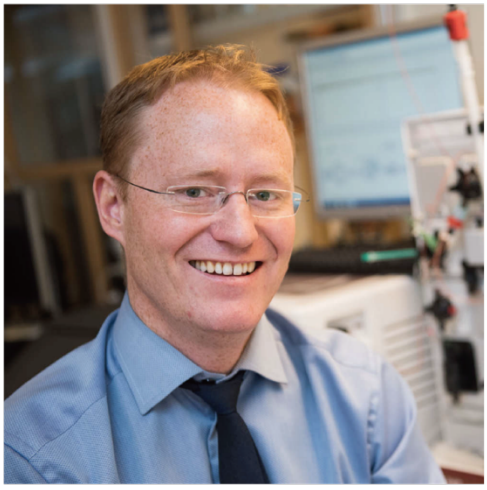
IQB Seminar

Effects of Nanoscale Patterns in Biology Using DNA Origami



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Life Science Research Building B 301

DNA is not only a carrier of genetic information but also an excellent building material for nanoscale engineering. In particular, it allows us to position molecules with nanometer precision to measure effects of binding depending on nanoscale separation of ligands. We argue that these DNA origami techniques are currently forming the basis for what might possibly become a new era of precise spatial control in biology. I will present recent examples of our work on pathways where the nanoscale spacing of ligands appear to be important and how nanoscale spacing effects the binding of antibodies and the possible implications these findings can have. Taken together, our data shed light on the intricate dynamics of the central dogma, revealing the complex factors that govern transcription-translation coupling.

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