



Prof. Maria Arménia Carrondo

Full Professor at Instituto de Tecnologia Química e Biológica (ITQB), Universidade Nova de Lisboa (1998-2018).

Current address: ITQB – Av. da República, 2784-505 Oeiras, Portugal

Born in V. N. de Famalicão, Portugal, in 1948.

Chem. Eng. by University of Porto, Portugal, 1971; Ph.D. in Chemical Crystallography, Imperial College of Science and Technology, University of London, UK, 1978.

Previous positions:

President of the Fundação para a Ciência e a Tecnologia (April 2015-January 2016). Vice-Rector of the Universidade Nova de Lisboa (Jan.2007- Sept.2013). Vice-Director of ITQB (1996 - 2005). Member of the Executive Direction of IST, Technical University of Lisbon (1984 -1987).

Associate Professor at Instituto Superior Técnico (IST), Universidade Técnica de Lisboa, (1979-1998).

Research current position:

Coordinator of the Macromolecular Crystallography Unit and Leader of the Structural Genomics Laboratory at ITQB.

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Awards:

Elected EMBO member in 2000; European Medal for Bio-Inorganic Chemistry in 2004. “Estímulo à Excelência” award from the Ministério da Ciência, Inovação e Ensino Superior in 2004. Award for the best article on Biophysics published in 2003, by the Sociedade Portuguesa de Biofísica in 2004. Award of the “Medalha de Honra do Município” by the Municipality of Vila Nova de Famalicão. Distinguished by Editorial Verbo in the publication “Annualia 2005/2006” in 2005. Award of the “Medalha de Honra do Município” by the Municipality of Oeiras in 2007. Prémio Câmara Pestana 2008 attributed jointly by Instituto Câmara Pestana from Universidade de Lisboa and GlaxoSmithKline in 2009. Invited as one of the twenty selected women to participate in the exhibit organized in 2015 by Agência Viva “Mulheres na Ciência”.

Official Representations:

Member of the Infrastructure Instruct-ERIC Council since July 2017.

Representative of ITQB as a partner in the EU - BioStruct-X (2011-2016), a project of translational access and enhancement of integrated Biological Structure determination at synchrotron X-ray facilities.

User representative in the I3 EU project ELISA, European Light Sources Activities between 2009 and 2011.

Representative of the Portuguese Government at the ESRF Council (1998-2002).

Representative of the Minister for Science and Technology in the process that led to the Portuguese membership of ESRF in 1998. Users representative at the EC Round-Table for synchrotrons (1991-1996).

Positions in Scientific Organizations/Membership of Evaluation Boards and Committees

Coordinator of PCISBIO, the Portuguese Affiliated Centre to Instruct an LS-EU ESFRI Infrastructure since 2011 and Instruct-ERIC since July 2017.

Member of the Proposal Review Committee of the Swiss Light Source Synchrotron (2012-).

Member of the Conselho Científico para as Ciências da Vida e Saúde da Fundação para a Ciência e a Tecnologia, 2013.

Member of the Science Advisory Committee of the European Synchrotron Radiation Facility, ESRF, Grenoble, France (2012- 2015).

Member of the ERC Life Sciences Evaluation Panel (LS1) for Advanced Grants , 2011 and 2013.

Evaluator for the Academy of Finland (2003, 2006 and 2013).

Member of the Scientific Advisory Board of the EMBL-PETRAIII project (2008-2012).

Member of the Priorities Committee of the EMBL Hamburg Outstation (1999-2011)

Member of the Review Panel of the EMBL Hamburg Outstation in 2003 and 2011.

Member of the European Crystallographic Association Committee for the Max-Perutz Prize (2006, 2007 and 2013).

Member of the Review Panel for the MAX-IV laboratory in Lund in 2006 and 2009.

Member of the Scientific Advisory Board of MAX IV in Lund, Sweden, 2010-2011.

Member of the ESRF Review Committee in Life Sciences - Protein Crystallography (2000-2003).

EMBO evaluator on various programmes since 2001.

Editor of Journal of Biological Inorganic Chemistry (2001-2015) and member of its Editorial Board (1998-2000).

