

March 3-7, 2004



# 1<sup>st</sup> Neuroscience Symposium

International Institute for Neuroscience of Natal

## Instituto Internacional de Neurociencia de Natal

Escritório Administrativo  
Rua Romualdo Galvão  
1703 - Edifício Trade Center -  
Salas 204,205 e 206 - Lagoa Nova  
Natal  
Rio Grande do Norte, Brasil  
CEP 59.056-100

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program

This 1st Neuroscience Symposium is dedicated to Dr. Cesar Timóteia, one of the fathers of Brazilian neuroscience.

# Welcome to the 1st Neuroscience Symposium of the International Institute for Neuroscience of Natal (IINN).

The decision to create the IINN is based upon the principle that the development and dissemination of scientific endeavors can contribute significantly to the education of children, the resolution of social inequalities, and the emergence of economic growth in developing countries like Brazil. This thesis is not solely based on the important economic contribution that the improvement of scientific production can bring to under-developed economies, adding value to their products through innovation; such a contribution is very clear, but it might not be the most important one. The propagation of high-level scientific practice, with all the ethical and moral values that characterize it, can play a crucial role in the education and cultural formation of future generations of Brazilians.

The Inaugural Symposium of IINN will take place March 3-7, 2004 in Natal. Distinguished scientists from around the world will come together for four days to showcase the amazing achievements of modern brain research. This event will officially launch our project in Brazil and, we hope, mark the beginning of a new era in Brazilian science.

## Tuesday, March 2, 2004 / 3:00 p.m. – 7:00 p.m.

3:00 p.m. – 7:00 p.m. **Registration** / Hotel Lobby

## Wednesday, March 3, 2004 / 9:00 a.m. – 4:30 p.m.

- 9:00 a.m. – 9:15 a.m. **Opening Remarks and Introduction of Special Guests**  
Miguel Nicolelis, Duke University / Cidade do Sol
- 9:15 a.m. – 10:00 a.m. **Welcome**  
Wilma Faria, Governor of Rio Grande do Norte  
Edward O'Neil, Pew Foundation  
Representatives of the Federal Government / Cidade do Sol
- 10:00 a.m. – 10:30 a.m. **Dissecting Short-Term Synaptic Plasticity at a Synapse of the Auditory Pathway**  
Erwin Neher, Max Planck Institute / Cidade do Sol
- 10:30 a.m. – 11:00 a.m. **The Interplay Between Synapses and Dendrites: Can Synaptic Homeostasis Coexist with Hebbian Learning?**  
Idan Segev, Hebrew University / Cidade do Sol
- 11:00 a.m. – 11:30 a.m. **Reverberation, Storage and Propagation of Memories Across the Wake-Sleep Cycle**  
Sidarta Ribeiro, Duke University / Cidade do Sol
- 12:00 p.m. – 2:00 p.m. **Lunch**
- 2:00 p.m. – 2:30 p.m. **Neuronal Dynamics in the Context of Functional Human Brain Imaging**  
Rodolfo Llinás, New York University / Cidade do Sol
- 2:30 p.m. – 3:00 p.m. **Orienting Attention in the Human Brain**  
Anna Nobre, Oxford University / Cidade do Sol
- 3:00 p.m. – 3:30 p.m. **What We Can Learn from Comparative Studies of the Brains of Mammals**  
Jon Kaas, Vanderbilt University / Cidade do Sol
- 3:30 p.m. – 4:00 p.m. **Refreshment Break** / Cidade do Sol
- 4:00 p.m. – 4:30 p.m. **Adult Neurogenesis and its Modulation by Experience**  
Charles Gross, Princeton University / Cidade do Sol

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Poster Display & Themes ..... 6

### THURSDAY, MARCH 4, 2004

- A** Neurophysiology and Imaging ..... 6
- B** Molecular and Cellular Neuroscience ..... 10
- C** Modeling, Analysis and Computational Neuroscience ..... 14
- D** Neurogenesis and Development ..... 15

### FRIDAY, MARCH 5, 2004

- E** Ethology and Experimental Psychology ..... 16
- F** Pharmacology ..... 21

### SATURDAY, MARCH 6, 2004

- G** Neurochemistry and Neuroanatomy ..... 25
- H** Neuroscience Education and Neurophilosophy ..... 28
- I** Psychology and Medicine ..... 29
- J** Nutrition and Neuroendocrinology ..... 33
- K** Neuropathology ..... 34

**Thursday, March 4, 2004 / 9:00 a.m. – 7:00 p.m.**

- 9:00 a.m. – 9:30 a.m.** **Navigating through the Inhibitory Gauntlet**  
Henry Markram, Brain and Mind Institute / Cidade do Sol
- 9:30 a.m. – 10:00 a.m.** **Resonant Synchronization of Inhibitory Networks: How Anatomy Determines Oscillation Frequency**  
Erik de Schutter, Antwerp University / Cidade do Sol
- 10:00 a.m. – 10:30 a.m.** **Synchronizing Functions of Electrical Synapses in the Mammalian Brain**  
Barry Connors, Brown University / Cidade do Sol
- 10:30 a.m. – 11:00 a.m.** **Refreshment Break** / Cidade do Sol
- 11:00 a.m. – 11:30 a.m.** **Computational Architectures in Primary Visual Cortex: from Synaptic Rumours to Low-level Perception**  
Yves Fregnac, Institut de Neurobiologie Alfred Fessard / Cidade do Sol
- 11:30 a.m. – 12:00 p.m.** **Mechanisms of Visual Plasticity: Different Mechanisms for Loss and Recovery of Cortical Binocularity**  
Ary Ramoa, Virginia Commonwealth University / Cidade do Sol
- 12:00 p.m. – 2:00 p.m.** **Lunch**
- 2:00 p.m. – 2:30 p.m.** **A Novel Approach to Neurodegeneration?**  
Susan Greenfield, Oxford University / Cidade do Sol
- 2:30 p.m. – 3:00 p.m.** **Gender Differences and Neurophysiology**  
Maria Bernardete de Sousa, Federal University of Rio Grande do Norte / Cidade do Sol
- 3:00 p.m. – 3:30 p.m.** **Nonlinear Dynamics of Neuronal Activities: Relevance for Understanding Higher Brain Functions**  
Henri Korn, Pasteur Institute / Cidade do Sol
- 3:30 p.m. – 4:00 p.m.** **Refreshment Break** / Cidade do Sol
- 4:00 p.m. – 4:30 p.m.** **Functional Consequences of Post-Lesional Synaptic Reorganization**  
Luiz Eugenio Mello, Federal University of São Paulo / Cidade do Sol
- 4:30 p.m. – 5:00 p.m.** **Spinal Cord Input Integration in the Characterization of Painful Events**  
Deolinda Lima, University of Porto / Cidade do Sol
- 5:00 p.m. – 7:00 p.m.** **Posters on Display**  
Neurophysiology and Imaging; Molecular and Cellular Neuroscience; Modeling, Analysis and Computational Neuroscience; Neurogenesis and Development / Pirâmide Café

**Friday, March 5, 2004 / 9:00 a.m. – 7:00 p.m.**

- 9:00 a.m. – 10:30 a.m.** **Special Panel Discussion: Tropical Parasitic Diseases**  
Erney Camargo, President, National Council for Scientific and Technological Development (CNPq)  
Selma Maria Jerônimo, Federal University of Rio Grande do Norte  
Ruth Nussenzweig, New York University  
Victor Nussenzweig, New York University  
Luiz Hildebrando Pereira, Tropical Diseases Research Center of Rondônia, Brazil  
Isaac Roitman, Evaluation Director, Agency for the Improvement of Graduate Training (CAPES) / Cidade do Sol
- 10:30 a.m. – 11:00 a.m.** **Refreshment Break** / Cidade do Sol
- 11:00 a.m. – 11:30 a.m.** **Information Overload in Neurophysiology: How Do We Connect the Dots?**  
John Chapin, State University of New York / Cidade do Sol
- 11:30 a.m. – 12:00 p.m.** **Gene Expression in Vocal Communication Pathways in Songbirds: A Window on Plasticity and Learning**  
Claudio Mello, Oregon University of Health and Science / Cidade do Sol
- 12:00 p.m. – 2:00 p.m.** **Lunch**
- 2:00 p.m. – 2:30 p.m.** **Special Presentation**  
Hemai Parthasarathy, Senior Editor  
Public Library of Science / Cidade do Sol
- 2:30 p.m. – 3:00 p.m.** **Scale-Free Brain Functional Networks**  
Dante Chialvo, Northwestern University and UCLA / Cidade do Sol
- 3:00 p.m. – 3:30 p.m.** **Timing Matters in Neuronal Activity**  
Sergio Neuenschwander, Max Planck Institute / Cidade do Sol
- 3:30 p.m. – 4:00 p.m.** **Refreshment Break** / Cidade do Sol
- 4:00 p.m. – 4:30 p.m.** **Exocytosis at Ribbon-type and Conventional Active Zone Synapses**  
Henrique von Gersdorff, Vollum Institute / Cidade do Sol
- 4:30 p.m. – 5:00 p.m.** **Migration and Cell Identity in the Cerebral Cortex**  
Cecilia Hedin-Pereira, Federal University of Rio de Janeiro / Cidade do Sol
- 5:00 p.m. – 7:00 p.m.** **Posters on Display**  
Ethology and Experimental Psychology; Pharmacology / Pirâmide Café

