Zbyněk Kozmik

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LABORATORY OF

TRANSCRIPTIONAL REGULATION

development and evolution, eye, *Pax, Tcf* genes

In the picture:
1. Zbyněk Kozmik | **2.** Radim Žídek | **3.** Jiří Pergner | **4.** Vladimír Soukup | **5.** Ondřej Machoň | **6.** Andrea Kuželová | **7.** Veronika Nosková | **8.** Simona Macháčová | **9.** Simona Mršťáková | **10.** Katarína Kovácová | **11.** Olga Tichá | **12.** Iryna Kozmiková | **13.** Michaela Kreplová | **14.** Veronika Kovácsová

We are interested in studies of development and evolution of development (evo-devo). We use a combination of gain-of-function (transgenic) and loss-of-function (conditional knock-outs) approaches using laboratory mouse as a model organism to study mammalian embryonic development. We utilize several model systems including fish, amphioxus, platynereis and cnidarians to study various aspects of evo-devo, especially the evolution of eyes and gene regulatory networks.

Selected recent papers:

Mašek J, Machoň O, Kořínek V, Taketo MM, Kozmik Z: Tcf7l1 protects the anterior neural fold from adopting the neural crest fate. **Development. 2016** Jun 15;143(12):2206-16. doi: 10.1242/dev.132357.

Liegertová M, Pergner J, Kozmiková I, Fabian P, Pombinho AR, Strnad H, Pačes J, Vlček Č, Bartůněk P, Kozmik Z: Cubozoan genome illuminates functional diversification of opsins and photoreceptor evolution. **Sci Rep. 2015** Jul 8;5:11885. doi: 10.1038/srep11885. Erratum in: Sci Rep. 2015;5:14396.

Klimova L, Antosova B, Kuzelova A, Strnad H, Kozmik Z: Onecut1 and Onecut2 transcription factors operate downstream of Pax6 to regulate horizontal cell development. **Dev Biol. 2015** Jun 1;402(1):48-60. doi: 10.1016/j.ydbio.2015.02.023.


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