

Amir Sagi  
Full Professor  
Department of Life Sciences  
School of Sustainability and Climate Change  
**Email:** [sagia@bgu.ac.il](mailto:sagia@bgu.ac.il)  
**Web address:** <https://lifewp.bgu.ac.il/wp/sagia>



## Research interests

The IAG-switch sex differentiating mechanism in crustacean reproduction

Functional genomics in crustacean physiology

Crustaceans' growth, physiology and biomineralization

Crustaceans as biocontrol agents over disease-carrying snails

## Employment

### Distinguished Professor

Full Professor

Department of Life Sciences

Ben-Gurion University of the Negev

1 Oct 2005 → present

### Member

School of Sustainability and Climate Change

Ben-Gurion University of the Negev

1 Oct 2021 → present

## Research outputs

### All-female crayfish populations for biocontrol and sustainable aquaculture

Shaked, S. A., Levy, T., Moscovitz, S., Wattad, H., Manor, R., Ovadia, O., Sagi, A. & Aflalo, E. D., 15 Feb 2024, In: *Aquaculture*. 580, 740377.

### Ferroptosis precedes apoptosis to facilitate specific death signalling by fatty acids

Zupo, V., Costantini, M., Aflalo, E. D., Levy, T., Chalifa-Caspi, V., Obayomi, O., Mutalipassi, M., Ruocco, N., Glaviano, F., Somma, E., Nieri, P. & Sagi, A., 25 Oct 2023, In: *Proceedings of the Royal Society B: Biological Sciences*. 290, 2009, p. 20231327 1 p.

### Computer vision system for counting crustacean larvae by detection

Rothschild, C., Aflalo, E. D., Kedem, I., Farjon, G., Yitzhaky, Y., Sagi, A. & Edan, Y., 1 Oct 2023, In: *Smart Agricultural Technology*. 5, 100289.

### A tunable reflector enabling crustaceans to see but not be seen

Shavit, K., Wagner, A., Schertel, L., Farstey, V., Akkaynak, D., Zhang, G., Upcher, A., Sagi, A., Yallapragada, V. J., Haataja, J. & Palmer, B. A., 17 Feb 2023, In: *Science*. 379, 6633, p. 695-700 6 p.

### Enhanced proliferation in a prawn embryonic primary cell culture ectopically expressing mutated Ras

Sudarshan, G., Weil, S., Rotem-Dai, N., Manor, R., Greenshpan, Y., Goldstein, O., Sharabi, O., Aflalo, E. D., Ofir, R., Rosental, B., Gazit, R. & Sagi, A., 9 Jan 2023, In: *Frontiers in Marine Science*. 9, 1100971.

### Correlation between metabolomic profile and proliferation of *Macrobrachium rosenbergii* primary embryonic cell culture

Sudarshan, G., Weil, S., Jasińska, W., Manor, R., Goldstein, O., Aflalo, E. D., Ofir, R., Zimin, S. V., Levy, T., Rosental, B., Brotman, Y. & Sagi, A., 1 Jan 2023, In: *Frontiers in Marine Science*. 10, 1270491.

**The transcriptional landscape of the giant freshwater prawn: Embryonic development and early sexual differentiation mechanisms**

Grinshpan, N., Abayed, F. A. A., Wahl, M., Ner-Gaon, H., Manor, R., Sagi, A. & Shay, T., 7 Dec 2022, In: *Frontiers in Endocrinology*. 13, 1059936.

**On genome editing in embryos and cells of the freshwater prawn *Macrobrachium rosenbergii***

Molcho, J., Manor, R., Shamsian, M., Sudarshan, G., Ofir, R., Parker, D., Weil, S., Wattad, H., Hayun, E., Levy, T., Aflalo, E. D., Hendel, A. & Sagi, A., 15 Sep 2022, In: *Aquaculture*. 558, 738391.

**Genes Encoding the Glycoprotein Hormone GPA2/GPB5 and the Receptor LGR1 in a Female Prawn**

Wahl, M., Levy, T., Manor, R., Aflalo, E. D., Sagi, A. & Aizen, J., 24 Mar 2022, In: *Frontiers in Endocrinology*. 13, 823818.

**Genes encoding putative bicarbonate transporters as a missing molecular link between molt and mineralization in crustaceans**

Abehsera, S., Bentov, S., Li, X., Weil, S., Manor, R., Sagi, S., Li, S., Li, F., Khalaila, I., Aflalo, E. D. & Sagi, A., 1 Dec 2021, In: *Scientific Reports*. 11, 1, 11722.

**Lentiviral-Transduced Ectopic Expression of Androgenic Hormone in a Crustacean Hematopoietic Primary Cell Culture**

Rotem-Dai, N., Weil, S., Greenshpan, Y., Abehsera, S., Manor, R., Ofir, R., Gazit, R., Rosental, B., Aflalo, E. D. & Sagi, A., 14 Oct 2021, In: *Frontiers in Marine Science*. 8, 677679.

**Protandric Transcriptomes to Uncover Parts of the Crustacean Sex-Differentiation Puzzle**

Levy, T., Zupo, V., Mutalipassi, M., Somma, E., Ruocco, N., Costantini, M., Abehsera, S., Manor, R., Chalifa-Caspi, V., Sagi, A. & Aflalo, E. D., 8 Oct 2021, In: *Frontiers in Marine Science*. 8, 745540.

**The crustacean androgen: a hormone in an isopod and androgenic activity in decapods'**

Sagi, A. & Khalaila, I., 1 Jun 2021, In: *American Zoologist*. 41, 3, p. 477-484 8 p.

**Transcriptome analysis reveals the endocrine regulation on the expression of *iag* in *Litopenaeus vannamei***

Chen, K., Li, S., Xiang, J., Sagi, A. & Li, F., 1 Jun 2021, In: *Journal of Marine Science and Engineering*. 9, 6, 677.

**Corrigendum: Sex-Biased CHHs and Their Putative Receptor Regulate the Expression of IAG Gene in the Shrimp *Litopenaeus vannamei* (Front. Physiol., (2019), 10, (1525), 10.3389/fphys.2019.01525)**

Guo, Q., Li, S., Lv, X., Xiang, J., Manor, R., Sagi, A. & Li, F., 31 May 2021, In: *Frontiers in Physiology*. 12, 705293.

**Transcriptional silencing of vitellogenesis-inhibiting and molt-inhibiting hormones in the giant freshwater prawn, *Macrobrachium rosenbergii*, and evaluation of the associated effects on ovarian development**

Cohen, S., Ilouz, O., Manor, R., Sagi, A. & Khalaila, I., 30 May 2021, In: *Aquaculture*. 538, 736540.

**Reinforcement of bio-apatite by zinc substitution in the incisor tooth of a prawn**

Bentov, S., Palmer, B. A., Bar-On, B., Shelef, Y., Aflalo, E. D. & Sagi, A., 15 Jan 2021, In: *Acta Biomaterialia*. 120, p. 116-123 8 p.

**The protandric life history of the Northern spot shrimp *Pandalus platyceros*: molecular insights and implications for fishery management**

Levy, T., Tamone, S. L., Manor, R., Bower, E. D. & Sagi, A., 1 Dec 2020, In: *Scientific Reports*. 10, 1, 1287.

**Two Homogametic Genotypes – One Crayfish: On the Consequences of Intersexuality**

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., 20 Nov 2020, In: *iScience*. 23, 11, 101652.

**From sporadic single genes to a broader transcriptomic approach: Insights into the formation of the biomineralized exoskeleton in decapod crustaceans**

Shaked, S. A., Abehsera, S., Levy, T., Chalifa-Caspi, V. & Sagi, A., 1 Nov 2020, In: Journal of Structural Biology. 212, 2, 107612.

**The IAG-Switch and Further Transcriptomic Insights Into Sexual Differentiation of a Protandric Shrimp**

Levy, T., Tamone, S. L., Manor, R., Aflalo, E. D., Sklarz, M. Y., Chalifa-Caspi, V. & Sagi, A., 28 Oct 2020, In: Frontiers in Marine Science. 7, 587454.

**Characterization and possible function of an enigmatic reflector in the eye of the shrimp: *Litopenaeus vannamei***

Schiffmann, N., Wormser, E. M., Brumfeld, V., Addadi, Y., Pinkas, I., Yallapragada, V. J., Aflalo, E. D., Sagi, A., Palmer, B. A., Weiner, S. & Addadi, L., 1 Oct 2020, In: Faraday Discussions. 223, p. 278-294 17 p.

**Hemocyanin modification of chitosan scaffolds with calcium phosphate phases increase the osteoblast/osteoclast activity ratio—A co-culture study**

Kruppke, B., Heinemann, C., Farack, J., Weil, S., Aflalo, E. D., Sagi, A. & Hanke, T., 1 Oct 2020, In: Molecules. 25, 19, 4580.