**Saturday, March 6, 2004 / 9:00 a.m. – 7:00 p.m.**

- 9:00 a.m. – 9:30 a.m. Plasticity and Dynamics of Visual Cortex Networks**  
Mriganka Sur, Massachusetts Institute of Technology / Cidade do Sol
- 9:30 a.m. – 10:00 a.m. The Dynamical Basis of Auditory Acuity**  
Marcelo Magnasco, Rockefeller University / Cidade do Sol
- 10:00 a.m. – 10:30 a.m. Memory Types, Retrieval and Extinction**  
Ivan Izquierdo, Federal University of Rio Grande do Sul / Cidade do Sol
- 10:30 a.m. – 11:00 a.m. Refreshment Break / Cidade do Sol**
- 11:00 a.m. – 11:30 a.m. High Density Neural Interfaces: Challenges in Technology Development of New Neural Prosthetics**  
Alan Rudolph, BioInspired Solutions / Cidade do Sol
- 11:30 a.m. – 12:00 p.m. Partial Directed Coherence and Functional Neuroscience**  
Luiz Baccalá, University of São Paulo / Cidade do Sol
- 12:15 p.m. – 2:00 p.m. Lunch**
- 2:00 p.m. – 3:00 p.m. Special Panel Discussion / Neuroscience in Brazil**  
Ricardo Gattass, Superintendent, Financer of Studies and Projects (FINEP); Federal University of Rio de Janeiro  
Ivan Izquierdo, Federal University of Rio Grande do Sul  
Luiz Carlos Silveira, President, Brazilian Society for Neuroscience; Federal University of Pará / Cidade do Sol
- 3:00 p.m. – 3:30 p.m. Refreshment Break / Cidade do Sol**
- 3:30 p.m. – 4:00 p.m. Fundamental Steps in Neural Processing Underlying Odor Discrimination**  
Gordon Shepherd, Yale University / Cidade do Sol
- 4:00 p.m. – 4:30 p.m. Capsaicin Receptors, Airway Inflammation and Neurogenic Responses Induced by Pollutants**  
Sidney Simon, Duke University / Cidade do Sol
- 4:30 p.m. – 5:00 p.m. Intra- and Interglomerular Neuronal Interactions Underlying Odor-Information Processing**  
John Hildebrand, University of Arizona / Cidade do Sol
- 5:00 p.m. – 7:00 p.m. Posters on Display**  
Neurochemistry and Neuroanatomy; Neuroscience Education and Neurophilosophy; Psychology and Medicine; Nutrition and Neuroendocrinology; Neuropathology / Pirâmide Café

**Sunday, March 7, 2004 / 9:45 a.m. – 12:00 p.m.**

- 9:45 a.m. - 10:00 a.m. French - Brazilian Collaborations in Neuroscience for the Natal Institute**  
Rémy Lestienne, Scientific Attaché, French Embassy, Brasília / Cidade do Sol
- 10:00 a.m. – 10:30 a.m. Special Presentation**  
Yuan Liu, Program Director  
National Institutes of Health / Cidade do Sol
- 10:30 a.m. – 11:00 a.m. From Where to Where-and-How: Assessing Brain Function through Multi-Site Recordings**  
Koichi Sameshima, University of São Paulo / Cidade do Sol
- 11:00 a.m. – 11:30 a.m. Computing with Neural Ensembles**  
Miguel Nicolelis, Duke University / Cidade do Sol
- 11:30 a.m. – 12:00 p.m. Conclusions and Acknowledgments / Cidade do Sol**

## Posters

Posters will be on display in the Piramide Café and are listed alphabetically according to the date of display and theme.

### Theme Descriptions:

- A** Neurophysiology and Imaging
- B** Molecular and Cellular Neuroscience
- C** Modeling, Analysis and Computational Neuroscience
- D** Neurogenesis and Development
- E** Ethology and Experimental Psychology
- F** Pharmacology
- G** Neurochemistry and Neuroanatomy
- H** Neuroscience Education and Neurophilosophy
- I** Psychology and Medicine
- J** Nutrition and Neuroendocrinology
- K** Neuropathology

## Thursday, March 4, 2004

### A Neurophysiology and Imaging

AN EXPLORATION INTO TEMPORAL PRECISION IN A1. Elhilali M., Shamma S.; Institute for Systems Research, Department of Electrical and Computer Engineering, University of Maryland, College Park, USA.

CELL VARIABILITY ACROSS FRONTO-PARIETAL CORTICAL ENSEMBLES IN MACAQUE MONKEYS: IMPLICATIONS FOR NEUROPROSTHETIC DESIGN. Carmena J. M. 1,2, Lebedev M. A. 1,2, Phelps E. 1, Nicolelis M. A. L. 1,2,3,4, 1 Department of Neurobiology; 2 Center for Neuroengineering; 3 Department of Biomedical Engineering; 4 Department of Psychological and Brain Sciences, Duke University, Durham, USA.

CHANGES IN CORTICAL SPREADING DEPRESSION ASSOCIATED WITH EARLY CASTRATION AND MALNUTRITION IN MALE RATS. Oliveira-Silva S. P., Andrade E. M., Aniceto H. K. R., Guedes R. C. A.; Dept. of Nutrition, Univ. Federal de Pernambuco, Recife, Brazil.

CHANGING PLANS: ELECTROPHYSIOLOGICAL CORRELATES IN HUMANS AND MONKEYS. Dias E. C. 1, Foxe J.J. 1,2,3, Schroeder C. E. 1,2, Javitt D. C. 1,4; 1 Program in Cognitive Neurosciences and Schizophrenia, The Nathan Kline Institute for Psychiatric Research, NY; 2 Department of Neuroscience; 3 Department of Psychiatry and Behavioral Science, Albert Einstein College of Medicine, NY; 4 Department of Psychiatry, New York University School of Medicine, NY, USA.

CORRELATION BETWEEN THE RATE OF LEARNING AND THETA RHYTHM IN WISTAR RATS. Santos L. M. 1,4, Kubo R. 1, Silva M. T. A. 3, Sameshima K. 1,2, Valle A. C. 1, Timo-laria C. 1; 1 Neurology, University of Sao Paulo, Sao Paulo, Brasil; 2 Pathology, University of Sao Paulo, Brasil; 3 Institute of Psychology, University of Sao Paulo, Sao Paulo, Brasil; 4 Nicolelis Laboratory, Department of Neurobiology, Duke University Medical Center, Durham, NC, USA.

CORTICAL SPREADING DEPRESSION IN ADULT RATS TREATED DURING SUCKLING WITH L-ARGININE. Frazão M. F., Maia L. M. S. S., Rocha-De-Melo A. P., Souza T. K. M., Silva M. B., Gurgel M. A., Guedes R. C. A.; Laboratório de Fisiologia da Nutrição Naide Teodósio, LAFINNT, Departamento de Nutrição, UFPE, Recife, Brazil.

C-PLAID: A NEW STIMULUS FOR STUDYING PERCEPTUAL SWITCHES. Lima B. 1, Azzi J. 2, Baron J. 3, Singer W. 1, Neuenschwander S. 1; 1 Max-Planck-Institute for Brain Research, Frankfurt/M, Germany; 2 Instituto de Biofísica Carlos Chagas Filho, UFRJ, Rio de Janeiro; 3 Instituto de Ciências Biológicas, UFMG, Belo Horizonte, Brazil.

CYTOCHROME-OXIDASE, MYELIN AND ELECTROPHYSIOLOGICAL BOUNDARIES AND MODULES OF SOMATOSENSORY AND VISUAL CORTICAL AREAS OF THE AGOUTI (*DASYPROCTA PRIMNOLOPHA*). Dias I. 1, Santiago L. F. 1, Franca J. G. 2, Houzel J. C. 3, Lent R. 3, Silveira L. C. 4, Picanço-Diniz C. W. 1, Pereira A. Jr. 1+; 1 Laboratório de Neuroanatomia Funcional, Dep. de Morfologia da UFPA; 2 Laboratório de Neurobiologia I do Instituto Carlos Chagas Filho da UFRJ; 3 Laboratório de Neuroplasticidade, Dep. de Anatomia da UFRJ; 4 Laboratório de Neurofisiologia Prof Eduardo Oswaldo-Cruz, Dep. de Fisiologia da UFPA, Brazil; +Current address: Dept. of Neurobiology, Duke Medical Center, Durham, NC.

EFFECTS OF APOMORPHINE AND CHLORPROMAZINE ON LATENT INHIBITION USING INFERIOR COLLICULUS STIMULATION AS NEGATIVE REINFORCEMENT. Troncoso A. C., Brandão M. L.; Laboratory of Psychobiology, University of São Paulo, Ribeirão Preto, Brazil.

EFFECTS OF EARLY EXCESSIVE VITAMIN A INTAKE ON CORTICAL SPREADING DEPRESSION IN RATS. Francisco E. S.; Rocha-de-Melo A. P., Oliveira M. M. B., Guedes, R. C. A.; Departamento de Nutrição, UFPE, Recife, PE, Brazil.

EFFECTS OF GLUCANTIME ON THE VOLTAGE-GATED POTASSIUM CHANNEL. Faheina G.V. 3, Donato M. F. 3, Arruda I. T. S. 3, Oliveira M. R. 3, Cruz J. S. 1, Araújo, D. A. M. 2,3; 1 Departamento de Bioquímica-Imunologia, UFMG; 2 Laboratório de Tecnologia Farmacêutica, UFPB; 3 Departamento de Biologia Molecular, UFPB. João Pessoa, Brasil.

EMBODIED IN-VITRO ELECTROPHYSIOLOGY: CONTROL OF A MOBILE ROBOT BY A POPULATION OF CULTURED NEURONS. Cozzi L.1, D'Angelo P.1, Ide A. N. 1,2, Chiappalone M. 1, Martinoia S. 1, Sanguineti V. 1; 1 University of Genova, Italy; 2 Universidade Federal de São Carlos, São Carlos, SP, Brazil.

FAST AND ORGANIZED TOPOGRAPHIC INTERPOLATION ACROSS THE BLIND SPOT (BS) REPRESENTATION IN MONKEY V1. Azzi J. C. B., Fiorani M., Gattass R.; Instituto de Biofísica Carlos Chagas Filho, CCS, Universidade Federal do Rio de Janeiro, Brasil.

FAST NEURAL ACTIVITY MODULATION IN THE MOUSE STRIATUM AND MOTOR CORTEX DURING ROTAROD PRACTICE. Cohen D., Costa R., Nicolelis M. A. L.; Department of Neurobiology, Duke Univ. Med. Ctr., Durham, NC, USA.

FMRI EVIDENCE OF FUNCTIONALITY AND PLASTICITY IN POLYMICROGYRIC CORTEX. Araujo D.1, Araujo D. B.1, Pontes-Neto O. M. 1, Rosset S. 1, Wichert-Ana L., Leite J. P. 1, Sakamoto A. 1, Santos A. C. 1; 1 Universidade de Sao Paulo, Ribeirão Preto, SP, Brazil.

FUNCTIONAL MRI AND ENTROPY-BASED ANALYSIS METHODS. Araujo D. B. 1, Tedeschi W. 1, Müller H. P. 2, Santos A. C. 1, Erne S. N. 2, Baffa O. 1; 1 University of Sao Paulo, Ribeirão Preto, SP, Brazil; 2 University of Ulm, Ulm, Germany.

