



אוניברסיטת בן-גוריון בנגב  
**Ben-Gurion University of the Negev**  
**Avram and Stella Goldstein-Goren Department**  
**of Biotechnology Engineering**  
**SEMINAR**



**Dr. Omri Wurtzel**

Head of Laboratory for Regeneration and Stem Cell Biology  
The Department of Biochemistry and Molecular Chemistry  
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**July 14<sup>th</sup>, 14:10, Building 51 – Auditorium Nano**

**Deciphering the regulation of pluripotency and differentiation in regeneration.**

Our laboratory specializes in using planarians, freshwater flatworms, and animals that have an abundant population of pluripotent stem cells (PSCs). Planarians use PSCs for tissue maintenance and for regeneration. We are particularly interested in the regulation of differentiation vs. proliferation of planarian stem cells, and how the balance of these processes allows the animals to regenerate. Our laboratory also specializes in finding the conserved components of the injury response essential for understanding the differences in survival and regenerative capacities of different organisms. We use comparative genomics for unraveling the conserved regulatory circuitry of injury-response and harness the planarian system to study its conserved functions. We use various techniques, including single-cell RNA sequencing (SCS) to computationally determine cellular identities and lineage potential, and most importantly, their functions.

**Host:**

**Rachel Lichtenstein** [ruha@bgu.ac.il](mailto:ruha@bgu.ac.il)