

Course information

Biobanking as a resource for biomedical research

One-week course, March 5-9, 2018

This course will give you new insights on the value of biobanks and how to use these rich sources of samples and related data. It will include lectures with practical information on how to start a new study, how to collect samples with high quality, to link health registers to biobanks, large-scale omics analyses and some of the emerging and powerful IT tools to link such data sources.

Purpose and goal

Biobanks constitute a powerful resource in medical research with access to millions of human samples and related data. Easier access to samples and new “omic-technologies” with high-throughput analytical platforms now permit cheaper large scale analyses. This course aims to provide the course participants practical knowledge to start biobanking with state of the art quality comprising ethics, legal aspects, sampling handling and logistics.

The course will also include lectures covering how to apply technology advancements such as next generation sequencing to harness biological information from biobanked material such as tissues and liquid biopsies.

Finally, the participants will be given insight into successful research projects where biobanking in combination with large scale analysis is having direct impact on health care.

Target group

Researchers and professionals from health care, universities and industry with an interest in biobanking.

Course management

Gunnel Tybring, Course director, PhD, Associate Professor

Johan Lindberg, Course director, Assistant professor

The responsible department for this course is the Department of Medical Epidemiology and Biostatistics (MEB), Karolinska Institutet in collaboration with <http://BBMRI.se>

Course structure

- Lectures & group discussions
- Site visits
- Presentation (= examination)

All students are required to take part in all scheduled activities: lectures, field trips and presentation/examination. The course is examined by giving a presentation of the course assignment, either a pre-defined biobank study or an example from own research.



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Course content

1. Practical knowledge to enable biobanking including

- a) Ethical aspects
- b) Legal aspects
- c) IT infrastructure
- d) Public trust
- e) Required documentation and stakeholders
- f) Biobank service; available infrastructures

2. How to biobank with high quality from various sources such as:

- a) Blood/plasma/serum/urine
- b) PBMC
- c) Single cells
- d) Tissues

3. Examples of how to apply molecular technologies to harness information

- a) Proteomics of plasma and tissues
- b) Metabolomics of plasma, serum and urine
- c) Sequencing of circulating tumor DNA/RNA
- d) Single cell sequencing of circulating tumor cells and tissues
- e) DNA and RNA sequencing of tumor tissues
- f) Epigenetics of blood and tissues

4. The value of applying quality registries to biobanked material

5. Examples of successful biobanking efforts, large scale analysis and subsequent impact on clinical care

Date and place

The course will be given at Karolinska Institutet, Stockholm during March 5-9, 2018. More information regarding venue and schedule will be sent out prior to the course start.

Course fee and registration

The course fee is 13 000 SEK, excluding VAT. Please note that the course is conducted under the condition that we receive a sufficient number of participants. VAT may be added to all prices, contact us for more information.

If you are interested in the course, please visit <http://ki.se/epe> or contact Kristoffer Mörtsjö at Karolinska Institutet Executive and Professional Education.

Application deadline: 2018-01-15

For more information, please contact

Questions regarding the course:

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Questions regarding course registration, etc.:

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Karolinska Institutet Executive and Professional Education delivers competence development for municipalities, governments and businesses and works for development in healthcare and a healthier society.

