

Curriculum vitae of J. R. Sotelo (2008, condensed)

I) Personal Data

Dr. José Roberto Sotelo Sosa: born in Montevideo, Uruguay, July 29, 1948.
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II) Academic Degree

PhD in Biology: Biochemistry, Neuroscience.
Other studies: School of Medicine.

III) a) Academic Position now

***COUNCELOR** of the Directory Council of the **INSTITUTO DE INVESTIGACIONES BIOLÓGICAS CLEMENTE ESTABLE (IIBCE)**.

***Professor and Head** of the Department of Proteins and Nucleic Acids (Full time, 2005-now)

***INSTITUTO DE INVESTIGACIONES BIOLÓGICAS CLEMENTE ESTABLE (IIBCE), Clemente Estable Institute for Biological Research**
Av. Italia 3318. Montevideo, Uruguay.

Professor and sponsor of Masters and Doctorates, Uruguay.

***PROGRAMME FOR THE DEVELOPMENT OF BASIC SCIENCES (PEDECIBA), Post Graduate School.**

The Department of Proteins and Nucleic Acids is **Associated** to the Department of Biochemistry of the School of Sciences for education and research.

***SCHOOL OF SCIENCES (SS), UNIVERSITY OF THE REPUBLIC (UR)**

Professor of Neurosciences

***NEUROSCIENCES DOCTORATE PROGRAMME, PABLO DE OLAVIDE UNIVERSITY, SEVILLA, SPAIN.**

b) Academic Positions occupied in the past

Instructor, Biophysics Department, (1971-1974)

***SCHOOL OF MEDICINE (SM, UR)**

Research Fellow, Biophysics Department (1971-1975).

Research Assistant, Biophysics Department (1975-1980).

Associate Professor, Biophysics Department (1980-1992, Full time).

***INSTITUTO DE INVESTIGACIONES BIOLÓGICAS CLEMENTE ESTABLE (IIBCE), Clemente Estable Institute for Biological Research**

Associate Professor, Biophysics Department (Part-time, 1988-1992)

***SCHOOL OF VETERINARIA (SV-UR).**

IV) Fields of Research Interest

a) Local protein synthesis in the axonal territory in normal or pathological conditions: calcium regulation of nervous system protein synthesis.

b) Collaboration with the Laboratory of Ethology, Ecology and Evolution of the IIBCE. Statistical advisory: experimental design, data processing and analysis.

V) Selected Publications

Salerno, V.P., Calliari, A., Provance, D.W., Sotelo-Silveira, J.R., **Sotelo, J.R.**, and Mercer, J.A. (2008). "Myosin-Va mediates RNA localization in primary

