

Alessandro Ori, PhD

PERSONAL INFORMATION

Researcher unique identifier(s): orcid.org/0000-0002-3046-0871

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Date of birth: 23/09/1981

Nationality: Italian

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EDUCATION

- 2010 PhD, Biochemistry
University of Liverpool, UK
Supervisor Prof. D.G. Fernig
Thesis title: “*Analysing the heparin interactome: from biochemistry to systems biology*”
Main research focus: Biochemistry/Proteomics/Systems biology
- 2006 Master, Biotechnology
Università degli Studi di Bologna, Italy
Main research focus: Cancer biology

PROFESSIONAL EXPERIENCE

- 09/2015 – Junior Group Leader
Leibniz Institute on Aging – Fritz Lipmann Institute (FLI), Jena, Germany
Main research focus: Proteomics of Aging
- 2010 – 2015 Postdoctoral fellow, Martin Beck lab
Structural and Computational Biology Unit, European Molecular Biology
Laboratory (EMBL), Heidelberg, Germany
Main research focus: Structural proteomics/Systems biology
- 2006 – 2010 Postgraduate research assistant, Prof. D.G. Fernig lab
University of Liverpool, UK
- 2005 Research placement (six months), Université Paris 7-D.Diderot, France
Main research focus: Molecular biology/Cancer biology

FELLOWSHIPS

- 2012 – 2014 Marie Curie Intra European postdoctoral fellowship (NPCquant), EMBL
Heidelberg
- 2011 – 2012 Alexander von Humboldt foundation postdoctoral fellowship, EMBL
Heidelberg
- 2006 – 2010 Marie Curie Early Stage Training fellowship

AWARDS

- 2017 Poster prize, Modulating Ageing Antiageing Meeting, Halle, Germany
- 2009 Poster prize, 9th International Symposium on Mass Spectrometry, UCSF,
San Francisco, USA

AWARDED TO GROUP MEMBERS

- 2018 Best short talk award, FASEB Skeletal Muscle Satellite Cells and Regeneration conference, Steamboat Springs, USA (awarded to Svenja Schüler)
- 2018 Winner of poster contest (1st place), 1st North American Mass Spectrometry Summer School, Madison, WI, USA (awarded to Erika Kelmer Sacramento)
- 2017 Best presentation award, 2nd International Symposium Healthy Aging, Magdeburg, Germany (awarded to Nadja Gebert)

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2015 – Member of eight thesis advisory committees of PhD students at the Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)
- 2015 – Supervision of six PhD students and one Technician in my group at the Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)
- 2015 – Supervision of one Facility Manager, one Staff Scientist, one Postdoc, one Technician in the Proteomics Core Facility at the Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)
- 2013-2017 Co-supervision of three PhD students at the EMBL Heidelberg
- 2011-2013 Supervision of three undergraduate students at the EMBL Heidelberg
- 2009-2012 Co-supervision of one PhD student at the University of Liverpool
- 2009 Co-supervision of a bachelor student at the University of Liverpool

TEACHING ACTIVITIES

- 2018 Organization and coordination of a 2 days practical on ‘Sample preparation for mass spectrometry’ for the DFG - Research Training Group 2155 ProMoAge
- 2017 Invited lecturer – Graduate school, University Clinic Jena (UKJ), Germany
- 2017 Invited lecturer – Master Biochemistry, The Faculty of Biology and Pharmacy, Friedrich-Schiller-University, Jena, Germany
- 2016 – Invited lecturer – Proteomics and multi-omics integration, Master program in Neuroscience of Scuola Normale Superiore, Pisa, Italy
- 2010– 2014 Instructor of the Proteomics Module of the EMBL predoc course, Heidelberg, Germany
- 2006– 2009 Instructor of the Molecular Biology practical module for undergraduates, University of Liverpool, UK

