

Curriculum vitae

Name: ISABEL Maria Godinho de SÁ-NOGUEIRA

Nationality: Portuguese

Year of Birth: 1962

Present work address:

Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa

Departamento de Ciências da Vida

Campus de Caparica, 2829-516 Caparica, Portugal

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Academic Qualifications

- 2012 Agregação (Habilitation) in Microbiology, Molecular Genetics and Molecular Biology, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa
- 1991 PhD in Biology-Molecular Biology, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa (with honours)
- 1980-1985 Licenciatura (5 years Degree) in Biology, Faculdade de Ciências, Universidade de Lisboa (grade 17/20)

Positions

Academic and Scientific

- 1999- present Associate Professor, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa (FCT/UNL)
- 1995-1999 Assistant Professor with tenure, FCT/UNL.
- 1991-1995 Assistant Professor, FCT/UNL.
- 1989-1991 Teaching Assistant, FCT/UNL.
- 1985-1989 Teaching Assistant Trainee, FCT/UNL.
- 2010-present Head of a research group in Microbial Genetics, Centro de Recursos Microbiológicos (CREM), FCT/UNL
- 1996-2009 Head of the Microbial Genetics Laboratory, Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa (ITQB/UNL)
- 1992-1996 Researcher, ITQB/UNL
- 1992 Post-doctoral fellow, Emory University, Atlanta, GA, USA,
- 1990-1991 PhD student, ITQB/UNL
- 1985-1989 PhD student, Instituto Gulbenkian de Ciência, Oeiras, Portugal

Academic Management

- 2007-2012 Head of the Life Sciences Department, FCT/UNL
- 2009-present Coordinator of the Scientific Division Microbiology, Genetics and Cell Biology, Life Sciences Department, FCT/UNL
- 2009-present Coordinator of the PhD Program in Biology, FCT/UNL
- 2007-present Member of the Scientific Committee of the Master of Science Program in Medical Microbiology, FCT/UNL.
- 2007-2011 Member of the Scientific Committee of the Master of Science Program in Biotechnology, FCT/UNL

2009-2010	Member of the Scientific Council, FCT/UNL
2007-2009	Member of the Coordinating Committee of the Scientific Council, FCT/UNL
1996-1999	Member of the Coordinating Committee of the Scientific Council, ITQB/UNL

Advisory Positions

2008-2011	Reviewer for PhD and Post-Doctoral fellowships, Fundação para a Ciência e a Tecnologia (FCT/MCE)
2008	Member of the Santander Totta Scientific Merit Award Review Panel on Life Sciences, Universidade Nova de Lisboa (UNL)
1998-present	Scientific reviewer for the following international journals: Journal of Bacteriology (American Society for Microbiology); Journal of Applied Environmental Microbiology (American Society for Microbiology); FEMS Microbiology Letter (Federation of European Microbiological Societies); Proteins: Structure, Function, and Bioinformatics (Wiley); BMC Genomics (BioMed Central); Enzyme and Microbial Technology (Elsevier); Biocatalysis and Biotransformation (Informa, healthcare); FEBS Journal (Wiley); Nucleic Acids Research (Oxford University Press).

Research interests

Molecular Microbiology and Microbial Genetics. Control gene expression of carbohydrate metabolism in bacteria. The main area of interest is to understand how the transcriptional and translational regulatory networks interact with other cellular components such as the metabolic system. This involves the analysis of the mechanisms through which the cell senses nutrient availability and transmits that information to the level of gene expression. It also involves looking at the transcription and translation control, which govern the expression of genes involved in carbohydrate metabolism in the Gram-positive model organism *Bacillus subtilis*.

Laboratory web site: <http://sites.fct.unl.pt/microbial-genetics/>

Recent Supervision

PhD

Completed

- José Inácio. 2008. "Molecular Analysis of Arabinan Degradation in *Bacillus subtilis*". Grant SFRH/BD/18238/2004 from FCT. PhD in Biology, UNL
- Irina Franco. 2007. "Regulation of Arabinose Metabolism in *Bacillus subtilis*: linking structure and function". Grant SFRH BD/5233/2001 from FCT. PhD in Biology, UNL

In progress

- M Isabel Correia. "Assembly of AraR-DNA complexes and gene regulation in *Bacillus subtilis*". PhD Grant from FCT nº SFRH/BD/29469/2006.
- Mário Ferreira. "Genetic and biochemical characterization of hemicellulosic polysaccharides' utilization in *Bacillus subtilis*", Ref. SFRH/BD/73039/2010 from FCT
- Lia Godinho. "Characterization of open reading frames of unknown function in *Bacillus subtilis*: gene regulation and functional analysis" Ref. SFRH/BD/73109/2010 from FCT.

