

CV Chantal Fernandes

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A- Personal information

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Institutional affiliation: Centro de Neurociências e Biologia Celular de Coimbra

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B- Education

2009 Ph.D. Biochemistry (Specialty Microbiology), University of Coimbra, Portugal, under the supervision of Professor Milton Costa

2004 B.Sc. Biochemistry, University of Coimbra, Portugal

C- Positions and Employment.

2010-... Post-doctoral research fellow, FMUC and Center for Neuroscience and Cell Biology, under the supervision of Professor Teresa Gonçalves

2009/10 Technical, Medical Company.

2004/09 Ph.D. Student, Lab. Microbiology FCTUC, Portugal.

D- Experience as scientific adviser

Supervision of Master degree students:

Collaboration in the supervision of the students Paulo Silva, Fabiana Soares and Cristela Pires.

Supervisors: Prof. Teresa Gonçalves, Prof. Leonel Perreira.

Collaboration in the supervision of the students Ana Maranhã and Carlos Matos.

Supervisors: Prof. Milton S. da Costa e Prof. Nuno Empadinhas.

Supervision of Ph. D. students:

Collaboration in the supervision of the students Daniel Farinha Nunes, Gil Pereira Costa, Joana Filipa Neves, Carolina Paiva Coelho) of the international Ph. D. program organized by the Center for Neuroscience and Cell Biology.

Supervisors: Prof. Milton S. da Costa e Prof. Nuno Empadinhas.

Member of the evaluation panel of academic examinations: Examiner of the Master Degree Dissertation (MSc thesis) examination: João Filipe Nogueira Marques, "Caracterização do perfil biotecnológico de *Dilsea carnosã*. Ensaios de cultivo em IMTA, Análise do conteúdo coloidal, Quantificação de potencial bioativo", Master in Biodiversidade e Biotecnologia Vegetal (FCTUC), 15/9/2015.

Member of the evaluation panel of the grant "Identificação do potencial antimicrobiano de produtos naturais".

Participation and teaching in the Medical Mycology course of the international Ph. D. program organized by the Center for Neuroscience and Cell Biology.

E- Participation in R&D projects

1. PTDC/SAU-ESA/108636/2008 *Alternaria infectoria* FKS, CHS and melanin synthesis genes: the combination for opportunism. PI: Gonçalves T.
2. PTDC/SAU-MET/111398/2009 Role of the intestine in promoting the lipogenic effects of fructose. PI: J. Jones.
3. "Nature's shields to environmental stress. Biosynthesis of compatible solutes in extremely radiation-resistant *Rubrobacter* spp.", Fundação para a Ciência e a Tecnologia, Portugal. Project POCI/BIA-MIC/56511/2004 (2005-2008). PI: Milton S. da Costa.
4. "Hotsolutes - New applications of compatible solutes from hyperthermophiles", European Commission (FP6). CRAFT, Contract n° COOP-CT-2003-508644 (2004-2006). Project Coordinator: Miguel Santos-STAB-VIDA; Coordinator in the group of Coimbra: Milton S. da Costa.

F- Selected peer-reviewed publications

1. Fernandes C, Prados-Rosales R, Silva B, Nakouzi-Naranjo A, Zuzarte M, Chatterjee S, Stark RE, Casadevall A, Gonçalves T (2016) Activation of melanin synthesis in *Alternaria infectoria* by antifungal drugs. *Antimicrob Agents Chemother.* 60:1646–1655. doi: 10.1128/AAC.02190-15. (Impact factor 4.476)
2. Fernandes C, Gow NAR, Gonçalves T (2016) The importance of subclasses of chitin synthase enzymes with myosin-like domains for the fitness of fungi. *Fungal Biol Rev.* doi: 30:1-14. 10.1016/j.fbr.2016.03.002. (SCImago Journal Rank (SJR): 1.529)
3. Soares F, Fernandes C*, Silva P, Pereira L, Gonçalves T (2016) Antifungal activity of carrageenan extracts from the red alga *Chondracanthus teedei* var. *lusitanicus*. *J Appl Phycol.* doi:10.1007/s10811-016-0849-9. *Corresponding author. (Impact factor 2.559)
4. Fernandes C, Anjos J, Walker LA, Silva BM, Cortes L, Mota M, Munro CA, Gow NA, Gonçalves T (2014). Modulation of *Alternaria infectoria* cell wall chitin and glucan synthesis by cell wall synthase inhibitors. *Antimicrob Agents Chemother.* 58:2894-2904. doi: 10.1128/AAC.02647-13. *Antimicrob Agents Chemother.* (Impact factor 4.476)
5. Anjos J, Fernandes C, Silva BM, Quintas C, Abrunheiro A, Gow NA, Gonçalves T (2012). $\beta(1,3)$ -glucan synthase complex from *Alternaria infectoria*, a rare dematiaceous human pathogen. *Med Mycol.* 50:716-25. doi: 10.3109/13693786.2012.675525. (SCImago Journal Rank (SJR): 1.979)
6. Fernandes C, Mendes V, Costa J, Empadinhas N, Jorge C, Lamosa P, Santos H and da Costa MS (2010). Two alternative pathways for the synthesis of the rare compatible solute mannosylglucosylglycerate in *Petrotoga mobilis*. *J. Bacteriol.* 192:1624-33. doi: 10.1128/JB.01424-09. (Impact factor 3.726)
7. Nobre A, Alarico S, Fernandes C, Empadinhas N, da Costa MS (2008). A unique combination of genetic systems for the synthesis of trehalose in *Rubrobacter xylanophilus*: properties of a rare actinobacterial TreT. *J. Bacteriol.* 190:7939-7946. doi: 10.1128/JB.01055-08. (Impact factor 3.636)
8. Rodrigues MV, Borges N, Henriques M, Lamosa P, Ventura R, Fernandes C, Empadinhas N, Maycock C, da Costa MS, Santos H (2007). Bifunctional CTP:inositol-1-phosphate cytidyltransferase/CDP-inositol:inositol-1-phosphate transferase, the key enzyme for di-myoinositol-phosphate synthesis in several (hyper)thermophiles. *J. Bacteriol.* 189:5405-5412. doi: 10.1128/JB.00465-07. (SCImago Journal Rank (SJR): 2.621)
9. Fernandes C, Empadinhas N, da Costa MS (2007). Single-step pathway for synthesis of glucosylglycerate in *Persephonella marina*. *J. Bacteriol.* 189:4014-4019. doi: 10.1128/JB.00075-07. (SCImago Journal Rank (SJR): 2.621)
10. Fernandes C, Rainey FA, Nobre MF, Pinhal I, Folhas F, da Costa MS (2005). *Hermiinimonas fonticola* gen. nov., sp. nov., a Betaproteobacterium isolated from a source of bottled mineral water. *Syst. Appl. Microbiol.* 28:596-603. PMID: 16156117. (SCImago Journal Rank (SJR): 1.214)