- fibroblasts from multiple organs.” *Cell Motility and the Cytoskeleton*. 65: 422–433.
- Sotelo-Silveira J, Crispino M, Puppo A, **Sotelo J.R.**, Koenig E. (2008). “Myelinated axons contain beta-actin mRNA and ZBP-1 in periaxoplasmic ribosomal plaques and depend on cyclic AMP and F-actin integrity for in vitro translation”. *J. Neurochemistry* 104:545-557.
- A. Kun, L.Otero, J. R. Sotelo-Silveira, and **J. R. Sotelo**, (2007) Ribosomal Distributions in Axons of Mammalian Myelinated Fibers. *Journal of Neuroscience Research* 85:2087–2098.
- J. R. Sotelo**, (2007). The Society of Biochemistry and Molecular Biology of Uruguay (SBBM), *IUBMB Life*, 59(4 – 5): 219 – 220, April –May 2007.
- J. R. Sotelo Silveira, A. Calliari, A. Kun, E. Koenig, **J. R. Sotelo**. (2006). RNA trafficking in axons. *Traffic*, 2006 April; 7(5):508-515. Invited Review.
- Juan Claudio Benech, Carlos Escande and **José Roberto Sotelo**. (2005). Relationship Between RNA Synthesis and The Ca²⁺ Filled State Of The Nuclear Envelope Store. *Cell Calcium*. 2005 Aug;38(2):101-9.
- J. R. Sotelo-Silveira, A. Calliari, M. Cárdenas, E. Koenig and **J. R. Sotelo**. (2004). Myosin Va and Kinesin II motor proteins are concentrated in ribosomal domains (periaxoplasmic ribosomal plaques) of myelinated axons. *Journal of Neurobiology*, 60(2):187-196, 2004.
- A. Calliari, J. R. Sotelo Silveira, M. C. Costa, J. Nogueira, L.C. Cameron, A. Kun, J. C. Benech, **J. R. Sotelo**. (2002) Myosin Va is locally synthesized following nerve injury. *Cell Motility and Cytoskeleton*. 51:169-176, 2002.
- J. C. Benech, P. Lima, C. Rogers, **J. R. Sotelo**, E. Brown. (2000) Ca²⁺ dynamics in synaptosomes isolated from the squid optic lobe. *Journal of Neuroscience Research*, 62:840-846, 2000.
- J. R. A. Sotelo-Silveira, A. Calliari, A. Kun, J. C. Benech and **J. R. Sotelo**, (2000). Neurofilament mRNAs are present and translated in the normal and severed sciatic nerve. *Journal of Neuroscience Research*, 62:65-75, 2000.
- J. R. Sotelo**, A. Kun, J. C. Benech, J. Morillas, A. Giuidtta, C. R. Benech, (1999). Ribosomes and Polyribosomes are Present in the Squid Giant Axon: an Immunocytochemical study. *Neuroscience*, 90(2):705-715, 1999.
- R. García-Tejeiro, J. R. A. Sotelo-Silveira, **J. R. Sotelo**, J. C. Benech, (1999). Calcium efflux from platelet vesicles of the dense tubular system. Analysis of the possible contribution of the calcium pump. *Molecular and Cellular Biochemistry*. 199(1-2):7-14, 1999
- J. C. Benech, J. R. A. Sotelo-Silveira, R. García, J. M. Verdes, A. Calliari, A. Kun, D. Calliari and **J. R. Sotelo**, (1998). Calcium and cellular metabolism: transport and regulation: Conference report. *Biochemical Education*., 26(3):228, 1998.
- A. Kun, J. C. Benech, A. Giuiditta, **J. R. Sotelo**, (1998). Polysomes are present in the squid giant axon: an immunoelectron microscopy study. *Electron Microscopy*, Volume 1, pp:825-826, 1998.
- F. G. Costa and **J. R. Sotelo**, (1996). Copulation duration of *Lycosa malitiosa* (Araneae Lycosidae) at cool and at warm temperatures. *Revue Arachnologique* 11(8):81-86, 1996.
- J. C. Benech, A. Gallina, C. Cameron, A. Teixeira, R. García, J. R. Sotelo-Silveira, J. M. Verdes, A. Sasso, A. Calliari, A. Kun, **J. R. Sotelo**, (1995). A strategy to introduce young students to biochemical research. *Biochemical Education*, 23 (4):192-193, 1995.