MSc

Completed

- Mário Ferreira. 2009. "Utilization of arabinose-containing polysaccharides by *Bacillus subtilis*: transport and metabolism" MSc in Biotechnology Faculdade de Ciências e Tecnologia, UNL.

- Lia Godinho. 2009. "Characterization of the *araL* gene from *Bacillus subtilis*". MSc in Biotechnology Faculdade de Ciências e Tecnologia , UNL.
- Diana Garcia. 2010. "Designing novel Biocompatible Ionic liquids for different Bioapplications". MSc in Biotechnology, Faculdade de Ciências e Tecnologia, UNL. Co-supervision. Supervisor: Dr Pedro Vidinha.

Funding - Recent Project leadership

- 2010-2013 Breaking Down the Wall - Microbial Hemicellulases for saccharification, Fundação para a Ciência e a Tecnologia PTDC/AGR-AAM/102345/2008
- 2005-2009 Molecular Characterization of a Microbial Hemicellulolytic System, Fundação para a Ciência e a Tecnologia POCl/AGR/60236/2004
- 2005-2009 Mechanisms of Repression by AraR, a Key Regulator of Carbohydrates Utilization in *Bacillus subtilis*, Fundação para a Ciência e a Tecnologia POCl/BIA-MIC/61140/2004

Recent publications

- Godinho LM, and de Sá-Nogueira I. (2011). Characterization and regulation of a bacterial sugar phosphatase of the HAD superfamily AraL from *Bacillus subtilis*. *FEBS Journal* 278: 2511-2524.
- Ferreira M.J. and I. de Sá-Nogueira (2010) A multitask ATPase serving different ABC-type sugar importers in *Bacillus subtilis*. *Journal of Bacteriology* 192 (20): 5312-5318.
- de Sanctis, D., Inácio, J., Lindley, P., de-Sá-Nogueira, I. Bento, I. (2010). New evidence for the role of calcium in the glycosidase reaction of GH43 arabinanases. *FEBS Journal* 277(21): 4562-4574.
- Inácio, JM, Correia, I.L. and de Sá-Nogueira I. (2008). Two distinct arabinofuranosidases contribute to arabino-oligosaccharide degradation in *Bacillus subtilis*. *Microbiology-SGM* 154 (9): 2719-2729.
- de Sanctis D, Bento I, Inácio JM, Custódio S, de Sá-Nogueira I, and Carrondo MA (2008). Overproduction, crystallization and preliminary X-ray characterization of Abn2, an endo-1,5-alpha-arabinanase from *Bacillus subtilis*. *Acta Crystallogr Sect F Struct Biol Cryst Commun.* 64(Pt 7):636-638. doi:10.1107/S1744309108016321
- Inácio, J.M., and I. de Sá-Nogueira. (2008). Characterization of the *abn2(yxiA)* encoding a *Bacillus subtilis* GH43 arabinanase, Abn2, and its role in arabino-polysaccharides degradation. *Journal of Bacteriology* 190: 4272-4280. doi:10.1128/JB.00162-08
- Inácio J. M. and de Sá-Nogueira I. (2007) *trans*-acting factors and *cis* elements involved in glucose repression of arabinan degradation in *Bacillus subtilis*. *Journal of Bacteriology* 189(22): 8371-8376. doi:10.1128/JB.01217-07.
- Franco. I.S. Mota. L.J. Soares. C.M. and de Sá-Nogueira I. (2007) Probing key DNA contacts in AraR-mediated transcriptional repression of the *Bacillus subtilis* arabinose regulon. *Nucleic Acids Research* 35: 4755–4766. Open Access. doi:10.1093/nar/gkm509.
- Franco, S. I., Mota, L. J., Soares, C. M., and I. Sá-Nogueira. (2006). Functional domains of *Bacillus subtilis* transcription factor AraR and identification of aminoacids important for nucleoprotein complex assembly and effector-binding. *Journal of Bacteriology* 188: 3024-3036. doi:10.1128/JB.188.8.3024-3036.2006