

Assunta (Susy) Liberti



Born in Lacco Ameno (NA, Italy) on 24/01/1985

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Current Position: Researcher (Ricercatore III° livello)

Current Affiliation:

Department of Biology and Evolution of Marine Organisms (BEOM),
Stazione Zoologica Anton Dohrn, Villa Comunale, 80121 Naples, Italy

Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
Università degli Studi di Napoli “Federico II” (Naples, Italy)	Bachelor degree	2004-2007	Biology Developmental Biology
Università degli Studi di Napoli “Federico II” (Naples, Italy)	Master degree (Laurea)	2007-2009	Biology Developmental Biology
CEINGE- Biotecnologie Avanzate s.c.a.r.l. (Naples, Italy)	Postgraduate Fellow	2010	Cell and molecular biology
Open University, Milton Keynes UK- Stazione Zoologica di Napoli Anton Dohrn (Naples, Italy)	Ph.D.	2010-2014	Comparative Immunology
Department of Pediatrics, College of Medicine, University of South Florida, Saint Petersburg (Florida, USA).	Visitor researcher	2014	Animal Biology and Comparative immunology
Istituto di Biochimica delle Proteine- Centro Nazionale delle Ricerche (Naples, Italy).	Post-doc fellow	2014-2015	Cell Biology

Institute and Location	Degree / Function	Year	Field of Study
Department of Pediatrics, College of Medicine, University of South Florida, Saint Petersburg (Florida, USA)	Post-doc fellow	2016-2018	Comparative immunology and mucosal immunity of the digestive tract of marine organism
Biology and Evolution of Marine Organisms, Stazione Zoologica Anton Dohrn di Napoli (Naples, Italy).	Post-doc fellow	2018-2022	Comparative Immunology, and Ecotoxicology
BEOM-Stazione Zoologica Anton Dohrn, Napoli, Italy	Ricercatore	2023-present	Immunology of marine organism

Appointments and awards

2023: “Prof. Enzo Ottaviani” Award, at XXIII Meeting of the Italian Association of Developmental and Comparative Immunology, Naples 13-15 February 2023

2022: *Best poster presentation* at the conference “World Congress of Inflammation” Rome, 6-8 June 2022

2016: *Best poster presentation* at the conference “Aquatic Viruses workshop” Plymouth UK, 10-13 July 2016

October 2023 to present: Member of SZN committee for the renewal of post-doc contracts (“Assegno di Ricerca”).

Other

2022 to present: Member of the Italian Association of Developmental and Comparative Immunology (SIICS)

Guest Associate Editor for a Research Topic in *Frontiers in Cellular and Infection Microbiology*, entitled “Evolution of secreted immune effectors in shaping the microbial ecology of mucosal environments”.

Reviewer Editor for *Frontiers in Molecular Innate Immunity*”, section of “Frontiers in Immunology”.

Students’ Supervision

Training of 2 summer intern students (University of South Florida-US), and 2 intern students (Università Federico II-Italy and Agrocampus Ovest, France)

Publications

List of publications of the last 10 years:

Peer-reviewed publications:

