**GW4 Human Tissue Community Biobanks**

**Can we help you with your research?**

The following biobanks are overseen by members of the GW4 Human Tissue Community in Exeter, Bristol, and Cardiff. If you wish to investigate use of any of the samples held in these biobanks, please contact the biobank directly or one of the three GW4 Human Tissue Community leads:

Dr Susan Ring, Bristol ([S.M.Ring@bristol.ac.uk](mailto:S.M.Ring@bristol.ac.uk))

Prof Phil Stephens, Cardiff ([StephensP@cardiff.ac.uk](mailto:StephensP@cardiff.ac.uk))

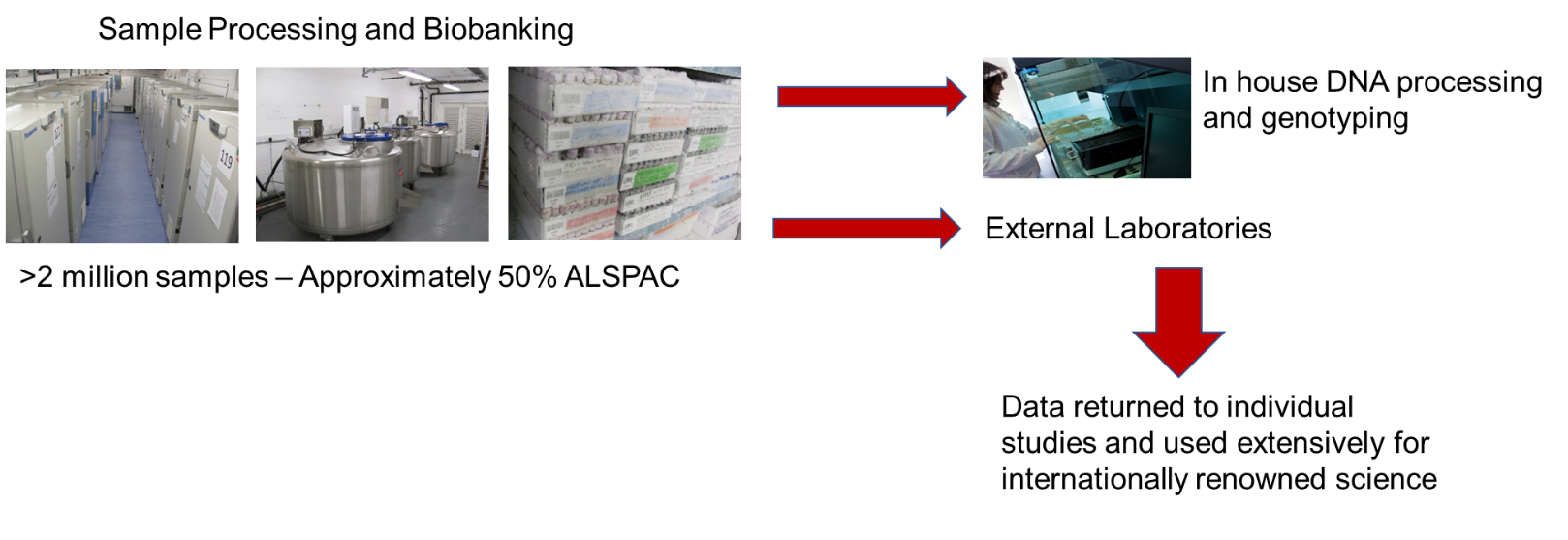
Dr Jacqueline Whatmore, Exeter ([J.L.Whatmore@exeter.ac.uk](mailto:J.L.Whatmore@exeter.ac.uk))

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**Bristol**

**Bristol Bioresource Laboratories (BBL) Biobanking and Sample Analysis for Population Studies**

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Sample users cover costs of sample provision. Cohorts cover costs of collection and storage.

<https://www.bristol.ac.uk/population-health-sciences/research/groups/bblabs/>

**BBL collections with Research Tissue Bank Ethical Approval**

**ALSPAC: Avon Longitudinal Study of Parents and Children**

<https://www.bristol.ac.uk/alspac>

ALSPAC), is a world-leading birth cohort study. The study recruited more than 14,000 pregnant women between April 1991 and December 1992 and holds multiple biological samples at multiple time points from the mothers, fathers, the children arising from the pregnancy and now also their grandchildren have been followed up in detail ever since.

