

POSTDOCTORAL POSITION:

THE MOLECULAR AND NEURONAL BASES OF SOCIALLY REGULATED PLASTICITY IN CIRCADIAN RHYTHMS IN BEES, HEBREW UNIVERSITY OF JERUSALEM Both honeybees and bumblebees show natural socially regulated plasticity in circadian rhythms. 'Clock genes' cycle in the brain of the rhythmic foragers but not in "nurse" bees which tend brood around the clock, suggesting that chronobiological plasticity is associated with reorganization of the circadian clockwork. Nevertheless, clock neurons in the brain circadian network measure time in around-the-clock active bees. Nurses removed from the hive rapidly switch to activity with strong circadian rhythms and a phase correlated with ambient day-night cycles. Why do nurse bees that are active around the clock in a tightly regulated environment need a functional clock? How does the circadian system of bees organized to allow this profound plasticity while keeping it robust to support sun compass navigation and time memory in foragers? What are the social factors in the colony that regulate clock plasticity? What are the social signals and pathways mediating social synchronization in bees? We look for a curious, highly motivated, and skilled postdoc to lead this multidisciplinary research program. The projects will integrate sociobiological manipulations, behavioral observations, comparative genomics, and molecular and pharmacological tools to manipulate the molecular clockwork of the bee. Required qualifications - A PhD degree in molecular evolution, genetics, neurobiology, molecular biology or related fields - Relevant lab expertise in neuroanatomy, bioinformatics, or molecular biology techniques - An outstanding academic record - Experience in organismal biology (e.g., animal behavior, neuroethology, or ecology) is advantageous. - Fluent spoken and written English - Excellent communication and interpersonal skills, ability to work in a team. We offer a strong, internationally recognized and interdisciplinary working environment with an open academic atmosphere. Location in the beautiful city of Jerusalem. The position can start on 15 July 2020 or as soon as possible thereafter. The position is for 2-3 years. For further information please contact: Prof. Guy Bloch (guy.bloch@mail.huji.ac.il)