**The "IAG-Switch"—A Key Controlling Element in Decapod Crustacean Sex Differentiation**

Levy, T. & Sagi, A., 10 Sep 2020, In: Frontiers in Endocrinology. 11, 651.

**The iag gene in the invasive crayfish *procambarus clarkii* – towards sex manipulations for biocontrol and aquaculture**

Savaya, A., De Leo, G., Aalto, E., Levy, T., Rosen, O., Manor, R., Aflalo, E. D., Tricarico, E. & Sagi, A., 1 Jun 2020, In: Management of Biological Invasions. 11, 2, p. 237-258 22 p.

**Prawn monosex populations as biocontrol agents for snail vectors of fish parasites**

Savaya, A., Glassner, H., Livne-Luzon, S., Chishinski, R., Molcho, J., Aflalo, E. D., Zilberg, D. & Sagi, A., 15 Apr 2020, In: Aquaculture. 520, 735016.

**Crayfish hemocyanin on chitin bone substitute scaffolds promotes the proliferation and osteogenic differentiation of human mesenchymal stem cells**

Kruppke, B., Farack, J., Weil, S., Aflalo, E. D., Poláková, D., Sagi, A. & Hanke, T., 1 Mar 2020, In: Journal of Biomedical Materials Research - Part A. 108, 3, p. 694-708 15 p.

**A highly reflective biogenic photonic material from core-shell birefringent nanoparticles**

Palmer, B. A., Yallapragada, V. J., Schiffmann, N., Wormser, E. M., Elad, N., Aflalo, E. D., Sagi, A., Weiner, S., Addadi, L. & Oron, D., 1 Feb 2020, In: Nature Nanotechnology. 15, 2, p. 138-144 7 p.

**Three generations of prawns without the Z chromosome: Viable WW *Macrobrachium rosenbergii* all-female populations in polyculture with *Oreochromis niloticus***

Molcho, J., Levy, T., Benet, A., Naor, A., Savaya, A., Manor, R., Abramov, A., Aflalo, E. D., Shechter, A. & Sagi, A., 15 Jan 2020, In: Aquaculture. 515, 734531.

**Sex-Biased CHHs and Their Putative Receptor Regulate the Expression of IAG Gene in the Shrimp *Litopenaeus vannamei***

Guo, Q., Li, S., Lv, X., Xiang, J., Manor, R., Sagi, A. & Li, F., 20 Dec 2019, In: Frontiers in Physiology. 10, 1525.

**Penaeid shrimp genome provides insights into benthic adaptation and frequent molting**

Zhang, X., Yuan, J., Sun, Y., Li, S., Gao, Y., Yu, Y., Liu, C., Wang, Q., Lv, X., Zhang, X., Ma, K. Y., Wang, X., Lin, W., Wang, L., Zhu, X., Zhang, C., Zhang, J., Jin, S., Yu, K., Kong, J., & 13 others Xu, P., Chen, J., Zhang, H., Sorgeloos, P., Sagi, A., Alcivar-Warren, A., Liu, Z., Wang, L., Ruan, J., Chu, K. H., Liu, B., Li, F. & Xiang, J., 1 Dec 2019, In: Nature Communications. 10, 1, 356.

**Production of WW males lacking the masculine Z chromosome and mining the *Macrobrachium rosenbergii* genome for sex-chromosomes**

Levy, T., Rosen, O., Manor, R., Dotan, S., Azulay, D., Abramov, A., Sklarz, M. Y., Chalifa-Caspi, V., Baruch, K., Shechter, A. & Sagi, A., 1 Dec 2019, In: Scientific Reports. 9, 1, 12408.

**Screening for Dmrt genes from embryo to mature *Macrobrachium rosenbergii* prawns**

Amterat Abu Abayed, F., Manor, R., Aflalo, E. D. & Sagi, A., 1 Oct 2019, In: General and Comparative Endocrinology. 282, 113205.

**Modelled effects of prawn aquaculture on poverty alleviation and schistosomiasis control**

Hoover, C. M., Sokolow, S. H., Kemp, J., Sanchirico, J. N., Lund, A. J., Jones, I. J., Higginson, T., Riveau, G., Savaya, A., Coyle, S., Wood, C. L., Micheli, F., Casagrandi, R., Mari, L., Gatto, M., Rinaldo, A., Perez-Saez, J., Rohr, J. R., Sagi, A., Remais, J. V., & 1 others De Leo, G. A., 1 Jul 2019, In: Nature Sustainability. 2, 7, p. 611-620 10 p.

**CPAP3 proteins in the mineralized cuticle of a decapod crustacean**

Abehsera, S., Zaccai, S., Mittelman, B., Glazer, L., Weil, S., Khalaila, I., Davidov, G., Bitton, R., Zarivach, R., Li, S., Li, F., Xiang, J., Manor, R., Aflalo, E. D. & Sagi, A., 1 Dec 2018, In: Scientific Reports. 8, 1, 2430.

**The search for proteins involved in the formation of crustacean cuticular structures**

Abehsera, S., Weil, S., Manor, R. & Sagi, A., 1 Dec 2018, In: Hydrobiologia. 825, 1, p. 29-45 17 p.

**A Putative Insulin-like Androgenic Gland Hormone Receptor Gene Specifically Expressed in Male Chinese Shrimp**

Guo, Q., Li, S., Lv, X., Xiang, J., Sagi, A., Manor, R. & Li, F., 1 May 2018, In: Endocrinology. 159, 5, p. 2173-2185 13 p.

**Optically functional isoxanthopterin crystals in the mirrored eyes of decapod crustaceans**

Palmer, B. A., Hirsch, A., Brumfeld, V., Aflalo, E. D., Pinkas, I., Sagi, A., Rosenne, S., Oron, D., Leiserowitz, L., Kronik, L., Weiner, S. & Addadi, L., 6 Mar 2018, In: Proceedings of the National Academy of Sciences of the United States of America. 115, 10, p. 2299-2304 6 p.

**Exploitation of reproductive barriers between *Macrobrachium* species for responsible aquaculture and biocontrol of schistosomiasis in West Africa**

Savaya-Alkalay, A., Ndao, P. D., Jouanard, N., Diane, N., Aflalo, E. D., Barki, A. & Sagi, A., 1 Jan 2018, In: Aquaculture Environment Interactions. 10, p. 487-499 13 p.

**Size-selective predation by all-male prawns: implications for sustainable biocontrol of snail invasions**

Savaya-Alkalay, A., Ovadia, O., Barki, A. & Sagi, A., 1 Jan 2018, In: Biological Invasions. 20, 1, p. 137-149 13 p.

**Calculating the Structure of Isoxanthopterin Crystals, Efficient Reflectors in the Crustacean Eyes**

Hirsch, A., Palmer, B., Brumfeld, V., Aflalo, D., Sagi, A., Pinkas, I., Oron, D., Weiner, S., Addadi, L., Leiserowitz, L. & Kronik, L., 2018, *APS March Meeting 2018*.

**Sex Control in Cultured Decapod Crustaceans**

Levy, T., Aflalo, E. D. & Sagi, A., 2018, *Sex Control in Aquaculture*. Wang, H-P., Piferrer, F., Chen, S-L. & Shen, Z-G. (eds.). Wiley-Blackwell, p. 689-704 14 p.

**Insulin-Like Gene in Prawns and Uses Thereof**

Amir, S. & Tomer, V., 31 Dec 2017, Patent No. IL207388, Priority date 3 Aug 2010, Priority No. IL20100207388

**Short versus long double-stranded RNA activation of a post-transcriptional gene knockdown pathway**

Shpak, N., Manor, R., Abilevich, L. K., Mantal, O., Shavit, K., Aflalo, E. D., Toiber, D. & Sagi, A., 2 Dec 2017, In: RNA Biology. 14, 12, p. 1766-1775 10 p.

**The gene encoding the insulin-like androgenic gland hormone in an all-female parthenogenetic crayfish**

Levy, T., Rosen, O., Simons, O., Alkalay, A. S. & Sagi, A., 1 Dec 2017, In: PLoS ONE. 12, e0189982.

**All-female monosex culture in the freshwater prawn *Macrobrachium rosenbergii* – A comparative large-scale field study**

Levy, T., Rosen, O., Eilam, B., Azulay, D., Zohar, I., Aflalo, E. D., Benet, A., Naor, A., Shechter, A. & Sagi, A., 1 Oct 2017, In: Aquaculture. 479, p. 857-862 6 p.

**In Situ Crosslinking of Highly Porous Chitosan Scaffolds for Bone Regeneration: Production Parameters and In Vitro Characterization**

Kruppke, B., Farack, J., Sommer, F., Weil, S., Aflalo, E. D., Wiesmann, H. P., Sagi, A. & Hanke, T., 1 Oct 2017, In: *Macromolecular Materials and Engineering*. 302, 10, 1700147.

