

Curriculum vitae of Tiago M. Bandeiras

Personal information

Name: Tiago Miguel Guerra Miranda Bandeiras
Civil state: Married, two children
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Nationality: Portuguese
Date of birth: 03 September 1977

Education

2001–2005 PhD degree in Biochemistry given by Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa. Research developed at the Metalloproteins & Bioenergetics Group supervised by Dr. Miguel Teixeira and Dr. Cláudio Gomes.
1995-2000 University degree in Applied Chemistry in Biotechnology at Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa.

Research Experience

Since 2008 Auxiliary Researcher (Ciência 2007) integrated in the Macromolecular Crystallography Laboratory IBET/ITQB. Coordinator & project manager of pre-clinical projects in collaboration with Merck pharmaceutical company.
2005-2008 Post-Doc at IBET and Merck (Darmstadt, Germany) in structure-based drug design pre-clinical projects.
2001-2005 PhD Student at the Metalloproteins & Bioenergetics Group (ITQB, UNL) supervised by Dr. Miguel Teixeira and Dr. Cláudio Gomes.
1999-2001 Research work under the supervision of Dr. Cláudio Gomes and Dr. Miguel Teixeira at the Metalloproteins & Bioenergetics Group (ITQB, UNL).

Teaching Experience

2009-2012 Lecturer in the module “Frontiers of Biotechnology” in ITQB PhD program.
2011 Lecturer in “Biomedical Sciences” Masters at Universidade da Beira Interior.
2010 Lecturer in Medicine Masters in Faculdade Ciências Médicas, Universidade Nova de Lisboa.
2003-2005 Auxiliary and Assistant Professor at Universidade Lusófona de Humanidades e Tecnologias, Portugal, for the courses of “Bioenergetics” and “Enzymology” in the degree of Biology.

Supervision Activities

2008-2012	Present: (PhD Student) Sara Silva; (Lab Technician) Micael Freitas; (BI fellowship) Cristiana Sousa; (BI fellowship) Daniela Moutinho; (Master student) Margarida Silva. Past: (Post-Doc) Dr. Cristina Pereira; (BI fellowship) Filipa Pinho; (BI fellowship) Ana Rita; (Leonardo da Vinci fellowship) Bethania Cassani.
PhD supervision	Tânia Tavares (SFRH/BD/31604/2006) in co-supervision with Dr. Xavier Malcata and Sara Silva (SFRH/BD/78706/2011) in co-supervision with Dr. Pedro Matias.

Funding

Principal Investigator	2011-2014: "Structural determinants of superoxide reduction" (PTDC/BIA-PRO/111940/2009, 110.786€ awarded by Fundação para a Ciência e Tecnologia, Ministry of Science and Technology, Portugal).
Principal Investigator	Since 2006: "Structure-based drug design" projects for pharmaceutical company Merck, Germany.
Task Responsible Investigator	2012-2015: "Response to oxidative and nitrosative stress by <i>Entamoeba histolytica</i> : searching for new virulence factors" (PTDC/SAU-MIC/111447/2009, 12.000€ awarded by Fundação para a Ciência e Tecnologia, Ministry of Science and Technology, Portugal).
Task Responsible Investigator	2012-2015: "Development of function blocking antibodies using Phage Display Technology" (PTDC/SAU-ONC/121670/2010, 39.369€ awarded by Fundação para a Ciência e Tecnologia, Ministry of Science and Technology, Portugal).

Meetings Organization

2011 - Organizer of the first Merck MIB meeting in Oeiras, Portugal (IBET).

2008-2012 - Member of the local organizing committee of the Biocrys crystallographic course, ITQB, Oeiras, Portugal.

2005 - Member of the local organizing committee of the 1st ESF and MAX INF2 Course on Membrane Proteins "the rocky road from gene to structure", ITQB, Oeiras, Portugal

Publications

24. Carvalho-Santos Z, Machado P, Alvarez-Martins I, Gouveia SM, Jana SC, Duarte P, Amado T, Branco P, Freitas MC, Silva ST, Antony C, **Bandeiras TM**, Bettencourt-Dias M. BLD10/CEP135 is a microtubule-associated protein that controls the formation of the flagellum central microtubule pair. *Dev Cell*. 2012 Aug 14;23(2):412-24.
23. **Bandeiras TM**, Botelho HM, Petrasch D, Freitas MC, Gomes CM, Kletzin A, Frazão C. In-House SAD Phasing of an Unique Thermophilic Rieske Ferredoxin Containing a Stabilizing Disulfide Bridge. *Protein Pept Lett*. 2012 Jul 12.

