

Hector Garcia Seisdedos

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Education

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| 2007-2012 | Ph.D. in Biophysics. University of Granada. Advisors: Jose Manuel Sanchez-Ruiz and Beatriz Ibarra-Molero. Thesis title: "Combinatorial libraries focused in protein engineering: Applications in thermostability, promiscuity and design of new active sites." |
| 2006-2007 | Teaching Certificate. University of Salamanca. |
| 2005-2007 | M.Sc. in Biochemistry. University of Salamanca. |
| 2005-2007 | B.Sc. and M.Sc. in Biology. University of Salamanca. |

Employment

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| 2022 to date | Group Leader Structural Biology Department. IBMB-CSIC. |
| 2018-2022 | Research assistant Emmanuel Levy's lab. Weizmann Institute of Science. |
| 2013-2018 | Postdoctoral fellow Emmanuel Levy's lab. Weizmann Institute of Science. |

Fellowships, Awards, and Grants

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| 2022-2025 | "Proyectos de Generacion de conocimiento" . Grant : PID2021-127150NA-I00 Spanish Ministry of Science and Innovation. |
| 2022-2027 | Ramon y Cajal Fellowship. Spanish Ministry of Science and Innovation. |
| 2016-2018 | Senior Postdoctoral Fellowship. Koshland and McDonald-Leapman Foundations. |
| 2016 | "Grand Challenge Award" . Awarded by the I-CORE (Israeli Centers of Research Excellence). |
| 2015 | "Innovative Student Award" . Awarded by the Azrieli Center for Systems Biology. |
| 2014 | Best Poster Award. Annual Meeting of the Israel Society for Biochemistry & Molecular Biology (ISBMB). |
| 2008 | Mobility Grant. For a secondment at the E. Polytechnique. Andalusian Government. |
| 2007-2012 | Ph.D. Fellowship. Andalusian Government. |

Teaching Experience

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| 2010-2011 | Lecturer, Physical Chemistry Laboratory (60 hours). University of Granada. |
| 2009-2010 | Lecturer, Introduction to Chemistry (25 hours). University of Granada. |

Courses and Certificates

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| 2017 | EMBO Laboratory Management Course. Hfp consulting at Weizmann Institute |
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of Science. Duration: 24 hours.

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| 2013-2014 | Analysis of large biological datasets using the R statistical package. Feinberg Graduate School. Duration: 50 hours. |
| 2011-2012 | III Course for the Improvement of the Graduate Teaching and the Formation of Novel Instructors. European Higher Education Area. Duration: 105 hours. |

Publications

*Denotes corresponding authorship.

- Romero-Romero ML, **Garcia-Seisdedos H**, Ibarra-Molero B. Active site center redesign increases protein stability preserving catalysis in thioredoxin. *Protein Science* 31 (9):e4447. <https://doi.org/10.1002/pro.4417> (2022)
- **Garcia-Seisdedos H***, Levin T, Shapira G, Freud S, Levy ED. Mutant libraries reveal negative design shielding proteins from supramolecular self-assembly and re-localization in cells. *PNAS* 119 (5) e2101117119. <https://doi.org/10.1073/pnas.2101117119> (2022)
- **Garcia-Seisdedos H**, Heidenreich M, Levy ED. Not going with the flow: How cells adapt internal physics. *Cell* 6:183, 1462-1463. <https://doi.org/10.1016/j.cell.2020.11.021> (2020)
- Empereur-Mot C, **Garcia-Seisdedos H**, Elad N, Dei S, Levy ED. Geometric description of self-interaction potential in protein structures. *Sci. Data* 6:64. <https://doi.org/10.1038/s41597-019-0058-x> (2019)
- **Garcia-Seisdedos H**, Villegas J, Levy ED. Infinite assembly of folded proteins in evolution, disease, and engineering. *Angewandte Chemie Int Ed* 58, 5514-5531. <https://doi.org/10.1002/anie.201806092> (2018)
- **Garcia-Seisdedos H**, Empereur-Mot C, Elad N, Levy ED. Proteins evolve on the edge of supramolecular self-assembly. *Nature* 548, 244-247. <https://doi.org/10.1038/nature23320> (2017)
+2 **F1000** recommendations
- **Garcia-Seisdedos H**, Steinberg A, Levy ED. Symmetry breaking in homo-oligomers: The curious case of mega-hemocyanin. *Structure* 23:1, 3-5. <https://doi.org/10.1016/j.str.2014.12.006> (2015)
- **Garcia-Seisdedos H**, Ibarra-Molero B & Sanchez-Ruiz JM. Probing the mutational interplay between primary and promiscuous protein functions: a computational-experimental approach, *PLoS Comput Biol* 8, e1002558. <https://doi.org/10.1371/journal.pcbi.1002558> (2012)
- **Garcia-Seisdedos H**, Ibarra-Molero B & Sanchez-Ruiz JM. How many ionizable groups can sit on a protein hydrophobic core? *Proteins* 80, 1-7. <https://doi.org/10.1002/prot.23166> (2012)

Selected Talks

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| Feb 2021 | Physics of Life Symposium. Dresden, Germany. |
| Aug 2019 | XXIX International Conference on Yeast Genetics and Molecular Biology. Gothenburg, Sweden. |
| Dec 2017 | 4 th Conference of the Israel Society for Biotechnology Engineering (ISBE). Tel Aviv, Israel. |
| Jun 2017 | Gordon Research Conference. "Exploring the Role of Proteins as Cellular Organizers by Combining Experiments and Theory". Holderness, NH, US. |
| Feb 2017 | 8 th ILANIT/FISEB Conference. Eilat, Israel. |
| Dec 2016 | The P4EU Conference. Rehovot, Israel. |
| Mar 2016 | The Weizmann and MPI-MolPhy Symposium on Chemical and Molecular Biology. Rehovot, Israel. |