**MARS: A protein family involved in the formation of vertical skeletal elements**

Abehsera, S., Peles, S., Tynyakov, J., Bentov, S., Aflalo, E. D., Li, S., Li, F., Xiang, J. & Sagi, A., 1 May 2017, In: *Journal of Structural Biology*. 198, 2, p. 92-102 11 p.

**Implant recognition and gender expression following ampoule-androgenic gland implantation in *Litopenaeus vannamei* females (Penaeidae)**

Vega-Alpizar, J. L., Alfaro-Montoya, J., Hernández-Noguera, L., Umaña-Castro, R., Aflalo, E. D. & Sagi, A., 1 Feb 2017, In: *Aquaculture*. 468, p. 471-480 10 p.

**Three generations of cultured prawn without W chromosome**

Shpak, N., Manor, R., Aflalo, E. D. & Sagi, A., 20 Jan 2017, In: *Aquaculture*. 467, p. 41-48 8 p.

**A Single Injection of Hypertrophied Androgenic Gland Cells Produces All-Female Aquaculture**

Levy, T., Rosen, O., Eilam, B., Azulay, D., Aflalo, E. D., Manor, R., Shechter, A. & Sagi, A., 1 Oct 2016, In: *Marine Biotechnology*. 18, 5, p. 554-563 10 p.

**The mineralized exoskeletons of crustaceans**

Bentov, S., Abehsera, S. & Sagi, A., 12 Sep 2016, *Extracellular Composite Matrices in Arthropods*. Springer International Publishing, p. 137-163 27 p.

**Production of recombinant insulin-like androgenic gland hormones from three decapod species: In vitro testicular phosphorylation and activation of a newly identified tyrosine kinase receptor from the Eastern spiny lobster, *Sagmariasus verreauxi***

Aizen, J., Chandler, J. C., Fitzgibbon, Q. P., Sagi, A., Battaglione, S. C., Elizur, A. & Ventura, T., 1 Apr 2016, In: *General and Comparative Endocrinology*. 229, p. 8-18 11 p.

**Calcium phosphate mineralization is widely applied in crustacean mandibles**

Bentov, S., Aflalo, E. D., Tynyakov, J., Glazer, L. & Sagi, A., 24 Feb 2016, In: *Scientific Reports*. 6, 22118.

**Identification and characterization of an insulin-like receptor involved in crustacean reproduction**

Sharabi, O., Manor, R., Weil, S., Aflalo, E. D., Lezer, Y., Levy, T., Aizen, J., Ventura, T., Mather, P. B., Khalaila, I. & Sagi, A., 1 Feb 2016, In: *Endocrinology*. 157, 2, p. 928-941 14 p.

**Biotechnology, biocontrol and conservation: Potential approaches-harnessing RNAi-based sex-differentiation manipulations in decapods**

Savaya-Alkalay, A. & Sagi, A., 1 Jan 2016, *A Global Overview of the Conservation of Freshwater Decapod Crustaceans*. Springer International Publishing, p. 323-338 16 p.

**A crayfish molar tooth protein with putative mineralized exoskeletal chitinous matrix properties**

Tynyakov, J., Bentov, S., Abehsera, S., Yehezkel, G., Roth, Z., Khalaila, I., Weil, S., Berman, A., Plaschkes, I., Tom, M., Aflalo, E. D. & Sagi, A., 1 Nov 2015, In: *Journal of Experimental Biology*. 218, 21, p. 3487-3498 12 p.

**Exoskeletons across the pancrustacea: Comparative morphology, physiology, biochemistry and genetics**

Roer, R., Abehsera, S. & Sagi, A., 1 Nov 2015, In: *Integrative and Comparative Biology*. 55, 5, p. 771-791 21 p.

**Proteomic analysis of the crayfish gastrolith chitinous extracellular matrix reveals putative protein complexes and a central role for GAP 65**

Glazer, L., Roth, Z., Weil, S., Aflalo, E. D., Khalaila, I. & Sagi, A., 14 Oct 2015, In: *Journal of Proteomics*. 128, p. 333-343 11 p.

**Erratum: Binary gene expression patterning of the molt cycle: The case of chitin metabolism**

Abehsera, S., Glazer, L., Tynyakov, J., Plaschkes, I., Chalifa-Caspi, V., Khalaila, I., Aflalo, E. D. & Sagi, A., 12 Jun 2015, In: PLoS ONE. 10, 6, e0130787.

**A novel chitin binding crayfish molar tooth protein with elasticity properties**

Tynyakov, J., Bentov, S., Abehsera, S., Khalaila, I., Manor, R., Katzir Abilevich, L., Weil, S., Aflalo, E. D. & Sagi, A., 26 May 2015, In: PLoS ONE. 10, 5, e0127871.

**Binary gene expression patterning of the molt cycle: The case of chitin metabolism**

Abehsera, S., Glazer, L., Tynyakov, J., Plaschkes, I., Chalifa-Caspi, V., Khalaila, I., Aflalo, E. D. & Sagi, A., 28 Apr 2015, In: PLoS ONE. 10, 4, e0122602.

**Identification and characterization of androgenic gland specific insulin-like peptide-encoding transcripts in two spiny lobster species: *Sagmariasus verreauxi* and *Jasus edwardsii***

Ventura, T., Fitzgibbon, Q., Battaglione, S., Sagi, A. & Elizur, A., 1 Apr 2015, In: General and Comparative Endocrinology. 214, p. 126-133 8 p.

**Binary patterning of chitin metabolism pathways in a crayfish: a tool for multi gene studies of the molt cycle in arthropods**

Abehsera, S., Glazer, L., Tynyakov, J., Plaschkes, I., Caspi, V., Khalaila, I., Aflalo, E. D. & Sagi, A., Apr 2015, In: Integrative and Comparative Biology. 55, p. E1-E1

**Stable amorphous calcium carbonate comprising phosphorylated amino acids, synthetic phosphorylated peptides and gastrolith proteins**

Amir, S., Amir, B. & Assaf, S., 31 Mar 2015, IPC No. C07K C I, Patent No. IL186850, Priority date 22 Oct 2007, Priority No. IL20070186850

**Layered growth of crayfish gastrolith: About the stability of amorphous calcium carbonate and role of additives**

Habraken, W. J. E. M., Masic, A., Bertinetti, L., Al-Sawalmih, A., Glazer, L., Bentov, S., Fratzi, P., Sagi, A., Aichmayer, B. & Berman, A., 1 Jan 2015, In: Journal of Structural Biology. 189, 1, p. 28-36 9 p.

**On the safety of RNAi usage in aquaculture: The case of all-male prawn stocks generated through manipulation of the insulin-like androgenic gland hormone**

Lezer, Y., Aflalo, E. D., Manor, R., Sharabi, O., Abilevich, L. K. & Sagi, A., 1 Jan 2015, In: Aquaculture. 435, p. 157-166 10 p.

**Use of crustacean gastrolith components or artificial mixture comprising calcium carbonate, chitin and polypeptide in the preparation of a medicament for treating conditions associated with calcium metabolism or calcium signaling**

Yosef, B. & Amir, S., 31 Dec 2014, Patent No. IL178495, Priority date 5 Oct 2006, Priority No. IL20060178495

**Expression of cytoskeletal and molt-related genes is temporally scheduled in the hypodermis of the crayfish *Procambarus clarkii* during premolt**

Tom, M., Manfrin, C., Chung, S. J., Sagi, A., Gerdol, M., De Moro, G., Pallavicini, A. & Giulianini, P. G., 1 Dec 2014, In: Journal of Experimental Biology. 217, 23, p. 4193-4202 10 p.

**Increased calcium absorption from synthetic stable amorphous calcium carbonate: Double-blind randomized crossover clinical trial in postmenopausal women**

Vaisman, N., Shaltiel, G., Daniely, M., Meiron, O. E., Shechter, A., Abrams, S. A., Niv, E., Shapira, Y. & Sagi, A., 1 Oct 2014, In: Journal of Bone and Mineral Research. 29, 10, p. 2203-2209 7 p.

**The Prawn *Macrobrachium vollehovenii* in the Senegal River Basin: Towards Sustainable Restocking of All-Male Populations for Biological Control of Schistosomiasis**

Savaya Alkalay, A., Rosen, O., Sokolow, S. H., Faye, Y. P. W., Faye, D. S., Aflalo, E. D., Jouanard, N., Zilberg, D., Huttlinger, E. & Sagi, A., 28 Aug 2014, In: PLoS Neglected Tropical Diseases. 8, 8, e3060.

**Neo-females production and all-male progeny of a cross between two Indian strains of prawn (*Macrobrachium rosenbergii*): Population structure and growth performance under different harvest strategies**

Aflalo, E. D., Dandu, R. V. S. N., Verghese, J. T., Rao, N., Samraj, T. Y. C., Ovadia, O. & Sagi, A., 20 May 2014, In: Aquaculture. 428-429, p. 7-15 9 p.

