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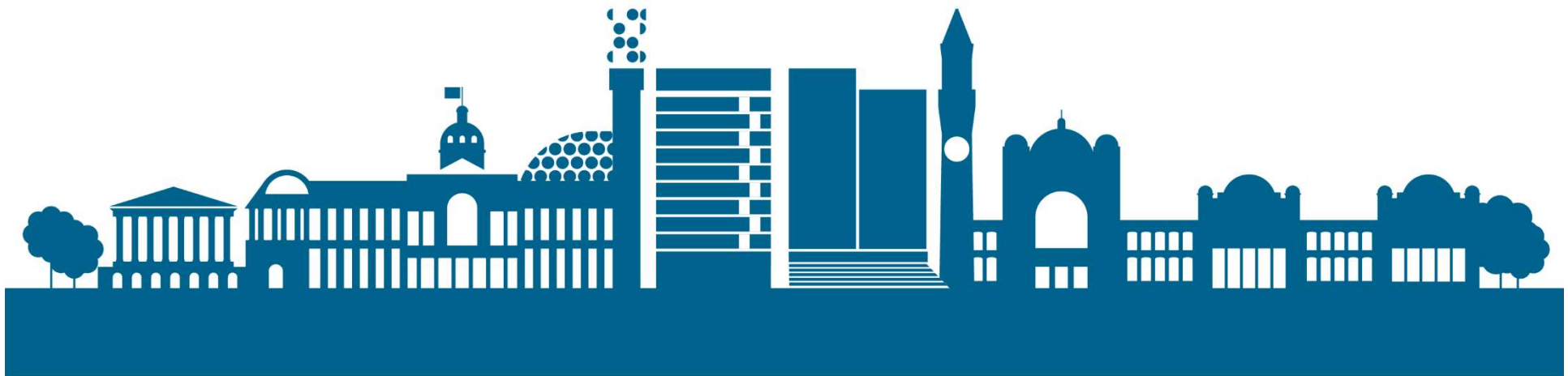


INSTITUTE OF
IMMUNOLOGY AND
IMMUNOTHERAPY

NAFLD BioResource

Prof Philip Newsome

Centre for Liver and Gastrointestinal Research



NIHR BioResource

- >100k volunteers from the general population and included patients with rare diseases enrolled in the **NIHR BioResource - Rare Diseases**.
 - Provided information related to their health and lifestyle and biological samples, including DNA
 - Consented to be recalled for biomedical research studies according to their phenotype or genotype.
 - High density array (Affymetrix UK Biobank Axiom[®] Array) and metabolomic profiling (Metabolon) of DNA and plasma samples is in process to facilitate recall.



NIHR BioResource Centres for Translational Research in Common and Rare Diseases

- 12 Centres awarded in 2017 (+ Cambridge) to either BRCs or CRFs
- Created to support in depth phenotyping of patients with common and rare diseases



NIHR Common Disease BioResources

- Inflammatory Bowel Disease
- Mental Health

Awarded

- Immune Mediated Inflammatory Disorders
- NAFLD
- Cerebrovascular Disease - pilot



Role of NIHR BioResources

- Providing an understanding of disease mechanisms and potential therapeutic targets.
- Application of 'omics in large cohorts offered by a national NIHR resource.
- Opportunities for translational research and new opportunities for economic growth through industrial collaborations.
- Recallable BioResources