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22. Santos SP, **Bandeiras TM**, Pinto AF, Teixeira M, Carrondo MA, Romão CV. Thermofluor-based optimization strategy for the stabilization and crystallization of *Campylobacter jejuni* desulforubrythrin. *Protein Expr Purif*. 2012 Feb;81(2):193-200. Epub 2011 Oct 24.
 21. Gorynia S, **Bandeiras TM**, Pinho FG, McVey CE, Vonnrhein C, Round A, Svergun DI, Donner P, Matias PM, Carrondo MA. Structural and functional insights into a dodecameric molecular machine - the RuvBL1/RuvBL2 complex. *J Struct Biol*. 2011 Dec;176(3):279-91.
 20. Pinho FG, Pinto AF, Pinto LC, Huber H, Romão CV, Teixeira M, Matias PM, **Bandeiras TM**. Superoxide reductase from *Nanoarchaeum equitans*: expression, purification, crystallization and preliminary X-ray crystallographic analysis. *Acta Crystallogr Sect F Struct Biol Cryst Commun*. 2011 May 1;67(Pt 5):591-5.
 19. Pinho FG, Romão CV, Pinto AF, Saraiva LM, Huber H, Matias PM, Teixeira M, **Bandeiras TM**. Cloning, purification, crystallization and X-ray crystallographic analysis of *Ignicoccus hospitalis* neelaredoxin. *Acta Crystallogr Sect F Struct Biol Cryst Commun*. 2010 May 1;66(Pt 5):605-7.
 18. **Bandeiras TM**, Romão CV, Rodrigues JV, Teixeira M, Matias PM. Purification, crystallization and X-ray crystallographic analysis of *Archaeoglobus fulgidus* neelaredoxin. *Acta Crystallogr Sect F Struct Biol Cryst Commun*. 2010 Mar 1;66(Pt 3):316-9.
 17. Brito JA, Sousa FL, Stelter M, **Bandeiras TM**, Vonnrhein C, Teixeira M, Pereira MM, Archer M. Structural and functional insights into sulfide:quinone oxidoreductase. *Biochemistry*. 2009 Jun 23;48(24):5613-22.
 16. **Bandeiras TM**, Refojo PN, Todorovic S, Murgida DH, Hildebrandt P, Bauer C, Pereira MM, Kletzin A, Teixeira M. The cytochrome *ba* complex from the thermoacidophilic crenarchaeote *Acidianus ambivalens* is an analog of *bc(1)* complexes. *Biochim Biophys Acta*. 2009 Jan;1787(1):37-45.
 15. Gorynia S, Matias PM, **Bandeiras TM**, Donner P, Carrondo MA. Cloning, expression, purification, crystallization and preliminary X-ray analysis of the human RuvBL1-RuvBL2 complex. *Acta Crystallogr Sect F Struct Biol Cryst Commun*. 2008 Sep 1;64(Pt 9):840-6.
 14. **Bandeiras TM**, Hillig RC, Matias PM, Eberspaecher U, Fanghänel J, Thomaz M, Miranda S, Crusius K, Pütter V, Amstutz P, Gulotti-Georgieva M, Binz HK, Holz C, Schmitz AA, Lang C, Donner P, Egner U, Carrondo MA, Müller-Tiemann B. Structure of wild-type Plk-1 kinase domain in complex with a selective DARPIn. *Acta Crystallogr D Biol Crystallogr*. 2008 Apr;64(Pt 4):339-53.
 13. Brito JA, **Bandeiras TM**, Teixeira M, Vonnrhein C, Archer M. Crystallisation and preliminary structure determination of a NADH: quinone oxidoreductase from the extremophile *Acidianus ambivalens*. *Biochim Biophys Acta*. 2006 Apr;1764(4):842-5.
 12. Todorovic S, Pereira MM, **Bandeiras TM**, Teixeira M, Hildebrandt P, Murgida DH. Midpoint potentials of hemes *a* and *a*₃ in the quinol oxidase from *Acidianus ambivalens* are inverted. *J Am Chem Soc*. 2005 Oct 5;127(39):13561-6.
 11. **Bandeiras TM**, Pereira MM, Teixeira M, Moenne-Loccoz P, Blackburn NJ. Structure and coordination of CuB in the *Acidianus ambivalens* aa₃ quinol oxidase heme-copper center. *J Biol Inorg Chem*. 2005 Oct;10(6):625-35.
 10. Kletzin A, Ferreira AS, Hechler T, **Bandeiras TM**, Teixeira M, Gomes CM. A Rieske ferredoxin typifying a subtype within Rieske proteins: spectroscopic, biochemical and stability studies. *FEBS Lett*. 2005 Feb 14;579(5):1020-6.
 9. Melo AM, **Bandeiras TM**, Teixeira M. New insights into type II NAD(P)H:quinone oxidoreductases. *Microbiol Mol Biol Rev*. 2004 Dec;68(4):603-16. Review.

