

Prof. Marino Zerial, PhD

1 | General information:

Contact details: Max Planck Institute of Molecular Cell Biology and Genetics
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Current position: Director, Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), Dresden; Honorary Professor at the Technische Universität Dresden (TU Dresden)

Researcher unique identifier(s): ORCID-ID: 0000-0002-7490-4235

2 | Academic education:

1980 – 1982 Doctoral training, University of Trieste, Italy
1977 – 1982 Degree in Biology, University of Trieste, Italy

3 | Advanced academic qualifications:

1982 PhD Thesis, Biology, *“Continuous immunostimulation and mucopolysaccharidosis: increase in mobilization and catabolism of heparan sulfate”*, University of Trieste, Italy (Supervisor: Domenico Romeo)

4 | Postgraduate professional career:

Since 1998 Director, Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), Dresden
Honorary Professor, Technische Universität Dresden (TU Dresden), Dresden
1991 – 1997 Research Group Leader, Cell Biology Program EMBL, Heidelberg
1989 – 1991 Staff Scientist (Kai Simons' group), EMBL, Heidelberg
1985 – 1988 Postdoctoral Fellow, EMBL, Heidelberg
1983 – 1985 Postdoctoral Fellow, Institute Jacques Monod, Paris, France

5 | Other:

Awards/Honors

- Elected International Honorary Member of the American Academy of Arts and Sciences (2021)
- Award of the German Society for Biochemistry and Molecular Biology (GBM) - Fritz Lipmann Honorary Lecture (2019)
- Elected Member of the Istituto Veneto di Scienze, Lettere ed Arti (Venetian Institute of Sciences, Letters and Arts) (2019)
- Gottfried Wilhelm Leibniz Prize by the German Research Foundation (DFG) (2006)
- Chiara D'Onofrio-Prize, 1999
- FEBS Anniversary Prize, 1994

Other professional activities:

- Standing committee “MPI of Molecular Physiology (since 2021)
- Physics of Life (PoL) Hiring Commission (since 2021)
- CASUS Supervisory Board & Search/Hiring Committees (since 2020)
- Tenure Track Commission of the Scientific Council of the MPG (since 2020)
- Associate Member Center for Advancing Electronics Dresden, TU Dresden (cfaed) (since 2020)
- Nomination Committee for the Max Planck-Humboldt Research Award (since 2019)
- Scientific Committee of Mildred-Scheel-Nachwuchszentrum Dresden (since 2018)

- Core Committee "MPI for Molecular Biomedicine" (since 2018)
- Verein zur Förderung der Lipidomik- und Gesundheitsforschung e.V. (since 2016)
- Free-Floating MPRGL Selection Panel (since 2015)
- Scientific Advisory Board of the Venetian Institute of Molecular Medicine, Padua, Italy (since 2013)
- Graduate Academy of the Technische Universität Dresden (since 2013)
- German Society of Cell Biology (DGZ) (since 2012)
- Core Committee "MPI for Terrestrial Microbiology" (since 2011)
- Scientific Advisory Board of MRC-LMCB, London, UK (since 2011)
- SAC 1 of DRESDEN-concept (since 2010)
- Advisory Editorial Board Molecular Systems Biology (since 2010)
- Editorial Boards: Cellular Logistics (since 2010), Traffic (since 2005), J Cell Biol (since 1998)
- Italian Scholarship Advisory Committee of the Giovanni Armenise-Harvard Foundation (since 2007; chair since 2013)

6 | Selected publications:

1. Belicova L, Repnik U, Delpierre J, Gralinska E, Seifert S, Valenzuela JI, Morales-Navarrete HA, Franke C, Räägel H, Shcherbinina E, Prikazchikova T, Koteliansky V, Vingron M, Kalaidzidis YL, Zatsepin T, **Zerial M**. Anisotropic expansion of hepatocyte lumina enforced by apical bulkheads. **J Cell Biol** 2021; 220:e202103003
2. Cezanne A, Lauer J, Solomatina A, Sbalzarini IF, **Zerial M**. A non-linear system patterns Rab5 GTPase on the membrane. **Elife** 2020; 9:e54434
3. Murray D, Jahnel M, Lauer J, Avellaneda M, Brouilly N, Cezanne A, Morales-Navarrete H, Perini E, Ferguson C, Lupas AN, Kalaidzidis Y, Parton RG, Grill SW, **Zerial M**. An endosomal tether undergoes an entropic collapse to bring vesicles together. **Nature** 2016; 537:107-111
4. Zeigerer A, Bogorad RL, Sharma K, Gilleron J, Seifert S, Sales S, Berndt N, Bulik S, Marsico G, D'Souza RC, Lakshmanaperumal N, Meganathan K, Natarajan K, Sachinidis A, Dahl A, Holzhütter HG, Shevchenko A, Mann M, Koteliansky V, **Zerial M**. Regulation of Liver Metabolism by the Endosomal GTPase Rab5. **Cell Rep** 2015; 11:884-892
5. Collinet C, Stöter M, Bradshaw CR, Samusik N, Rink JC, Kenski D, Habermann B, Buchholz F, Henschel R, Mueller MS, Nagel WE, Fava E, Kalaidzidis Y, **Zerial M**. Systems Survey of Endocytosis by Functional Genomics and Quantitative Multi-Parametric Image Analysis. **Nature** 2010; 464:243-9
6. Ohya T, Miaczynska M, Coskun U, Lommer B, Runge A, Drechsel D, Kalaidzidis Y, **Zerial M**. Reconstitution of Rab- and SNARE-dependent membrane fusion by synthetic endosomes. **Nature** 2009; 459:1091-7
7. Rink J, Ghigo E, Kalaidzidis Y, **Zerial M**. Rab conversion as a mechanism of progression from early to late endosomes. **Cell** 2005; 122:735-49
8. Christoforidis S, McBride HM, Burgoyne RD, **Zerial M**. The Rab5 effector EEA1 is a core component of endosome docking. **Nature** 1999; 397:621-625
9. Bucci C, Parton R, Mather I, Stunnenberg H, Simons K, Hoflack B, **Zerial M**. The small GTPase rab5 functions as a regulatory factor in the early endocytic pathway. **Cell** 1992;70:715-728
10. Chavrier P, Parton RG, Hauri HP, Simons K, **Zerial M**. Localization of low molecular weight GTP-binding proteins to exocytic and endocytic compartments. **Cell** 1990; 62:317-329