
The 170th iCeMS SEMINAR

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10:30-11:30

Heparan sulfate as a regulator of chondrocyte differentiation

Lecturer: **Prof Andrea Vortkamp**

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Venue: 2nd Floor Seminar Room (#A207)
iCeMS Main Building (#77), Kyoto University

Based on the function of Indian hedgehog my lab currently focuses on the interaction of transcription factors and chromatin remodeling enzymes in controlling the balance between cell cycle progression and differentiation in chondrocytes. Another focus of our research is the role of heparan sulfate (HS) in regulating the distribution and activity of signaling molecules in the growth plate. Specifically we aim to decipher how the pattern of HS sulfation determines the interaction with distinct growth factors, cytokines and proteases, and how these interactions control their distribution and activity in the extra cellular matrix of the growth plate. A third line of research covers the role of HS as a regulator of joint homeostasis. Based on experiments indicating that the HS structures place a critical role in the maintaining the articular cartilage we intend to decipher the mechanisms controlling the differentiation of articular chondrocytes aiming at developing strategies to regenerate diseased joint tissue.

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