



Nuclear Architecture, Lipids and Phase Separation

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Message from the Guest Editors

Dear Colleagues,

We are delighted to invite you to contribute to a special Cells issue, the basis of which will be selected from the presentations at the workshop “Nuclear Architecture, Lipids, and Phase Separation”, taking place in Prague, 24– 25 October, 2019 (<https://eurocellnet.eu/workshop2019/>).

The molecular organization within the cell nucleus determines gene expression, and recent observations revolutionize our understanding of nuclear architecture. In particular, the molecular functions of intra-nuclear lipids involved in RNA polymerase II transcription and modulation of RNA polymerase I activity at multiple levels suggest additional functions of lipids. The aim of the workshop and this Special Issue is to provide insight into state of the art methods and data available about the precise localization and metabolism of nuclear lipid-containing structures, as well as to discuss the diverse functional implications of these nuclear molecular assemblies in gene expression. Special attention will be given to multidisciplinary approaches, including light and electron (cryo)-microscopy, lipid chemistry, and biophysics, addressing the mechanotransduction and phase separation events in the nucleus with the potential to form novel views on functions of macromolecular assemblies in the nucleus and nucleoplasmic lipids.

We are looking forward to your contributions to this Special Issue.

Prof. Dr. Pavel Hozák

Prof. Dr. Ohad Medalia

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