Genomics and advanced transcriptomics of super-sleeper: uncovering mechanisms of anhydrobiosis and hibernation

Beyond traditional sleeping pattern in animals, there are adaptations to hypometabolism, ranging from dormancy, where vital processes are significantly suppressed to examples of complete ametabolic cases, i.e. anabiosis. The most impressive examples of anabiosis, is the sleeping chironomid Polypedilum vanderplankii: an insect able to survive without water for years. A champion among mammals is dormice, able to spent up to 11 months in dormancy. In my talk I will outline our recent finding (based on the advanced transcriptomics methods, including deep analysis of promoters and enhancers) on the genetic mechanisms providing such extraordinary ability to these animals.

Speaker:

Dr. Oleg Gusev
Division of Genomic Technologies,
PMI RIKEN, Yokohama

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