Apr 1991 – Dec 1992 recruited ~14000 pregnancies in Avon area

* Biological samples collected at multiple timepoints from all generations
  + 23 sweeps for G1 (original children)
  + 7 sweeps for G0 mothers
  + 4 sweeps for G0 fathers
  + currently @30 and G2 (children of the original children) sweeps
* 1.2 million biological samples, 30K DNA, 15K LCLs
* ALSPAC RTB ~400K HTA relevant samples on licence
  + excludes data access
* ALSPAC Executive review requests for ALSPAC samples

Contact: Email: [alspac-exec@bristol.ac.uk](mailto:alspac-exec@bristol.ac.uk)

* Samples include urine, nasal-lavage, sputum, placenta, breast milk, nails, serum, PBMCs, saliva, RBCs, blood, hair, stool, WBCs, LCLs, cord, teeth, blood spot, skin biopsy, meconium

**CLS: Centre for Longitudinal Studies, UCL**

* **National child development study (NCDS)**

<https://cls.ucl.ac.uk/cls-studies/1958-national-child-development-study/>

* + 17K participants born in a single week in 1958 in GB
  + 2 biological sweeps (age 44 and 62), 150K samples
* **BCS70** <https://cls.ucl.ac.uk/cls-studies/1970-british-cohort-study/>
  + 17K participants born in a single week in 1970 in GB
  + 1 biological sweep (age 46), 32.5K samples
* **Next Steps** <https://cls.ucl.ac.uk/cls-studies/next-steps/>
  + 16K participants born 1989-90 in England
  + 1 biological sweep, DNA only, (age 32)
* **Millenium Cohort Study** <https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/>
  + 19K participants born 2000-02 in UK
  + 1 biological sweep, DNA only, age 14: samples also obtained from parents
* CLS RTB ~ 22K HTA relevant samples on licence
* CLS Access committee review request for samples

**South West Dementia Brain Bank (SWDBB):** <https://www.bristol.ac.uk/translational-health-sciences/research/neurosciences/research/south-west-dementia-brain-bank/>

**Contact** Dr Candida Tasman (SWDBB Technician and HTA PD), 0117 4147821; [swdbb@bristol.ac.uk](mailto:swdbb@bristol.ac.uk)

**What we hold in our tissue bank:**

* Brain tissue from over 1,300 donors – frozen, formalin fixed, FFPE blocks and sections, homogenates, DNA and RNA – and CSF
* Clinical information – including cognitive assessment data for many cases
* Neuropath data – each case is fully diagnosed, and many have additional information provided by researchers
* Biochemical and genetic data e.g. APOE genotypes and SNPs
* Pre-mortem blood samples and post-mortem brain fibroblast cell lines for some cases

**SWDBB is part of the UK Brain Bank Network (UKBBN)**

* 10 brain banks in the UK, some of which specialise in certain types of brain tissue – e.g. from donors who died suddenly or who has been diagnosed with a specific neurological condition such as Parkinson’s disease or multiple sclerosis
* UKBBN was set up with the aim of standardising protocols, storage and the application process for tissue samples
* Information about all donations is uploaded to the UKBBN database which can be accessed by researchers. Requests can be made to any or all banks for tissue or data.

**UKBBN and associated charities use a cost recovery scheme for the provision of tissue**

* The aim is to create a sustainable future for brain banking
* The tariff is standardised and covers partial cost of retrieval, assessment and archiving of the brain tissue
* The charges for academic institutions cover approximately half of these costs, those for commercial institutions cover three quarters

**Bristol (Immunity & Infection) Biobank**

**Remit:** The Biobank holds a range of samples enabling research to increase understanding of the immune system, the immune response to infection & vaccination, and the nature of the interactions occurring between host & pathogen

**Deposits:** End of study – left-over samples from REC-approved studies (with appropriate study consent for storage & future use)

**Ongoing:** Collection of samples over time (using Biobank documents) from specific donor groups (patients & healthy volunteers); left over from medical procedures and/or collected specifically for research

**Use:** Batch of existing samples or smaller sets of samples over time (sometimes from “virtual” deposit)

**Required:** funding, peer review, protocol/experimental plan, transfer agreement (internal or external)

**Sample types:**

* Respiratory nose swabs, throat swabs, saliva (neat / in STGG / in RNAlater), also DNA/RNA extracts of the above (left over from PCR work)
* Blood & derivatives – whole blood, blood clots, serum, plasma, PBMCs
* Biopsies/surgery leftovers – tonsils/adenoids, ocular tissue, bone, tumours, etc
* Urine, rectal swabs, pus, etc

**Data:** Basics on all deposits – age, sex/gender, consent date, sample date, sample type. Additional details as relevant to cohort – vaccination history, medications, disease status/details, treatment details, etc

Purely commercial research (not expected to result in peer-reviewed publication) is not supported, except where small sample numbers are to be used for assay development/validation where end result is generalisable and in the public interest

Contact: Biobank Manager [jennifer.oliver@bristol.ac.uk](mailto:jennifer.oliver@bristol.ac.uk); [Bristol-biobank@bristol.ac.uk](mailto:Bristol-biobank@bristol.ac.uk)

**The Tooth Tissue Bank (TTB)**

The TTB bank can supply researchers, including those overseas and from commercial enterprises, with fully anonymised tooth tissue. Some teeth are whole, the majority sectioned into crowns and roots. A very limited number of children's teeth, and no donor data, are held.

