

## **Mauro Dalla Serra: CURRICULUM VITAE (04/2019)**

**Education:** 1990 Trento – University of Trento - Degree in Physics; Qualified as Full University Professor at the National Scientific Qualification 2012 in Applied Physics (02/B3) and in General Biochemistry & Clinical Biochemistry (05/E1)

**Present Position:** Director of the Institute of Biophysics - Italian National Research Council

**Services:** European Biophysical Societies' Association (EBSA) as elected member of the Executive Committee (since 2015); International Union for Pure and Applied Biophysics (IUPAB) as CNR Vice-Delegate (since 2011); Association of Resources for Biophysics Research in Europe (ARBRE) as a member since 2014; Member of the Management Committee of the Cost Action MOBIEU (since 2015); Regional Biophysics Conference Series as member of the Scientific Advisory Board (since 2004); Italian Society for Pure and Applied Biophysics as elected member (2004-2008, 2010-2014); National Agency for the Evaluation of the Universities and Research Institutes (ANVUR) as member of the Evaluation of Research Quality 2011-2014 (VQR 2011-2014, GEV02).

### **Employment**

- 01/04/2019 Director of the Institute of Biophysics - Italian National Research Council
- 16/04/2009 to 31/03/2019: Senior Research Scientist of CNR and Head of the Unit at Trento of the Institute of Biophysics CNR, since 09/07/2004
- 14/08/2003 to 15/04/2009: Senior Research Scientist of the Bruno Kessler Foundation (former ITC - Istituto Trentino di Cultura) assigned to the IBF-CNR Unit at Trento
- 01/04/1996 – 13/08/2003: appointed Research Scientist of the ITC assigned to CNR - Centre for Physics of the Aggregated States (CeFSA)
- 01/08/1994 – 31/03/1996: recipient of a Grant from the Department of Physics, University of Trento (supervisor G. Menestrina)
- 01/08/1993 – 31/07/1994: recipient of a Fellowship from the National Council of Researches at the CNR - Centre for Physics of the Aggregated States (CeFSA) (supervisor G. Menestrina)
- 01/06/1992 – 30/06/1993: recipient of a Fellowship from the National Institute for the Physics of Matter at the Centre for Physics of the Aggregated States (CNR-CeFSA) (supervisor G. Menestrina)
- 01/01/1991 – 31/05/1992: recipient of a Fellowship at the Institute for Scientific and Technological Research (supervisor T. Poggio)

### **Visits abroad:**

01/03/1998 – 31/05/1999: recipient of a Post-Doc position as Assistant Scientist Res. at the Texas A&M University, College Station, Texas, Dept. Medical Biochemistry & Genetics; Supervisor H. Bayley.

**Research interest:** My collaborators and myself, have developed a thorough biophysical and biochemical approach to investigate structural and functional aspects of the interaction of membrane-active molecules with the lipid film. A large portion of my work has been dedicated to protein-protein and protein-lipid interaction, in particular to the mechanism of action of membrane-damaging toxins of bacterial or animal origin. However, my interest goes also to many other substances that are relevant for human health. I have been working with small antibiotics, natural non-protein biopolymers, or peptides causing misfolding diseases. I have published more than 100 articles in International refereed journals, and contributed 20 chapters to multi-authored books; I was co-editor of two Special Issues (BBA 2016, EBJ 2017).

**Refereeing:** I am referee for many leading journals in the field of biochemistry and biophysics, among which: Biochem. J., Biochemistry, BBA, FEBS Lett., Toxicon, FEMS Microbiol. Lett., Antimic. Agents Chem., Mol. Microbiol., Toxicology, Nature Comm., Sci. Reports. I am regular referee for applications to International Foundation for Science and of the Slovenian Research Agency.

**Expertise:**

**Scientific:** I am familiar with biochemical/biophysical techniques for the purification and structural/functional characterization of membrane active polymers (i.e., peptides and proteins) like, centrifugation, chromatography, electrophoresis; Langmuir technique for lipid monolayers, electrophysiology on planar lipid membranes, cell culture, fluorescence spectroscopy, preparation and characterization of different pure lipid model systems (monolayers, vesicles, micelles and bicelles, supported bilayers).

