

LIFE SCIENCES

seminar series

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Between genotype and phenotype: signalling and physical morphogenesis at the cellular-to-supracellular level

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Thursday, 16:00

Seminar room 132, pavilion A11
University campus Bohunice

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Genes do not make tissues and organs: cells do. While great progress has been made in recent years in describing and understanding gene regulatory networks, these represent an essentially intracellular view of biology. Organismal phenotypes, particularly those affecting physical form and structure, are rarely analysed at the cellular-to-supracellular level. How ensembles of cells create form thus remains a significant frontier in research. General principles of tissue morphogenesis will be introduced with a particular focus on active cell rearrangement in epithelia as an organogenesis-driving process. Well known and novel morphogenetic motifs important in the formation of teeth, hair follicles and diverse glands in the body will be described. New discoveries relating physical phenotypes to the genes that control organ formation will be presented.