INSTITUTIONAL RESPONSIBILITIES

- 2015 – Scientific Supervisor of the Proteomics Core Facility, Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)
- 2015 – 2017 Acting Head of the Subdivision on ‘Systems Biology of Aging’, Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)
- 2015 – Organizer of the internal interest club on ‘Intestine and Aging’, Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)
- 2016 Member of the Recruitment Committee for W3 Professorship on ‘Computational Biology of Aging’, Leibniz Institute on Aging – Fritz Lipmann Institute (FLI), Friedrich Schiller University, Jena
- 2016 Head of the Recruitment Committee for two positions for the Bioinformatics

- Core Facility, Leibniz Institute on Aging – Fritz Lipmann Institute (FLI), Jena, Germany
- 2018 Organization of the annual FLI retreat (>180 scientists, 3 invited international external speakers)
- 2020 Co-organizer of the Jena Aging Meeting (together with H. Morrison and K.L. Rudolph, >180 registered attendee in 2018)

IMPORTANT FUNCTIONS OUTSIDE OF THE INSTITUTION

- 2011 – Served as a reviewer for Aging Cell, BMC Genomics, Journal of Proteome Research (ACS), Molecular and Cellular Proteomics, Molecular Systems Biology, Nature Communications, PLOS Computational Biology, PLOS One and Nucleic Acid Research
- 2016 – Served as a grant reviewer for the Deutsche Forschungsgemeinschaft (German Research Foundation) and W.M. Keck Foundation (USA)

PARTICIPATION IN COLLABORATIVE GRANTS

- 2016 – Associated Project, DFG - Research Training Group 2155 ProMoAge - Protein Modification: A Key Mechanism for Ageing. Project title: *Investigating the relationship between protein glycation and aggregation in stem cells and tissues*

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2007 – Member, Biochemical Society (UK)
- 2012 – Member, HUman Proteome Organization (HUPO)
- 2014 – Member, European Association for Cancer Research (EACR)
- 2015 – Member, German Society for Aging Research (DGfA)
- 2017 – Member, German Society for Proteomics (DGPF)

LIST OF FIVE SELECTED PEER REVIEWED PUBLICATIONS

1. Kelmer Sacramento E., Kirkpatrick J.M., Mazzetto M., Di Sanzo S., Caterino C., Sanguanini M., Papaevgeniou N., Lefaki M., Childs D., Bagnoli S., Terzibasi Tozzini E., Bartolome A., Romanov N., Baumgart M., Huber W., Chondrogianni N., Vendruscolo M., Cellerino A. #, and Ori A. #. (2019) Reduced proteasome activity in the aging brain results in ribosome stoichiometry loss and aggregation. **bioRxiv** p. 577478.
2. Wyant, G.*, Abu-Remaileh, M.*, Frenkel, E., Laqtom, N., Dharamdasani, V., Heinze, I., Ori, A. #, and Sabatini, D.M. # (2018). NUFIP1 is a ribosome receptor for starvation-induced ribophagy. **Science** 360, 751-758.
3. Mackmull, M.-T., Klaus, B, Heinze, I, Chokkalingam, M, Beyer, A, Russel, R. B., Ori, A. #, and Beck, M. # (2017). Landscape of nuclear transport receptor cargo specificity. **Mol. Syst. Biol.** 13, 962.
4. Ori, A. *, Toyama, B.H. *, Harris, M.S., Bock, T., Iskar, M., Bork, P., Ingolia, N.T., Hetzer, M.W., and Beck, M. (2015). Integrated Transcriptome and Proteome Analyses Reveal Organ-Specific Proteome Deterioration in Old Rats. **Cell Syst.** 1, 224–237.
5. Ori, A., Banterle, N., Iskar, M., Andrés-Pons, A., Escher, C., Khanh Bui, H., Sparks, L., Solis-Mezarino, V., Rinner, O., Bork, P., et al. (2013). Cell type-specific nuclear pores: a case in point for context-dependent stoichiometry of molecular machines. **Mol. Syst. Biol.** 9, 648.