**Stable amorphous calcium carbonate comprising phosphorylated amino acids and use thereof in pharmaceutical and nutraceutical formulations**

Amir, S., Amir, B. & Shmuel, B., 27 Feb 2014, Patent No. IL193461, Priority date 14 Aug 2008, Priority No. IL20080193461

**One precursor, three apolipoproteins: The relationship between two crustacean lipoproteins, the large discoidal lipoprotein and the high density lipoprotein/ $\beta$ -glucan binding protein**

Roth, Z., Sagi, A. & Khalaila, I., 1 Jan 2014, In: Biochimica et Biophysica Acta - Molecular and Cell Biology of Lipids. 1841, 12, p. 1700-1708 9 p.

**Sustainable Aquaculture Using Temporal RNA Interference in Crustaceans: The Case of the Insulin-like Androgenic Gland Hormone and Prawn Monosex Culture**

AFLALO, ELIAHU. D. & SAGI, AMIR., 2014, *Biotechnology : Animal Biotechnology*. Govil, J. N. (ed.). Studium press LLC, Vol. 1. p. 319-332

**Composition Comprising Crustacean Gastrolith Components, Calcium Carbonate and its Use**

Yossi, B. & Amir, S., 27 Dec 2013, IPC No. C07K 14/ 435 A I, Patent No. PT2068891E, Priority date 5 Oct 2006, Priority No. IL20060178495

**Gene Silencing in Crustaceans: From Basic Research to Biotechnologies**

Sagi, A., Manor, R. & Ventura, T., 1 Dec 2013, In: Genes. 4, 4, p. 620-645 26 p.

**Epidermal growth factor receptor in the prawn *Macrobrachium rosenbergii*: Function and putative signaling cascade**

Sharabi, O., Ventura, T., Manor, R., Aflalo, E. D. & Sagi, A., 1 Sep 2013, In: Endocrinology. 154, 9, p. 3188-3196 9 p.

**A crayfish insulin-like-binding protein: Another piece in the androgenic gland insulin-like hormone puzzle is revealed**

Rosen, O., Weil, S., Manor, R., Roth, Z., Khalaila, I. & Sagi, A., 2 Aug 2013, In: Journal of Biological Chemistry. 288, 31, p. 22289-22298 10 p.

**An androgenic gland membrane-anchored gene associated with the crustacean insulin-like androgenic gland hormone**

Rosen, O., Manor, R., Weil, S., Aflalo, E. D., Bakhrat, A., Abdu, U. & Sagi, A., 1 Jun 2013, In: Journal of Experimental Biology. 216, 11, p. 2122-2128 7 p.

**Identification of receptor-interacting regions of vitellogenin within evolutionarily conserved  $\beta$ -sheet structures by using a peptide array**

Roth, Z., Weil, S., Aflalo, E. D., Manor, R., Sagi, A. & Khalaila, I., 1 Jun 2013, In: ChemBioChem. 14, 9, p. 1116-1122 7 p.

**Hemocyanin with phenoloxidase activity in the chitin matrix of the crayfish gastrolith**

Glazer, L., Tom, M., Weil, S., Roth, Z., Khalaila, I., Mittelman, B. & Sagi, A., 1 May 2013, In: Journal of Experimental Biology. 216, 10, p. 1898-1904 7 p.

**Post-Embryonic Transcriptomes of the Prawn *Macrobrachium rosenbergii*: Multigenic Succession through Metamorphosis**

Ventura, T., Manor, R., Aflalo, E. D., Chalifa-Caspi, V., Weil, S., Sharabi, O. & Sagi, A., 30 Jan 2013, In: PLoS ONE. 8, 1, e55322.

**Bone Loss Prevention in ovariectomized rats using stable amorphous calcium carbonate**

Shaltiel, G., Bar-David, E., Meiron, O. E., Waltman, E., Shechter, A., Aflalo, E. D., Stepensky, D., Berman, A., Martin, B. R., Weaver, C. M. & Sagi, A., 2013, In: Health. 5, 7B, p. 18-29 12 p.

**Monosex culture of prawns through androgenic gene silencing**

Sagi, A., 2013, In: Infofish International. 1, 2013, p. 22-24 3 p.

**Novel chitin binding proteins with suggested role in organization of a crustacean cuticular chitinous extracellular matrix**

Mittelman, B., Glazer, L., Weil, S., Gafni, O., Khalaila, I., Tom, M., Davidov, G., Zarivach, R. & Sagi, A., 2013, p. E147-E147.

**The insulin-like androgenic gland hormone in crustaceans: From a single gene silencing to a wide array of sexual manipulation-based biotechnologies**

Ventura, T. & Sagi, A., 1 Nov 2012, In: Biotechnology Advances. 30, 6, p. 1543-1550 8 p.

**Enamel-like apatite crown covering amorphous mineral in a crayfish mandible**

Bentov, S., Zaslansky, P., Al-Sawalimh, A., Masic, A., Fratzi, P., Sagi, A., Berman, A. & Aichmayer, B., 17 Oct 2012, In: Nature Communications. 3, 839.

**Stimulation of molt by RNA interference of the molt-inhibiting hormone in the crayfish *Cherax quadricarinatus***

Pamuru, R. R., Rosen, O., Manor, R., Chung, J. S., Zmora, N., Glazer, L., Aflalo, E. D., Weil, S., Tamone, S. L. & Sagi, A., 1 Sep 2012, In: General and Comparative Endocrinology. 178, 2, p. 227-236 10 p.

**On the involvement of proteins in the assembly of the crayfish gastrolith extracellular matrix**

Glazer, L. & Sagi, A., 2 Jul 2012, In: Invertebrate Reproduction and Development. 56, 1, p. 57-65 9 p.

**Novel molt-related hemocyanin family proteins from extracellular matrix of crustacean gastroliths**

Glazer, L., Weil, S., Mittelman, B., Roth, Z., Khalaila, I. & Sagi, A., Apr 2012, In: Integrative and Comparative Biology. 52, p. E66-E66

**The identification of Cq-MAG, a novel androgenic gland-specific gene encoding a putative crustacean membrane-anchored protein**

Rosen, O., Manor, R., Weil, S., Aflalo, E. D., Abdu, U. & Sagi, A., Apr 2012, In: Integrative and Comparative Biology. 52, p. E149-E149

**Toward a sustainable production of genetically improved all-male prawn (*Macrobrachium rosenbergii*): Evaluation of production traits and obtaining neo-females in three Indian strains**

Aflalo, E. D., Raju, D. V. S. N., Bommi, N. A., Verghese, J. T., Samraj, T. Y. C., Hulata, G., Ovadia, O. & Sagi, A., 29 Mar 2012, In: Aquaculture. 338-341, p. 197-207 11 p.

**Timing sexual differentiation: Full functional sex reversal achieved through silencing of a single insulin-like gene in the prawn, *Macrobrachium rosenbergii***

Ventura, T., Manor, R., Aflalo, E. D., Weil, S., Rosen, O. & Sagi, A., 1 Mar 2012, In: Biology of Reproduction. 86, 3, 90.

**Isolation and characterization of a female-specific DNA marker in the giant freshwater prawn *Macrobrachium rosenbergii***

Ventura, T., Aflalo, E. D., Weil, S., Kashkush, K. & Sagi, A., 1 Nov 2011, In: Heredity. 107, 5, p. 456-461 6 p.

**In situ molecular NMR picture of bioavailable calcium stabilized as amorphous CaCO<sub>3</sub> biomineral in crayfish gastroliths**

Akiva-Tal, A., Kababya, S., Balazs, Y. S., Glazer, L., Berman, A., Sagi, A. & Schmidt, A., 6 Sep 2011, In: Proceedings of the National Academy of Sciences of the United States of America. 108, 36, p. 14763-14768 6 p.

**Isolation and characterization of the complete cDNA sequence encoding a putative insulin-like peptide from the androgenic gland of *Penaeus monodon***

Mareddy, V. R., Rosen, O., Thaggard, H. B., Manor, R., Kuballa, A. V., Aflalo, E. D., Sagi, A., Paterson, B. & Elizur, A., 8 Aug 2011, In: Aquaculture. 318, 3-4, p. 364-370 7 p.



**Expression of an Androgenic Gland-Specific Insulin-Like Peptide during the Course of Prawn Sexual and Morphotypic Differentiation**

Ventura, T., Manor, R., Aflalo, E. D., Weil, S., Khalaila, I., Rosen, O. & Sagi, A., 11 Apr 2011, In: ISRN Endocrinology. 2011, p. 1-11 11 p.