- Dishaw LJ, Litman GW, **Liberti A.** Tethering of soluble immune effectors to mucin and chitin reflects a convergent and dynamic role in gut immunity. *Philosophical Transactions of the Royal Society B. in press.*
- Annona G., **Liberti A.**, Pollastro C., Spagnuolo A., Sordino P., De Luca P. Reaping the benefits of liquid handlers for high-throughput gene expression profiling in a marine model invertebrate. *BMC Biotechnology.* 2024;24(1):4.; doi: 10.1186/s12896-024-00831-y.
- Liberti A.**, Pollastro C., Pinto G., Illiano A., Marino R., Amoresano A., et al. Transcriptional and proteomic analysis of the innate immune response to microbial stimuli in a model invertebrate chordate. *Front Immunol.* 2023;14:1217077; doi: 10.3389/fimmu.2023.1217077.
- Osca D., Caputi L., Tanduo V., Sepe RM., **Liberti A.**, Tiralongo F., et al. The complete mitochondrial genome of the zebra seabream (Perciformes, Sparidae) from the Mediterranean Sea. *Mitochondrial DNA B.* 2022;7(11):2006-8; doi: 10.1080/23802359.2022.2145174.
- Liberti A.**, Natarajan O., Atkinson C.G.F., Dishaw L.J. Secreted immunoglobulin domain effector molecules of invertebrates and management of gut microbial ecology. *Immunogenetics.* 2022;74(1):99-109; doi: 10.1007/s00251-021-01237-2.
- Liberti A.**, Natarajan O., Atkinson C.G.F., Sordino P., Dishaw L.J. Reflections on the Use of an Invertebrate Chordate Model System for Studies of Gut Microbial Immune Interactions. *Front Immunol.* 2021;12:642687; doi: 10.3389/fimmu.2021.642687.
- Liberti A.**, Bertocci I., Pollet A., Musco L., Locascio A., Ristoratore F., et al. An indoor study of the combined effect of industrial pollution and turbulence events on the gut environment in a marine invertebrate. *Mar Environ Res.* 2020;158:104950; doi: 10.1016/j.marenvres.2020.104950.
- Liberti A.**, Cannon J.P., Litman G.W., Dishaw L.J. A Soluble Immune Effector Binds Both Fungi and Bacteria via Separate Functional Domains. *Front Immunol.* 2019;10:369; doi: 10.3389/fimmu.2019.00369.
- Liberti A.**, Zucchetti I., Melillo D., Skapura D., Shibata Y., De Santis R., et al. Chitin protects the gut epithelial barrier in a protochordate model of DSS-induced colitis. *Biol Open.* 2018;7(1); doi: 10.1242/bio.029355.
- Leigh B.A., **Liberti A.**, Dishaw L.J. Generation of Germ-Free *Ciona intestinalis* for Studies of Gut-Microbe Interactions. *Front Microbiol.* 2016;7:2092; doi: 10.3389/fmicb.2016.02092.
- Dishaw L.J., Leigh B., Cannon J.P., **Liberti A.**, Mueller M.G., Skapura D.P., et al. Gut immunity in a protochordate involves a secreted immunoglobulin-type mediator binding host chitin and bacteria. *Nat Commun.* 2016;7:10617; doi: 10.1038/ncomms10617.
- Liberti A.**, Melillo D., Zucchetti I., Natale L., Dishaw L.J., Litman G.W., et al. Expression of *Ciona intestinalis* variable region-containing chitin-binding proteins during development of the gastrointestinal tract and their role in host-microbe interactions. *PLoS One.* 2014;9(5):e94984; doi: 10.1371/journal.pone.0094984.

Book Chapters:

Liberti A., Leigh B.A., Graham Z., Natarajan O., Dishaw L.J. A Role for Secreted Immune Effectors in Microbial Biofilm Formation Revealed by Simple In Vitro Assays. *Methods Mol Biol.* 2022;2421:127-40; doi: 10.1007/978-1-0716-1944-5_9.

Liberti A., Leigh B., De Santis R., Pinto M.R., Cannon J.P., Dishaw L.J., et al. An Immune Effector System in the Protochordate Gut Sheds Light on Fundamental Aspects of Vertebrate Immunity. *Results Probl Cell Differ.* 2015;57:159-73; doi: 10.1007/978-3-319-20819-0_7

Preprint papers

Natarajan O., Gibboney S. L., Young M. N., Lim S. J., Pluta N., Atkinson C. G. F., Leigh B. A., **Liberti A.**, Kees E. D., Breitbart M., Gralnick J. A., Dishaw L. J. (2022). Prophages regulate *Shewanella fidelis* 3313 motility and biofilm formation: implications for gut colonization dynamics in *Ciona robusta*. doi: 10.1101/2022.11.23.517592

Filograna A., De Tito S., Lo Monte M., Oliva R., Bruzzese F., Roca M. S., Zannetti A., Greco A., Spano D., Ayala I., **Liberti A.**, Petraccone L., Dathan N., Catara G., Schembri L., Colanzi A., Budillon A., Beccari A. R., Del Vecchio P., Luini A., Corda D., Valente C. (2023). Identification and characterization of a new potent inhibitor targeting CtBP1/BARS in melanoma cells. doi: 10.21203/rs.3.rs-2921121/v1.