* co-first authors

co-senior authors

CITATION METRICS (source Thomson Reuters)

Total articles in peer-reviewed journals (of which first or senior author): **39+1 preprint (19)**

Sum of the times cited: **1512**

Average citations per article: **43.20**

h-index: **19**

Last Updated: 03/18/2019

MAJOR ONGOING COLLABORATIONS

- Henri Jasper, Genentech/Buck Institute, USA – Intestinal stem cells aging
- David M. Sabatini, Whitehead Institute, MIT, USA – Organelle proteomics
- Pekka Katajsto, University of Helsinki, Finland and Karolinska Institute, Sweden – Intestinal stem cells aging, asymmetric cell division
- Alessandro Cellerino, Scuola Normale Superiore, Pisa, Italy – Brain proteome aging in the short lived fish *N.furzeri*
- Julia von Maltzahn, Leibniz Institute on Aging - Fritz Lipmann Institute, Jena, Germany – Muscle stem cells aging
- K. Lenhard Rudolph, Leibniz Institute on Aging - Fritz Lipmann Institute, Jena, Germany – Muscle stem cells aging
- Thomas Hildebrandt, IZW, Berlin – Proteomic analysis of extremely long lived rodents

PARTICIPATION IN INTERNATIONAL CONFERENCES (ORAL PRESENTATIONS OF OWN ACCEPTED ABSTRACTS / INVITED TALKS)

- 2019: 48th American Aging Association Meeting, San Francisco, USA. Talk title: *Region-specific effects of aging on the intestinal epithelium and their reversal by dietary restriction*
- 2019: Keystone conference: Proteomics and its Application to Translational and Precision Medicine, Stockholm, Sweden. Talk title: *Comprehensive characterization of protein abundance, stability and aggregation during vertebrate brain aging*
- 2018: Annual Meeting of the German Society for Aging Research (DGfA), Jena, Germany. Talk title: *Age and diet affect the intestinal crypt proteome*
- 2018: EMBL Conference: From functional genomics to systems biology, Heidelberg, Germany. Talk title: *Comprehensive characterization of protein abundance, stability and aggregation during vertebrate brain aging*
- 2018: Fall meeting 2018, International Graduate School in Molecular Medicine, Ulm, Germany. Talk title: *Proteomic strategies to study stem cell aging*
- 2018: 10th Protein Rainbow Workshop, Dusseldorf, Germany. Talk title: *Proteomic strategies to study stem cell aging*
- 2018: Discovery Proteomics Seminar Event, Zürich, Switzerland. Talk title: *From Fixed Tissues to Rare Cell Populations: A Proteomic Journey*
- 2018: Workshop. Ageing: models and therapies, Coimbra, Portugal. Talk title: *Proteomic analysis identifies novel intrinsic and extrinsic factors influencing muscle stem cell aging*
- 2017: EMBO | EMBL Symposium: From Single- to Multiomics, Heidelberg, Germany. Talk title: *Comprehensive characterization of protein abundance, stability and aggregation during vertebrate brain aging*
- 2017: 2nd Molecular Biology of Ageing Meeting, Groningen, Netherlands. Talk title: *Aging and diet affect the intestinal crypt proteome*