**Insulin-like gene in prawns and uses thereof**

Sagi, A. & Ventura, T., 23 Feb 2011, IPC No. C07K 14/ 62 A I, Patent No. CN101981046, Priority date 4 Feb 2009, Priority No. WO2009IL00127

**Stable amorphous calcium carbonate comprising phosphorylated amino acids, synthetic phosphorylated peptides, and gastrolith proteins**

Bentov, S., Sagi, A., Berman, A. & Shechter, A., 9 Feb 2011, IPC No. C07K 14/ 435 A I, Patent No. CN101969962, Priority date 22 Oct 2008, Priority No. WO2008IL01362

**Solubility and bioavailability of stabilized amorphous calcium carbonate**

Meiron, O. E., Bar-David, E., Aflalo, E. D., Shechter, A., Stepensky, D., Berman, A. & Sagi, A., 1 Feb 2011, In: Journal of Bone and Mineral Research. 26, 2, p. 364-372 9 p.

**Cloning of an insulin-like androgenic gland factor (IAG) from the blue crab, *Callinectes sapidus*: Implications for eyestalk regulation of IAG expression**

Chung, J. S., Manor, R. & Sagi, A., 1 Jan 2011, In: General and Comparative Endocrinology. 173, 1, p. 4-10 7 p.

**From the discovery of the crustacean androgenic gland to the insulin-like hormone in six decades**

Ventura, T., Rosen, O. & Sagi, A., 1 Jan 2011, In: General and Comparative Endocrinology. 173, 3, p. 381-388 8 p.

**A sexual shift induced by silencing of a single insulin-like gene in crayfish: Ovarian upregulation and testicular degeneration**

Rosen, O., Manor, R., Weil, S., Gafni, O., Linial, A., Aflalo, E. D., Ventura, T. & Sagi, A., 20 Dec 2010, In: PLoS ONE. 5, 12, e15281.

**Stabilization of amorphous calcium carbonate by phosphate rich organic matrix proteins and by single phosphoamino acids**

Bentov, S., Weil, S., Glazer, L., Sagi, A. & Berman, A., 1 Aug 2010, In: Journal of Structural Biology. 171, 2, p. 207-215 9 p.

**A protein involved in the assembly of an extracellular calcium storage matrix**

Glazer, L., Shechter, A., Tom, M., Yudkovski, Y., Weil, S., Aflalo, E. D., Pamuru, R. R., Khalaila, I., Bentov, S., Berman, A. & Sagi, A., 23 Apr 2010, In: Journal of Biological Chemistry. 285, 17, p. 12831-12839 9 p.

**Multi-transcript expression patterns in the gastrolith disk and the hypodermis of the crayfish *Cherax quadricarinatus* at premolt**

Yudkovski, Y., Glazer, L., Shechter, A., Reinhardt, R., Chalifa-Caspi, V., Sagi, A. & Tom, M., 1 Jan 2010, In: Comparative Biochemistry and Physiology - Part D: Genomics and Proteomics. 5, 2, p. 171-177 7 p.

**N-glycan moieties of the crustacean egg yolk protein and their glycosylation sites**

Roth, Z., Parnes, S., Wiel, S., Sagi, A., Zmora, N., Chung, J. S. & Khalaila, I., 1 Jan 2010, In: Glycoconjugate Journal. 27, 1, p. 159-169 11 p.

**Towards Monosex Culture of Prawns (Scampi): As a follow-up to the discovery of an androgenic gland specific insulin-like factor**

Ventura, T., Aflalo, ED. & Sagi, A., 2010, In: Fishing Chimes: a monthly Indian fisheries journal. 29, 10, p. 10-12 3 p.

**Composition comprising crustacean gastrolith components and its use**

Ben, Y. & Sagi, A., 21 Oct 2009, IPC No. C07K 14/ 435 A I, Patent No. CN101563091, Priority date 5 Oct 2006, Priority No. IL20060178495

### **The Biology and Management of Size Variation**

Karplus, I. & Sagi, A., 4 Sep 2009, *Freshwater Prawns: Biology and Farming*. New, M. B., Valenti, W. C., Tidwell, J. H., D'Abramo, L. R. & Kutty, M. N. (eds.). Wiley-Blackwell, p. 316-345 30 p.

### **Molt-inhibiting hormone stimulates vitellogenesis at advanced ovarian developmental stages in the female blue crab, *Callinectes sapidus* 2: Novel specific binding sites in hepatopancreas and cAMP as a second messenger**

Zmora, N., Sagi, A., Zohar, Y. & Chung, J. S., 18 Aug 2009, In: *Saline Systems*. 5, 1, 6.

### **Insulin-like gene of prawns and uses thereof**

Sagi, A., Ventura, T., Sagi, A. & Ventura, T., 13 Aug 2009, IPC No. C07K 14/ 62 A I, Patent No. AU2009211046, Priority date 4 Feb 2009, Priority No. WO2009IL00127

### **Temporal silencing of an androgenic gland-specific insulin-like gene affecting phenotypical gender differences and spermatogenesis**

Ventura, T., Manor, R., Aflalo, E. D., Weil, S., Raviv, S., Glazer, L. & Sagi, A., 1 Jan 2009, In: *Endocrinology*. 150, 3, p. 1278-1286 9 p.

### **A Novel Molt-related Protein with a Possible Role in the Formation of Crayfish Calcium Storage Deposits**

Glazer, L., Shechter, A., Berman, A., Weil, S., Aflalo, E. D., Yudkovski, Y., Tom, M. & Sagi, A., 2009, In: *Integrative and Comparative Biology*. 49, p. E63-E63

### **Future prospects of crustacean monosex culture: could giant prawn monosex culture benefit from the discovery of an insulin-like factor?**

Ventura, T., Aflalo, E. D. & Sagi, A., 2009, In: *Aquaculture Europe Magazine*. 34, 1, p. 30-31 2 p.

### **A novel approach to denitrification processes in a zero-discharge recirculating system for small-scale urban aquaculture**

Singer, A., Parnes, S., Gross, A., Sagi, A. & Brenner, A., 1 Nov 2008, In: *Aquacultural Engineering*. 39, 2-3, p. 72-77 6 p.

### **A gastrolith protein serving a dual role in the formation of an amorphous mineral containing extracellular matrix**

Shechter, A., Glazer, L., Cheled, S., Mor, E., Weil, S., Berman, A., Bentov, S., Aflalo, E. D., Khalaila, I. & Sagi, A., 20 May 2008, In: *Proceedings of the National Academy of Sciences of the United States of America*. 105, 20, p. 7129-7134 6 p.

### **Composition Comprising Crustacean Gastrolith Components, Calcium Carbonate and its Use**

Sagi, A. & Ben, Y., 10 Apr 2008, IPC No. C07K 14/ 435 A I, Patent No. AU2007303786, Priority date 7 Oct 2007, Priority No. WO2007IL01211

### **Orally-administrable compositions comprising stable amorphous calcium carbonate**

Sagi, A., Berman, A. & Ben, Y., 13 Feb 2008, IPC No. A61K 33/ 10 A I, Patent No. CN101123945, Priority date 26 May 2005, Priority No. WO2005IL00545

### **Coordination of Reproduction and Molt in Decapods**

Raviv, S., Parnes, S. & Sagi, A., 4 Jan 2008, *Reproductive Biology of Crustaceans: Case Studies of Decapod Crustaceans*. Mente, E. (ed.). CRC Press, p. 365-390 26 p.

### **Male Reproductive Hormones**

Chang, E. & Sagi, A., 4 Jan 2008, *Reproductive Biology of Crustaceans*. Bentham Science Publishers B.V., p. 299-317 19 p. (Reproductive Biology of Crustaceans).

### **Experimental evidence of a sex reversal process in the shrimp *hippolyte inermis***

Zupo, V., Messina, P., Carcaterra, A., Aflalo, E. D. & Sagi, A., 1 Jan 2008, In: *Invertebrate Reproduction and Development*. 52, 1-2, p. 93-100 8 p.

**Reciprocal changes in calcification of the gastrolith and cuticle during the molt cycle of the red claw crayfish *Cherax quadricarinatus***

Shechter, A., Berman, A., Singer, A., Freiman, A., Grinstein, M., Erez, J., Aflalo, E. D. & Sagi, A., 1 Jan 2008, In: Biological Bulletin. 214, 2, p. 122-134 13 p.

**Male and female reproduction in penaeid shrimps**

Parnes, S., Raviv, S. & Sagi, A., Jan 2008, *Reproductive Biology of Crustaceans: Case Studies of Decapod Crustaceans*. Mente, E. (ed.). 1st ed. CRC Press, p. 427-455 29 p.

**Hepatopancreatic multi-transcript expression patterns in the crayfish *Cherax quadricarinatus* during the moult cycle**

Yudkovski, Y., Shechter, A., Chalifa-Caspi, V., Auslander, M., Ophir, R., Dauphin-Villemant, C., Waterman, M., Sagi, A. & Tom, M., 1 Dec 2007, In: Insect Molecular Biology. 16, 6, p. 661-674 14 p.

**Search for hepatopancreatic ecdysteroid-responsive genes during the crayfish molt cycle: From a single gene to mutagenicity**

Shechter, A., Tom, M., Yudkovski, Y., Weil, S., Chang, S. A., Chang, E. S., Chalifa-Caspi, V., Berman, A. & Sagi, A., 1 Oct 2007, In: Journal of Experimental Biology. 210, 20, p. 3525-3537 13 p.

