



<b>ISN School</b>					
<b>Advanced School on Molecular and Cell Biology to Unravel the Physiology/Pathology of Diverse Biological Paradigms</b>					
<b>-----First Week-----</b>					
<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<b>Module subjects</b>	<b>Alzheimer Disease</b>	<b>Calcium Messenger &amp; diseases</b>	<b>Proteins &amp; RNA Association</b>	<b>Cancer Genomics</b>	<b>Cell metabolism and cytoskeleton</b>
8:30-9:00	<b>Welcome to the School</b>				
9:00-9:40	<b>G. Bloom (USA) "Amyloid and Tau: the Trigger and Bullet of Alzheimer's Disease Pathogenesis".</b>	<b>E. Carafoli (Italy) "Calcium signals in physiology and disease in neurons"</b>	<b>I. Stagnary (Canada) "Signaling Interactome Dynamics in Health and Disease"</b>	<b>David Munroe (US). "Developing Genomic Tools to Understand Oncogenic Processes"</b>	<b>Gregg Gundersen (USA). "Microtubules, integrin trafficking and cell migration"</b>
9:40-10:20	<b>Efstathios Gonos (Greece). "Proteasome activation delays human ageing"</b>	<b>O. Uchitel (Argentina) "Calcium channels and synaptic transmission 50 years after Katz and Miledi"</b>	<b>Roy Larson (Brazil). "RNA binding proteins in the Pre-synapsis"</b>	<b>J. R. Sotelo Silveira (Uruguay). "Transcription &amp; Translational Profiling"</b>	<b>Meg Titus (USA) "Charting the Evolution of MyTH-FERM Myosins"</b>
10:20-10:40	<b>Coffee Break</b>				
10:40-	<b>Peter Baas (US)</b>	<b>G. Ferreira, (Urug.)</b>	<b>Alfredo</b>	<b>M. Duhagon</b>	<b>Enrique de la</b>

11:20	"Microtubules in Neurons"	"Channelopathies"	Cáceres (Argentina). "RhoGTPase signaling and axon formation"	(Uruguay). "Cancer Stem Cells"	Cruz (USA). « Mechanics of biological polymers »
11:20-12:00	M. Calero (Spain). "Conformational Disorders and Neurodegeneration"	Dr. Antonios Stamatakis (Greece). "Effects of <i>Early life Experiences</i> on Glutamate receptors"	B. Garat (Uruguay). "RNA binding proteins in lower eukaryotics"	Luigia Santella (Italy). "Actin cytoskeleton regulates Fertilization"	Silvia Chifflet (Uruguay). "Cell Migration in Epitelium Reparation"
<b>Lunch</b>					
12:00-13:30					
13:30-18:00					
<b><u>Experimental Course – Hands on (Monday to Thursday. Friday presentation of results)</u></b>					
1) Flow Cytometry to unveil the intriguing process of chromosome segregation and elimination ("chromosome loss", it occurs also in neurons).	2) Atomic Force Microscopy to understand axon structure in neurodegenerative process.	3) Confocal Microscopy as a tool to correlate cell biochemistry and Physio-pathology	4) Real Time PCR to quantify RNA expression	5) High Performance Liquid Chromatography (HPLC) to identify molecules	6) RNA and Protein labelling for understanding the dynamics of gene expression and translation at a subcellular level