- 2017: HUman Proteome Organization (HUPO) 2017 meeting, Dublin, Ireland. Talk title: *Spatial tissue proteomics of liver cancer*
- 2017: 2nd International Symposium on Healthy Aging, Magdeburg, Germany. Talk title: *Naked mole rats exhibit unique proteome features linked to longevity*
- 2016: VIB Conference Series, Applied Bioinformatics in Life Sciences, Leuven, Belgium. Talk title: *Spatiotemporal variation of mammalian protein complex stoichiometries*
- 2015: Annual Meeting of the German Society for Aging Research (DGfA), Jena, Germany. Talk title: *Integrated genomic and proteomic analyses of aging organs in rat*
- 2014: EMBO Symposium, Molecular Machines: Lessons from Integrating Structure, Biophysics and Chemistry, EMBL Heidelberg, Germany. Talk title: *Proteome survey reveals the dynamic nature of protein complexes*
- 2009: 67th Harden Conference on Decoding the Biology of Heparan Sulphate Proteoglycans, Cambridge, UK. Talk title: *Analysing the heparin interactome: a new method for the localisation of heparin-binding sites*
- 2008: Proteoglycans NorthWest Meeting, Lancaster, UK. Talk title: *Development of a new method for the localisation of heparin-binding sites on proteins*

PRESENTED BY GROUP MEMBERS

- 2018: HUman Proteome Organization (HUPO) 2018 meeting, Orlando, USA. Talk title: *Investigating the relationship between protein glycation and stability in cells and tissues* (presented by Simone Di Sanzo)
- 2018: FASEB Skeletal Muscle Satellite Cells and Regeneration, Steamboat Springs, USA. Talk title: *Proteomic analysis of skeletal muscles reveals extracellular proteins affecting satellite cell function during aging* (presented by Svenja Schöler)
- 2017: Keystone Symposia on Gastrointestinal Control of Metabolism, Copenhagen, Denmark. Talk title: *Age and diet affect the intestinal crypt proteome* (presented by Nadja Gebert)
- 2017: 2nd International Symposium on Healthy Aging, Magdeburg, Germany. Talk title: *Age and diet affect the intestinal crypt proteome* (presented by Nadja Gebert)

INVITED SEMINARS AT RESEARCH INSTITUTIONS

- 2019: Institute of Biochemistry, Charité University Medicine, Berlin, Germany
- 2017: The Crick Institute, London, UK
- 2017: Institute of Pharmacology, University Hospital Jena, Germany
- 2017: Scuola Normale Superiore, Pisa, Italy
- 2017: Alternative models for aging research meeting, IZW, Berlin, Germany
- 2016: Research Training Group 2155 ProMoAge kick-off meeting, Wittenberg, Germany
- 2014: Institute of Pathology, University Hospital Heidelberg, Germany

