

Stanford



Tom Levy

Postdoctoral Scholar, Stem Cell Biology and Regenerative Medicine

Bio

HONORS AND AWARDS

- Gruss Lipper Postdoctoral Fellowship for Biomedical Research, The EGL Charitable Foundation (2021-2023)
- Rothschild Postdoctoral Fellowship, Yad Hanadiv Foundation (2021-2022)
- Vaadia-BARD Postdoctoral Fellowship, US-Israel Binational Agricultural Research and Development Fund (2021-2022)
- Stanford School of Medicine Dean's Postdoctoral Fellowship, Stanford School of Medicine (2021)
- Emergency Postdoctoral Fellowships for Israeli Researchers in Israel, Israel Academy of Sciences and Humanities (2020-2022)

PROFESSIONAL EDUCATION

- PhD, Ben-Gurion University of the Negev , Life Sciences - Physiology and Endocrinology (2019)
- MSc (Summa Cum Laude), Ben-Gurion University of the Negev , Life Sciences (2016)
- BSc (Summa Cum Laude), Ben-Gurion University of the Negev , Marine Biology and Biotechnology (2014)

STANFORD ADVISORS

- Irving Weissman, Postdoctoral Faculty Sponsor
- Ayelet Voskoboynik, Postdoctoral Research Mentor

PATENTS

- Tom Levy, Rivka Manor, Amir Sagi. " Patent International Application No. PCT/IL2018/051046 Sex-linked genomic marker for crayfish and uses thereof", Sep 17, 2018

Publications

PUBLICATIONS

- **Genes Encoding the Glycoprotein Hormone GPA2/GPB5 and the Receptor LGR1 in a Female Prawn.** *Frontiers in endocrinology*
Wahl, M., Levy, T., Manor, R., Aflalo, E. D., Sagi, A., Aizen, J.
2022; 13: 823818
- **Protandric Transcriptomes to Uncover Parts of the Crustacean Sex-Differentiation Puzzle** *FRONTIERS IN MARINE SCIENCE*
Levy, T., Zupo, V., Mutalipassi, M., Somma, E., Ruocco, N., Costantini, M., Abehsera, S., Manor, R., Chalifa-Caspi, V., Sagi, A., Aflalo, E. D.
2021; 8
- **Botryllus schlosseri as a Unique Colonial Chordate Model for the Study and Modulation of Innate Immune Activity.** *Marine drugs*
Goldstein, O., Mandujano-Tinoco, E. A., Levy, T., Talice, S., Raveh, T., Gershoni-Yahalom, O., Voskoboynik, A., Rosental, B.
2021; 19 (8)
- **Two Homogametic Genotypes - One Crayfish: On the Consequences of Intersexuality.** *iScience*