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8. Müller FH, **Bandeiras TM**, Urich T, Teixeira M, Gomes CM, Kletzin A. Coupling of the pathway of sulphur oxidation to dioxygen reduction: characterization of a novel membrane-bound thiosulphate:quinone oxidoreductase. *Mol Microbiol.* 2004 Aug;53(4):1147-60.
 7. Pereira MM, **Bandeiras TM**, Fernandes AS, Lemos RS, Melo AM, Teixeira M. Respiratory chains from aerobic thermophilic prokaryotes. *J Bioenerg Biomembr.* 2004 Feb;36(1):93-105. Review.
 6. Kletzin A, Urich T, Müller F, **Bandeiras TM**, Gomes CM. Dissimilatory oxidation and reduction of elemental sulfur in thermophilic archaea. *J Bioenerg Biomembr.* 2004 Feb;36(1):77-91. Review.
 5. Das TK, Gomes CM, **Bandeiras TM**, Pereira MM, Teixeira M, Rousseau DL. Active site structure of the aa3 quinol oxidase of *Acidianus ambivalens*. *Biochim Biophys Acta.* 2004 Apr 12;1655(1-3):306-20. Review.
 4. Urich T, **Bandeiras TM**, Leal SS, Rachel R, Albrecht T, Zimmermann P, Scholz C, Teixeira M, Gomes CM, Kletzin A. The sulphur oxygenase reductase from *Acidianus ambivalens* is a multimeric protein containing a low-potential mononuclear non-haem iron centre. *Biochem J.* 2004 Jul 1;381(Pt 1):137-46.
 3. **Bandeiras TM**, Salgueiro CA, Huber H, Gomes CM, Teixeira M. The respiratory chain of the thermophilic archaeon *Sulfolobus metallicus*: studies on the type-II NADH dehydrogenase. *Biochim Biophys Acta.* 2003 Mar 6;1557(1-3):13-9.
 2. **Bandeiras TM**, Salgueiro C, Kletzin A, Gomes CM, Teixeira M. *Acidianus ambivalens* type-II NADH dehydrogenase: genetic characterisation and identification of the flavin moiety as FMN. *FEBS Lett.* 2002 Nov 6;531(2):273-7.
 1. Gomes CM, **Bandeiras TM**, Teixeira M. A new type-II NADH dehydrogenase from the archaeon *Acidianus ambivalens*: characterization and in vitro reconstitution of the respiratory chain. *J Bioenerg Biomembr.* 2001 Feb;33(1):1-8.

Book Chapter

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1. RuvBL1 and RuvBL2 and Their Complex Proteins Implicated in Many Cellular Pathways. Gorynia S, **Bandeiras TM**, Matias PM, Pinho FG, McVey CE, Donner P, Carrondo MA. (2011). *Deciphering the Structure, Function and Dynamics of Biological Molecules*, NATO Science Series.

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