HYBRID CIRCUITS: INTERFACING COMPUTERS, MODELS AND LIVING NEURAL TISSUE IN REAL TIME. Mazur R.1, Pinto R. D. 1, Selverston A. I. 2; 1 Instituto de Física, Universidade de São Paulo, Brazil; 2 Institute for Nonlinear Science, University of California, San Diego, USA.

INHIBITORY EFFECT OF FLUOXETINE ON THE PROPAGATION OF CORTICAL SPREADING DEPRESSION IN NORMAL AND MALNOURISHED YOUNG RATS. Amancio-dos-Santos A., Pinheiro P. C. F., Lima D. S. C., Ozias M. G., Oliveira M. B., Guimarães N. X., Guedes R. C. A.; Dept. of Nutrition, Univ. Federal de Pernambuco, Recife, PE, Brazil.

INTERHEMISPHERIC SPREADING DEPRESSION DIFFERENCES IN YOUNG RATS PREVIOUSLY SUBMITTED TO REPETITIVE ELECTROSTIMULATION OF THE LEFT PAWS AND/OR MALNUTRITION. Monte-Silva K. K., Assis F. N. L., Leal G. M. A., Guedes R. C. A.; Dept of Nutrition, Univ Federal de Pernambuco, CEP, Recife, PE, Brazil.

INTRATHECAL-STRYCHNINE ADMINISTRATION PROMOTES A DECREASE IN LATENCY TIME RESPONSE OF HYPEREXCITED SPINAL DORSAL HORN NEURONS. Monteiro C. M. 1, Cardoso-Cruz H.1, Galhardo V. 1,2, Lima D. 1,2; 1 IBMC Institute for Molecular and Cell Biology, Univ. Porto; 2 Institute of Histology and Embryology, Faculty of Medicine, Univ. Porto, Portugal.

LEFT DORSO-LATERAL PREFRONTAL REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IMPROVED EXECUTIVE FUNCTION IN PARKINSON'S DISEASE (PD) PATIENTS WITH DEPRESSION: A RANDOMIZED AND CONTROLLED TRIAL. Boggio P. S., Fregni F., Santos C. M., Rigolino R., Myczkowski M. L., Gallucci-Neto J., Mansur C. G. S., Rosa M. A., Odebrecht M., Rumi D. O., Barbosa E. R., Rigonatti S. P., Marcolin M. A., Silva M. T. A.; Department of Experimental Psychology, Institute of Psychology, Psychiatry and Neurology Institute University of São Paulo, São Paulo, SP, Brazil; Neurology Department, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, USA.

LOW FREQUENCY TRANSCRANIAL MAGNETIC STIMULATION DECREASED CORTICAL EXCITABILITY OF PATIENTS WITH CEREBRAL CORTICAL MALFORMATIONS: A TMS AND EEG STUDY. Thome-Souza S., Fregni F., Bempohl F., Boggio P. S., Merabet L., Rigonatti S. P., Marcolin M. A., Pascual-Leone A., Valente K. D.; Psychiatry Institute, University of São Paulo, São Paulo, Brazil; Department of Neurology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, USA.

$\mu$ -OPIOID AGONIST DAMGO SELECTIVELY HYPERPOLARIZES TONICALLY FIRING NEURONS IN RAT SUBSTANTIA GELATINOSA. Santos S., Safronov B.; Morphophysiology of the Nervous System Lab, Instituto de Biologia Molecular e Celular, Porto, Portugal.

NEURONAL RESPONSES RELATED TO FACE IDENTIFICATION IN THE MONKEY ANTERIOR TEMPORAL CORTICAL AREAS. Souza W. C., Eifuku S., Tamura R., Nishijo H., Ono T.; Department of Physiology, Faculty of Medicine, Toyama Medical and Pharmaceutical University, Toyama, Japan.

NORADRENERGIC NEURONS OF THE A5 AREA: AN ELECTROPHYSIOLOGICAL AND MORPHOLOGICAL STUDY. Ramos A. S., Arantes R. M., Cruz J. S.; Laboratory of Excitable Membranes - ICB, Instituto de Ciências Biológicas, UFMG, Brazil.

PAIN-INDUCED IMMEDIATE REORGANIZATION OF SOMATOSENSORY SPINAL NETWORKS. Galhardo V. 1,2, Lima D. 1,2; 1 IBMC - Institute for Molecular and Cell Biology; 2 Faculty of Medicine, University of Porto, Portugal.

PATTERN SELECTIVITY IN POPULATION RESPONSES OF EARLY VISUAL AREAS AND EXTRAstriatal FEEDBACK. Schmidt K. E., Goebel R., Castelo-Branco M., Lomber S. G., Payne B. R., Galuske R. A. W.; MPI für Hirnforschung, Frankfurt, Germany.

PATTERNS OF LFP SYNCHRONIZATION IN MONKEY PREFRONTAL CORTEX DURING A VISUAL SHORT-TERM MEMORY TASK. Rodriguez E. F., Muckli L. F., Städtler E., Waltz J. A., Pipa G., Munk M. H. J.; Max-Planck Institute for Brain Research, Frankfurt, Germany.

PHASE SYNCHRONY OF CORTICAL NEURAL SIGNALS DURING LANGUAGE PROCESSING. Brunetti E. P.1, Bosman C.2, Aboitiz F.2; 1 Instituto de Ciencias Biomedicas, Facultad de Medicina, Universidad de Chile; 2 Laboratorio de Neurociencias Cognitivas, Departamento de Psiquiatria, Facultad de Medicina, Pontificia Universidad Catolica de Chile Millennium Nucleus of Integrated Neuroscience, Chile.

POPULATIONAL CHANGES IN RAT ANTERIOR CINGULATE CORTEX NEURONAL NETWORK INDUCED BY PAIN. Cardoso-Cruz H. 1, Maia A. 1,2, Monteiro C. -1, Galhardo V. 1,2, Lima D. 1,2; 1 IBMC, University of Porto, Porto, Portugal; 2 Institute of Histology, Faculty of Medicine of Porto, Porto, Portugal.

PREDICTION OF WHISKER MOVEMENTS FROM NEURONAL ENSEMBLE RECORDINGS IN THE PRIMARY MOTOR CORTEX OF RATS. Oliveira L. M. O.1, Santos L.1, Carmena J. M. 1,2, Pereira A. 1, Ribeiro S. 1, Nicolelis M. A. L. 1,2,3,4, 1 Department of Neurobiology, 2 Center for Neuroengineering, 3 Department of Biomedical Engineering, 4 Department of Psychological and Brain Sciences, Duke University, Durham, NC, USA.

REWARD EXPECTATION MODULATES POST-STIMULUS NEURONAL ENSEMBLE ACTIVITY IN PRIMARY SENSORY CORTEX AND THALAMUS. Pantoja J., Ribeiro S., Wiest M., Soares E., Gervasoni D., Nicolelis M.; Dept. of Neurobiology, Duke University, Durham, NC, USA.

THE CONVERGENCE OF TASTE, OLFACTION AND TEXTURE INFORMATION, AND THE REPRESENTATION OF THE REWARD VALUE OF FAT, IN THE HUMAN BRAIN. Araujo I. E., Rolls E. T.; Department of Experimental Psychology, University of Oxford, Oxford, United Kingdom.

THE EFFECT OF CUE FAMILIARITY ON THE FORMATION OF SENSORY-MOTOR ASSOCIATION AND M1 ACTIVITY. Coelho M. R. P., Cohen D., Nicolelis M. A. L.; Dept. Neurobiology, Duke University Medical Center, Durham, NC, USA.

THE MULTIPLE-FACES EFFECT: A PILOT STUDY WITH fMRI. Dinu M. D.1, Simas M. L. B.1, Santos N. A.2, Cartaxo H. Q.3, Nogueira R. M. T. B. L.1, Lima R. D.3, Silva R. F.3; 1 Laboratório de Percepção Visual, LabVis-UFPE, Departamento de Psicologia, Universidade Federal de Pernambuco, Recife, Pernambuco, Brasil; 2 LabPVis, Mestrado de Psicologia, CCHLA, UFPB, João Pessoa-PB, Brasil; 3 Hospital Real Português, Recife, Brasil.

THE MULTIPLE FACES EFFECT: A QUANTITATIVE PSYCHOPHYSIC STUDY. Nogueira R. M. T. B.1, Medeiros J. C. M.1, Santos N. A.2, Simas M. L. B.1; 1 Laboratório de Percepção Visual, LabVis-UFPE, Departamento de Psicologia, Universidade Federal de Pernambuco, Recife, Pernambuco, Brasil; 2 LabPVis, Mestrado de Psicologia, CCHLA, UFPB, João Pessoa-PB, Brasil.

TMS OVER RIGHT DLPFC IMPROVES AFFECTIVE SET-SHIFTING IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER. Bempohl F., Fregni F., Boggio P. S., Merabet L., Rigonatti S. P., Silva M. A. T., Higa D. S., Otachi P., Saad E., Pascual-Leone A., Marcolin M. A.; Psychiatry and Psychology Institute, University of São Paulo, São Paulo, Brazil; Neurology Department, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, USA.

TWO EFFECTS OF MONOCULAR DEPRIVATION MODIFY OCULAR DOMINANCE IN MOUSE VISUAL CORTEX. Frenkel M. Y., Bear M. F.; Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, USA.

B

## Molecular and Cellular Neuroscience

**A1 ADENOSINE RECEPTORS: EVIDENCE OF EXPRESSION MODULATION BY CYCLIC AMP AND ENDOGENOUS ADENOSINE IN CHICK EMBRYO RETINAL CULTURES.** Pereira M. R., Ferreira J. M., Paes-de-Carvalho R.; Laboratório de Neurobiologia Celular, Programa de Neuroimunologia e Departamento de Neurobiologia, Universidade Federal Fluminense, Niterói, RJ, Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brasil.

**A MOTIF IN THE C-TERMINAL REGION MEDIATES ENDOCYTOSIS AND LOCALIZATION OF THE VESICULAR ACETYLCHOLINE TRANSPORTER (VACHT).** Ferreira L. T.1; Santos M. S.2; Martins Silva C.1; Gomez M. V.1; Prado V. F.2; Prado M. A. M.1; 1 Department of Pharmacology; 2 Department of Biochemistry, Federal University of Minas Gerais, Belo Horizonte.