COMPLETE LIST OF PUBLICATIONS

Numbers in **bold** indicate first or corresponding author publications

Original research articles

- [36] E. Kelmer Sacramento*, J. Kirkpatrick*, M. Mazzetto*, S. Di Sanzo, C. Caterino, M. Sanguanini, N. Papaevgeniou, M. Lefaki, D. Childs, S. Bagnoli, E. Terzibas Tozzini, A. Bartolome, N. Romanov, M. Baumgart, W. Huber, N. Chondrogianni, M. Vendruscolo, A. Cellerino[#], and **A. Ori[#]**, “Reduced proteasome activity in the aging brain results in ribosome stoichiometry loss and aggregation,” *bioRxiv*, p. 577478, Mar. 2019.
- [35] J. Muntel*, J. Kirkpatrick*, R. Bruderer, T. Huang, O. Vitek, **A. Ori[#]**, and L. Reiter[#], “Comparison of Protein Quantification in a Complex Background by DIA and TMT Workflows with Fixed Instrument Time,” *J. Proteome Res.*, vol. 18, no. 3, pp. 1340–1351, Mar. 2019.
- [34] B. Goepfert, F. Truckenmueller, **A. Ori**, V. Fritz, T. Albrecht, A. Fraas, D. Scherer, R. G. Silos, C. Sticht, N. Gretz, A. Mehrabi, M. Bewerunge-Hudler, S. Pusch, J. L. Bermejo, P. Dietrich, P. Schirmacher, M. Renner, and S. Roessler, “Profiling of gallbladder carcinoma reveals distinct miRNA profiles and activation of STAT1 by the tumor suppressive miRNA-145-5p,” *Sci. Rep.*, vol. 9, no. 1, p. 4796, 2019.
- [33] Z. Chen, E. M. Amro, F. Becker, M. Hölzer, S. M. M. Rasa, S. N. Njeru, B. Han, S. Di Sanzo, Y. Chen, D. Tang, S. Tao, R. Haenold, M. Groth, V. S. Romanov, J. M. Kirkpatrick, J. M. Kraus, H. A. Kestler, M. Marz, **A. Ori**, F. Neri, Y. Morita, and K. L. Rudolph, “Cohesin-mediated NF-κB signaling limits hematopoietic stem cell self-renewal in aging and inflammation,” *J. Exp. Med.*, vol. 216, no. 1, p. 152 LP-175, Jan. 2019.
- [32] G. Wyant*, M. Abu-Remaileh*, E. Frenkel, N. Laqtom, V. Dharamdasani, I. Heinze, **A. Ori[#]**, and D. Sabatini[#], “NUFIP1 is a ribosome receptor for starvation-induced ribophagy,” *Science*, vol. 360, no. 6390, pp. 751–758, 2018.
- [31] L. Parca, M. Beck, P. Bork, and **A. Ori**, “Quantifying compartment-associated variations of protein abundance in proteomics data,” *Mol. Syst. Biol.*, vol. 14, no. 7, p. e8131, 2018.
- [30] I. Heinze*, M. Bens*, E. Calzia*, S. Holtze, O. Dakhovnik, A. Sahm, J. M. Kirkpatrick, K. Szafranski, N. Romanov, S. N. Sama, K. Holzer, S. Singer, M. Ermolaeva, M. Platzer[#], T. Hildebrandt[#], and **A. Ori[#]**, “Species comparison of liver proteomes reveals links to naked mole-rat longevity and human aging,” *BMC Biol.*, vol. 16, no. 1, pp. 1–18, 2018.
- [29] K. Buczak*, **A. Ori***, J. M. Kirkpatrick, K. Holzer, D. Dauch, S. Roessler, V. Endris, F. Lasitschka, L. Parca, A. Schmidt, L. Zender, P. Schirmacher, J. Krijgsveld, S. Singer[#], and M. Beck[#], “Spatial tissue proteomics quantifies inter- and intra-tumor heterogeneity in hepatocellular carcinoma,” *Mol. Cell. Proteomics*, vol. 17, no. 4, pp. 810–825, Apr. 2018.
- [28] D. Elster, M. Tollot, K. Schlegelmilch, **A. Ori**, A. Rosenwald, E. Sahai, and B. von Eyss, “TRPS1 shapes YAP/TEAD-dependent transcription in breast cancer cells,” *Nat. Commun.*, vol. 9, no. 1, 2018.
- [27] M.-T. Mackmull, B. Klaus, I. Heinze, M. Chokkalingam, A. Beyer, R. B. Russell, **A. Ori[#]**, and M. Beck[#], “Landscape of nuclear transport receptor cargo specificity,” *Mol. Syst. Biol.*, vol. 13, no. 12, p. 962, Dec. 2017.
- [26] K. Holzer, E. Drucker, S. Roessler, D. Dauch, F. Heinzmann, N. Waldburger, E.-M. Eiteneuer, E. Herpel, K. Breuhahn, L. Zender, P. Schirmacher, **A. Ori**, and S. Singer, “Proteomic Analysis Reveals GMP Synthetase as p53 Repression Target in Liver Cancer,” *Am. J. Pathol.*, vol. 187, no. 2, pp. 228–235, Feb. 2017.
- [25] M. I. Dauden, J. Kosinski, O. Kolaj-Robin, A. Desfosses, **A. Ori**, C. Faux, N. A. Hoffmann, O. F. Onuma, K. D. Breunig, M. Beck, C. Sachse, B. Séraphin, S. Glatt, and C. W. Müller, “Architecture of the yeast Elongator complex,” *EMBO Rep.*, vol. 18, no. 2, pp. 264–279, Feb. 2017.
- [24] **A. Ori***, M. Iskar*, K. Buczak, P. Kastritis, L. Parca, A. Andrés-Pons, S. Singer, P. Bork[#], and M. Beck[#], “Spatiotemporal variation of mammalian protein complex stoichiometries,” *Genome Biol.*, vol. 17, no. 1, p. 47, Dec. 2016.
- [23] M. Ferber*, J. Kosinski*, **A. Ori**, U. J. Rashid, M. Moreno-Morcillo, B. Simon, G. Bouvier, P. R. Batista, C. W. Müller[#], M. Beck[#], and M. Nilges[#], “Automated structure modeling of large protein assemblies using crosslinks as distance restraints,” *Nat. Methods*, vol. 13, no. 6, pp. 515–520, Apr. 2016.