- Levy, T., Ventura, T., De Leo, G., Grinshpan, N., Abu Abayed, F. A., Manor, R., Savaya, A., Sklarz, M. Y., Chalifa-Caspi, V., Mishmar, D., Sagi, A.
2020; 23 (11): 101652
- **From sporadic single genes to a broader transcriptomic approach: Insights into the formation of the biomineralized exoskeleton in decapod crustaceans** *JOURNAL OF STRUCTURAL BIOLOGY*
Shaked, S. A., Abehsera, S., Levy, T., Chalifa-Caspi, V., Sagi, A.
2020; 212 (2): 107612
 - **The IAG-Switch and Further Transcriptomic Insights Into Sexual Differentiation of a Protandric Shrimp** *FRONTIERS IN MARINE SCIENCE*
Levy, T., Tamone, S. L., Manor, R., Aflalo, E. D., Sklarz, M. Y., Chalifa-Caspi, V., Sagi, A.
2020; 7
 - **The "IAG-Switch"-A Key Controlling Element in Decapod Crustacean Sex Differentiation** *FRONTIERS IN ENDOCRINOLOGY*
Levy, T., Sagi, A.
2020; 11: 651
 - **Ovarian development pattern and vitellogenesis of ridgetail white prawn, *Exopalaemon carinicauda*** *CELL AND TISSUE RESEARCH*
Wang, L., Guo, Q., Levy, T., Chen, T., Wu, X.
2020; 382 (2): 367–79
 - **The IAG gene in the invasive crayfish *Procambarus clarkii* - towards sex manipulations for biocontrol and aquaculture** *MANAGEMENT OF BIOLOGICAL INVASIONS*
Savaya, A., De Leo, G., Aalto, E., Levy, T., Rosen, O., Manor, R., Aflalo, E. D., Tricarico, E., Sagi, A.
2020; 11 (2): 237–58
 - **The protandric life history of the Northern spot shrimp *Pandalus platyceros*: molecular insights and implications for fishery management** *SCIENTIFIC REPORTS*
Levy, T., Tamone, S. L., Manor, R., Bower, E. D., Sagi, A.
2020; 10 (1): 1287
 - **Three generations of prawns without the Z chromosome: Viable WW *Macrobrachium rosenbergii* all-female populations in polyculture with *Oreochromis niloticus*** *AQUACULTURE*
Molcho, J., Levy, T., Benet, A., Naor, A., Savaya, A., Manor, R., Abramov, A., Aflalo, E. D., Shechter, A., Sagi, A.
2020; 515
 - **Production of WW males lacking the masculine Z chromosome and mining the *Macrobrachium rosenbergii* genome for sex-chromosomes** *SCIENTIFIC REPORTS*
Levy, T., Rosen, O., Manor, R., Dotan, S., Azulay, D., Abramov, A., Sklarz, M. Y., Chalifa-Caspi, V., Baruch, K., Shechter, A., Sagi, A.
2019; 9: 12408
 - **Sex Control in Cultured Decapod Crustaceans** *SEX CONTROL IN AQUACULTURE, VOLS I AND II*
Levy, T., Aflalo, E. D., Sagi, A., Wang, H. P., Piferrer, F., Chen, S. L.
2019: 691–704
 - **The gene encoding the insulin-like androgenic gland hormone in an all-female parthenogenetic crayfish** *PLOS ONE*
Levy, T., Rosen, O., Simons, O., Alkalay, A., Sagi, A.
2017; 12 (12): e0189982
 - **All-female monosex culture in the freshwater prawn *Macrobrachium rosenbergii* - A comparative large-scale field study** *AQUACULTURE*
Levy, T., Rosen, O., Eilam, B., Azulay, D., Zohar, I., Aflalo, E. D., Benet, A., Naor, A., Shechter, A., Sagi, A.
2017; 479: 857–62
 - **A Single Injection of Hypertrophied Androgenic Gland Cells Produces All-Female Aquaculture** *MARINE BIOTECHNOLOGY*
Levy, T., Rosen, O., Eilam, B., Azulay, D., Aflalo, E. D., Manor, R., Shechter, A., Sagi, A.
2016; 18 (5): 554–63
 - **Identification and Characterization of an Insulin-Like Receptor Involved in Crustacean Reproduction** *ENDOCRINOLOGY*
Sharabi, O., Manor, R., Weil, S., Aflalo, E. D., Lezer, Y., Levy, T., Aizen, J., Ventura, T., Mather, P. B., Khalaila, I., Sagi, A.
2016; 157 (2): 928–41

PRESENTATIONS

- Germline stem cell competition in chimeras of the colonial tunicate *Botryllus schlosseri* – a mechanism of natural selection - The North American Comparative Immunology Workshop (6/5/2022 - 6/8/2022)
- The science behind the IAG-switch and the genome of the giant freshwater prawn *Macrobrachium rosenbergii* - Giant Prawn 2019 Conference (11/15/2019 - 11/18/2019)
- WW neo-males, sex chromosomes and all-female aquaculture in crustaceans - The 12th International Marine Biotechnology Conference (9/9/2019 - 9/13/2019)
- All-female redclaw crayfish aquaculture - The 12th International Marine Biotechnology Conference (9/9/2019 - 9/13/2019)
- Biotechnology for all-female prawns – first time in crustacean aquaculture - The International Symposium of Genetics in Aquaculture (7/15/2018 - 7/20/2018)
- Do WW homogametic female redclaw crayfish exist? - The International Symposium of Genetics in Aquaculture (7/15/2018 - 7/20/2018)
- Novel biotechnology for all-female prawn aquaculture by a single injection of hypertrophied androgenic gland cells - The 15th Asia-Pacific Biotechnology Congress (7/20/2017 - 7/22/2017)
- Sexual differentiation during the life history of a protandric shrimp - The Society for Integrative and Comparative Biology (1/4/2017 - 1/8/2017)
- A single injection of hypertrophied androgenic gland cells produces all-female aquaculture - The 11th International Marine Biotechnology Conference (8/29/2016 - 9/2/2016)