**ABETA42 ACCUMULATION IN LATE ENDOSOMES/MVBS IN CULTURED PRIMARY NEURONS IS ASSOCIATED WITH ENDOCYTOSIS AND SYNAPSE CHANGES.** Almeida C. G.1, Takahashi R. H.1, Yu F.1, Lin M. T.1, Greengard P.2, Snyder E.2, Gouras G.K.1; 1 Dept. Neurol. & Neurosci., Weill Med. Col. Cornell Univ., New York, NY, USA; 2 Lab Molec & Cell Neurosci, Rockefeller Univ., New York, NY, USA.

**ADULT NEUROGENESIS IN THE NORTHEASTERN BRAZILIAN LIZARD, TROPIDURUS HISPIDUS.** Marchioro M.1, Nunes J-M. A. M.1, Ramalho A. M.1, Perez-Martinez E.2, Lopez-Garcia C.2; 1 Laboratório de Neurofisiologia. Departamento de Fisiologia, Universidade Federal de Sergipe, 2 Neurobiologia, Biologia Celular, Universitat de Valencia, Bursajot, Espanha.

**ANALYSIS OF ΔFOSB PROTEIN EXPRESSION IN PILOCARPINE-INDUCED EPILEPSY IN RATS AFTER CHOLINERGIC LESION WITH 192-IGG-SAPORIN.** Avedissian M., Tzirnazoglou U. F., Longo B. M., Mello L. E. A. M.; Physiology Department, UNIFESP, Brazil.

**ANALYSIS OF FUNCTIONAL IONOTROPIC ACETYLCHOLINE AND GLUTAMATE RECEPTORS DURING DEVELOPMENT OF THE CHICK BRAIN.** Matos R. J. B., Britto L. R. G.; Laboratory of Cellular Neurobiology, Department of Physiology and Biophysics, ICB/USP São Paulo, Brazil.

**ARE AMYLOID FIBRILS STRUCTURALLY IDENTICAL? IMPLICATION OF FIBRIL STABILITY FOR PARKINSON'S DISEASE.** Einsiedler C. M.1, Porto T. C. R.1, Suarez M. C.1, Andradre L. R.2, Silva J. L.1, Landsbury Jr. P.T. 3, Foguel D. 1; 1 Departamento de Bioquímica Médica, Universidade do Brasil, Rio de Janeiro; 2 Departamento de Anatomia, Universidade do Brasil, Rio de Janeiro; 3 Brigham and Women's Hospital and Department of Neurology, Harvard Medical School, Boston, USA.

**ASSOCIATION BETWEEN PSYCHOSIS AND THE PRESENCE OF VARIANT ALLELES OF CELLULAR PRION PROTEIN GENE IN PATIENTS WITH TEMPORAL LOBE EPILEPSY.** Guarnieri R., Soares B. L., Walz R., Velasco T. R., Hallak J. E. C., Alexandre V. Jr., Wichert-Ana L., Bianchin M. M., Landemberger M. C., Brentani R. R., Martins V. R., Sakamoto A. C.; CIREP, Centro de Cirurgia de Epilepsia, Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo (FMRP-USP), Ribeirão Preto.

**BRAIN ABNORMALITIES OF HSF1 NULL MOUSE.** Santos S. D.1, Saraiva M. J.1, 1 Molecular Neurobiology, IBMC- Porto, Portugal.

**BRAINSTEM NEURONS EXPRESSING NK1 AND μ-OPIOID RECEPTORS ARE NOT ACTIVATED BY THE MOVEMENT OF A CHRONICALLY INFLAMED JOINT.** Pinto M., Tavares I., Lima D.; Institute Histology Embryology, Faculdade de Medicina do Porto and IBMC, Portugal.

**CHANGES IN GENE EXPRESSION OF SEROTONIN RECEPTORS IN A MOUSE MODEL OF AGGRESSION.** Chiavegatto S., Bibancos T., Aneas I., Vallada H. P.; Institute of Psychiatry and Institute of Heart, School of Medicine, University of Sao Paulo, SP, Brazil.

**CHRONIC AND ACUTE EFFECTS OF HEROIN, COCAINE AND AMPHETAMINE IN PC12 CELLS.** Oliveira M. T.1, Rego A. C.1, Morgadinho M. T.2, Sarmento A. B.1, Macedo T. R. A.2, Oliveira C. R.1; 1 Center for Neuroscience and Cell Biology of Coimbra; Institute of Biochemistry; 2 Institute of Pharmacology and Experimental Therapeutics, Faculty of Medicine, University of Coimbra.

**COMPARATIVE DISTRIBUTION OF CART MRNA IN VIRGIN, PREGNANT AND LACTATING RAT FOREBRAIN.** Valera A. G.1, Nasello A. G.2, Elias C. F.3, Felicio L. F.1; 1 Dept. of Pathology, FMVZ, USP; 2 Dept. of Physiology, FCMSC; 3 Dept. of Anatomy, ICB, USP, São Paulo, Brazil.

**DIFFERENTIAL EXPRESSION OF CONNEXINS AND THE EMBRYONIC TELEENCEPHALON COMPARTMENTALIZATION.** Garcia G. T.1, Menezes J. R. L.2, Fróes M. M.2, Cofre J.1; 1 BEG/CCB/UFSC; 2 ICB/CCS/ UFRJ, Brazil.

**DIFFERENTIAL EXPRESSION OF IMPACT IN THE MOUSE BRAIN.** Pereira C. M.1, Longo B. M.2, Jaqueta C. B.2, Mello L. E. A. M.2, Castilho B. A.1; 1 Departamento de Microbiologia, Imunologia e Parasitologia; 2 Departamento de Fisiologia, Escola Paulista de Medicina, Universidade Federal de São Paulo, São Paulo, Brazil.

**DIFFERENTIAL EXPRESSION OF PURINERGIC P2X RECEPTORS DURING NEURONAL DIFFERENTIATION OF P19 EMBRYONAL CARCINOMA CELLS IN VITRO.** Majumder P., Resende R. R., Faria M., Ulrich H.; Department of Biochemistry, Instituto de Química, Universidade de São Paulo, Brasil.

**DYNAMIC OF PKCβ-GFP FUSION PROTEIN AT PC-12 CELLS STABLE EXPRESSING THE NCS-1 PROTEIN.** Guimarães M. M.1, Gomez M. V.1, Jeromin A.2, Romano-Silva M. A.1; 1 Federal University of Minas Gerais; 2 Baylor College of Medicine, Texas, USA.

**DYNAMICS OF INTRA- AND EXTRACELLULAR LEVELS OF S100β IN THE FEMALE AND MALE RAT BRAIN.** Nogueira M. I.1,2, Azmitia E. C.1; 1 Lab of Neuroplasticity Department of Biology, NYU; 2 Biomedical Sc. Inst., USP.

**EPILEPTIC ACUTE PERIOD GENE EXPRESSION ANALYSIS BY MEANS OF ORESTES STRATEGY IN THE PILOCARPINE MODEL.** Jaqueta C. B., Avedissian M., Longo B. M., Briones M. R., Mello L. E. A. M.; Physiology and Microbiology Departments – UNIFESP.

**FUNCTIONAL DESENSITISATION OF ADENOSINE RECEPTORS AFTER HYPOXIA.** Coelho J. E.1, Mendonça A.1, Cunha R. A.2, Ribeiro J. A.1; 1 Laboratory of Neuroscience, Faculty of Medicine, University of Lisbon; 2 Ctr Neuroscience Coimbra, Inst. Biochemistry, Fac Medicine Univ. Coimbra, Portugal.

**FUNCTIONAL INTERACTION BETWEEN NEUROPEPTIDE Y RECEPTORS AND MODULATION OF GLUTAMATE RELEASE IN CONTROL AND EPILEPTIC RAT HIPPOCAMPUS.** Silva A. P.1, Xapelli S.1, Oliveira C.1,2, Malva J. O.1,2; 1 Center for Neuroscience of Coimbra, University of Coimbra; 2 Institute of Biochemistry, Faculty of Medicine, University of Coimbra, Portugal.

**GROWTH-ASSOCIATED PROTEIN 43 EXPRESSION IN HIPPOCAMPAL MOLECULAR LAYER OF CHRONIC EPILEPTIC RATS TREATED WITH CYCLOHEXIMIDE.** Longo B.1,3, Vezzani A.2, Mello L. E. A. M.1; 1 Dept. of Physiology, UNIFESP/EPM, São Paulo, Brazil; 2 Laboratory of Neuropharmacology, Mario Negri Institute, Milan, Italy; 3 Laboratory of Tissue Engineering and Immunopharmacology, CPqGM-FIOCRUZ, Bahia, Brazil.

**INCREASE IN MITOCHONDRIAL BCL-2 LEVELS UPON INHIBITION OF CALCINEURIN IN CORTICAL CULTURES EXPOSED TO 3-NITROPROPIONIC ACID.** Almeida S., Oliveira C. R., Rego A. C.; Institute of Biochemistry, Faculty of Medicine, and Center for Neuroscience and Cell Biology of Coimbra, University of Coimbra, Coimbra, Portugal.

B

**INCREASED EXPRESSION OF NR2A SUBUNIT IN MICE RESISTANT TO ETHANOL SENSITIZATION.** Quadros I. M. H., Nobrega J. N., Hipolide D. C., Souza-Formigoni M. L. O.; Department of Psychobiology, Federal University of São Paulo, Brazil.

**INDIVIDUAL VARIABILITY IN CONTEXTUAL FEAR CONDITIONING: NOCICEPTIN/ORPHANIN FQ MRNA EXPRESSION IN THE AMYGDALA.** Fornari R. V.1, Nobrega J. N.2, Moreira K. M.1, Figueiredo L. Z.1, Hipolide D. C.1, Oliveira M. G. M.1; 1 Psychobiology Department, Federal University of São Paulo (UNIFESP), São Paulo, SP, Brazil; 2 Neuroimaging Research Section, Centre for Addiction and Mental Health, Toronto, Canada.