## Second Week

<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<b>Module subjects</b>	<b>Atomic Force Microsc. &amp; Illness</b>	<b>Axonal Protein Synthesis</b>	<b>Schwann Cell &amp; Axon</b>	<b>RNA targeting</b>	<b>Eukaryotic Nucleus</b>
<b>9:00-9:40</b>	<b>Hans Oberleithner (Germany). "Viewing physiology through an atomic force microscope"</b>	<b>Mike Fainzilber (Israel). "RNA localization in cell growth control"</b>	<b>J. R. Sotelo (Uruguay). "Schwann cell to axon RNA transfer"</b>	<b>Robert Singer (USA, still tentative). "mRNA targeting in Fibroblasts and Neurons"</b>	<b>Ricardo Benavente (Germany). "The Functional Organization of the Cell Nucleus, in particular in meiotic cells"</b>
<b>9:40-10:20</b>	<b>Victor Shahin (Germany). "Atomic force microscopy in biomedical research"</b>	<b>Avraham Yaron (Israel). "The Axonal Transcriptome"</b>	<b>Felipe Court (Chile) Microvesicle Transfer from Schwann cell to axon</b>	<b>Jeffrey Gerst (Israel) "RNA localization in health and disease"</b>	<b>Gustavo Folle (Uruguay). "Mechanisms of Chromosome Loss"</b>
<b>10:20-10:40 Coffee break</b>					
<b>10:40-11:20</b>	<b>J. C. Benech (Uruguay). "Atomic Force Microscope in</b>	<b>A. Kun (Uruguay) "Ribosomes in axons"</b>	<b>J. A. Mercer (USA). "Myosin Va function in</b>	<b>L.C. Cameron (Brazil). "Mass Spectromics Analysis During</b>	<b>Horst Wallrabe (USA, Germany) "The Power of</b>

	Myometrium Cells”		RNA transfer”	Human Hyper Metabolic States”	FRET Microscopy”
11:20-12:00			J. Rodríguez Medina (Puerto Rico, USA). “Myosin II function in cell division »	Adriana Bassini (Brazil). "Mass Spectromics Analysis During Human Hyper Metabolic States"	
12:00-13:30 <b><u>Lunch</u></b>					
13:30-18:00					
<b><u>Experimental Course – Hands on (Monday to Thursday. Friday presentation of results</u></b>					
1) Transcriptome identification by High throughput sequency	2) In Vivo Calcium Measurement to unravel the role of Calcium as a second messenger in neurons	3) In situ Hibridization as a tool to identify specific mRNAs transfer from Schwann cell to axons	4) Electron Microscopy immunocytochemistry of axonal ribosomes	5) FRET between mRNA and Motor Proteins	6) Mass Spectrometry to identify RNA binding proteins (RNBP)
19:30 <b><u>Dinner</u></b>					

## Symposium (mid week-end)

Friday	Activities	Saturday	Lectures	Sunday	Lectures
1		8:30-8:50	George Bloom	8:30-8:50	Silvia Chifflet
2		8:50-9:10	Miguel Calero	9:50-9:10	J. C. Benech
3		9:10-9:30	Peter Baas	9:10-9:30	M. Fainzilber
4		9:30-9:50	Ernesto Carafoli	9:30-9:50	A. Yaron
5		9:50-10:10	Osvaldo Uchitel	9:50-10:10	A. Kun
		10:10-10:30	<b>Coffee Break</b>	10:10-10:30	Coffee Break
6		10:30-10:50	Gonzalo Ferreira	10:30-10:50	J. R. Sotelo (Sr.)
7		10:50-11:10	Igor Stagnari	10:50-11:10	Felipe Court
8		11:10-11:30	Roy Larson	11:10-11:30	J. A. Mercer
9		11:30-11:50	Beatriz Garat	11:30-11:50	Robert Singer
10		11:50-12:10	David Munroe	11:50-12:10	Jeffrey Gerst
11		12:10-12:30	J. R. Sotelo Silveira	12:10-12:30	L. C. Cameron
12		12:30-14:00	<b>LUNCH</b>	12:30-14:00	
		14:00-14:20	Gregg Gunderson	14:00-14:20	Ricardo Benavente
12		14:20-14:40	Meg Titus	14:20-14:40	Gustavo Folle
13		14:40-15:00	A. Cáceres	14:40-15:00	Horst Wallrabe
14		15:00-15:20	Maria Duhagon	15:00-15:20	A. Bassini
		15:20-15:40	<b>Coffee Break</b>	15:20-15:40	Diego Lico
15		15:40-16:00	H. Oberleithner		
16		16:00-16:20	V. Shahin		
17		16:20-16:40	E. de la Cruz		
18		16:40-17:20	J. Rodriguez Medina		
19		17:20-17:40	A. Stamatakis		
<b><u>Dinner</u></b>					