**Remit:** Projects can either be basic or translational and include studies of:

* Tooth erosion, abrasion and dentine hypersensitivity
* Interactions between tooth material and bacteria
* The chemical and physical behaviour of tooth tissue when in their natural state and following exposure to various agents
* The effects of dental care products developed to reduce tooth stain
* Interactions between natural teeth and materials used in restoration/replacement
* Archaeological research

**Application:**

* The TTB bank can supply researchers including those overseas and from commercial enterprises
* Only applications that fall within the remit of the tooth tissue bank (TTB) are considered
* Applications must be favourably peer reviewed (evidence of prior review provided by applicant, or by the TTB panel)
* The bank’s ethics extends to bank based projects that it approves

**Current Holdings From the living – fully anonymised (no data held)**

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**Deciduous Tooth Tissue (children’s)**

**Contact:** Tooth Tissue Bank Manager [nikki.hellin@bristol.ac.uk](mailto:nikki.hellin@bristol.ac.uk)

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**Cardiff**

**Cardiff University Biobank:** [www.cardiff.ac.uk/biobank](http://www.cardiff.ac.uk/biobank)

Cardiff University Biobank (CUB) is a purpose-built facility situated on the University Hospital of Wales site. CUB was officially opened in 2018 and currently comprises five members of staff. The facility has resources to collect, process and store biological samples and associated data from both human and non-human sources. Storage facilities at CUB include HTA-compliant room temperature, fridge, standard freezer, ultra-low temperature freezer and cryogenic (vapour phase liquid nitrogen) options. CUB offers multiple quality assured services which include consent and sample collection, sample access (stored and fresh), prospective new collections, sample hosting, sample processing and project support. Sample types offered varies per collection as this is guided by researcher and clinician requirements as well as relevance to the disease area.

**Contact:** Kate Shires (Biobank Manager). Email: [cubiobank@cardiff.ac.uk](mailto:cubiobank@cardiff.ac.uk); Tel: +44 (0)29 2251 0775

**Wales Kidney Research Tissue Bank** [www.kidneyresearchunit.wales](http://www.kidneyresearchunit.wales)

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Donald Fraser (Director) Chantal Colmont (Manager)

Chantal and Donald work in the Wales Kidney Research Unit, a Biomedical Research Unit funded by Health and Care Research Wales, where Chantal is unit manager and Donald is unit director. They set up Wales Kidney Research Tissue Bank in 2011, which is a tissue bank dedicated to supporting studies of mechanisms of disease in people affected by kidney disease. The tissue bank provides directed collection and has supported a wide range of local, national and international research. It collects samples including blood, urine, dialysis fluid, and kidney and vascular tissues. It has released >7,000 samples to research projects in the past 5 years.

Contact: [fraserdj@cardiff.ac.uk](mailto:fraserdj@cardiff.ac.uk); [ColmontCS@cardiff.ac.uk](mailto:ColmontCS@cardiff.ac.uk)

A logo for a scientific research

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Webpage: [https://brain.wales/biobanking/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbrain.wales%2Fbiobanking%2F&data=05%7C02%7CStephensP%40cardiff.ac.uk%7C3eab43636e864176e06908dc69ea3362%7Cbdb74b3095684856bdbf06759778fcbc%7C1%7C0%7C638501701801771312%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=%2BuPEJU%2FU2Dm2HzIZC2%2FoFxnaznHlYGiTslGG5VOlotQ%3D&reserved=0)

Prof. Neil Robertson (Co-Director) Dr Emma Tallantyre (Co-Director) Dr Sam Loveless (Manager)

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**Purpose:** The Welsh Neuroscience Research Tissue Bank (WNRTB) serves as a repository of samples donated by patients from Wales and England for use in studies advancing the understanding of, and care for, neurological diseases. Samples are obtained from patients undergoing treatment or investigations for neurological disorders at hospitals within Wales, as well as healthy volunteers. Currently, the bank holds samples from patients diagnosed with Multiple Sclerosis, Epilepsy, Motor Neuron Disease, Idiopathic Intercranial Hypertension, Glioblastoma, Migraine, and a few other diagnoses.

