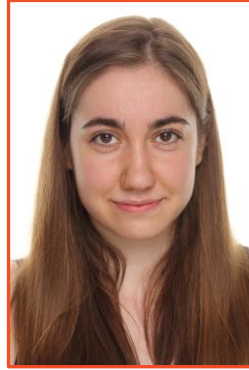


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## Regular Wednesday IMG seminar



**Michaela Šimová**

**Phenotyping Module**

**“Where blood begins: decoding early  
embryonic hematopoiesis”**

Despite the central role of bone marrow in postnatal hematopoiesis, the first blood cells in mammalian development arise in the yolk sac, and their activity is essential for successful embryonic development. Progenitors of all three hematopoietic waves coexist in overlapping temporal and spatial windows and share many molecular markers, which makes their discrimination and study challenging. As a result, key aspects of early hematopoietic development remain unresolved. This presentation will focus on early embryonic hematopoiesis, particularly yolk sac–derived waves and their contribution to the developing immune system. Using a combination of single-cell RNA sequencing, flow cytometry, and novel lineage-tracing approaches based on the Split-Cre system, we aim to identify regulatory pathways, discover new progenitor markers, and refine strategies for tracking their developmental fate.

**The seminar will be held**

**on Wednesday 3 June 2026 at 15:00**

**in the Milan Hašek Auditorium at IMG**

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)

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