

BIOGRAPHICAL SKETCH

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NAME Maria Catarina Silva		POSITION TITLE Graduate student, Visiting scholar	
eRA COMMONS USER NAME			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Faculdade de Ciencias da Universidade de Lisboa, Portugal	B.Sc. + Masters	2005	Biochemistry

NOTE: The Biographical Sketch may not exceed four pages. Follow the formats and instructions on the attached sample.

A. Positions and Honors.

2000-2005: Biochemistry B.Sc. Degree, at Faculdade de Ciencias da Universidade de Lisboa, Portugal.

2004-2005: Undergraduate research work from the Biochemistry B.Sc. degree at the Morimoto Laboratory, Northwestern University. Sponsored in part by the FCT (Fundacao para a Ciencia e Tecnologia, Portugal) fellowship: POCTI/BIA-BMC/56609/2004.

2005-2006: Visiting scholar, Morimoto Laboratory, BMBCB Department Northwestern University. Sponsored in part by the FCT fellowship: POCTI/BIA-BMC/56609/2004.

2007 - : Graduate student from Faculdade de Ciencias, Universidade de Lisboa, Portugal. Research work in the Morimoto Lab (Northwestern University, IL, USA). Advisors Prof. Margarida D. Amaral and Prof. Richard I. Morimoto. Sponsored by the FCT fellowship: SFRH/BD/28461/2006.

C. Research Support.

2004 - 2005: Biochemistry B.Sc. 5th Year Internship. Faculdade the Ciencias da Universidade de Lisboa student. Advisor Professor Margarida D. Amaral. Research performed in the Morimoto Lab, Northwestern University IL, USA. Co-advisor Professor Richard I. Morimoto. Sponsored in part by the FCT fellowship POCTI/BIA-BMC/56609/2004.

Research: Generation of the first Caenorhabditis elegans model for expression of the human CFTR (Cystic Fibrosis Transmembrane Conductance Regulator) protein and its characterization. Study of the wild-type and mutant F508del-CFTR proteins expression and processing in vivo. Identification of genetic modifiers of protein expression/ degradation.

2005 - 2006: Visiting Scholar. Research in the Morimoto Lab, Northwestern University IL, USA. Mentor Professor Richard I. Morimoto and Professor Margarida D. Amaral. Sponsored in part by the FCT fellowship POCTI/BIA-BMC/56609/2004

Research: Study of different misfolded proteins that have been related to human disorders: (1) C. elegans as a model system for the expression of human CFTR (associated to CF when mutated). Characterization of the protein processing, and genetic modifiers of expression and degradation. (2) C. elegans as a model system for the study of protein misfolding and aggregation. Proteins associated to human neurodegenerative diseases as:

polyglutamine proteins (polyQ expansion disorders) and Superoxide Dismutase 1 (Amyotrophic Lateral Sclerosis) are expressed in *C. elegans* to study the aggregation process, its regulation and toxicity for the organism.

2007 - : Graduate student from Faculdade de Ciencias, Universidade de Lisboa, Portugal. Work performed in the Morimoto Lab (Northwestern University, IL, USA). Co-advisors Prof. Margarida D. Amaral and Prof. Richard I. Morimoto. Sponsored by the FCT fellowship: SFRH/BD/28461/2006.

Research: *C.elegans* strains expressing polyQ and SOD1 (fluorescently-tagged) were used to perform RNAi screens for suppression of aggregation, to identify cellular factors involved in this process. For the common modifiers identified, biochemical, biophysical and behavioral assays are performed to determine how suppression of aggregation is achieved, and how it affects toxicity. The goal is to better understand the mechanism of misfolded proteins accumulation in the cell: its regulation, intermediate species and key steps that can be modulated to decrease toxicity.