**Sample types**: include serum, plasma, whole blood, dry blood spots, DNA, PBMCs, brain / tumour tissue. Ethical approval exists to collect further samples including, but not limited to, nerve biopsy material, hair, nails, urine.

The WNRTB provides the infrastructure and support for specific research projects as well as biobanking arms of major clinical trials into MS and other neurological disorders. Currently there are nearly 1000 participants consented directly to the WNRTB with >3000 further participants contributing samples or data via these other routes.

The current bank holds > 110,000 sample aliquots supporting a huge number of national and international research projects and collaborations. In total more than 8000 samples have been released to research in the last few years.

Contact: Email: [wnrtb@cardiff.ac.uk](mailto:wnrtb@cardiff.ac.uk); Tel: +44 (0)2921 843454

**South Wales Initiative for Fetal Tissue Research Tissue Bank (SWIFT RTB)**

Anne Rosser PI; Anne-Marie McGorrian (SWIFT manager); Sophie Rowlands (Deputy manager)

**Purpose:** The SWIFT-RTB is based in the School of Biosciences and was set up in 2013 to collect human fetal tissue for research use. Potential participants are identified at UHW, Cardiff, through the Pregnancy Advisory Services Clinic. We consent participants at UHW, collect tissue and transport it to the lab for dissection. Dissected tissue is distributed to approved projects within 7 days and any residual unused tissue is disposed of within this time window. There is no long-term storage of tissue in SWIFT-RTB. Researchers can apply to the RTB for use of tissue.

**Contact**: [SWIFT-RTB@cardiff.ac.uk](mailto:SWIFT-RTB@cardiff.ac.uk); +44 (0)2920 875188

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**Wales Cancer Biobank (WCB)**

Weblink: [www.walescancerbank.co.uk](http://www.walescancerbank.co.uk)

Dr Lisa Spary

*Applications Manager*

Prof Richard Clarkson Prof Richard Adams

*PI and Scientific Director*  *Clinical Director*

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**Purpose:** The WCB approaches patients in Wales with a known or suspected cancer diagnosis to gain consent to access excess tissue samples and fluid samples to make available for cancer related research. Over 17,000 patients have donated samples and data to the biobank since it started in 2005 and over 170 research projects across 10 countries have benefited from those donations. WCB is licensed by the Human Tissue Authority (licence 12107) to store human samples for research and has approval from Wales REC3 as a research tissue bank, with the ability to issue samples to researchers. Researchers worldwide, working in academia or the commercial sector can apply for samples and/or data from WCB.

**Sample types:** WCB routinely collects samples from breast, colorectal, prostate and lung cancer patients and there is an archive of tissue and blood samples from 30 solid tumour types. Tissue (tumour and adjacent normal tissue) is stored frozen at -80 and as FFPE blocks. Blood, serum, plasma and other fluids are stored frozen at -80. Bespoke sample collections, including fresh tissue, can be organised on request. Digital images of H&E sections are also available.

* WCB has an application process that includes an external review of projects requesting access to materials.
* A sample search is available on the website [www.walescancerbank.com/applications](https://walescancerbank.com/applications/) or contact [wcbresearchapplications@cf.ac.uk](mailto:wcbresearchapplications@cf.ac.uk).
* The Wales Cancer Biobank also hosts samples for clinical trial collections and has adopted several large trial sample cohorts at the end of the trial that are also available for use.
* WCB has a YouTube channel, [www.youtube.com/@walescancerbiobank](http://www.youtube.com/@walescancerbiobank), hosting short animations introducing biobank, the application process, talks and staff vlogs.

**Contact:** [walescancerbank@cf.ac.uk](mailto:walescancerbank@cf.ac.uk); [wcbresearchapplications@cf.ac.uk](mailto:wcbresearchapplications@cf.ac.uk); Tel: 02921 843243

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**Exeter**

**Royal Devon & Exeter Tissue Bank (RDETB):**  <https://exetercrfnihr.org/about/rde-tissue-bank/>

**Purpose:** RDETB was set up to collect and store “spare” tissue or biological samples that could be collected at the time of routine clinical care, at the Royal Devon & Exeter Hospital or other collaborating NHS sites (e.g. Plymouth, Cornwall, North Devon, Taunton, Yeovil, and Torbay).

Samples are collected with the consent of the treating clinician and informed consent of the donor. In some cases, informed consent will be taken after the clinical procedure has been undertaken but always before the sample is removed from the clinical care environment to the tissue bank. For example, samples removed during emergency procedures, that are stored in the pathology/biochemistry department awaiting incineration, may be moved to the tissue bank following informed consent.