- K. Sango; J. M. Verdes; N. Hikawa; H. Horie; Shun-ichi Tanaka; Shuji Inoue; **J. R. Sotelo**, T. Takenaka. (1994). Nerve Growth Factor (NGF) restores depletions of Calcitonin Gene-Related Peptide and Substance P in Sensory Neurons from Diabetic Mice in vitro. *Journal of the Neurological Sciences*, 126 (1994):1-5.
- J. R. Sotelo**, C. Benech, A. Kun, (1992). Local radiolabeling of the 68 kD neurofilament subunit in the rat sciatic nerve. *Neuroscience Letters*, 144:174-176. 1992.
- K. Sango, H. Horie, **J. R. Sotelo**, T. Takenaka. (1991). A high glucose environment improves survival of diabetic neurons in culture. *Neuroscience Letters*, 129:277-280, 1991.
- J. R. Sotelo**, H. Horie, S. Ito, C. Benech, K. Sango, T. Takenaka, (1991). An in vitro model to study diabetic neuropathy. *Neuroscience Letters* 129:91-94, 1991.
- C. Benech, **J. R. Sotelo**, R. Martinez, R. Correa-Luna, (1990). Effects of gangliosides on the methionine uptake of crushed sciatic nerves of rats with alloxan diabetes. *Neuroscience Letters*, 114(2):220-224, 1990.
- L. Stensaas, L. Monti-Bloch, R. Garcia, **J. R. Sotelo**. (1989). Snug tubular enclosures reduce extrafascicular axonal escape at peripheral nerve repair sites. *Experimental Neurology* 103:135-145, 1989.
- F. G. Costa, **J. R. Sotelo**. (1986). Vertical Copulation Can Occur in *Lycosa malitiosa* Tullgren (Araneae Lycosidae) *Journal of Aracnology*, 14:121-122, 1986.
- F. G. Costa, **J. R. Sotelo**. (1984). Influence of temperature on the copulation duration of *Lycosa malitiosa* Tullgren (Araneae Lycosidae). *Journal of Arachnology*, 12:273-277, 1984.
- C. Benech, **J. R. Sotelo**, J. Menendez, R. Correa-Luna. (1982). Autoradiographic Study of RNA and Protein Synthesis in Sectioned Peripheral Nerves. *Experimental Neurology*, 76:72-82, 1982.
- A. Cirio, R. Boivin, J. Bost, R. Silva, **J. R. Sotelo**, (1981). Stimulation prandiale de la motricite reticulaire chez le mouton: phase cephalique et reflexe oral. *Ann. Rech. Vet.*, 12, 291, 1981.

Books

"Calcium and Cellular Metabolism: Transport and Regulation", (1997). **Editors, J. R. Sotelo** and J. C. Benech. Published by **Plenum Publishing Company**. November 1997, ISBN0-306-45594-3.

Chapters in Books

J. R. Sotelo, J. M. Verdes, J. C. Benech, J. R. Sotelo-Silveira, A. Calliari, A. Kun, (1997). "Regulation of neuronal protein synthesis by calcium". In "Calcium and Cellular Metabolism: Transport and Regulation." Plenum Pub. Co., pp 125-142.

VI) Honours

Banting y Best National Price from the Uruguayan Diabetic Association for the work: Experimental diabetic neuropathy: alterations of the fast axoplasmic transported proteins and the newly locally synthesized proteins in the peripheral nervous system.

President of the Uruguayan Biochemical & Molecular Biology Society (SBBM).

Counselor of the Directory Council of the Instituto de Investigaciones Biológicas Clemente Estable (IIBCE).

Director of the First International School of Biochemistry, Molecular and Cell Biology (2007). Montevideo, Punta Ballena, Maldonado, Uruguay.

Organizer of Several International Courses in Uruguay, Brazil, and one in USA.