Organization of International Scientific Meetings

Co-Director of the Erice 2010 "Structure and Function from Macromolecular Crystallography: Organisation in Space and Time".

Organizer of the courses BioCrys on "Fundamentals of modern methods in Biocrystallography", Oeiras, 2002, 2004, 2006, 2008, 2010, 2012 and 2014.

Member of the Organizing and Programme Committees of the Eurobic8, Aveiro, Portugal, 2006.

Vice-President of the Organizing Committee of the FEBS meeting, Lisbon, 2001.

Chair of the Organizing Committee of ECM 17, Lisbon, 1997.

Member of the Programme Committee of ECM 16, 1995, Lund, Sweden and member of the Advisory Board for ECM 18, 1998, Prague, Check Republic and Member of the Programme Committee for ECM 19, 2000, Nancy, France.

Founding Member of the Special Interest Group within ECA on Macromolecular Crystallography and Secretary between 1998 and 2001.

Chair of this SIG since 2006. Vice-President of the Portuguese Biochemical Society (1998-2004).

Membership and positions in Scientific Societies

Member of the Portuguese Society of Chemistry, Society for Bio-Inorganic Chemistry, European Crystallographic Association and American Society for Biochemistry and Molecular Biology.

Member of the European Crystallographic Association Committee for the Max-Perutz Prize (2006, 2007 and 2013).

Officer of the Executive Committee of the International Union of Crystallography (1999-2005) and Chair of the IUCr Sub - Commission on the Union calendar (2002-2005).

Officer of the Executive Committee of the European Crystallography Association (ECA) (1997 - 2000).

Research supervision at IST and ITQB

13 PhD students and 14 post-docs

2 PhDs students in co-supervision since 2019 (Andreia Fernandes) and 2020 (André Gouveia)

More relevant European Projects

Coordinator of the ITQB participation in the EU Instruct-ULTRA “Releasing the full potential of Instruct to expand and consolidate infrastructure services for integrated structural life science research” (2017-2020)

Coordinator for the ITQB participation as partner of the EU Collaborative project BioStruct-X (2011- 2016) and previously on the integrated project SPINE2-Complexes, the Specific Support Action TEACH-SG, the EU Infrastructure Cooperation Network MAX-INF2 and TID centre to the EU integrated project BIOXHIT.

Special Scientific Interests:

Protein Crystallography, Structural Biology. Structural studies of protein and protein complexes, metalloproteins and metalloenzymes.

Publications:

Number of papers in refereed journals (WebSc) **162**; book chapters **2**; Books editor **2**; Number of citations (without self-citations) **4 758**, h-index, **39**

Selected Publications

1. P.M. Matias, P. Donner, R. Coelho, M. Thomaz, C. Peixoto, S. Macedo, N. Otto, S. Joschko, P. Scholz, A. Wegg, S. Bäsler, M. Schäfer, U. Egner and M.A. Carrondo, “Structural evidence for ligand specificity in the binding domain of the human Androgen receptor : implications for phatogenic gene mutations” *J. Biol. Chem.* (2000) 275: 26164-26171, First structure of the LBD of the Androgen receptor subsequently used for drug discovery .
2. C. Frazão, G. Silva, C. M. Gomes, P. Matias, R. Coelho, L. Sieker, S. Macedo, M. Y. Liu, S. Oliveira, M. Teixeira, A. V. Xavier, C. Rodrigues-Pousada, M. A. Carrondo, and J. Le Gall, “Structure of a dioxygen reduction enzyme from *Desulfovibrio gigas*”, *Nature Struct. Biol.* (2000) 7: 1041-1045.
3. P.M. Matias, C. M. Soares, L. M. Saraiva, R. Coelho, J. Morais, J. Le Gall and M.A. Carrondo, “[NiFe] Hydrogenase from *Desulfovibrio desulfuricans* ATCC 27774: Gene sequencing, three-dimensional structure determination and refinement at 1.8 Å and modelling studies of its interaction with the tetra-haem cytochrome c_3 “, *J. Biol. Inorg. Chem.*, (2001) 6: 63-81.
4. F. J. Enguita, L. O. Martins, A. O. Henriques and M. A. Carrondo “Crystal structure of a bacterial endospore coat component: a laccase with enhanced thermostability properties” *J. Biol. Chem.* (2003) 278, 19416-19425.
5. M. A. Carrondo “Ferritins, Iron Uptake and Storage from the Bacterioferritin Viewpoint” *EMBO J.* (2003), 22, 1959-1968.
6. S. Macedo, C. V. Romão, E. Mitchell , P. M. Matias, M. Y. Liu , A. V. Xavier , J. LeGall , M. Teixeira, P. Lindley and M. A. Carrondo “The nature of the di-iron site in the bacterioferritin from *Desulfovibrio desulfuricans*” *Nature Struct. Biol* (2003), 10, 285-290.
7. P.M. Matias, I. A. C. Pereira, C. M. Soares and M. A. Carrondo “Sulphate respiration from hydrogen in *Desulfovibrio* bacteria: a structural biology overview” *Progress in Biophysics and Molecular Biology* (2005) 89, 292-329.