**INHIBITORS OF AMYLOIDOGENESIS DECREASE INTRACELLULAR AMYLOID ACCUMULATION IN A CORTICAL CELL LINE DERIVED FROM TRISOMY 16 MOUSE.** Lima A. C. P.1, Arriagada C.2, Toro R.3, Cárdenas A. M.3, Caviedes P.2, Ferreira S. T.1; 1 Departamento de Bioquímica Médica, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil; 2 Physiology and Biophysics Program, ICBM, Faculty of Medicine, University of Chile, Santiago, Chile; 3 Laboratory of Pharmacology, School of Medicine, University of Valparaíso, Valparaíso, Chile.

**INVOLVEMENT OF METABOTROPIC GLUTAMATE RECEPTORS IN MONOARTHRITIC PAIN.** Neto F. L.1, Schadrack J.2, Tölle T.R.2, Castro-Lopes J. M.1; 1 Institute of Histology and Embryology, Faculty of Medicine of Oporto and IBMC, Porto, Portugal; 2 Department of Clinical Neuropharmacology, Max-Planck-Institute for Psychiatry, Munich, Germany.

**LENTIVIRAL VECTORS FOR GENE SILENCING IN POLYGLUTAMINE DISORDERS: ATAXIN 3 GENE SILENCING BY LENTIVIRAL MEDIATED DELIVERY OF DOUBLE-STRANDED RNAs.** Alves S.1, Déglon N.2, Almeida L. P.1; 1 Dept. of Vectors and Gene Therapy, Center for Neuroscience of Coimbra and Faculty of Pharmacy, University of Coimbra, R. Norte, Coimbra, Portugal; 2 Commissariat à l'Energie Atomique (CEA); Département de Recherche Médicale; Service Hospitalier Frédéric Joliot; URA CEA/CNRS2210 et UIIBP; Orsay Cedex, France.

**MODULATION OF CELL PROLIFERATION BY NITRIC OXIDE IN CHICK RETINAL CELLS.** Magalhães C. R., Paes-de-Carvalho R.; Lab. de Neurobiologia celular, Prog. de Neuroimunologia, UFF, Niterói, RJ.

**MODULATION OF PRION PROTEIN OLIGOMERIZATION, AGGREGATION AND BETA-SHEET CONVERSION BY 4,4'-DIANILINO-1,1'-BINAPHTHYL-5,5'-SULFONATE (BIS-ANS).** Cordeiro Y.1, Lima L. M. T. R.2, Gomes M. P. B.1, Foguel D.1, Silva J. L.1; 1 Departamento de Bioquímica Médica, CNRMN, ICB, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil; 2 Departamento de Medicamentos, Faculdade de Farmácia, UFRJ, Rio de Janeiro, Brazil.

**NEURONAL EXPRESSION OF TRANSFERRIN RECEPTORS (TFR) AFTER GLOBAL BRAIN ISCHEMIA IN RATS.** Yamashita L. F., Favero-Filho L. A., Sinigaglia-Coimbra R., Coimbra C. G.; Laboratory of Neuropathology and Neuroprotection. Department of Neurology and Neurosurgery. Department of Morphology. Universidade Federal de São Paulo, Brazil.

**NEURONAL EXPRESSION OF TRANSFERRIN RECEPTORS (TFR) AFTER TRANSIENT FOCAL ISCHEMIA OF THE RAT BRAIN.** Favero-Filho L. A., Yamashita L. F., Sinigaglia-Coimbra R., Coimbra C. G.; Laboratory of Neuropathology and Neuroprotection. Department of Neurology and Neurosurgery. Department of Morphology. Universidade Federal de São Paulo, Brazil.

**NMDA RECEPTOR: INVOLVEMENT OF THE PURINERGIC SYSTEM ON THE CONTROL OF SUBUNIT EXPRESSION AND NEURONAL SURVIVAL.** Ferreira J. M.1,2, Paes-de-Carvalho R.2; 1 Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro; 2 Dept. Neurobiology And Prog. Neuroimmunology, Federal Fluminense University.

**NORMAL BRAIN MITOCHONDRIAL RESPIRATION IN MICE LACKING CELLULAR PRION PROTEIN.** Soares B. L.1, Bianchin M. M.1, Souza M. M.4, Xikota J. C.1,4, Sakamoto A. C.1, Brentani R.3, Martins V. R.3, Carlotti C. G.2, Walz R.1,4; 1 Departamento de Neurologia, Psiquiatria e Psicologia Médica, Faculdade de Medicina de

Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brazil; 2 Departamento de Cirurgia, Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo, São Paulo, SP, Brazil; 3 Ludwig Institut for Cancer Research, São Paulo Branch, São Paulo, SP, Brazil; 4 Faculdade de medicina, Centro de Ciências da Saúde, Universidade do Vale do Itajaí, Itajaí, SC, Brazil; 5 Centro de Cirurgia de Epilepsia, hospital Governador Celso Ramos, Florianópolis, SC, Brazil.

**PERSISTENT EIF2 $\alpha$  PHOSPHORYLATION IN THE HIPPOCAMPUS AND CORTEX DURING PILOCARPINE-INDUCED STATUS EPILEPTICUS IN MICE.** Carnevali L. S.1, Pereira C. M.1, Longo B. M.2, Jaqueta C. B.2, Avedissian M.2, Mello L. E. A. M.2, Castilho B. A.1; 1 Depto. Microbiologia, Imunologia e Parasitologia; 2 Depto. Fisiologia, Universidade Federal de São Paulo- EPM, São Paulo, Brazil.

**PROTECTIVE EFFECT OF MELATONIN ON ROTENONE PLUS CA2<sup>+</sup>-INDUCED MITOCHONDRIAL OXIDATIVE STRESS AND PC12 CELL DEATH.** Sousa S. C., Castilho R. F.; Departamento de Patologia Clínica, Faculdade de Ciências Médicas, Universidade Estadual de Campinas, SP, Campinas, Brazil.

**SECONDARY HYPERALGESIA IS ASSOCIATED WITH ALTERATIONS IN THE EXPRESSION OF NK1- AND GABA<sub>B</sub>-RECEPTORS IN NOCICEPTIVE SPINAL NEURONS.** Castro A. R., Pinto M., Tavares I., Lima D.; Institute of Histology and Embryology, Faculty of Medicine of Oporto and IBMC, Universidade do Porto, Porto, Portugal.

**STRESS-INDUCED C-FOS EXPRESSION CAN BE DIFFERENTIALLY MODULATED BY DEXAMETHASONE, DIAZEPAM AND IMPRAMINE.** Medeiros M. A.1, Reis L. C.1, Mello L. E.2; 1 Department of Physiological Sciences, UFRuralRJ; 2 Department of Physiology, UNIFESP, Brazil.

**THE ACTIVATION OF ERK2 IN CULTURED RETINAL GLIAL CELLS IS REGULATED BY ADENOSINE RECEPTORS.** Rodrigues A. S., Araujo I. L. S., Leão-Ferreira L. R., Paes-de-Carvalho R.; Programa de Neuroimunologia, Departamento de Neurobiologia, Universidade Federal Fluminense, Niterói/RJ, Brazil.

**THE DAMAGE TO DOPAMINERGIC NEURONS IN SUBSTANTIA NIGRA POSTNATAL CELL CULTURES AFFECTS GDNF AND HO-1 EXPRESSION.** Saavedra A.1, Baltazar G.3, Carvalho C.1,2, Duarte E.1,2; 1 Center for Neuroscience and Cell Biology; 2 Dep. of Zoology, Univ. of Coimbra, Portugal; 3 Faculty of Health Sciences, Univ. of Beira Interior, Covilhã, Portugal.

**THE NEURONAL ADHERENS JUNCTION PROTEIN DELTA-CATENIN IS CRITICAL FOR COGNITIVE FUNCTION.** Israely I.1, Costa R. M.3,4, Xie C. W.3, Silva A. J.3,4, Kosik K. S.5, Liu X.1,2,4; 1 Molecular & Medical Pharmacology; 2 Pathology & Laboratory Medicine; 3 Neurobiology; 4 Brain Research Institute, University of California, Los Angeles; 5 Department of Neurology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA.

**THE ROLE OF CAPSAICIN-SENSITIVE AFFERENTS IN FOOD ALLERGY SIGNALING IN THE MOUSE BRAIN.** Basso A. S.1, Costa-Pinto F. A.1, Britto L. R. G.2, Sa-Rocha L. C.1, Palermo-Neto J.1; 1 Department of Pathology, School of Veterinary Medicine, University of São Paulo; 2 Department of Physiology and Biophysics, Institute of Biomedical Sciences, University of São Paulo.

**THE ROLE OF THE CAUDAL VENTROLATERAL MEDULLA IN THE HYPOALGESIA ASSOCIATED WITH HYPERTENSION.** Pinho D.1, Morato M.1,3, Sousa T.1, Tavares I.2, Albino-Teixeira A.1; 1 Institute of Pharmacology and Therapeutics; 2 Institute of Histology and Embryology, Faculty of Medicine of Porto and IBMC; 3 Pharmacology, Department Faculty of Pharmacy of Porto, Portugal.

**URINARY BLADDER INFLAMMATION INCREASES THE EXPRESSION OF THE EXTRACELLULAR SIGNAL-REGULATED KINASES 1 AND 2 (ERKS 1/2).** Cruz C.1,2, Avelino A.1, McMahon S. B.2, Cruz F.1; 1 Institute of Histology and Embryology, Faculty of Medicine of Porto, Porto, Portugal; 2 Sensory Function Group, Centre for Neuroscience Research, London, United Kingdom.



**B** VENTROBASAL COMPLEX GABA<sub>b</sub>1b RECEPTOR MRNA EXPRESSION IS DECREASED IN MONOARTHRITIS. Ferreira-Gomes J., Neto F. L., Castro-Lopes J. M.; Institute of Histology and Embryology, Faculty of Medicine of Oporto and IBMC, Porto, Portugal.

## **C** Modeling, Analysis and Computational Neuroscience

A BIOPHYSICAL MODEL OF VERTEBRATE OLFACTORY SYSTEM EXHIBITING GAP JUNCTION DEPENDENT ODOR-EVOKED SPATIOTEMPORAL PATTERNS OF ACTIVITY. Simões-de-Souza F. M., Roque A. C.; Laboratório de Sistemas Neurais, Faculdade de Filosofia Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, São Paulo, Brazil.

A NEW PARADIGM FOR SINGLE NEURON COMPUTATION OF BOOLEAN FUNCTIONS. Guerreiro A. M. G.1, Araujo C. P.2; 1 Department of Electrical and Computer Engineering, University of Colorado at Colorado Springs, 2 Department of Electrical and Computer Engineering, University of Colorado Springs and Symetrix Corporation.