Participants willing to donate samples are given a unique ID number and all their samples and associated data are anonymised and stored under this unique number. No participant personal identifiable information is provided to researchers.

**Samples available:** The RDETB manages samples of prostate, kidney, gut and bladder originally collected by the Exeter Tissue Bank, and study-specific collections from ongoing prospective studies.

**New collections:** The RDETB team is happy to facilitate new prospective collections to answer study-specific research questions, which it would be anticipated would be involved with molecular and cellular factors involved in the initiation and progression of common diseases. This would include research into understanding the mechanisms of common diseases. Many collections are not stored but provided to the researcher as soon as they are collected.

Application processes: In the first instance, please contact the RDETB Co-ordinating Manager, Professor Angela Shore ([a.c.shore@exeter.ac.uk](mailto:a.c.shore@exeter.ac.uk)) to discuss your potential project needs. This may include identifying appropriate academic/clinical collaborators.

Formal applications to set up a new collection or access stored samples are then made to the RDETB Steering Committee for review and approval.

**Contact:** Professor Angela Shore; [a.c.shore@exeter.ac.uk](mailto:a.c.shore@exeter.ac.uk)

**Peninsula Research Bank** <https://exetercrfnihr.org/about/exeter-10000-prb/>

**What is available?**

**Samples:** Banked DNA/ urine/ serum/ plasma and prospectively collected RNA/ whole blood from Exeter 10,000 volunteers <https://exetercrfnihr.org/about/exeter-10000/>

**Data**: Data from Exeter 10,000 and allied studies, and consent to access medical records

**Samples and data:** from other ethically approved studies that have been transferred to the Peninsula Research Bank (PRB) for long term management

**How do I access volunteers, samples and/or data?** Contact the tissue bank to discuss your project needs. You may then be invited to submit a formal request for access to volunteers, samples and/or data to the PRB Steering Committee which meets monthly, with the close involvement and active participation of the lay members of our Patient and Public Involvement (PPI) group.

Samples can be identifiable by phenotype and genotype (to request a search, please complete our query form).

**Lay summary:** If you are requesting access to volunteers, please note that the lay summary provided in your application will form the basis of our initial approach letter sent out to potential volunteers registered on the PRB database. We aim for information in our initial letter to be succinct, informative, easy to read and understandable to the average lay person. If your application is for access to samples/data, approval by the Steering Committee may be dependent on the content of your lay summary. Some guidance from our lay panel can be provided.

**NHS ethics:** Studies wanting to access Exeter 10,000 volunteers via the PRB will need appropriate ethical and governance approval.

Please note that the PRB Steering Committee likes to be involved in projects as early as possible, so it can assist with protocol design and the oversight of patient-facing documents such as participant information sheets (PISs), before they go to ethics.

Contact: [k.m.gooding@exeter.ac.uk](mailto:k.m.gooding@exeter.ac.uk) in the first instance

**Genetic Beta Cell Research Bank** **(GBCRB):**

<https://www.diabetesgenes.org/current-research/genetic-beta-cell-research-bank/>

**Purpose:** The GBCRB is a tissue bank with over-arching ethics to carry out research into the mechanisms and genetic causes of diabetes and other beta cell disorders.

**Samples:** Samples from diagnostic archives and residual samples from research activity where enduring consent has been given. The GBCRB ensures effective guardianship of these samples, with a Steering Committee that reviews all requests to use samples and associated data to ensure they are sensibly used to improve the diagnosis, care and treatment of genetic diabetes.

**Contact:** [kevin.colclough@nhs.net](mailto:kevin.colclough@nhs.net) or [jaynehoughton@nhs.net](mailto:jaynehoughton@nhs.net)

**Exeter Archival Diabetes Biobank:**

<https://www.exeter.ac.uk/research/diabetes-research/research/isletbiology/>

**Samples:** The biobank stores pancreas samples which were recovered from people very soon after the diagnosis of type 1 diabetes. Many of the organs come from young children and they represent the world’s largest collection of recent-onset type 1 diabetes pancreata. As such, this biobank provides a unique opportunity to investigate the immunopathology of type 1 diabetes.

**Contact:** [S.Richardson@exeter.ac.uk](mailto:S.Richardson@exeter.ac.uk)

**Peninsula Pre/Perinatal Twins Research Bank:**

<https://www.epigenomicslab.com/the-peninsula-preperinatal-twins-research-bank-pt-rb/>

This biobank is now closed to new samples but available as a resource to researchers on approval and has over-arching approval for collection and use of samples collected from twins and their biological parents.

Contact: [J.Mill@exeter.ac.uk](mailto:J.Mill@exeter.ac.uk)