**Do benthic and planktonic diatoms produce equivalent effects in crustaceans?**

Zupo, V., Messina, P., Buttino, I., Sagi, A., Avila, C., Nappo, M., Bastida, J., Codina, C. & Zupo, S., 1 Sep 2007, In: Marine and Freshwater Behaviour and Physiology. 40, 3, p. 169-181 13 p.

**Characterization of a vasa-like gene from the Pacific white shrimp *Litopenaeus vannamei* and its expression during oogenesis**

Aflalo, E. D., Bakhrat, A., Raviv, S., Harari, D., Sagi, A. & Abdu, U., 1 Feb 2007, In: Molecular Reproduction and Development. 74, 2, p. 172-177

**Insulin and gender: An insulin-like gene expressed exclusively in the androgenic gland of the male crayfish**

Manor, R., Weil, S., Oren, S., Glazer, L., Aflalo, E. D., Ventura, T., Chalifa-Caspi, V., Lapidot, M. & Sagi, A., 15 Jan 2007, In: General and Comparative Endocrinology. 150, 2, p. 326-336 11 p.

**Dynamics of reproduction in a captive shrimp broodstock: Unequal contribution of the female shrimp and a hidden shortage in competent males**

Parnes, S., Raviv, S., Azulay, D. & Sagi, A., 1 Jan 2007, In: Invertebrate Reproduction and Development. 50, 1, p. 21-29 9 p.

**Males also have their time of the month! Cyclic disposal of old spermatophores, timed by the molt cycle, in a marine shrimp**

Parnes, S., Raviv, S., Shechter, A. & Sagi, A., 1 Dec 2006, In: Journal of Experimental Biology. 209, 24, p. 4974-4983 10 p.

**Characterization of glycan moieties in Vitellogenin of the freshwater prawn *Macrobrachium rosenbergii*, and bioinformatics comparison with other decapod crustaceans**

Roth, Z., Parnes, S., Weil, S., Sagi, A. & Khalaila, I., Nov 2006, In: Glycobiology. 16, 11, p. 1129-1129

**Intersexuality and behavior in crayfish: The de-masculinization effects of androgenic gland ablation**

Barki, A., Karplus, I., Manor, R. & Sagi, A., 1 Aug 2006, In: Hormones and Behavior. 50, 2, p. 322-331 10 p.

**A novel two-step procedure for mass production of all-male populations of the giant freshwater prawn *Macrobrachium rosenbergii***

Aflalo, E. D., Hoang, T. T. T., Nguyen, V. H., Lam, Q., Nguyen, D. M., Trinh, Q. S., Raviv, S. & Sagi, A., 15 Jun 2006, In: Aquaculture. 256, 1-4, p. 468-478 11 p.

**Growth of redclaw crayfish (*Cherax quadricarinatus*) in a three-dimensional compartments system: Does a neighbor matter?**

Barki, A., Karplus, I., Manor, R., Parnes, S., Aflalo, E. D. & Sagi, A., 10 Mar 2006, In: Aquaculture. 252, 2-4, p. 348-355 8 p.

**Complete sequence of *Litopenaeus vannamei* (Crustacea**

Raviv, S., Parnes, S., Segall, C., Davis, C. & Sagi, A., 1 Jan 2006, In: General and Comparative Endocrinology. 145, 1, p. 39-50 12 p.

**Orally-administrable compositions comprising stable amorphous calcium carbonate**

Amir, S., Yosef, B., Berman, A. & Ben, Y., 8 Dec 2005, IPC No. A61K 33/ 10 A I, Patent No. AU2005247198, Priority date 26 May 2005, Priority No. WO2005IL00545

**Expression of the reproductive female-specific vitellogenin gene in endocrinologically induced male and intersex *Cherax quadricarinatus* crayfish**

Shechter, A., Aflalo, E. D., Davis, C. & Sagi, A., 1 Jul 2005, In: Biology of Reproduction. 73, 1, p. 72-79 8 p.

**The androgenic gland and monosex culture of freshwater prawn *Macrobrachium rosenbergii* (De Man): A biotechnological perspective**

Sagi, A. & Aflalo, E. D., 15 Feb 2005, In: Aquaculture Research. 36, 3, p. 231-237 7 p.

**Structural characterization of the N-glycan moiety and site of glycosylation in vitellogenin from the decapod crustacean *Cherax quadricarinatus***

Khalaila, I., Peter-Katalinic, J., Tsang, C., Radcliffe, C. M., Aflalo, E. D., Harvey, D. J., Dwek, R. A., Rudd, P. M. & Sagi, A., 1 Sep 2004, In: Glycobiology. 14, 9, p. 767-774 8 p.

**Reproductive readiness of the shrimp *Litopenaeus vannamei* grown in a brackish water system**

Parnes, S., Mills, E., Segall, C., Raviv, S., Davis, C. & Sagi, A., 14 Jun 2004, In: Aquaculture. 236, 1-4, p. 593-606 14 p.

**Androgenic gland implantation promotes growth and inhibits vitellogenesis in *Cherax quadricarinatus* females held in individual compartments**

Manor, R., Aflalo, E. D., Segall, C., Weil, S., Azulay, D., Ventura, T. & Sagi, A., 1 Jan 2004, In: Invertebrate Reproduction and Development. 45, 2, p. 151-159 9 p.

**Culture of the crayfish *Cherax quadricarinatus* in an intensive growout separate cell system- is it feasible? B. Effects of cell size on all male culture yield**

Sagi, A., Manor, R., Aflalo, E. D., Segev, R. & Azulay, D., 2004, In: Fisheries and fish breeding in Israel. 35, 1, p. 621-631

**Sex determination in crayfish: Are intersex *Cherax quadricarinatus* (Decapoda, Parastacidae) genetically females?**

Parnes, S., Khalaila, I., Hulata, G. & Sagi, A., 1 Oct 2003, In: Genetical Research. 82, 2, p. 107-116 10 p.

**Male-like behavioral patterns and physiological alterations induced by androgenic gland implantation in female crayfish**

Barki, A., Karplus, I., Khalaila, I., Manor, R. & Sagi, A., 1 Jun 2003, In: Journal of Experimental Biology. 206, 11, p. 1791-1797 7 p.

**The influence of androgenic gland implantation on the agonistic behavior of female crayfish (*Cherax quadricarinatus*) in interactions with males**

Karplus, I., Sagi, A., Khalaila, I. & Barki, A., 1 May 2003, In: Behaviour. 140, 5, p. 649-663 15 p.

**The soft red patch of the Australian freshwater crayfish (*Cherax quadricarinatus* (von Martens)): A review and prospects for future research**

Karplus, I., Sagi, A., Khalaila, I. & Barki, A., 1 Apr 2003, In: Journal of Zoology. 259, 4, p. 375-379 5 p.

**Culture of the crayfish *Cherax quadricarinatus* in an intensive growout separate cell system- is it feasible? A. Differences in growth rate between genders.**

Sagi, A., Manor, R., Aflalo, E. D. & Azulay, D., 2003, In: Fisheries and fish breeding in Israel.

**Intensification of redclaw crayfish *Cherax quadricarinatus* culture: II. Growout in a separate cell system**

Manor, R., Segev, R., Leibovitz, M. P., Aflalo, E. D. & Sagi, A., 1 Nov 2002, In: Aquacultural Engineering. 26, 4, p. 263-276 14 p.

**Intensification of redclaw crayfish *Cherax quadricarinatus* culture I. Hatchery and nursery system**

Parnes, S. & Sagi, A., 1 Nov 2002, In: Aquacultural Engineering. 26, 4, p. 251-262 12 p.

**On intersexuality in the crayfish *Cherax quadricarinatus*: An inducible sexual plasticity model**

Sagi, A., Manor, R., Segall, C., Davis, C. & Khalaila, I., 1 Jan 2002, In: Invertebrate Reproduction and Development. 41, 1-3, p. 27-33 7 p.

**The eyestalk-androgenic gland-testis endocrine axis in the crayfish *Cherax quadricarinatus***

Khalaila, I., Manor, R., Weil, S., Granot, Y., Keller, R. & Sagi, A., 1 Jan 2002, In: General and Comparative Endocrinology. 127, 2, p. 147-156 10 p.

**The vitellogenin cDNA of *Cherax quadricarinatus* encodes a lipoprotein with calcium binding ability, and its expression is induced following the removal of the androgenic gland in a sexually plastic system**

Abdu, U., Davis, C., Khalaila, I. & Sagi, A., 1 Jan 2002, In: General and Comparative Endocrinology. 127, 3, p. 263-272

**The vitellogenin gene in the crayfish *Cherax quadricarinatus*: expression and encoded proteins**

Sagi, A., Khalaila, I., Aflalo, E., Peter-Katalinic, J., Abdu, U. & Davis, C., 2002, In: Integrative and Comparative Biology. 42, 6, p. 1304-1304

**Physiological effects of methyl farnesoate and pyriproxyfen on wintering female crayfish *Cherax quadricarinatus***

Abdu, U., Barki, A., Karplus, I., Barel, S., Takac, P., Yehezkel, G., Laufer, H. & Sagi, A., 19 Oct 2001, In: Aquaculture. 202, 1-2, p. 163-175 13 p.