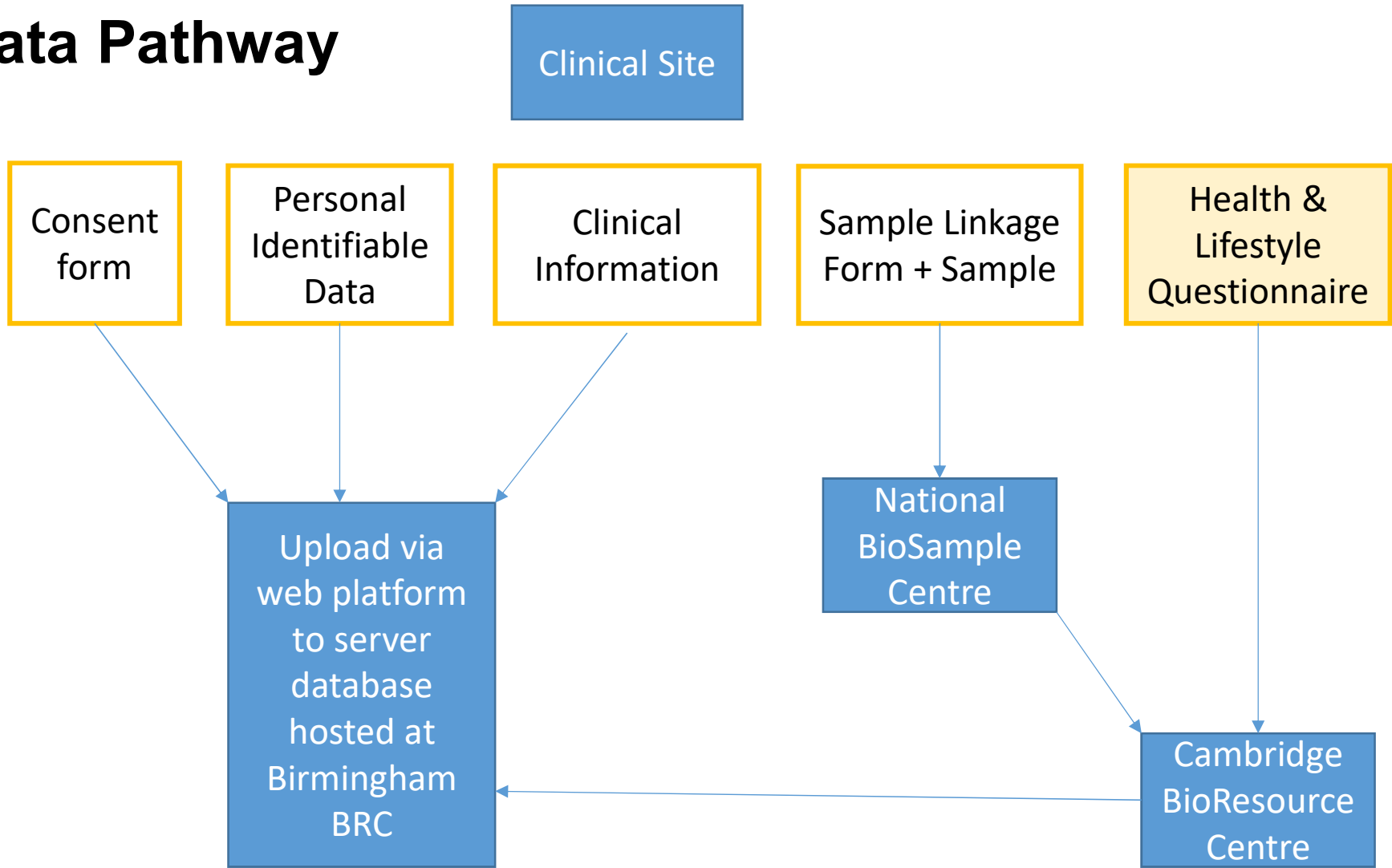


Goals of NAFLD BioResource

- Create and populate large scale UK registry (5-10k)
- Data analysis
- Recallable resource for experimental medicine/industry studies



Data Pathway



Health & Lifestyle Questionnaire

? Modifiable ?Add NAFLD fields

3. General Health Questions (yes/no)

- ADD PCOS, OSA, weight loss procedure (if YES then option 1. Permanent Gastrectomy/stomach resection (sleeve/roux), 2. Gastric band insertion (removable, stomach intact) 3. Endoscopic gastric balloon (temporary)

4. General Medication

- Risk here of incomplete data and mixed use of brand and generic names – will check with IBD BioResource as to how they broach this.
- Add tick boxes for certain classes of drugs (T2DM, weight loss, anti-hypertensive agents, statins/fibrates). include Methotrexate and Tamoxifen)



Health & Lifestyle Questionnaire

5. Alcohol

- Add a question here about past alcohol consumption, such as:
- Was there ever a time in your life when you drank more heavily and/or were advised to reduce your alcohol consumption?
- If that is a YES – then the follow-up question is how much (expressed as units) and for how long (years)?

9. Family History

- Add question about liver disease
- Add a question on coffee consumption. How many cups of coffee do you consume per day?
- Activity questions – DASI index <https://www.mdcalc.com/duke-activity-status-index-dasi>

NAFLD BioResource – Clinical Data

(1) Routine bloods

- Urea & Electrolytes (Urea, Sodium, Potassium, Creatinine)
- Liver blood tests (Bilirubin, AST, ALT, GGT, Albumin) – AST/GGT may not be routinely requested
- Full blood count including platelet count and INR
- HbA1c yes/no, if yes then value in mmol/mol
- Total cholesterol, HDL cholesterol, Triglycerides (calculate FLI)
- Tick box to say full liver screen in the past Yes/No (HBV, HCV, Haemochromatosis, Auto Abs); if yes then was positive or negative

This would allow us to calculate NAFLD fibrosis score (NFS) and Fib-4. NFS has a SNOMED CT code.

(2) Non-invasive markers of liver fibrosis

- Liver FibroScan yes/no, if yes then date and values (Median, IQR, CAP, probe)
- ARFI readings yes/no, if yes then date and values
- Serum ELF (has a SNOMED CT code) yes/no, if yes then date and values

(3) Liver histology

- - Liver biopsy yes/no
- - if yes then date, NAS score (if available), NASH yes or no?, Fibrosis stage (Kleiner F1-F4)



Value for Participants

- Access the BioResource for research projects/applications
- CRN metrics



NAFLD BioResource - Organisation

- Convene NAFLD BioResource Steering committee
- Proposals reviewed and communicated to National BioResource

