Best in Class Solution for Liquid Biopsy Testing

GeneFirst
Building E5 Culham Science Centre
Abingdon
OX14 3DB
United Kingdom
Company Profile

- Molecular diagnostics company established in 2011
- Based at Culham Science Park
- Specialised in cancer and infectious diseases testing for research and diagnostic purposes
- Advanced multiplex-PCR and NGS-based liquid biopsy technologies
- Series of patented technologies and products – CE marked and pipeline in development
- ISO 13485 accredited with focus on quality
- CE mark and launch X CeloSeq cancer panels, Papilloplex® HPV assays, upper respiratory panels and other diagnostic products within the next 3 years

Strictly Confidential
XCeLoSeq Next Gen Sequencing Kits

- Suite of NGS cancer detection panels including pan-cancer, lung and colorectal based on patented **Adaptor Template Oligonucleotide Mediated Sequencing (ATOM-Seq)** technology.

- **Unique features**
  - Completely unique method of DNA capture
  - High efficiency capture and minimal sample loss
  - Unique suitability for low quality or low concentration samples

- **Competitive advantage**
  - Fastest protocol time - 2 hours faster than current market leader
  - High clinical confidence - able to detect extremely low frequency mutations with confidence
  - Cost effective - requires less sequencing to achieve the same data output

- **IP status**
  - US, Europe, Australia, Canada and China pending
Application in Bowel Cancer

Using ATOM-Seq for screening, patient stratification, and monitoring of surgery & therapy

Bowel Cancer Facts
- 41,500 diagnosed per year
- 16,000 deaths per year (2nd highest)
- Above 90% survival if caught early

Use in Screening Program
<table>
<thead>
<tr>
<th>Faecal Screening</th>
<th>Blood Liquid Biopsy</th>
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<tbody>
<tr>
<td>Below 60% uptake / Only 10% of diagnoses</td>
<td>Studies suggest higher uptake</td>
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<tr>
<td>Bowel cancer specific</td>
<td>Comprehensive cancer detection</td>
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<tr>
<td>Simple, limited data</td>
<td>Rich dataset</td>
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Patient Stratification with FFPE & Liquid Biopsy
- Identification of actionable mutations for targeted therapy
- Reliable and robust method for low quality samples
- Mutation detection down to 0.1% allele frequency
- Comprehensive mutation profiling

Monitoring of Surgery & Therapy
- Measure mutations in ctDNA to assess tumour resection / radiochemotherapy success
- Identification of resistance genes
- Earlier detection of recurrence and metastases leading to greater chance of cure
NIHR Leeds MIC

- Leeds In Vitro Diagnostics Co-operative (NIHR Leeds MIC) supports diagnostics developers in the design and validation of new diagnostic tests

- Together with the University of Leeds, a joint grant application, “Improving Patient Experience and Outcomes in Bowel Cancer Screening,” was put forward to the NIHR i4i PDA scheme

- NIHR’s role in leading and shaping Patient and Public Involvement and Engagement strategy for this study, crucial for:
  - helping set research priorities
  - improving quality by addressing the patients point of view
  - identifying important questions that health and social care research needs to answer
  - giving their views on research proposals alongside clinicians, methodologists, scientists, and public health and other professionals
  - taking part in clinical trials and other health and social care research studies, not just as participants but as active partners in the research process
  - publicising the results of NIHR Leeds MIC activity
Driving Patient Benefit and Economic Value

- Clinical validity, efficacy & utility
- Executive leadership
- Cost effectiveness
- Dissemination & adoption
- Regulatory & compliance
- IP & FTO
- Sales & Marketing
- Strategic partnerships
- Research & Development
- Funding streams
- Process improvement
- Clinical trials
- Public & Patient
- Research evidence
- Benefit to patient
- Economic value
- Product uptake & Commercial Success
Questions?