**Is the unique negatively charged polypeptide of crayfish yolk HDL a component of crustacean vitellin?**

Abdu, U., Yehezkel, G., Weil, S., Ziv, T. & Sagi, A., 1 Aug 2001, In: Journal of Experimental Zoology. 290, 3, p. 218-226

**Effects of implantation of hypertrophied androgenic glands on sexual characters and physiology of the reproductive system in the female red claw crayfish, *Cherax quadricarinatus***

Khalaila, I., Katz, T., Abdu, U., Yehezkel, G. & Sagi, A., 1 Jan 2001, In: General and Comparative Endocrinology. 121, 3, p. 242-249 8 p.

**Changes in protein kinase C during vitellogenesis in the crayfish *Cherax quadricarinatus* - Possible activation by methyl farnesoate**

Soroka, Y., Sagi, A., Khalaila, I., Abdu, U. & Milner, Y., 1 Jan 2000, In: General and Comparative Endocrinology. 118, 2, p. 200-208 9 p.

**High-density lipoprotein associated with secondary vitellogenesis in the hemolymph of the crayfish *Cherax quadricarinatus***

Yehezkel, G., Chayoth, R., Abdu, U., Khalaila, I. & Sagi, A., 1 Jan 2000, In: Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology. 127, 3, p. 411-421 11 p.

**Oocyte development and polypeptide dynamics during ovarian maturation in the red-claw crayfish *Cherax quadricarinatus***

Abdu, U., Yehezkel, G. & Sagi, A., 1 Jan 2000, In: Invertebrate Reproduction and Development. 37, 1, p. 75-83 9 p.

**The hepatopancreas as a site of yolk protein synthesis in the prawn *Macrobrachium rosenbergii***

Soroka, Y., Milner, Y. & Sagi, A., 1 Jan 2000, In: Invertebrate Reproduction and Development. 37, 1, p. 61-68 8 p.

**The Biology and Management of Size Variation**

Karplus, I., Malecha, S. R. & Sagi, A., 2000, *Freshwater Prawn Culture: The Farming of Macrobrachium Rosenbergii*. New, M. B. & Valenti, W. C. (eds.). Wiley-Blackwell, p. 259-289 31 p.

**Endocrine balance between male and female components of the reproductive system in intersex *Cherax quadricarinatus* (Decapoda)**

Khalaila, I., Weil, S. & Sagi, A., 15 Feb 1999, In: Journal of Experimental Zoology. 283, 3, p. 286-294 9 p.

**A newly established ELISA showing the effect of the androgenic gland on secondary-vitellogenic-specific protein in the hemolymph of the crayfish *Cherax quadricarinatus***

Sagi, A., Khalaila, I., Abdu, U., Shoukrun, R. & Weil, S., 1 Jan 1999, In: General and Comparative Endocrinology. 115, 1, p. 37-45 9 p.

**Culture of the Australian red-claw crayfish (*Cherax quadricarinatus*) in Israel III. Survival in earthen ponds under ambient winter temperatures**

Karplus, I., Zoran, M., Milstein, A., Harpaz, S., Eran, Y., Joseph, D. & Sagi, A., 15 Jul 1998, In: Aquaculture. 166, 3-4, p. 259-267 9 p.

**Administration of methyl farnesoate through the artemia vector, and its effect on *Macrobrachium rosenbergii* larvae**

Abdu, U., Takac, P., Yehezkel, G., Chayoth, R. & Sagi, A., 1 Jun 1998, In: Israeli Journal of Aquaculture - Bamidgeh. 50, 2, p. 73-81

**Comparative study of effects of prostaglandin E<sub>2</sub> on cAMP levels in gonads of the prawn *Macrobrachium rosenbergii* and the crayfish *Cherax quadricarinatus***

Silkovsky, J., Chayoth, R. & Sagi, A., 1 Jan 1998, In: Journal of Crustacean Biology. 18, 4, p. 643-649 7 p.

**Effect of methyl farnesoate on late larval development and metamorphosis in the prawn *Macrobrachium rosenbergii* (Decapoda, Palaemonidae): A juvenoid-like effect?**

Abdu, U., Takac, P., Laufer, H. & Sagi, A., 1 Jan 1998, In: Biological Bulletin. 195, 2, p. 112-119 8 p.

**Culture of the Australian red-claw crayfish (*Cherax quadricarinatus*) in Israel: II. Second growout season of overwintered populations**

Sagi, A., Milstein, A., Eran, Y., Joseph, D., Khalaila, I., Abdu, U., Harpaz, S. & Karplus, I., 1 Dec 1997, In: Israeli Journal of Aquaculture - Bamidgeh. 49, 4, p. 222-229

**Reproduction and molt in previously spawned and first-time spawning red-claw crayfish *Cherax quadricarinatus* females following eyestalk ablation during the winter reproductive-arrest period**

Sagi, A., Shoukrun, R., Levy, T., Barki, A., Hulata, G. & Karplus, I., 14 Oct 1997, In: Aquaculture. 156, 1-2, p. 101-111 11 p.

**Sexual differentiation in decapod crustaceans: Role of the androgenic gland**

Sagi, A., Snir, E. & Khalaila, I., 1 Jan 1997, In: Invertebrate Reproduction and Development. 31, 1-3, p. 55-61 7 p.

**Intersexuality and its Control by the Androgenic Gland in the Crayfish *Cherax quadricarinatus***

Khalaila, I. & Sagi, A., 1997, In: Journal of Reproduction and Development. 43, p. 69-70 2 p.

**Gonad maturation, morphological and physiological changes during the first reproductive cycle of the crayfish *Cherax quadricarinatus* female**

Sagi, A., Shoukrun, R., Khalaila, I. & Rise, M., 1 Jan 1996, In: Invertebrate Reproduction and Development. 29, 3, p. 235-242 8 p.

**Intersex red claw crayfish, *Cherax quadricarinatus* (von Martens): Functional Males with Pre-vitellogenic Ovaries**

Sagi, A., Khalaila, I., Barki, A., Hulata, G. & Karplus, I., 1 Jan 1996, In: Biological Bulletin. 190, 1, p. 16-23 8 p.

**Prostaglandin E<sub>2</sub> in Previtellogenic Ovaries of the Prawn *Macrobrachium rosenbergii*: Synthesis and Effect on the Level of cAMP**

Sagi, A., Silkovsky, J., Fleisher-Berkovich, S., Danon, A. & Chayoth, R., 1 Dec 1995, In: General and Comparative Endocrinology. 100, 3, p. 308-313 6 p.

**Carotenoids and their derivatives in organs of the maturing female crayfish *Cherax quadricarinatus***

Sagi, A., Rise, M., Khalaila, I. & Arad-Malis, S., 1 Jan 1995, In: Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology. 112, 2, p. 309-313 5 p.

**Ovarian protein synthesis in the prawn *Macrobrachium rosenbergii*. Does ovarian vitellin synthesis exist?**

Sagi, A., Soroka, Y., Snir, E., Chomsky, O., Milner, Y. & Calderon, J., 1 Jan 1995, In: Invertebrate Reproduction and Development. 27, 1, p. 41-47 7 p.

**Effects of androgenic gland ablation on somatic growth and sex reversal in *Macrobrachium rosenbergii* (de Man) males**

Sagi, A., Snir, E. & Zimmermann, S., 1995, In: Revista da Sociedade Brasileira de Zootecnia. 24, p. 300-309 10 p.

**Stimulation of pre-vitellogenic ovaries in crustaceans: a possible role for a juvenile hormone-like compound**

Sagi, A. & Soroka, Y., 1995, *Memorias II Congreso Ecuatoriano de Acuicultura*. Calderon, J. & Sorgeloos, P. (eds.). ESPOL, Ecuador, p. 35-39

**Alternate mating strategies of polymorphic males of *Libinia emarginata* appear to depend on methyl farnesoate**

Laufer, H., Sagi, A. & Ahl, J. S. B., 1 Jan 1994, In: Invertebrate Reproduction and Development. 26, 1, p. 41-44 4 p.

**Methyl farnesoate levels in male spider crabs exhibiting active reproductive behavior**

Sagi, A., Ahl, J. S. B., Danaee, H. & Laufer, H., 1 Jan 1994, In: Hormones and Behavior. 28, 3, p. 261-272 12 p.

**The role of juvenile hormones in crustacean reproduction**

Laufer, H., Ahl, J. S. B. & Sagi, A., 1 Dec 1993, In: Integrative and Comparative Biology. 33, 3, p. 365-374 10 p.