AN ISOLATED WORD SPEECH RECOGNITION ALGORITHM FOR ROBOTIC-AIDED SURGICAL SYSTEMS. Santos E. T. P.1, Cestari I. A.2; 1 Programa de Pós-graduação em Engenharia Elétrica, Escola Politécnica da Universidade de São Paulo; 2 Divisão de Bioengenharia do Instituto do Coração (InCor) HCFMUSP.

ARTIFICIAL NEURAL NETWORKS IN SPACE APPLICATIONS. Silva J. D. S.1, Velho H. F. C.2; 1 Computational Intelligence Group; 2 Scientific Computing Group, Laboratory for Computing and Applied Mathematics - LAC, National Institute for Space Research - INPE, Sao Jose dos Campos (SP), Brazil.

CHAOS VERSUS STOCHASTICITY IN NEURAL ACTIVITY. Carelli P. V., Pinto R. D.; IFUSP.

COMPUTATIONAL STUDIES ON NEW PROMISING CONTRAST AGENTS FOR MRI BRAIN INVESTIGATION. Araújo G. B.1, Gameiro C. G.1,2, Rocha G. B.1, Paris J.2, Thonon D.2, Desreux J. F.2, Alves S. Jr.1; 1 Departamento de Química Fundamental, UFPE, Recife; 2 Coordination and Radiochemistry Department, ULG, Liège.

CONSTRUCTING A DECISION SUPPORT SOFTWARE FOR COGNITIVE IMPAIRMENTS: EVALUATION, STAGING, TREATMENT, CARE, REHABILITATION AND DIGITAL INCLUSION. Sigulem D.1, Ramos L.2, Xavier A.1, Anção M.1; 1 Health Informatics Department, Escola Paulista de Medicina, São Paulo; 2 Ageing Studies Centre, Escola Paulista de Medicina, São Paulo.

DATA CLUSTERING USING SELF-ORGANIZING MAPS. Costa J. A. F.; Department of Electrical Engineering, Universidade Federal do Rio Grande do Norte, Natal, Brazil.

GLOBAL APPROACH TO ANALYSIS OF BRAIN ELECTRICAL ACTIVITY: ITS RATIONALE AND SELECTED APPLICATIONS. Wackermann J.; Dept. of Empirical and Analytical Psychophysics Institute for Frontier Areas of Psychology and Mental Health, Freiburg, Germany.

MODELLING AND ANALYSIS OF NEURAL CODING BASED ON A SIGNAL PROCESSING APPROACH. Destro-Filho J. B.1, Noriaki-Ide A.1,2, Roman D.3, Leite S. L.3, Fonseca C.L.1; 1 Control Systems Lab., School of Electronic Engineering, University of Uberlândia (UFU), MG, Brazil; 2 Department of Neurology, School of Medicine, University of São Paulo, Brazil; 3 Biochemistry Lab, Institute for Biochemistry and Genetics, University of Uberlândia (UFU), MG, Brazil.

RELIABILITY AND FLEXIBILITY IN NETWORKS OF CHAOTIC NEURONS. Reyes M. B., Pinto R. D., Instituto de Física da Universidade de São Paulo, Brazil.

SENSITIVITY OF AMPA RECEPTOR CHANNEL TO CALCIUM OSCILLATIONS ARISING THROUGH THE ACTIVATION OF THE METABOTROPIC GLUTAMATE RECEPTOR. Antunes G., Roque A. C.; Laboratório de Sistemas Neurais, Universidade de São Paulo at Ribeirão Preto, Brazil.

SPATIOTEMPORAL ACTIVITY PATTERNS IN A COMPUTATIONAL MODEL OF THE OLFACTORY SYSTEM WITH GAP JUNCTIONS. Simões-de-Souza F. M.1, Roque A. C.2; 1 Department of Psychology and Education, Psychobiology Sector, FFCLRP, University of São Paulo, Ribeirão Preto, SP, Brazil; 2 Department of Physics and Mathematics, FFCLRP, University of São Paulo, Ribeirão Preto, SP, Brazil.

SYMBOLIC LEARNING IN COMPUTER-SIMULATED NEUROSEMIOTIC CREATURES. Loula A.1, Gudwin R.1, Ribeiro S.2, Araújo I.3, Queiroz J.1; 1 Dept. Computer Engineering and Industrial Automation, State University of Campinas, Brazil; 2 Dept. Neurobiology, Duke University Medical School, Durham, NC, USA; 3 Dept. Experimental Psychology, University of Oxford, Oxford, UK.

## Neurogenesis and Development **D**

DRG11 IS DIFFERENTIALLY REQUIRED AT DISTINCT STAGES DURING DEVELOPMENT OF THE NOCICEPTIVE SYSTEM. Rebelo S.1, Osório L.1, Reguenga C.1, Anderson D.2, Lima D.1; 1 Inst. of Histology and Embryology, Faculty. of Medicine and IBMC. Univ. of Oporto, Porto, Portugal; 2 Div. of Biology and Howard Hughes Medical Institute, California Institute of Technology, Pasadena, CA, USA.

EMBRYONIC SIGNALS TRIGGER CHANGES IN POSTNATAL SVZ MIGRATORY BEHAVIOR AND GIVE RISE TO MULTIPLE CELL TYPES. Sequerra E. B.1,2, Froes M. M.2, Menezes J. R. L.2, Hedin-Pereira C.1; 1 Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil; 2 Depto de Anatomia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.

GFAP EXPRESSION IN ASTROCYTES OF SUPRACHIASMATIC NUCLEUS AND MEDIAL PREOPTIC AREA ARE DIFFERENTIALLY AFFECTED BY MALNUTRITION DURING RAT BRAIN DEVELOPMENT. Mendonça J. E. F.1, Vilela M. C. R.2, Bittencourt H.2, Lapa R. M.2, Oliveira F. G.2, Alessio M. L. M.2, Guedes R. C. A.3, Costa M. S. M. O.4, Costa B. L. S. A.2; 1 Centro de Ciências da Saúde, Universidade de Fortaleza, Fortaleza, CE, Brazil; 2 Departamento de Fisiologia e Farmacologia, Centro de Ciências Biológicas; 3 Departamento de Nutrição, Centro de Ciências da Saúde, Universidade Federal de Pernambuco, Cidade Universitária, Recife, PE, Brazil; 4 Departamento de Morfologia, Centro de Bociências, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil.

NEWBORN NEUROLOGICAL ASSESSMENT AND CHILD DEVELOPMENT. Araújo M. G. M.; Professora Doutora em Neurologia Infantil pela UNICAMP - São Paulo; Professora do Departamento de Pediatria - CCS -UFRN-Natal-RN e da Pós-graduação - Curso de Psicomotricidade da UnP - Universidade Potiguar - Natal- RN; Research on Neurological Maturation and Neurological Development.

NOCICEPTIVE STIMULI IN NEWBORN RATS AND LONG-TERM MODIFICATIONS IN THE HIPPOCAMPAL NEUROGENESIS. Leslie A. T. F. S., Guinsburg R., Mello L. E. A. M., Sanudo A.; Departamentos de Pediatria e Fisiologia da UNIFESP-EPM.

POSTNATAL DEVELOPMENT OF THE VICIA VILLOSA LECTIN LABELLING PATTERN IN THE PRIMARY SOMATOSENSORY CORTEX OF RATS. Pacheco-Bahia C.1, Picanço-Diniz C. W.1, Pereira A. Jr.2; 1 Federal University et Pará (UFPA) Brazil; 2 Dept. of Neurobiology, Duke University, Durham, NC, USA.

**D** THE EFFECT OF THE MANIPULATION OF THE SEROTONINERGIC SYSTEM DURING THE CRITICAL DEVELOPMENT PERIOD OF THE MORPHOLOGY AND MORPHOMETRY OF THE EPITHELIUM OF THE TRACHEA.

Guimarães B. M.1, Afonso L. B.1, Montenegro R. F. P.1, Neves P. R. A.1, Moraes S. R. A.1, Manhães de Castro R.2, Marinho S. M. C. O.2, Paes S. T.3, Tashiro T.4; 1 Departamento de Anatomia – UFPE; 2 Departamento de Nutrição; 3 Departamento de Anatomia Patológica; 4 Departamento de Educação Física e Desporto – UFPE, Brazil.

THE TREATMENT WITH FLUOXETINE DURING BRAIN GROWTH SPURT DELAYS THE REFLEXES MATURATION IN RATS. Deiró T. C. B. J.1, Teixeira D. M.2, Castro F. M. M.1, Jesus Deiró R. A.1, Manhães de Castro R.1, Vasconcelos R. G.1, Santos G. H. F.1, Freitas Silva S. R.1, Silva Diniz A. J.1; 1 Laborat. De Nutrição Psicofarmacologia e Imunidade-UFPE; 2 Depto de Ciências da Nutrição, UFBA.

Friday, March 5, 2004

**E** Ethology and Experimental Psychology

A REASSESSMENT OF THE ROLE OF THE SEROTONERGIC SYSTEM IN THE CONTROL OF FEEDING BEHAVIOR. Reis L. C., Medeiros M. A.; Department of Physiological Sciences, Institute of Biology, Federal Rural University of Rio de Janeiro, Brazil.

ACTION OF SELECTIVE SEROTONIN REUPTAKE INHIBITOR ON AGGRESSIVE BEHAVIOR IN ADULT RAT SUBMITTED TO THE NEONATAL MALNUTRITION. Ribas V. R., Ribeiro-Ribas V. R., Barreto Medeiros J. M., Cabral Filho J. E., Castro C. M. M. B., Manhães de Castro R.; Grupo de Pesquisa - Nutrição, Neuropsicofarmacologia e Imunidade, Brazil.

ACUTE EFFECT OF ROSE OIL ON AGGRESSION. Motta S. C.1, Barros H. M. T.2, Almeida R. N.3, Leite J. R.1; 1 Departamento de Psicobiologia, Universidade Federal de São Paulo; 2 Departamento de Ciências Fisiológicas, Fundação Faculdade Federal de Ciências Médicas de Porto Alegre; 3 Departamento de Fisiologia e Patologia, Universidade Federal da Paraíba.

