required** |
| **CSF – Viral PCR** | HSV 1 and 2, VZV, Entero and Parecho | 0.5 ml CSF |
| **Gene therapy blood borne virus PCR** | HCV and HBV | 10ml EDTA whole blood |
| **Gene therapy blood PCR** | Adenovirus, CMV, EBV, Toxoplasma | 5ml EDTA whole blood |

##### Referred Testing

A number of tests are sent away to external laboratories. Below are common requests. Additional tests not listed can be discussed with the laboratory or a clinical consultant

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Virus** | **Tests** | **Sample Requirements** | **Turnaround Time** | **Additional Information** |
| **Alpha/Hantavirus** | Serology | 5ml EDTA Whole Blood  Brown top serum Tube | 31 Days | PHE Porton Down |
| **Arbo/flavivirus** | Serology | 5ml EDTA Whole Blood  Brown top serum Tube | 14 Days | PHE Porton Down |
| **Chlamydia pneumoniae** | PCR | Eye swab  Throat swab  Urine | 7 Days | Micropathology Ltd |
| **Hepatitis D Virus** | PCR  Serology | EDTA Whole Blood  Brown top serum Tube | 14 Days | PHE Colindale |
| **Hepatitis E Virus** | Referred PCR and serology | EDTA Whole Blood | 14 Days | PHE Colindale |
| **HHV7** | PCR | EDTA Whole Blood | 3 Days | Micropathology Ltd |
| **Mumps** | PCR and Serology | Oracol Oral fluid (contact lab)  Throat swab  NPA  Urine  CSF | 14 Days | PHE Colindale |
| **Rickettsia/Coxiella/Q Fever** | Serology | 5ml EDTA Whole Blood  Brown top serum Tube | 14 Days | Porton Down |

##### VZV Reference Testing

The Varicella Zoster Reference Laboratory (VZRL) is based at Great Ormond Street Hospital and is headed by Professor Judith Breuer (see below for contact details for samples and advice). Please use our request forms for requesting of tests, found on the GOSH website.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **VZV Reference Testing** | | |  |  |
| **Test** | | **Sample Type** | **Turnaround time** | **Additional Comments** |
| **VZV quantitative IgG** | Serum | | 7 Days |  |
| **VZV quantitative PCR**  EDTA Whole blood  CSF | | | 14 Days |  |
| **VZV Viral Whole**  Original specimen or purified  **Genome Sequencing** DNA | | | 2-4 weeks | Viral Whole Genome Sequencing (WGS) is performed at the  Institute of Child Health Pathogen Genomics Unit (PGU). The Microbiology department at GOSH can facilitate nucleic acid extraction and reporting of results. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Contact Details** | **VZV Reference Lab**  **Virology Laboratory**  Level 4, Camelia Botnar Laboratories  Great Ormond Street Hospital for Children  Great Ormond Street  London WC1N 3JH  **Hays Dx:** GOSH DX 6640203, Bloomsbury 91 WC | **General Enquiries:**  Dr. Julianne Brown  Tel: 020 7405 9200 Ext 5929  Email: julianne.brown@nhs.net | **Clinical Enquiries:**  Professor Judy Breuer  Tel: 07880 793 143  Email: judith.breuer@gosh.nhs.uk |

|  |
| --- |
| **References and links** |
| **Forms and documents are available on the hospital intranet (GOSweb) and Qpulse, the Trust’s Quality Management System Clinical guidelines are also available on the hospital website http://www.gosh.nhs.uk/health-professionals/clinical-guidelines/** |
| **Forms** |
| **VZV reference request forms** Available on GOSH web |
| **Outreach user registration and** <https://goshlink.gosh.nhs.uk/outreach/common/epic_login.asp>  **guidance** |
| **Documents** |
| **Patient Identification Policy** http://goshweb.pangosh.nhs.uk/document\_library/Corporate Library/Patient Identification Policy.docx |
| **Accepting Unlabelled and** http://goshweb/document\_library/Corporate%20Library/PolicyOnAcceptingUnlabelledSamples.DOC  **Mislabelled Samples Policy** |
| **Trust Complaints Policy** http://goshweb.pangosh.nhs.uk/document\_library/corporate library/complaints policy.docx |
| **Information Governance Policy** http://goshweb/document\_library/Corporate Library/InformationGovernancePolicy.doc |
| **Image references** |
| **Adenovirus** <http://www.microbiologybook.org/virol/adenocdc.jpg> |
| **Herpes virus** <http://www.microbiologybook.org/virol/hsv1.jpg> |
| **Noro virus** <http://www.daviddarling.info/images/norovirus.jpg> |
| **Influenza A** <http://www.microbiologybook.org/mhunt/fluA.jpg> |
| **Parainfluenza** <http://www.microbiologybook.org/virol/paraflu.jpg> |