



Seminari di



Dipartimento

UNIVERSITÀ  
DEGLI STUDI DI TRIESTE  
DIPARTIMENTO DI  
SCIENZE DELLA VITA



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**Martedì 29 Ottobre 2019**

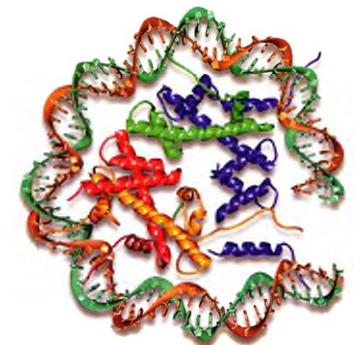
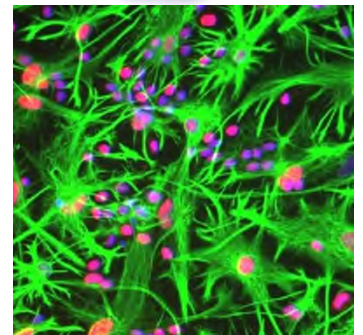
Aula 121d Ed. Q

Ore 14.00



**Dr. Rafał Mostowy**

**Evolutionary genetics of surface  
polysaccharide diversity in  
bacteria**



Bacterial species are often surrounded by surface polysaccharides (SPs), like capsules and lipopolysaccharides. These diverse molecules play many important roles in helping bacteria adapt to and persist in different environments. Recent advances in our understanding of how these structures are built and synthesized have elucidated the diversity-generating potential of the SP synthesis genetic loci. However, our understanding of how SP loci evolve across different bacterial species, genera and families is still far from complete. In this talk I will discuss two recent projects that have advanced our understanding of SP evolution using next-generation sequencing data from *Streptococcus pneumoniae* and the bacterial order Enterobacteriales (including *Escherichia coli*, *Salmonella enterica* and *Klebsiella pneumoniae*). Using large genomic data, I will demonstrate rapid evolution of SP loci and the important role of horizontal gene transfer therein. Finally, I will provide some perspective on the current research in the Microbial Genomics group in Krakow.