ACUTE PLACEBO EFFECT IN PARKINSON DISEASE PATIENTS. Fregni F., Maia F., Boggio P. S., Berman F., Merabet L., Rigonatti S. P., Silva M. T. A., Barbosa E. R., Vieira A. L., Pereira C. E. L., Ribeiro C., Pascual-Leone A., Marcolin M. A.; Psychiatry, Psychology and Neurology Institute, University of São Paulo, São Paulo, Brazil; Neurology Department, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA.

ALTERATIONS IN THE INDUCED BEHAVIOR FOR THE SHARP ADMINISTRATION OF THE EXTRACT OF DIPLOTROPIS FERRUGINEA BENTH. Cerqueira G. S.1, 3, Almeida J. R. G. S.1, Duarte J. C.1, Barbosa-Filho J. M.1,2, Medeiros I. A.1, Diniz M. F. F. M.1,2; 1 Laboratório de Tecnologia Farmacêutica; 2 Departamento de Ciências Farmacêuticas; 3 Departamento de Fisiologia e Patologia, Universidade Federal da Paraíba.

ALTERATIONS ON SPONTANEOUS LOCOMOTOR ACTIVITY (SLA) INDUCED BY TREATMENT WITH COCAINE ALONE OR ASSOCIATED WITH IMIPRAMINE, DURING 7 AND 14 DAYS. Queiroz R., Braga L., Lima L., Rodrigues V. O., Coelho Neto B. M., Santos C. S., Felipe C. F. B., Viana G. S. B., Lima I. S. P.; Faculty of Medicine of Juazeiro do Norte, FMJ.

ANXIETY INDUCED BY PICROTOXIN: BEHAVIORAL AND NEUROENDOCRINE PARAMETERS IN SWISS MICE. Stankevicius D., Rodrigues-Costa E. C., Fonseca E. S. M., Morgulis M. S. F. A., Palermo-Neto J.; Department of Pathology, FMVZ; Department of Pharmacology, ICB, USP.

ANXIOLYTIC AND ANTIDEPRESSANT-LIKE EFFECTS OF REM SLEEP DEPRIVATION IN OOFRECTOMIZED RATS. Oliveira R. A., Bruin G. S., Cunha G. M. A., Bruin V. M. S.; Department of Physiology and Pharmacology, Federal University of Ceará, Fortaleza, Brazil.

ANXIOLYTIC-LIKE EFFECTS OF AP7 INJECTED INTO THE VENTROMEDIAL HYPOTHALAMUS OF RATS SUBMITTED TO THE PUNISHED LICKING TEST. Jardim M. C., Guimarães F. S.; Department of Pharmacology, Ribeirão Preto School of Medicine, University of São Paulo.

ANXIOLYTIC-LIKE EFFECT OF YLANGUE-YLANGUE OIL INHALATION ON THE ELEVATED PLUS-MAZE TEST IN RATS. Catallani B.1, Almeida R. N.2; Faturi C. B.1, Leite J. R.1; 1 Departamento de Psicobiologia, Universidade Federal de São Paulo, UNIFESP/EPM; 2 Departamento de Fisiologia e Patologia, Universidade Federal da Paraíba.

AVOIDANCE BEHAVIOR AND NEURAL CORRELATES OF ALLERGEN EXPOSURE IN A MURINE MODEL OF ASTHMA. Costa-Pinto F. A.1, Basso A. S.1, Britto L. R. G.2, Malucelli B. E.1, Russo M.3; 1 Department of Pathology, School of Veterinary Medicine, USP; 2 Department of Physiology and Biophysics, Institute of Biomedical Sciences, USP; 3 Department of Immunology, Institute of Biomedical Sciences, USP.

BEHAVIOR AND IMMUNOLOGICAL ASPECTS OF MELANOMA B16F10 DEVELOPMENT IN C57BL/6J MICE. Sá-Rocha V. M., Sá-Rocha L. C., Palermo-Neto J.; Department of Pathology, School of Veterinary Medicine, University of São Paulo, São Paulo, Brazil.

BEHAVIORAL PHENOTYPE OF MALE MICE LACKING BOTH  $\alpha 2A$ - AND  $\alpha 2C$ -ADRENERGIC RECEPTOR SUBTYPES. Bacurau A. V. N.1, Bibancos T.2, Honmoto C. S.2, Brum P. C.1, Chiavegatto S.2,3; 1 School of Physical Education and Sports; 2 Department and Institute of Psychiatry; 3 Heart Institute (InCor), School of Medicine, University of Sao Paulo, Brazil.

BETWEEN-SUBJECTS, BUT NOT WITHIN-SUBJECTS, ANTICIPATORY CONTRAST IS IMPAIRED BY EXCITOTOXIC SELECTIVE LESION OF THE BASOLATERAL NUCLEUS OF THE AMYGDALA IN RATS. Onishi B. K. A., Xavier G. F.; Department of Physiology, Biosciences Institute, University of São Paulo, São Paulo, Brazil.

BLINDNESS AND DREAMS. Tavares S. C., Medeiros R. T. P.; Universidade Federal do Rio Grande do Norte, UFRN, Federal University of Rio Grande do Norte.

CCK1 and CCK2 RECEPTORS BLOCKING EFFECTS ON PASSIVE AVOIDANCE BEHAVIOR. Napoli T. F., Mônico C. F., Nóbrega J. C. C., Tieppo C. A., Felício L. F., Nasello A. G.; Dept. of Physiology, FCMSCSP, São Paulo, Brazil.

CHRONIC ETHANOL CONSUMPTION AND THIAMINE DEFICIENCY HAVE NO EFFECT ON FRONTAL CORTEX GLUTAMATE UPTAKE BUT AFFECT RAT WATER MAZE PERFORMANCE. Carvalho F. M., Pires R. G., Sacramento D. R., Romano-Silva M. A., Pereira S. R., Ribeiro A. M.; Laboratório de Neuroquímica, Departamento de Bioquímica e Imunologia, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais.

COGNITION, FUNCTIONALITY AND COMPLEXITY, NEW STAGING PERSPECTIVES FOR COGNITIVE IMPAIRMENTS. Xavier A.1, Sigulem D.2, Ramos L.3; 1 Health Informatics Department, Escola Paulista de Medicina, São Paulo; 2 Health Informatics Department, Escola Paulista de Medicina, São Paulo; 3 Ageing Studies Centre, Escola Paulista de Medicina, São Paulo.

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COMPARISON OF RAPID TOLERANCE DEVELOPMENT TO ETHANOL ON ROTAROD AND GRASPING STRENGTH TEST IN MICE. Batista L. C., Prediger R. D. S., Takahashi R. N.; Department of Pharmacology, Federal University of Santa Catarina, Florianópolis.

COMPARISON OF TWO DIFFERENT METHODS TO EVALUATE SPASTICITY: MODIFIED ASHWORTH SCALE VERSUS ISOKINETIC DYNAMOMETRY. Lima M. O.1, Freitas S. T. T.1, Tortoza C.2, Magini M.3, Lopes-Martins R. A. B.4; 1 Setor de Neurologia; 2 Laboratório de Biodinâmica, Fisioterapia/UNIVAP; 3 Laboratório de Matemática Aplicada; 4 Grupo de Pesquisas em Fisiologia e Farmacodinâmica IP&D/UNIVAP, São José dos Campos, SP.

CONTEXT ATTENUATION OF SKIN CONDUCTANCE RESPONSE TO UNPLEASANT VISUAL STIMULI. Oliveira L. A. S.1, Joffily M.1, Oliveira L.2, Lang P.3, Volchan E.1; 1 Federal University of Rio de Janeiro; 2 Federal Fluminense University; 3 University of Florida.

CORRELATION BETWEEN HIPPOCAMPAL ACETYLCHOLINESTERASE ACTIVITY AND SPATIAL MEMORY DEFICIT IN THE BEGINNING OF THE THIAMINE DEFICIENCY NEURODEGENERATIVE PROCESS ASSOCIATED WITH ETHANOL CONSUMPTION. Oliveira Silva I. F.1, Pereira S. R. C.2, Fernandes P. A.3, Ribeiro A. M.1; 1 Departamentos de Bioquímica e Imunologia, Instituto de Ciências Biológicas; 2 Psicologia, Faculdade de Ciências Humanas; 3 Análises Clínicas e Toxicológicas, Faculdade de Farmácia UFMG.

DIFFERENCES IN NEUROBEHAVIORAL MECHANISMS IN COMMON MARMOSETS (CALLITHRIX JACCHUS) FEMALES OF HETEROSEXUAL AND ISOSEXUAL DYADS ASSOCIATED WITH STRESS RESPONSE TO SOCIAL AND ENVIRONMENTAL CHANGES. Sousa M. B. C., Alcântara I. C., Leite S. M., Mendonça F. F.; Federal University of Rio Grande do Norte.

DIFFERENTIAL SENSITIVITY OF WISTAR, LEWIS AND SHR RAT STRAINS TO COCAINE-INDUCED ANALGESIA. Pamplona F. A., Vendruscolo L. F., Takahashi R. N.; Department of Pharmacology, Federal University of Santa Catarina, Florianópolis.

EFFECT OF EUGENOL ODOR BY INHALATORY PATHWAY IN WISTAR RATS ON THE ELEVATED PLUS-MAZE TEST. Faturi C. B.1, Almeida R. N.2, Cattalani B.1, Leite J. R.1; 1 Departamento de Psicobiologia, Universidade Federal de São Paulo-Brazil; 2 Departamento de Fisiologia e Patologia, Universidade Federal da Paraíba-Brazil.

EFFECT OF PALATABLE SOLUTIONS INTAKE IN HPA AXIS ACTIVITY OF PARADOXICAL SLEEP-DEPRIVED RATS. Kawakami S. E.; Toscano A. I., Tufik S., Suchecki D.

EFFECTS OF ACUTE EXPOSURE TO CADMIUM ON BEHAVIORAL PARAMETERS OF MALE RATS. Moraes R. C., Felício L. F., Sant'Ana M. G., Bernardi M. M.; Department of Pathology, FMVZ, University of São Paulo, São Paulo, SP.

EFFECTS OF DENTATE GYRUS COLCHICINE SELECTIVE LESION ON REINFORCEMENT OMISSION IN FIXED INTERVAL SCHEDULES. Figueiredo T. H., Bueno J. L. O.; Psychobiology, USP, Ribeirão Preto, Brazil.