VII) Fellowships or invitations for visiting foreign laboratories

- Department of Physiology, School of Medicine, Yokohama City University, Yokohama, Japan, 1989, February - May. Financed by **Japanese International Cooperation Agency (JICA)**.
- Department of Ophtalmology, Faculty of Medicine, Kyoto University, Kyoto, Japan, 1989 May - June. Supported by **JICA**.
- Department of General Physiology, Universita degli Studi di Napoli, Napoli, Italia. October 1, 1991 – March 31, 1992. Supported by the **European Union**.
- Marine Biological Laboratory (MBL), Woods Hole, Massachusetts. USA. Invited by Prof. A.Giuditta, July – August, 1994. Supported by **CONICYT**.
- Marine Biological Laboratory (MBL), Woods Hole, Massachusetts. USA. Invited by Prof. A.Giuditta, July – August, 1995. Supported by **CONICYT**.
- Marine Biological Laboratory (MBL), Woods Hole, Massachusetts, USA. Invited by Prof. A. Giuditta, July - August 1996. Supported by **CSIC**.
- Marine Biological Association of the United Kingdom (MBA), Plymouth, England, Invited by Dr. E. Brown, October - November, 1997. Supported by **CSIC**.
- Marine Biological Association of the United Kingdom (MBA), Plymouth, England, Invited by Dr. E. Brown, October - November, 1998. Supported by **CSIC**.
- Stazione Zoológica de Napoli (SZN), Napoli, Italia. Invited by Dr. E. Brown, October - Noviembre, 2000. Supported by **CSIC**.
- Department of Neurobiology, Cornell University at Ithaca, Ithaca, New York, USA. One month, invited by Dr. Timothy DeVoogd, supported by National Institute of Health (NIH), November, 2002.
- McLaughlin Institute, Great Falls, Montana, USA. Invitado por el Profesor John Mercer, 3 days, supported by the McLaughlin Research Institute. December, 2002.
- Laboratorio Andaluz de Biología, Universidad Pablo de Olavide, Sevilla, Spain. Invited by Dr. José María Delgado García to teach in the Programa de Doctorado de Neurociencias (Doctorate of Neurosciences Programme) of the Universidad Pablo de Olavide, Sevilla, España. Supported by the Programa de Doctorado de Neurociencias (Doctorate of Neurosciences Programme), April – May, 2003.
- Laboratory of Molecular Biology, Medical Research Council, Cambridge, UK. 2006
- Department of Physiology, University of Munster, Munster, Germany, 2006.
- Department of Biochemistry, University College London, London, UK, 2006
- Centro de Biotecnología de Madrid, Madrid, España, 2006.
- Hospital Carlos III, Madrid, España, 2006.
- Chairman of the Symposium: “RNA trafficking and targeting” in the Congress of the “Sociedad Brasileira de Bioquímica” (SBBq) and the Panamerican Association of Biochemistry and Molecular Biology Societies (PABMB), Aguas de Lindoia, Sao Paulo, Brasil, May 2008.

VIII) Financed Projects

- “Diabetic Neuropathies (I)”. Supported by the Japanese International Cooperation Agency (**JICA**). 1985.
- “Neuropatías Diabeticas. Comparison of axonally transported proteins with locally synthesized proteins in the Peripheral Nervous System. Effect of Gangliosides”. Supported by **Laboratory G. Ramón**, 1986.
- “Metabolic Disturbs Acting in Diabetic Neuropathy (II)”. Supported by **JICA**, 1988. (First renewal)
- “Diabetic Neuropathies (III)”. Supported by **JICA**, 1994. (Second renewal).
- “Developing of a Neuron Culture Laboratory”. **JICA**, 1994-1995.

- "Diabetic Neuropathies (IV)". Supported by **JICA**, 1996. (Third renewal).
- "International Workshop" held in Montevideo. Applied to the International Union of Pure and Applied Biophysics (**IUPAB**). Sponsored and supported, 1995.
- "International Workshop" held in Montevideo. Applied to the International Union of Biochemistry and Molecular Biology (**IUBMB**). Sponsored and supported, 1995.
- "Axonal mRNAs: Identification, Origin and Role", **European Economic Community**, 1994-1996.
- "TV International School of Neuroscience" held in Montevideo. Applied to the International Cell Research Organization (**ICRO-UNESCO**). Sponsored and supported, 1999.
- "TV International School of Neuroscience" held in Montevideo. Applied to the International Union of Biochemistry and Molecular Biology (**IUBMB**). Sponsored and supported, 1999.
- "Model of Scientific and Technological Integration among Argentina, Brasil y Uruguay" Director of the Project: J. R. Sotelo. Supported by the Organization of American States (OAS), 2000.
- "Presence and significance of BM-V in the Peripheral Nervous System". Supported by CSIC (University of the Republic): Aldo Calliari and J. R. Sotelo, December 1996- March 1998.
- "Model of Scientific and Technological Integration among Argentina, Brasil y Uruguay: II Spatial and temporal widening of the network". Supported by the Organization of American States (OAS), 2001.
- "Cloning and characterization of translated genes in synaptic nerve endings." **J. R. Sotelo** and Ángel Manuel Carrión, (Assistant Professor of the Neuroscience Unit, Biology Laboratory of Andalucía, Pablo de Olavide University, Andalucía, Spain. Supported by the Hispano-American International Cooperation Agency (AECI, Agencia Iberoamericana de Cooperación Internacional, Spain), 2002.
- "Cloning and characterization of translated genes in synaptic nerve endings." **J. R. Sotelo** and Ángel Manuel Carrión, (Assistant Professor of the Neuroscience Unit, Biology Laboratory of Andalucía, Pablo de Olavide University, Andalucía, Spain. Supported by the Hispano-American International Cooperation Agency (AECI, Agencia Iberoamericana de Cooperación Internacional, Spain), 2003. First renewal.
- "Myosin-Va and axonal protein synthesis NIH R03 TW007220 (Fogarty International Research Collaboration Award) Dec 2007 – Nov 2010. US\$158,953.
- Analisis de Variables Clinicas y Geneticas Asociadas a Desordenes del Movimiento, Demencias y Trastornos del Afecto En una Muestra Basada en la Clinica en Algunos Países Latinoamericanos: Efecto de Multiples Marcadores Genéticos y Haplotipos. Red de Macro Universidades de América Latina y el Caribe. 2008-2010.