**Estadios de muda en hembras adultas de *Penaeus vannamei***

Betancourt, I., Calderon, J. & Sagi, A., 1 Apr 1993, *Acuicultura Tropical*. AUTORES VARIOS CEL, Vol. 1. p. 13-15 3 p. (Aquaculture Tropical).

**Ecdysteroids and juvenoids in two male morphotypes of *Libinia emarginata***

Laufer, H., Wainwright, G., Young, N. J., Sagi, A., Ahl, J. S. B. & Rees, H. H., 1 Jan 1993, In: Insect Biochemistry and Molecular Biology. 23, 1, p. 171-174 4 p.

**Distinct reproductive types of male spider crabs *Libinia emarginata* differ in circulating and synthesizing methyl farnesoate**

Sagi, A., Homola, E. & Laufer, H., 1993, In: The Biological Bulletin. 185, 2, p. 168-173 6 p.

**Identification de los estadios de maduración ovarica**

Sagi, A., Calderon, J. & Betancourt, I., 1993, In: *Acuicultura Tropical*. 1, p. 23-26

**Methyl farnesoate appears to be a crustacean reproductive hormone**

Laufer, H., Sagi, A., Ahl, J. S. B. & Homola, E., 1 Jan 1992, In: Invertebrate Reproduction and Development. 22, 1-3, p. 17-20 4 p.

**Do juvenile hormone-like compounds in Crustacea have a role in the regulation of reproductive diapause?**

Sagi, A., Laufer, H. & Ahl, J. S. B., 1992, *Insect Juvenile Hormone Research: Fundamental and Applied Approaches*. Mauchamp, B., Couilland, F. & Baehr, J. C. (eds.). Institut National De La Recherche Agronomique, p. 119-123

**Gonad stimulation in Crustacea: an interspecies approach**

Sagi, A., 1992, *In Aquaculture and Schistosomiasis*. Harrison, B. A., Shay, E. G. & Ruskin, F. R. (eds.). Washington D.C.: National Academy Press, p. 47-55

**Juvenile Hormone-like compounds in Crustacea and their implications for reproductive behavior**

Sagi, A., Laufer, H. & Ahl, J. S. B., 1992, *Advances in regulation of insect reproduction*. Bennetova, B., Gelbic, I. & Soldan, T. (eds.). Ceske Budějovice Czech Acad. Sci., Inst. of Entomology, p. 153-156

Growth, size rank, and maturation of the freshwater prawn, *Macrobrachium rosenbergii*: analysis of marked prawns in an experimental population  
Ra'anan, Z., Sagi, A., Wax, Y., Karplus, I., Hulata, G. & Kuris, A., 1 Jan 1991, In: Biological Bulletin. 181, 3, p. 379-386 8 p.

Methyl farnesoate in the prawn *Macrobrachium rosenbergii*: Synthesis by the mandibular organ in vitro, and titers in the hemolymph  
Sagi, A., Homola, E. & Laufer, H., 1 Jan 1991, In: Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology. 99, 4, p. 879-882 4 p.

Relationship of claw form and exoskeleton condition to reproductive system size and methyl farnesoate in the male spider crab, *Libinia emarginata*  
Homola, E., Sagi, A. & Laufer, H., 1 Jan 1991, In: Invertebrate Reproduction and Development. 20, 3, p. 219-225 7 p.

Testicular thymidine incorporation in the prawn *Macrobrachium rosenbergii*: Molt cycle variation and ecdysteroid effects in vitro  
Sagi, A., Karp, L., Milner, Y., Cohen, D., Kuris, A. M. & Chang, E. S., 1 Jan 1991, In: Journal of Experimental Zoology. 259, 2, p. 229-237 9 p.

**Juvenile hormone-like compounds and reproduction in male and female crustaceans: with implications for aquaculture**  
Laufer, H. & Sagi, A., 1991, In: Bulletin of the Institute of Zoology, Academia Sinica. 16, p. 541-551 11 p.

Effect of androgenic gland ablation on morphotypic differentiation and sexual characteristics of male freshwater prawns, *Macrobrachium rosenbergii*  
Sagi, A., Cohen, D. & Milner, Y., 1 Jan 1990, In: General and Comparative Endocrinology. 77, 1, p. 15-22 8 p.

**Growth, maturation and progeny of sex-reversed**  
Sagi, A., 1990, In: World Aquaculture. 21, 4, p. 87-90

**Male reproduction in the freshwater prawn *Macrobrachium rosenbergii* (Decapoda, Palaemonidae): Physiology and endocrine regulation**  
Sagi, A., 1990, *Advances in Invertebrate Reproduction*. Hoshi, M. & Yamashita, O. (eds.). Elsevier, Vol. 5. p. 209-215

The production of *Macrobrachium rosenbergii* in monosex populations. III. Yield characteristics under intensive monoculture conditions in earthen ponds  
Cohen, D., Sagi, A., Ra'anan, Z. & Zohar, G., 1 Jan 1988, In: Israeli Journal of Aquaculture - Bamidgeh. 40, 2, p. 57-63 7 p.

**Morphotypic differentiation of males of the fresh-water prawn *Macrobrachium rosenbergii*: changes in the midgut glands and the reproductive system**  
Sagi, A. & Ra'anan, Z., 1988, In: Journal of Crustacean Biology. 8, 1, p. 43-47 5 p.

**Spermatogenesis and sperm storage in the testes of the behaviorally distinctive male morphotypes of *Macrobrachium rosenbergii* (Decapoda, Palaemonidae)**  
Sagi, A., Milner, Y. & Cohen, D., 1988, In: The Biological Bulletin. 174, 3, p. 330-336 7 p.

**THE ANDROGENIC GLAND IN CRUSTACEA-WITH EMPHASIS ON THE CULTURED FRESH-WATER PRAWN *MACROBRACHIUM-ROSENBERGII*-A REVIEW**  
Sagi, A., 1988, In: Israeli Journal of Aquaculture-Bamidgeh. 40, 4, p. 107-112 6 p.

**Morphotypic differentiation of male Malaysian giant prawns, *Macrobrachium rosenbergii***  
Kuris, A. M., Ra'anan, Z., Sagi, A. & Cohen, D., 1987, In: Journal of Crustacean Biology. 7, 2, p. 219-237 19 p.



תויגיד דח תויסולכוא מוטפ י"ע לוביב ילאיצנטופה רופישה **MACROBRACHIUM-ROSENBERGI**: סיקותמה סימה תינורפ לודיג  
א. א., 1987, In: לארשיב הגדמו גייד. כ', 2, p. 9-21 13 p.

Production of *Macrobrachium rosenbergii* in monosex populations: Yield characteristics under intensive monoculture conditions in cages  
Sagi, A., Ra'anan, Z., Cohen, D. & Wax, Y., 15 Jan 1986, In: Aquaculture. 51, 3-4, p. 265-275 11 p.

Rapid identification of reproductive state and the receptive period of females in pond populations of *Macrobrachium rosenbergii* - A new technique  
Sagi, A. & Ra'anan, Z., 15 Sep 1985, In: Aquaculture. 48, 3-4, p. 361-367 7 p.

**Alternative mating strategies in male morphotypes of the freshwater prawn *Macrobrachium rosenbergii* (De Man)**  
Ra'anan, Z. & Sagi, A., 1985, In: The Biological Bulletin. 169, 3, p. 592-601 10 p.

**1984 ייק - הילק תיפצת; הרוטלוקונומב תוינורפ מוטפ**  
א. א. & א. א., 1985, In: לארשיב הגדמו גייד. ח"י, 2, p. 20-24 5 p.

## Activities

### conference- colors of nutrition in Israel

Iris Shai (Other), Jack Gilron (Participant), Sagi (Participant), Sammy Boussiba (Participant), Aaron Fait (Participant) & Frank Hu (Other)  
31 Mar 2019 → 4 Apr 2019

### International Society for Invertebrate Reproduction and Development (External organization)

Amir Sagi (Chair)  
2010 → 2013

### Sigma Xi (External organization)

Amir Sagi (Member)  
1999

## Prizes

### Best Lecturer of the Year in Biology

Sagi, Amir (Recipient), 1997

### Excellence in Research Award (TCSERA)

Sagi, Amir (Recipient), 2016

### ICA award for leading entrepreneurship in agriculture and biotechnology, with Enzootic and Northern prawns

Sagi, Amir (Recipient), 2018

### Incumbent of the Judith and Murray Shusterman Chair for Career Development in Physiology

Sagi, Amir (Recipient), 1997

### Lily and Sidney Oelbaum Chair in Applied Biochemistry

Sagi, Amir (Recipient), 2010

### The Global Aquaculture Alliance's inaugural Novus Global Aquaculture Innovation Award

Sagi, Amir (Recipient), 2013

**The Landau Prize for Sciences and Arts**  
Sagi, Amir (Recipient), 2014