SEBES Seminar for Evolutionary Biology and Environmental Studies

Behavioural profiling of mice living in groups - Applications to strain comparison and mouse models of autism

Speaker:	**Dr. Elodie Ey and Dr. Fabrice de Chaumont** Bio Image Analysis, Institut Pasteur, Paris, France https://research.pasteur.fr/en/member/elodie-ey/
Date/Time:	Thursday, 2018-10-11 15:00 to 16:00
Place:	Y24-G-55/UZH Irchel Winterthurerstr. 190;8057 Zürich
Access:	only intern
Host:	Prof. Dr. Barbara König

Abstract:

Understanding complex behavioral traits such as decision-making or social interactions in mice requires high precision long-term individual following of mice. We present a real-time method for behavior analysis of mice housed in groups gathering computer vision, machine learning and Triggered-RFID identification to track and monitor animals over several days in enriched environments. This system - Live Mouse Tracker (LMT) - extracts a thorough list of individual and collective behavioral traits and provides a unique phenotypic profile for each animal. We applied LMT to build quantitative behavioral profiles of a large panel of mouse strains from the Collaborative Cross and of various mouse models carrying mutations associated with autism. Article and videos available as a pre-print on BioRxiv: https://doi.org/10.1101/345132

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