HAEMATOLOGY-PATHOLOGY RESEARCH LABORATORY

Principal investigator: Charlotte Guldborg Nyvold

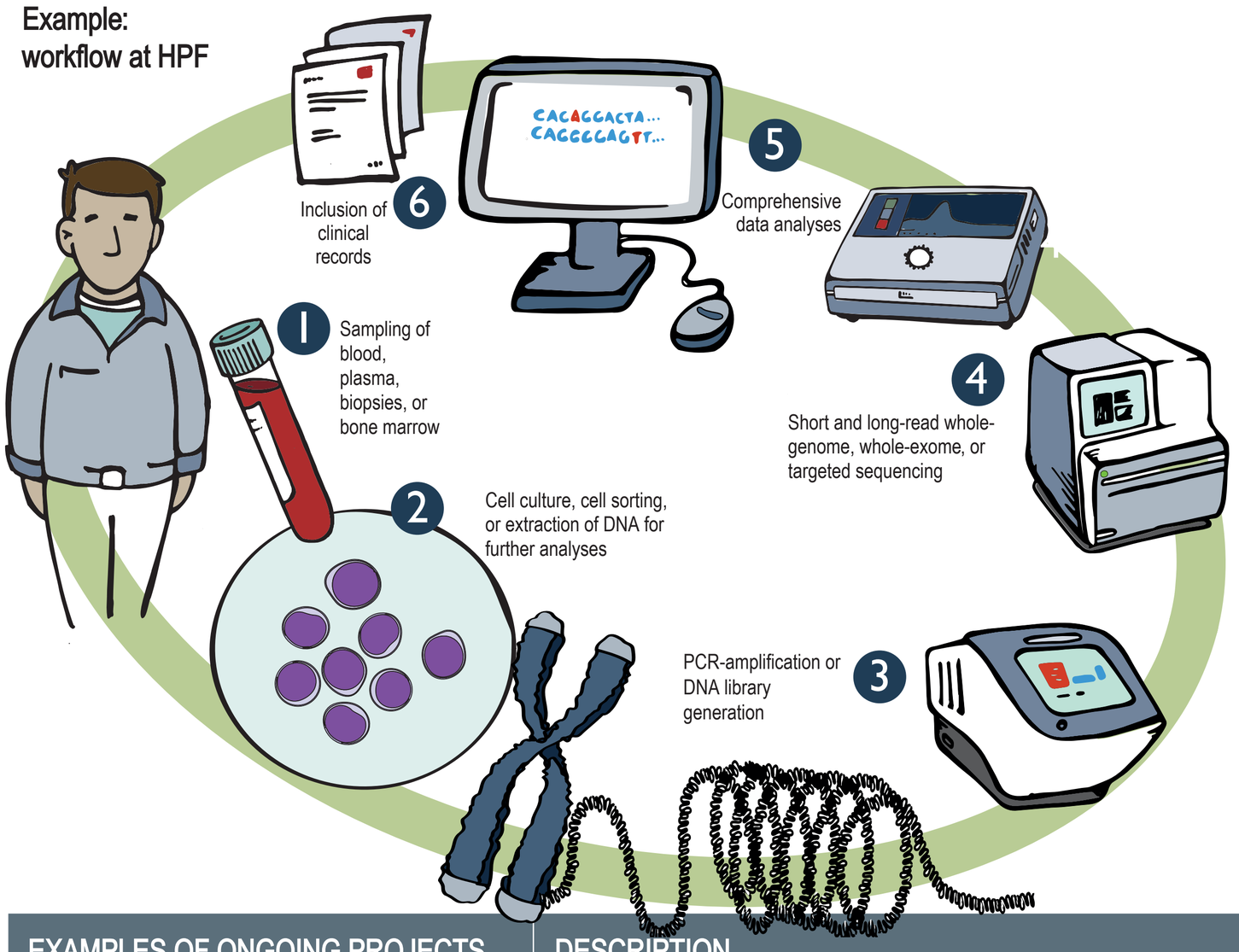
MAIN RESEARCH TOPICS

At HPF, we conduct research on hematological diseases, with a particular focus on the molecular heterogeneity of malignant B-cell disorders, including leukemia, lymphomas and multiple myeloma. Our work emphasizes translational research, bridging the gap between the laboratory and the clinic, and fostering a dynamic research environment that includes both science and medical students.

Beyond supporting specific research projects, we also collaborate with clinicians requiring laboratory expertise. Our research employs a wide range of techniques, including short- and long-read sequencing, flow cytometry, and cell sorting, allowing for in-depth molecular and genetic characterization of cancer cells and their microenvironment.

INVESTIGATING B-CELL CANCERS

Example: workflow at HPF



EXAMPLES OF ONGOING PROJECTS	DESCRIPTION
Molecular characterization of B cells during treatment of chronic lymphocytic leukemia	Cell sorting and a multiomics approach to investigate the biology and kinetics of residual leukemia cells treated with a Bruton's tyrosine kinase inhibitor
Circulating tumor DNA in aggressive lymphoma	Profiling of circulating tumor DNA employed in sensitive and longitudinal assessment of treatment response
Pre-clinical and clinical molecular profiling of B cells	Focus on the exhaustive examination of B-cell profiles with pre-clinical and clinical approaches to gain deeper insights into B-cell cancers with the focus of finding novel targets to extend the efficacy of treatments.
Measurable residual disease in B-cell malignancies	Ultra-deep sequencing of clonal immunoglobulin receptor rearrangements to assess minute levels of residual disease in B-cell malignancies
Immunotherapy of Waldenström macroglobulinemia (WM) : BCMA targeted immunotherapy may represent a new treatment strategy in WM	Pre-clinical project to test whether BCMA-directed immunotherapy can eliminate malignant cells and provide a rationale for future clinical trials
T-cell exhaustion in multiple myeloma	Flow cytometry analyses to investigate any changes in the T-cell compartment after treatment with engineered antibodies that make T cells recognize and kill the cancer cells

CONTACT INFORMATION

If you are interested in conducting a project in the group, contact:

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Check our website:

SCAN ME

EXAMPLES OF STUDENT ALUMNI

Marcus Høy Hansen, MSc, PhD
Senior Researcher and Bioinformatician in our group and at Dept. of Clin. Genetics, Aarhus University Hospital

Simone Valentin Lehtonen, MSc, PhD
Molecular Biologist at Genomic Medicine, The Diagnostic Unit, Copenhagen University Hospital

Mia Koldby Blum, MSc
Molecular Biologist at the Research Unit, Dept. of Hepatology and Gastroenterology, Aarhus University Hospital

Sólja Remisdóttir Veyhe, MSc, PhD
Postdoctoral Researcher, Molecular Biologist, Dept. of Research, National Hospital of the Faroe Islands

Per Ishøy Nielsen, MD
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SDU

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