- [22] K. Kiosze-Becker, **A. Ori**, M. Gerovac, A. Heuer, E. Nürnberg-Goloub, U. J. Rashid, T. Becker, R. Beckmann, M. Beck, and R. Tampé, “Structure of the ribosome post-recycling complex probed by chemical cross-linking and mass spectrometry,” *Nat. Commun.*, vol. 7, p. 13248, Nov. 2016.
- [21] S. Scharaw, M. Iskar, **A. Ori**, G. Boncompain, V. Laketa, I. Poser, E. Lundberg, F. Perez, M. Beck, P. Bork, and R. Pepperkok, “The endosomal transcriptional regulator RNF11 integrates degradation and transport of EGFR,” *J. Cell Biol.*, vol. 215, no. 4, pp. 543–558, Nov. 2016.
- [20] M. Gaik, D. Flemming, A. von Appen, P. Kastritis, N. Mücke, J. Fischer, P. Stelter, **A. Ori**, K. H. Bui, J. Baßler, E. Barbar, M. Beck, and E. Hurt, “Structural basis for assembly and function of the Nup82 complex in the nuclear pore scaffold,” *J. Cell Biol.*, vol. 208, no. 3, pp. 283–97, Feb. 2015.
- [19] F. R. Calviño, S. Kharde, **A. Ori**, A. Hendricks, K. Wild, D. Kressler, G. Bange, E. Hurt, M. Beck, and I. Sinning, “Symportin 1 chaperones 5S RNP assembly during ribosome biogenesis by occupying an essential rRNA-binding site,” *Nat. Commun.*, vol. 6, p. 6510, Jan. 2015.
- [18] J. Kosinski, A. von Appen, **A. Ori**, K. Karius, C. W. Müller, and M. Beck, “Xlink Analyzer: software for analysis and visualization of cross-linking data in the context of three-dimensional structures,” *J. Struct. Biol.*, vol. 189, no. 3, pp. 177–83, Mar. 2015.
- [17] M. Poli*, **A. Ori***, T. Child, S. Jaroudi, K. Spath, M. Beck, and D. Wells, “Characterization and quantification of proteins secreted by single human embryos prior to implantation,” *EMBO Mol. Med.*, vol. 7, no. 11, pp. 1465–79, Nov. 2015.
- [16] M.-T. Mackmull, M. Iskar, L. Parca, S. Singer, P. Bork, **A. Ori**[#], and M. Beck[#], “Histone Deacetylase Inhibitors (HDACi) Cause the Selective Depletion of Bromodomain Containing Proteins (BCPs),” *Mol. Cell. Proteomics*, vol. 14, no. 5, pp. 1350–60, May 2015.
- [15] A. von Appen*, J. Kosinski*, L. Sparks*, **A. Ori**, A. L. DiGuilio, B. Vollmer, M.-T. Mackmull, N. Banterle, L. Parca, P. Kastritis, K. Buczak, S. Mosalaganti, W. Hagen, A. Andres-Pons, E. A. Lemke, P. Bork, W. Antonin, J. S. Glavy, K. H. Bui[#], and M. Beck[#], “In situ structural analysis of the human nuclear pore complex,” *Nature*, vol. 526, no. 7571, pp. 140–143, Sep. 2015.
- [14] **A. Ori**^{*}, B. H. Toyama^{*}, M. S. Harris, T. Bock, M. Iskar, P. Bork, N. T. Ingolia[#], M. W. Hetzer[#], and M. Beck[#], “Integrated Transcriptome and Proteome Analyses Reveal Organ-Specific Proteome Deterioration in Old Rats,” *Cell Syst.*, vol. 1, no. 3, pp. 224–237, Sep. 2015.
- [13] T. Bock, W.-H. Chen, **A. Ori**, N. Malik, N. Silva-Martin, J. Huerta-Cepas, S. T. Powell, P. L. Kastritis, G. Smyshlyayev, I. Vonkova, J. Kirkpatrick, T. Doerks, L. Nesme, J. Baßler, M. Kos, E. Hurt, T. Carlomagno, A.-C. Gavin, O. Barabas, C. W. Müller, V. van Noort, M. Beck[#], and P. Bork[#], “An integrated approach for genome annotation of the eukaryotic thermophile *Chaetomium thermophilum*,” *Nucleic Acids Res.*, vol. 42, no. 22, pp. 13525–33, Dec. 2014.
- [12] K. A. Uniewicz, **A. Ori**, Y. A. Ahmed, E. A. Yates, and D. G. Fernig, “Characterisation of the interaction of neuropilin-1 with heparin and a heparan sulfate mimetic library of heparin-derived sugars,” *PeerJ*, vol. 2, p. e461, Jan. 2014.
- [11] J. Winkler, **A. Ori**, K. Holzer, C. Sticht, D. Dauch, E. M. Eiteneuer, F. Pinna, R. Geffers, V. Ehemann, A. Andres-Pons, K. Breuhahn, T. Longerich, J. Lorenzo Bermejo, N. Gretz, L. Zender, P. Schirmacher, M. Beck, and S. Singer, “Prosurvival function of the cellular apoptosis susceptibility/importin- α 1 transport cycle is repressed by p53 in liver cancer,” *Hepatology*, May 2014.
- [10] I. Piazza, A. Rutkowska, **A. Ori**, M. Walczak, J. Metz, V. Pelechano, M. Beck, and C. H. Haering, “Association of condensin with chromosomes depends on DNA binding by its HEAT-repeat subunits,” *Nat. Struct. Mol. Biol.*, vol. 21, pp. 560–568, May 2014.
- [9] **A. Ori**, N. Banterle, M. Iskar, A. Andrés-Pons, C. Escher, H. Khanh Bui, L. Sparks, V. Solis-Mezarino, O. Rinner, P. Bork[#], E. A. Lemke[#], and M. Beck[#], “Cell type-specific nuclear pores: a case in point for context-dependent stoichiometry of molecular machines,” *Mol. Syst. Biol.*, vol. 9, p. 648, Jan. 2013.
- [8] K. H. Bui*, A. von Appen*, A. L. DiGuilio, **A. Ori**, L. Sparks, M.-T. Mackmull, T. Bock, W. Hagen, A. Andrés-Pons, J. S. Glavy[#], and M. Beck[#], “Integrated structural analysis of the human nuclear pore complex scaffold,” *Cell*, vol. 155, no. 6, pp. 1233–43, 2013.
- [7] R. Xu, **A. Ori**, T. R. Rudd, K. A. Uniewicz, Y. A. Ahmed, S. E. Guimond, M. A. Skidmore, G. Siligardi, E. A. Yates, and D. G. Fernig, “Diversification of the structural determinants of fibroblast growth factor-heparin interactions: implications for binding specificity,” *J. Biol. Chem.*, vol. 287, no. 47, pp. 40061–73, Nov. 2012.
- [6] **A. Ori**, M. C. Wilkinson, and D. G. Fernig, “A systems biology approach for the investigation of the heparin/heparan sulfate interactome,” *J. Biol. Chem.*, vol. 286, no. 22, pp. 19892–19904, 2011.