IX) Invited Lectures (selected)

- "Local Protein Synthesis in Mammal Nerves". Università degli Studi Federico II di Napoli. Napoli, Italia, 1992.
- "Regulation of cultured neurons protein synthesis by calcium". International Workshop: "Calcium and Cellular Metabolism: Transport and Regulation", October, 1995.

- “Regulation of protein synthesis of cultured neurons by Ca²⁺”. Symposium: "The membrane transport of calcium and functions of glutamate", Porto Alegre, Brasil, October 9 to 10, 1995
- “Protein Synthesis in the Three Neuronal Territories”. II Latinamerican School of Neurosciences, Montevideo, Uruguay, March, 1997.
- “The Axonal Transport”. III Latinamerican School of Neurosciences, Montevideo, Uruguay, March, 1998.
- “Calcium Regulation of Neuronal Protein Synthesis”. IV Latinamerican School of Neurosciences. 1999.
- “Local Protein Synthesis in the Axonal Territory”. V Latinamerican School of Neurosciences. 2000.
- “Myosin V is present in the rat sciatic nerve and is locally synthesized after injury”. I International Symposium on Myosin V. II Iberoamerican Forum on the Cytoskeleton. May 22-26, 2000. Rio de Janeiro-Paraty, Brasil.
- “Protein Síntesis in the Synaptic and Axonal Territory” Department of Cell and Molecular Biology Ribeirao Preto School of Medicine, University of Sao Paulo, Ribeirao Preto, Brasil. Setember 27, 2000.
- “Regulation of Neuronal Protein Síntesis by Calcium”. Department of Cell and Molecular Biology Ribeirao Preto School of Medicine, University of Sao Paulo, Ribeirao Preto, Brasil. Setember 27, 2000.
- “Local protein synthesis in the peripheral nervous system”. Invited by Dr. Enrico Alleva, Section of Behavioural Pathophysiology, Laboratorio di Fisiopatologia di Organo e di Sistema, Istituto Superiore di Sanità. Roma, Italia. October 24, 2000.
- “Axonal regeneration and Protein Synthesis Machinery”. Invited by Dr. H. López, Department Neurobiology, Instituto de Investigaciones Médicas Mercedes y Martín Ferreira, Cordoba, Argentina. December 10, 2001.
- “The Cytoskeleton, Motor Proteins and Axonal Protein Synthesis Machinery” International Symposium and Training Course on Cell Motility, Molecular Motors and the Cytoskeleton (ICRO)”, Rio de Janeiro, May 27 – June 7, Brasil.
- “Motor Proteins and Axonal Ribosomal Domains” Invited by Dr. John Mercer, McLaughlin Research Institute, Great Falls, Montana, USA. November, 2002.
- “The Axonal Territory: Protein Synthesis and RNA transport”. Invited by Dr. T. DeVoogd, Department of Neurobiology, Cornell University at Ithaca, Ithaca, New York, USA, November, 2002.
- “A Course on Axonal Molecular Biology” Doctorate of Neurosciences, Pablo de Olavide University, Sevilla, Spain, April-May, 2003.