



Lab members:

1 professor
2 team leaders
2 lab technicians
8 post docs,
13 PhD students

Our lab has three main interests:

- a) Understanding how non-coding RNAs contribute to cell maintenance and disease development with a primary aim of defining new targets for disease intervention.
- b) Creating novel bioimaging and delivery systems for gene medicine with a special focus on inflammation, cancer, influenza and regeneration of damaged tissue (tissue engineering)
- c) Design and construction of functionalized self-assembled DNA and RNA nanostructures capable of complex biosensing, coupled with controlled action e.g. drug release, enzyme activation and receptor signalling.

Examples of research projects in the JK group

- o Disease profiling using aptamer libraries
- o Targeted delivery of oligonucleotide therapeutics
- o Receptor clustering on the surface of single cells
- o Enhancing therapeutic delivery across the blood brain barrier
- o Programmable DNA nanopore insertion
- o Nanopatterned enzyme cascades
- o Studying exosomes in tissue regeneration
- o Function of micro- and circRNA in human disease

More information at cellpat.au.dk, cembid@au.dk and inano.au.dk/about/research-groups/nanomedicine-joergen-kjems-group