- [5] M. Beck, A. Schmidt, J. Malmstroem, M. Claassen, **A. Ori**, A. Szymborska, F. Herzog, O. Rinner, J. Ellenberg, and R. Aebersold, “The quantitative proteome of a human cell line,” *Mol. Syst. Biol.*, vol. 7. 2011.
- [4] K. A. Uniewicz, **A. Ori**, R. Xu, Y. Ahmed, M. C. Wilkinson, D. G. Fernig, and E. A. Yates, “Differential scanning fluorimetry measurement of protein stability changes upon binding to glycosaminoglycans: a screening test for binding specificity.,” *Anal. Chem.*, vol. 82, no. 9, pp. 3796–3802, 2010.
- [3] T. R. Rudd*, K. A. Uniewicz*, **A. Ori***, S. E. Guimond*, M. A. Skidmore, D. Gaudesi, R. Xu, J. E. Turnbull, M. Guerrini, G. Torri, G. Siligardi, M. C. Wilkinson, D. G. Fernig, and E. A. Yates, “Comparable stabilisation, structural changes and activities can be induced in FGF by a variety of HS and non-GAG analogues: implications for sequence-activity relationships.,” *Org. Biomol. Chem.*, vol. 8, no. 23, pp. 5390–5397, 2010.
- [2] S. E. Guimond, T. R. Rudd, M. A. Skidmore, **A. Ori**, D. Gaudesi, C. Cosentino, M. Guerrini, R. Edge, D. Collison, E. McInnes, G. Torri, J. E. Turnbull, D. G. Fernig, and E. A. Yates, “Cations modulate polysaccharide structure to determine FGF-FGFR signaling: a comparison of signaling and inhibitory polysaccharide interactions with FGF-1 in solution.,” *Biochemistry*, vol. 48, no. 22, pp. 4772–4779, 2009.
- [1] **A. Ori**, P. Free, J. Courty, M. C. Wilkinson, and D. G. Fernig, “Identification of heparin-binding sites in proteins by selective labeling.,” *Mol. Cell. Proteomics*, vol. 8, no. 10, pp. 2256–2265, 2009.