8. I. Bento, L. O. Martins, G. G. Lopes, M. A. Carrondo and P. F. Lindley "Dioxygen reduction by multi-copper oxidases; a structural perspective", *Roy. Soc. Chem. Dalton Trans.* (2005), 3507-3513.
9. C. Frazão, C. E. McVey, M. Amblar, A. Barbas, C. Vonrhein, C. M. Arraiano and M.A. Carrondo "Unravelling the dynamics of RNA degradation by RNase II and its RNA- bound complex", *Nature* (2006), 443, 110-114.
10. P. M. Matias, S. Gorynia, P. Donner, M. A. Carrondo, "Crystal Structure of the Human AAA+ Protein RuvBL1", *J. Biol. Chem.* (2006) 281, 38918-38929.
11. M de Rosa, D. de Sanctis, M. Archer, A. Rich, A. Athanasiadis and M. A. Carrondo "Crystal structure of a junction between two Z-DNA helices" *PNAS* (2010), **107**, 9088-9092.
12. S. Gorynia, T. M. Bandejas, F. G. Pinho, C. E. McVey, C. Vonrhein, A. Round, D. I. Svergun, P. Donner, P. M. Matias and M. A. Carrondo "Structural and functional insights into a dodecameric molecular machine – The RuvBL1/RuvBL2 complex", *J. Struct. Biol.* (2011), **176**, 279-291.
13. M. A. Carrondo and P. and Spadon, (eds), "Macromolecular Crystallography: deciphering the structure, function and dynamics of biological molecules" (2012) Springer: Dordrecht (ISBN 978-94-007-2529-4) DOI 10.1007/978-94-007-2530-0.
14. B. Correia, S. A. Cerqueira, C. Beauchemin, M. Pires de Miranda, S. Li, R. Ponnusamy, L. Rodrigues, T. R. Schneider, M. A. Carrondo, K. M. Kaye, J. P. Simas and C. E. McVey "Crystal structure of the gamma-2 herpesvirus LANA DNA binding domain identifies charged surface residues which impact viral latency, *PLoS Pathog.* (2013) Oct;9 (10):e1003673. doi: 10.1371/journal.ppat.1003673.
15. R. Ponnusamy, M.V. Petoukhov, B. Correia, T. F. Custodio, F. Juillard, M.Tan, M. P. de Miranda, M. A. Carrondo, J. P. Simas, K. M. Kaye, D. I. Svergun, and C. E. McVey, "KSHV but not MHV-68 LANA induces a strong bend upon binding to terminal repeat viral DNA", *Nucleic Acids Research* (2015), 30, 1-16.
16. S.P. Santos, Y. Yang, M.T.G. Rosa, M.A.A. Rodrigues, C. Bouthier De La Tour, S.Sommer, M.Teixeira, M.A. Carrondo, P.Cloetens, I.A. Abreu, C.V. Romão The interplay between Fe and Mn in *Deinococcus radiodurans* triggers cellular protection during oxidative stress, *Sci Rep* 9 (2019), 17217.