# Karine ROBBE, PhD

## **Objective: Position in Biology and Bioinformatics**

Born the 4th November 1976, 27 years French, single

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#### **Education**

Pasteur Institute Bioinformatics Course (C. Letondal), Paris VII University Jan - Apr 2004

Oct 1999 - Dec 2003 PhD in Molecular Biology of the Cell, speciality: Biochemistry

- EMBO/FEBS advanced course in « Molecular mechanisms in signal transduction »

Spetses, Greece August 2001

**Master of Genetics PARIS VII University** 1996 - 1999

- DEA Molecular Biology of the Cell, Paris XI Orsay University (M. Jacquet)

- Pasteur & Curie Institutes course of Cell Biology (A. Dautry) April-May 1999

- Master specialities: human genetics, quantitative genetics, evolution genetics

**DEUG in Life Sciences** Cergy-Pontoise University 1994 - 1996

## **Experience**

Research Assistant CNRS, Pasteur Institute, Paris Jan 2004 - Apr 2004

> Prediction of proteins function, supervisor: Thierry Rose *Keywords:* graph, protein-protein interaction databases

Skills: conception, (Bio)Python, XML, algorithmic, graph search, HTTP/CGI, GML

output, parallel Blast.

Oct 1999 - Dec 2003 PhD Candidate, Pharmacology Institute IPMC CNRS, Sophia Antipolis

Activation Mechanism of Rac1, G protein, of Rho family, by Tiam1 exchange factor at

the surface of the lipidic membrane. Directors: Dr. Bruno Antonny, Dr. Pierre Chardin

Collaboration with **SERVIER pharmaceuticals** (1999-2002)

Keywords: signal transduction, G protein regulation, tumoral invasion

Skills: lipid-protein interaction, liposome preparation by reverse-phase or lipidic film and extrusion, G protein nucleotide binding and hydrolysis, lipopeptide preparation and purification, G protein glucosylation by bacterial toxin, protein production and

purification in eukaryote cells, cell culture, Western-Blot, mass spectrometry.

Nov 1998 - Sept 1999 MSc Traineeship, Jacques Monod Institute, Epigenetic and Recombination, Paris

> Histone deacetylase cloning in A. immerses, supervisor: Pr. J.L. Rossignol *Keywords*: regulation of gene expression, methylation, histone acetylation

Skills: use of genomic database, new gene cloning, molecular biology, genetic crossing

ERASMUS Traineeship, Leicester University, Mammalian Genetics laboratory March - Aug 1998

> Polymorphism in repeated sequences. Supervisor: Sir A. Jeffreys Keywords: genetic fingerprints, diabetes, IDDM, germinal mutations

Skills: MVR-PCR, SM-PCR, DNA extraction

Aug - Sept 1997 Traineeship, Paris Medicine University, CNRS UPR 37

DNA structures on the interferon-beta promoter. Supervisor: **Pr. J. Doly** 

*Keywords*: regulation of β- interferon expression

Skills: molecular biology, DNA gel-shift assay, cell culture

**Traineeship, "Collège de France"**, CNRS UPR 9054, Paris June - July 1996

Supervisor:Dr S. Nicolaidis

Keywords: obesity, nutrition, leptin, rat

Skills: radio-immunological assays, dissection, brain histology

Traineeship, ZENECA Pharmaceuticals ICI, Macclesfield, England July 1995

Supervisor: Dr. Henessey

Skills: high through ouput screening for gyrase inhibitor, bacteriology

# **Computer Science and Bioinformatics**

Operating Systems: Linux, Windows, MacOS

Languages: (Bio)Python, C, (Bio)Perl

**Algorithmic:** sorting, dynamic programming, greedy and local algorithms, graphs

**Computer Interface** participative conception, design workshop

Web: dynamic XHTML, CGI, web site conception, XML/DTD, databases (Sybase), Tkinter (Python)

**Bioinformatics:** biologic databases and web programs, sequences comparison, phylogenetic tree, pattern searching,

biostatistics, genetic desequilibrium and Lodscore **Office** (Canvas, Word, Excel, End-Note, Power Point)

### **Publications and Congress**

Mesmin B \*, Robbe K \*, Geny B, Luton F, Popoff M, Antonny B. A phosphatidylserine-binding site in the cytosolic fragment of *Clostridium sordelii* lethal toxin facilitates glucosylation of membrane-bound Rac. Submitted. \*These authors contributed equally to this work

Robbe K, Antonny B. Liposomes in the study of GDP/GTP cycle of Arf and related small G proteins. *Methods Enzymol.* 2003;372:151-66.

Robbe K, Otto-Bruc A, Chardin P, Antonny B. Dissociation of GDI and membrane translocation are required for efficient activation of Rac by the DH-PH region of Tiam. *J Biol Chem.* 2003 Feb 14;278(7):4756-62.

Robbe K, Bonnefoy E. Non-B-DNA structures on the interferon-beta promoter? *Biochimie*. 1998 Aug-Sep;80(8-9):665-71.

**RhoGTPases and Immunity,** Roscoff 10th-13th May 2003 (Poster)

European Congress in Cell Biology ELSO, Nice 29th june-3 July 2002 (Poster)

Congress in Biology computer Sciences JOBIM (Biology, Mathematics), St Malo 10th-12th June 2002

French Congress on G proteins, 7th-8th November 2000 and 27th-29th March 2002 (Poster)

EMBO/FEBS Advanced course Spetses, Greece, 18th-31st August 2001 (Poster)

**Epigenetic and Recombination Congress** Curie Institute, Paris, September 2000

#### Other Skills and Interests

Scientific Communication Course (Sophia-Antipolis, 2002, UNSA University PhD course) Scientific English (Master course), Cambridge First Certificate in English (Dec 1995) European First Aid Certificate, French Red Cross (Oct 1997) Teaching course (June 1996)

**BIOTECHNO Conferences Organisation:** Paris in 1997, 1999 with **BIODOCS** and Nice in 2000 with **AJC06**. Member of the CA **BIOTECH Network** in 2000/2001

Member of "Coup de pouce" society from 2001 to 2002 (high school homework support)

**BIOAVENIR** congress talk in 2000 (for students doing a Biology first degree)

**Téléthon'96 and Téléthon'97 Organisation** initiated by BGA society and realised in collaboration with AFM society **President of « Biologie et Génétique Appliquée »** (BGA) society in 1997

Sports: hiking, climbing, swimming, canyoning, via ferrata, snowboard Leisures: drawing (pastels), pastry making, numeric photography