Reviews / book chapters

- [5] M. Ermolaeva[#], F. Neri[#], **A. Ori[#]**, and K. L. Rudolph[#], “Cellular and epigenetic drivers of stem cell aging,” *Nat. Rev. Mol. Cell Biol.*, vol. 19, no. September, pp. 1–17, 2018. Review article.
- [4] A. Cellerino[#] and **A. Ori[#]**, “What have we learned on aging from omics studies?,” *Semin. Cell Dev. Biol.*, vol. 70, pp. 177–189, Oct. 2017. Review article.
- [3] **A. Ori***, A. Andrés-Pons*, and M. Beck, “The Use of Targeted Proteomics to Determine the Stoichiometry of Large Macromolecular Assemblies.,” *Methods Cell Biol.*, vol. 122C, pp. 117–146, Jan. 2014. Book chapter.
- [2] K. A. Uniewicz, **A. Ori**, T. R. Rudd, M. Guerrini, M. C. Wilkinson, D. G. Fernig, and E. A. Yates, “Following protein-glycosaminoglycan polysaccharide interactions with differential scanning fluorimetry.,” *Methods Mol. Biol.*, vol. 836, pp. 171–82, 2012. Book chapter.
- [1] **A. Ori**, M. C. Wilkinson, and D. G. Fernig, “The heparanome and regulation of cell function: structures, functions and challenges.,” *Front. Biosci.*, vol. 13, pp. 4309–4338, 2008. Review article.

* co-first authors

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