**Congress Organization (as Main Organizer):**

- 4<sup>th</sup> International workshop on Pore-forming toxins, Trento, 14-17 September 2000
- XVI National Congress of the Italian Society for Pure and Applied Biophysics Joint with the first Italian-Slovenian Biophysics Workshop (SIBPA 2002), Trento 11-14 September 2002
- Workshop on Il peptide amiloide e la Malattia di Alzheimer, Trento, 15.12.2003
- IX Biophysics School on "Ion channels and transporters in plant cells", Venice 26-30 January 2004
- kick-off meeting Project SyrTox, Roma Accademia dei XL, 11 November 2004
- XIV Biophysics School on "Molecular Mechanisms of Neurodegeneration" Venice 25-29 January 2010
- Alp Nano bio International School 2 "Micro and nanotechnologies in cancer diagnostics and therapy" Vipiteno (Bolzano, Italy), January 11-15 2010
- Alp Nano bio International School 3 "Next generation technology systems and life sciences interface research: an integrative approach" Vipiteno (Bolzano, Italy), January 23-27 2012
- Workshop on Nanotechnologies for HealthCare Trento, Italy, May 25th-26th, 2012
- International workshop on Pore-forming toxins, a meeting in memory of Gianfranco Menestrina, held in Trento, 28-30 August 2014
- Regional Biophysics Congress 2016, 25-28 August, Trieste
- Biophysics Week seminars "Perspectives in Biophysics, Trento 10/03/2016
- EBSA2017 Satellite Meeting on "Biophysical Approaches to Protein Folding and Disease"

**Congress Organization (as Member of the Scientific Committee):**

- XVIII Congress SIBPA2006, 17-21 September 2006, Palermo
- European Biophysical Society Association (EBSA) 2009, 11-15 July 2009, Genova
- XXI Congress SIBPA2012, 17-20 September 2012, Ferrara
- Regional Biophysics Conference 3-7 September 2012, Kladovo, Serbia
- Alp Nano bio International School 4 (Anis4) January 27-31, 2014, Vipiteno (I)
- Annual Congress 2014 of the Società Italiana di FotoBiologia, 11 - 13 Giugno 2014, Trento

I gave lectures at National and International congresses, 19 as Invited Speaker and 6 as Selected Orals. I served as Chair in 7 International Congresses.

**Administrative skills:** I have been member of the CNR-IBF "Consiglio di Istituto" (2004-2008). Since 2004 I am the Head of the Unit at Trento CNR-IBF. I have been member of 9 commissions for selecting candidates for permanent and non-permanent research positions.

**Autoevaluation according to scopus (04.2019):**

h-index=37; Total citations =3586

<http://orcid.org/0000-0003-1048-2739>

Scopus Author ID: 6602827949

*I authorize the use of my personal data and CV according to the Italian privacy law nr 196 30/06/2003*

### List of 5 publications:

1. Gilbert, R., **Dalla Serra, M.**, Froelich, C.J., Wallace, M., and Anderluh, G. 2014. "Membrane Pore Formation at Protein-Lipid Interfaces." *Trends in Biochemical Sciences* 39 (11): 510–16. <https://doi.org/10.1016/j.tibs.2014.09.002>.
2. Podobnik, Marietka, M. Marchioretto, M. Zanetti, A. Bavdek, M. Kisovec, M.M. Cajnko, L. Lunelli, **M. Dalla Serra**, and G. Anderluh. 2015. "Plasticity of Listeriolysin O Pores and Its Regulation by PH and Unique Histidine." *Scientific Reports* 5 (9623): 1–10. <https://doi.org/10.1038/srep09623>.
3. Rojko, Nejc, **M. Dalla Serra**, Peter Maček, and Gregor Anderluh. 2016. "Pore Formation by Actinoporins, Cytolysins from Sea Anemones." *Biochimica et Biophysica Acta (BBA) - Biomembranes* 1858 (3): 446–56. <https://doi.org/10.1016/j.bbamem.2015.09.007>.
4. Knap, P., Tebaldi, T., F. Di Leva, Biagioli, M., **M. Dalla Serra**, and G. Viero. 2017. "The Unexpected Tuners: Are LncRNAs Regulating Host Translation during Infections?" *Toxins* 9 (11): 357–66. <https://doi.org/10.3390/toxins9110357>.
5. Plotegher, N., G. Berti, E. Ferrari, I. Tessari, M. Zanetti, L. Lunelli, E. Greggio, M. Bisaglia, M. Veronesi, S. Giroto, **M. Dalla Serra**, C. Perego, L. Casella & L. Bubacco. 2017. "DOPAL Derived Alpha-Synuclein Oligomers Impair Synaptic Vesicles Physiological Function." *Scientific Reports* 7 (January): 40699. <https://doi.org/10.1038/srep40699>.