

Philippe BARBERET

Curriculum Vitae (February 2005)

Gesellschaft für Schwerionenforschung (GSI)
Materials Research / Biophysics

Planckstr. 1
64291 Darmstadt
Germany

Phone: +49 (0)6159 712169
Fax. +49 (0)6159 712179
email: p.barberet@gsi.de

Personal Information:

Date of birth : October 5th 1977
Place of Birth : Belfort, France
Citizenship : French
Mother Tongue : French
Foreign languages : English (fluent)
Spanish (learned in school)
German (Beginner)

Education:

2000-2003:

Ph.D. Physics and engineering sciences in University Bordeaux I, France

Ph.D. Thesis title: *“Development of a single ion irradiation facility for radiobiology studies at the cell level”*

Thesis awarded in October 2003.

1999-2000:

M.Sc. at University of Caen, France

Specialisation: Physics of ionizing radiations and matter

1997-2000:

Engineering High-school ISMRa in Caen, France

Specialisation: Instrumentation for radiation physics

1995-1997:

**Preparation for the competitive examination to French engineering high-schools,
Lycée Blaise Pascal, Clermont-Ferrand, France**

Research Experience:

September 2004 – Present:

Post-Doctoral Fellowship

Gesellschaft für Schwerionenforschung (GSI), Darmstadt, Germany

European Marie Curie Research Training Network: CELLION

Targeted irradiation of individual living cells using the GSI heavy ion microbeam

October 2003 – August 2004:

Short term teaching/research position in Bordeaux I University

Optimisation of the microbeam irradiation facility in CENBG.

October 2000 – September 2004:

Ph.D. Thesis in Bordeaux I University / CENBG, Bordeaux, France

Development of a single ion irradiation facility for radiobiology studies at the individual cell level

Teaching Experience:

October 2003 – August 2004:

Short term teaching/research position in Bordeaux I University

Lectures and practical teaching on physics for students in first and second year in university (Optics, electrostatic and magnetism, electronics)

Computer Skills:

Systems: Windows, Linux, UNIX

Programming languages: C, C++, Visual C++, Visual Basic

Simulation software: GEANT4, SRIM

Publications:

A. Peer-reviewed International Journals

Ph. Barberet, A. Balana, S. Incerti, C. Michelet-Habchi, Ph. Moretto, Th. Pouthier : Development of a focused charged particle microbeam for the irradiation of individual cells, *Review of Scientific Instruments* **76**, issue 1, 015101, January 2005.

C. Michelet-Habchi, Ph. Barberet, R.K. Dutta, Ph. Moretto, A. Guet-Bara, M. Bara Elemental maps in human allantochorial placental vessels cells: 2. MgCl₂ and MgSO₄ effects, *Magnesium Research* **16**, 171-175, 2003.

B. Peer-reviewed International Conference Proceedings

Ph. Barberet, P. Aguer, A. Balana, N. Gault, S. Incerti, J.L. Lefaix, C. Michelet-Habchi, Ph. Moretto, J.L. Poncey : First experiments on cells using the focused microbeam at CENBG, *Radiation Research* **161**, 91-93, 2004.

6th International Workshop on Microbeam Probes of Cellular Radiation Response, Oxford, UK, March 2003

S. Incerti, Ph. Barberet, R. Villeneuve, P. Aguer, E. Gontier, C. Michelet-Habchi, Ph. Moretto, D.T. Nguyen, T. Pouthier, R.W. Smith: Simulation of cellular irradiation with the CENBG microbeam line using GEANT4, *IEEE Trans.Nucl.Sci.* **51**, issue 4, 1395-1401, 2004

IEEE 2003 Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC), Portland, Oregon, October 2003.

S. Incerti, Ph. Barberet, B. Courtois, C. Michelet-Habchi, Ph. Moretto : Simulation of ion propagation in the microbeam line of CENBG using GEANT4, *Nucl. Instr. & Meth. B* **210**, 92-97, 2003.

8th International Conference on Nuclear Microprobe Technology and Applications, Takasaki, Japan, September 2002.

C. Michelet-Habchi, Ph. Barberet, R. K. Dutta, A. Guet-Bara, M. Bara and Ph. Moretto : Elemental maps in human allantochorial placental vessels cells: 1. High K⁺ and acetylcholine effects, *Nucl. Instr. & Meth. B* **210**, 354-358, 2003.

8th International Conference on Nuclear Microprobe Technology and Applications, Takasaki, Japan, September 2002.

C. Michelet, Ph. Moretto, Ph. Barberet, A. Balana, R.K. Dutta and P. Aguer, A focused microbeam for targeting cells with counted multiple particles, *Radiation Research* **158**, 370-371 (2002)

5th International Workshop on Microbeam Probes of Cellular Radiation Response, Stresa, Italy, June 2001.

Ph. Moretto, C. Michelet, A. Balana, Ph. Barberet, W. Przybylowicz, J.P. Slabbert, V. Prozesky, C. Pineda, G. Brut, G. Laurent, F. Lhoste. Development of a single ion irradiation system at CENBG for applications in radiation biology, *Nucl. Instr. & Meth. B* **181**, 104-109 (2001)

7th International Conference on Nuclear Microprobe Technology and Applications, Bordeaux, France, September 2000.

C. Michelet, Ph. Moretto, G. Laurent, W. J. Przybylowicz, V. M. Prozesky, C. A. Pineda, Ph. Barberet, F. Lhoste and J. Kennedy : Measurement of lateral straggling using a microbeam, *Nucl. Instr. & Meth. B* **181**, 157-163, (2001)

7th International Conference on Nuclear Microprobe Technology and Applications, Bordeaux, France, September 2000.

C. Thesis

Ph. Barberet, Développement d'une ligne d'irradiation microfaisceau en mode ion par ion pour la radiobiologie expérimentale à l'échelle cellulaire, Université Bordeaux I, n° d'ordre 2708, (2003)

<http://tel.ccsd.cnrs.fr/documents/archives0/00/00/44/09/index.html>