G- Communications in scientific meetings

1. Poster communication: XVIII Congress of the Portuguese Biochemical Society, Coimbra, December 17th - 20th, 2014. Modulation of cell wall chitin, glucan and melanin synthesis of *Alternaria infectoria* in response to cell wall synthases inhibitors. Fernandes C, Anjos J, Walker L, Silva B, Cortes L, Mota M, Munro C, Gow NAR, Gonçalves T.
2. Poster communication: XII CNC Annual Meeting, Coimbra, December 15th - 16th, 2014. Chitin, β -glucan and melanin in *Alternaria infectoria*: the perfect combination for resistance to antifungals. Fernandes C, Anjos J, Walker L, Prados-Rosales R, Silva B, Cortes L, Mota M, Nakouzi-Naranjo A, Chatterjee S, Stark RE, Eusébio E, Casadevall A, Munro C, Gow NAR, Gonçalves T.
3. Poster communication: XI CNC Annual Meeting, Biocant Park, Cantanhede. December 18th -20th, 2013. Effect of cell wall synthases inhibitors in the modulation of cell wall chitin and glucan synthesis of *Alternaria infectoria*. Fernandes C, Anjos J, Silva B, Mota M, Empadinhas N, Munro C, Walker L, Odds F, Gow NA, Gonçalves T.
4. Poster communication: 4th PF2MUC Symposium, Faculty of Medicine, University of Coimbra, October 25th, 2013. Effect of cell wall synthases inhibitors in the modulation of cell wall chitin and glucan synthesis of *Alternaria infectoria*. Fernandes C, Anjos J, Silva B, Mota M, Empadinhas N, Munro C, Walker L, Odds F, Gow NAR, Gonçalves T.
5. Poster communication: X CNC Annual Meeting, Biocant Park, Cantanhede, 2012. Effect of caspofungin and nikkomycin Z on the cell wall chitin and glucan synthesis in *Alternaria infectoria*. Fernandes C, Anjos J, Abrunheiro A, Goncalves T.
6. Oral communication: IX CNC Annual Meeting, University of Coimbra, Coimbra, 2011. *Alternaria infectoria* response to caspofungin: modulation of $\beta(1,3)$ - glucan synthase and chitin synthases genes expression and cell wall components glucan and chitin. Fernandes C, Anjos J, Quintas C, Gonçalves T.
7. Poster presentation in the IV FEBS Advanced Lecture Course Human Fungal Pathogens: Molecular Mechanisms of Host-Pathogen Interactions and Virulence, 7-13th May, 2011, La Colle sur Loup, Nice, France. *Alternaria infectoria* response to Caspofungin: modulation of $\beta(1,3)$ -glucan synthase and chitin synthases genes expression and cell wall components glucan and chitin. Fernandes C, Anjos J, Quintas C, Abrunheiro A, Gonçalves T.
8. Poster presentation in XVI National Congress of Biochemistry, 22-25th October, 2008, Ponta Delgada, Açores, Portugal. *Petrotoxa mobilis* possesses two pathways for the synthesis of the rare compatible solute mannosyl- α -1,2-glucosylglycerate. Fernandes C, Empadinhas N, Mendes V, Costa J, Santos H and da Costa MS.
9. Poster presentation in the "Microbiotec07", Lisbon, Portugal, 30th November – 2nd December, 2007. A single-step pathway for the synthesis of glucosylglycerate in *Persephonella marina*. Fernandes C, Empadinhas N, and da Costa MS.
10. Oral communication in V CNC Annual Meeting, Coimbra, 2007. Glucosylglycerate: occurrence, biosynthesis and protein stabilization. Fernandes C, Costa J, Mendes V, Empadinhas N, Faria T, Ventura R, Maycock C, Santos H and da Costa MS.
11. Poster presentation in the 2th FEMS Congress of European Microbiologists, Madrid, Spain, 4-8th July, 2006. The inositol-1-phosphate synthase from *Rubrobacter xylanophilus*. Fernandes C, Empadinhas N, and da Costa MS.