

# Esther Magdalena Márquez-Lona

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## EDUCATION

**Graduate Student Research** Fall 2002- present  
Interdisciplinary program in Molecular Biology, Genetics and Biochemistry  
Anatomy and Neurobiology Department  
University of California, Irvine.  
Advancement to Candidacy Examination 05/25/2007  
Thesis: Elucidating the role of Nucleolus in neuronal cell death pathways  
Assessing the neuroprotective role of Nucleophosmin protein  
Thesis Advisor: Steven Schreiber , M.D.

**Master of Science Degree** 09/1998-09/2000  
Molecular Biology and Genetic Engineering  
Engineering and Genetics Expression Laboratories  
Biochemistry Department. School of Medicine  
Nuevo Leon Autonomous University, Mexico.  
Thesis: Toxicological effects of adenoviral vectors in rat fetuses  
Overall GPA: 8.96/10  
Award: Diploma

**Bachelor of Science Degree** 08/1992-06/1997  
Chemical Pharmaceutics Biologist  
Chemistry School  
University Autonomous of Guanajuato, Mexico.  
Thesis: Molecular characterization of *Sclerotium cepivorum*  
Berk strains isolated from infected fields in Celaya  
Overall GPA: 8.2/ 10  
Award: Title

**English major** 08/1996-08/1998  
Languages Center

University Autonomous of Guanajuato, Mexico  
Award: Diploma  
Overall GPA: 8.5/ 10

**Relevant graduate courses:**

MBB 204 Protein Structure and Function  
MBB203 Structure/ Biosynthesis of Nucleic Acids  
DB231B Molecular and Cellular biology  
MBB206 Regulation of Gene Expression  
BC 207 Advanced Molecular genetics  
Mol Bio 218 Clinical Cancer  
MMG 215 Molecular immunology  
Overall GPA: 3.58/ 4.00

**RESEARCH  
EXPERIENCE**

Nucleic acids: DNA and RNA preparation and isolation  
RFLP analysis  
Cloning techniques  
*in vitro* amplification of DNA and RNA by PCR  
DNA sequencing analysis  
Directed DNA mutagenesis techniques

Protein: Protein isolation and purification techniques  
*in vitro* transcription/translation systems  
Co-immunoprecipitation technique  
GST fusion protein Pulldown Techniques  
SDS-PAGE  
Western blot analysis

Tissue culture: Maintenance and propagation of somatic cell lines  
HEK 293, 293T, HeLa, Cos7, Akata and CV1 cells  
Generation and maintenance of primary neuronal cell cultures  
Transient (lipofectamine) and stable (electroporation) transfection techniques  
Generation, production, purification and titrating of adenoviral vectors: first and second-generation

Histology: Basic and advance histological staining techniques  
Free floating Immunostaining techniques  
Light and fluorescence single and double immunolabeling  
Cell death pathways techniques  
Microtome and cryostat dissection techniques

Paraffin embedding and OCT inclusion techniques  
Perfusion techniques for murine models

*In vivo* murine work models: Intravenous, Intra-peritoneal, intra-amniotic, intra-cerebral, intra-nasal and subcutaneous administration of chemical and biological agents  
In utero and tail vein transduction of viral agents  
Anatomical dissections and processing of organs  
Pathological analysis of tissue

**WORK  
EXPERIENCE**

**Specialist Research Associate I** 11/2000-09/2002  
Viral Vector Laboratory  
The Center for Viral Research  
University of California Irvine

**HONORS AND  
AWARDS**

**UC Institute for Mexico and the United States (UC MEXUS) and  
National Council for Science and Technology of Mexico  
(CONACYT)**

Ph.D. Research Fellowship Award Program 2002- 2007

**National Council for Science and Technology of Mexico  
(CONACYT )**

Master of Science Fellowship Award Program 1998-2000

**University Autonomous of Guanajuato**

Bachelor's Laureate Thesis 1998

Annual Fellowship award 1997-1996

1996-1995

Member of the Honorable Academy of Chemistry

University Autonomous of Guanajuato 1994-1996

**TEACHING  
EXPERIENCE.**

International Theoretical-Practical courses in Molecular Biology 10/1999  
Gene Expression analysis  
Engineering and Genetics Expression Laboratories  
Biochemistry Department. School of Medicine

Nuevo Leon Autonomous University, Mexico.  
Area: Gene therapy.  
Course: Transduction and analysis of adenoviral vectors  
in murine models.

**INTERNATIONAL  
COURSEWORK.**

Biochemistry: An update 02/2000-08/2000  
Engineering and Genetics Expression Laboratories  
Biochemistry Department. School of Medicine  
Nuevo Leon Autonomous University, Mexico.

Introduction to Epidemiology 10/1999  
Engineering and Genetics Expression Laboratories  
Biochemistry Department. School of Medicine  
Nuevo Leon Autonomous University, Mexico.

International Theoretical-Practical course 10/1997  
Molecular basis, Diagnoses and Gene therapy of Cancer  
Engineering and Genetics Expression Laboratories  
Biochemistry Department. School of Medicine  
Nuevo Leon Autonomous University, Mexico.

**AFFILIATIONS** The society for Neuroscience

**SCIENTIFIC  
MEETINGS**

Márquez Lona EM, Ortiz R, Barrera Saldaña H, Rojas Martínez A. 10/2000  
Toxicological Effects of Adenoviral Vectors in Rat Fetuses  
International meeting in Molecular Biomedicine and Genetics  
Monterrey, Nuevo Leon; Mexico.

Márquez Lona EM, Ortiz R, Barrera Saldaña H, Rojas Martínez A. 10/2000  
Toxicological Effects of Adenoviral Vectors in Rat Fetuses  
National Meeting in Biomedical Research  
Monterrey, Nuevo Leon; Mexico.

Márquez Lona EM, Ortiz R, Barrera Saldaña H, Rojas Martínez A. 10/1999  
VNTR YNZ22: Molecular Marker and its study in Mexican Population  
National Meeting in Biomedical Research  
Monterrey, Nuevo Leon; Mexico.

- Márquez Lona EM, Ponce Noyola P. Molecular characterization of *Sclerotium cepivorum* Berk strains isolated from infected fields in Celaya  
National Biochemistry Meeting  
Merida, Yucatan; Mexico. 11/1998
- Márquez Lona EM, Ponce Noyola P. Molecular characterization of *Sclerotium cepivorum* Berk strains isolated from infected fields in Celaya  
National Meeting in Cellular and Molecular Biology of Mushrooms  
San Miguel de Allende, Guanajuato; Mexico. 08/1997

## REFERENCES

**Steven Schreiber, MD.**

[sschreib@uci.edu](mailto:sschreib@uci.edu)

Professor and Department Chair  
Neurology Department  
Phone: (949) 824 1669

**Peter Bryant, PhD.**

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Developmental & Cell Biology  
Professor  
Phone: (949) 824-4714, 6997.

**Rozaanne M. Sandri-Goldin, Ph.D.**

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Microbiology & Molecular Genetics  
Professor and Chair  
Microbiology & Molecular Genetics  
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**Marian L Waterman, Ph.D.**

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**Frances Anne Journak, Ph.D.**

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Professor

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**Rocio Ortíz López, Ph.D.**

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Professor

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**Patricia Ponce Noyola, Ph. D.**

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Experimental Biology Research Institute (IIBE)

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