EFFECTS OF FORCED SWIMMING TEST ON MALE RAT SEXUAL BEHAVIOR. Pinto A. P. M.1, Damasceno F.2, Fontanella J. C.1, Skinner G. O.1, Fontanella T. C.2, Paulos R. A.1, Chaves R., Ferraz M. M. D., Almeida O. M. M. S.3, Ferraz M. R.4; 1 UERJ, Rio de Janeiro, Brasil, graduate students; 2 UERJ, Rio de Janeiro, Brasil, postgraduate student; 3 UERJ, Rio de Janeiro, Brasil professor Dep Farmacologia; 4 UERJ, Rio de Janeiro, Brasil professor Dep Farmacologia.

EFFECTS OF HYDROALCOHOLIC EXTRACT OF DAVILLA RUGOSA POIRET ("CIPÓ CABOCLO") ON SEXUAL BEHAVIOR OF RATS. Guaraldo L., Dalfrè-Filho M. A., Hisano D., Navarro B. R., Nasello A. G.; Departamento de Ciências Fisiológicas, Faculdade de Ciências Médicas da Santa Casa de São Paulo, SP, Brasil.

EFFECTS OF N-ACETYLSEROTONIN (NAS) ON ROTATIONAL BEHAVIOR AND NEUROCHEMICAL CHANGES IN 6-OHDA LESIONED RATS. Aguiar L. M. V., Macedo D. S., Sousa F. C. F., Viana G. S. B.; Universidade Federal do Ceará, Fortaleza, Ceará, Brasil.

EFFECTS OF OPIOID RECEPTOR BLOCKADE ON THE SOCIAL BEHAVIOR OF THE NEOTROPICAL SPINY RAT TRINOMYS YONENAGAE (ECHIMYIDAE). Manaf P., Oliveira E. S.; Depto. Biologia, FFLRP, USP, Ribeirão Preto, SP, Brazil.

EFFECTS OF PRENATAL STRESS AND/OR METYRAPONE ON BEHAVIOR OF SWISS MICE 30-DAY-OLD OFF-SPRING. Fonseca E. S. M., Palermo-Neto J. J.; Department of Pathology, FMVZ-USP, Brazil.

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EFFECTS OF THE COMBINATION OF PRENATAL STRESS AND MATERNAL SEPARATION IN THE RAT ELEVATED PLUS-MAZE BEHAVIOR. Estanislau C., Morato S.; Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, USP.

EXPOSITION OF RATS TO ETHANOL (ETOH) PRE AND POST PREGNANCY CAUSES ALTERATIONS IN NESTLING BEHAVIOR. Carneiro L. M. V., Aragão G. F., Diógenes J. P. L., Vasconcelos S. M. M., Viana G. S. B.; Departamento de Fisiologia e Farmacologia, UFC, Fortaleza-CE, Brazil.

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INFLUENCE OF SYSTEMIC STRESSOR IN BEHAVIORAL AND IMMUNOLOGICAL RESPONSES IN SIDA CORDIFOLIA L. HYDROALCOHOLIC EXTRACT-TREATED BALB/C MICE. Franco C. I. F., Muccini T., Lima J. F., Medeiros K. C. P., Almeida R. N., Piuvezam M. R.; Departamento de Fisiologia e Patologia, Laboratório de Tecnologia Farmacêutica, LTF, UFPB, Brazil.

INTERACTION BETWEEN CIRCADIAN PHASE AND THE EXPERIENCE IN THE WATER MAZE. Valentinuzzi V. S.1, Diniz G. P.1, Menna-Barreto L.2, Xavier G. F.1; 1 Departamento de Fisiologia, Instituto de Biociências; 2 GMDRB, Universidade de São Paulo, São Paulo, Brasil.

IS THE MEDIAL NUCLEUS OF THE AMYGDALA INVOLVED IN SOCIAL RECOGNITION MEMORY? Moura P. J., Onishi B. K. A., Mercadante M. T., Xavier G. F.; Laboratório de Neurociências e Comportamento Instituto de Biociências, Universidade de São Paulo, USP.

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NEUROETHOLOGY: USE OF ETHOMATIC PROGRAM AND FLOWCHART REPRESENTATION OF SEIZURE SEQUENCES IN HUMAN EPILEPSY. Dal-Cól M. L. C., Terra-Bustamante V. C., Velasco T., Oliveira J. A. C., Sakamoto A. C., Garcia-Cairasco N.; LNNE, Depto. Fisiologia, FMRP/USP, Ribeirão Preto, SP.

NUCLEAR FACTOR- $\kappa$ B ACTIVATION INDUCED BY RETRIEVAL IS REQUIRED FOR RECONSOLIDATION OF REACTIVATED LONG-TERM MEMORY. Merlo E., Romano A.; Laboratorio de Neurobiología de la Memoria, Departamento de Fisiología, Biología Molecular y Celular, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, IFIByNE, CONICET, Ciudad Universitaria, Buenos Aires, Argentina.

PSYCHOPHARMACOLOGICAL SCREENING OF N-BENZOYL TYRAMINE (RIPARIN I) FROM ANIBA RIPARIA (NEES) MEZ (LAURACEAE) IN MICE. Sousa F. C. F., Monteiro A. P., Melo C. T. V., Vasconcelos S. M. M., Fonteles M. M. F., Gutierrez S. J. C., Barbosa-Filho J. M., Viana G. S. B.

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THE BEHAVIOR OF COMMON MARMOSET CALLITHRIX JACCHUS: THE COST OF CARRYING INFANTS. Albuquerque F. S., Arruda M. F.; Departamento de Fisiologia, Universidade Federal do Rio Grande do Norte UFRN.

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THE ROLE OF THE HIPPOCAMPAL DENTATE GYRUS IN THE EPILEPTOGENIC PROCESS IN THE PILOCARPINE MODEL OF EPILEPSY IN RATS. Bonilha S. M., Mello L. E. A. M.; Dept. of Physiology, Universidade Federal de São Paulo, Brazil.

TIME-OF-DAY VARIATION IN THE SENSITIZATION OF THE ACOUSTIC RESPONSE IN PIGEONS. Siqueira L. O., Vieira A. S., Ferrari E. A. M.; Laboratório de Sistemas Neurais e Comportamento, Departamento de Fisiologia e Biofísica, IB, UNICAMP, Campinas, SP, Brasil.

VISUO-SPATIAL REFERENCE AND WORKING MEMORY AND VISUAL ASSOCIATIVE LEARNING IN MICE WITH CEREBRAL DEFECTS INDUCED BY PRENATAL X-RAYS. Rauph B. G., Vitral R. W. F.; 1 Laboratório De Neurociências E Comportamento, Universidade Federal De Juiz De Fora, Brasil; 2 Center Of Cognitive And Neural Systems, Boston, MA, USA.

YANGAMBIN EFFECTS ON ELEVATED PLUS-MAZE MODEL ON MICE BEHAVIOR. Lima V. T. M., Macedo D. S., Monteiro A. P., Vasconcelos S. M. M., Dias C. S., Barbosa-Filho J. M., Viana G. S. B., Sousa F. C. F.; Universidade Federal do Ceará -UFC, Universidade de Fortaleza – UNIFOR, Fortaleza, Brasil.

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ANTICONVULSANT AND NEUROCHEMISTRY EFFECTS OF LEVETIRACETAM IN PILOCARPINE-INDUCED STATUS EPILEPTICUS. Oliveira A. A.2, Nascimento V. S.2, Freitas R. M.2, Melo C. T. V.2, Viana G. S. B.2, Fonteles M. M. F.1,2; 1 Department of Pharmacy; 2 Department of Physiology and Pharmacology, Laboratory of Neuropharmacology, Federal University of Ceará, Fortaleza.

ANTIEPILEPTOGENIC AND NEUROPROTECTIVE EFFECTS OF CYMBOPOGON CITRATUS IN THE PILOCARPINE MODEL OF EPILEPSY IN RATS. Blanco M. M., Costa M., Mello L. E. A. M.; Department of Physiology, UNIFESP and Dept. of Pharmacology, UNESP Botucatu.

ASSOCIATION OF AN OMEGA-6 ENRICHED DIET AND IMIPRAMINE IN RATS: PRELIMINARY RESULTS. Borsonello E. C., Galduróz J. C. F., Calil H. M.; Department of Psychobiology, Universidade Federal de São Paulo, Escola Paulista de Medicina, São Paulo.

BLOCKADE OF THE ANTIDEPRESSANT-LIKE EFFECTS OF KETAMINE WITH ATYPICAL NEUROLEPTICS. Andrade M. M., Chaves B. G., Jucá N. B. H., Lima V. T. M., Carvalho K. M., Macedo D. S., Sousa F. C. F., Vasconcelos S. M. M.; Faculdade Integrada do Ceará, FIC; Universidade Estadual; Federal do Ceará UECE, UFC Fortaleza.

CAFFEINE REVERSES THE OLFATORY MEMORY IMPAIRMENT IN AN ANIMAL MODEL OF PARKINSON'S DISEASE. Prediger R. D. S., Batista L. C., Takahashi R. N.; Dept. of Pharmacology, Federal University of Santa Catarina, Florianópolis, SC.

CAN DELAY OCCUR IN PONDERAL EVOLUTION AND REDUCTION OF HYDRIC INGESTION IN RATS AFTER CEASING FLUOXETINE TREATMENT? Duarte G. L., Aranha B. C., Santos G. H. F.1; Vasconcelos R.G. 1, Marinho M. G. S.1, Diniz Silva A. J., Macedo E. M. C.1, Freitas Silva S. R., Jesus Deiró R.A.1, Deiró T. C. B. J.2, Cabral Filho J. E., Manhaes-de-Castro R.1; 1 Lab. Nutrição, Neuropsicofarmacologia e Imunidade, UFPE; 2 Depto. Ciências Nutrição, UFBA.

CARBAMAZEPINE CAUSING STEVENS-JOHNSON SYNDROME: A REPORT FROM CEFACE. Portela M. P., Santos A. M., Lima A. M. O., Ferreira M. A. M., Francelino E. V., Fonteles M. M. F.; Pharmacovigilance Center of Ceará (CEFAC), Department of Pharmacy, Federal University of Ceara.

CENTRAL ACTIONS OF ESSENTIAL OIL OF GINGER. Felipe C. F. B.1, Fonseca K. S.2, Oliveira R. V. A.1, Lima I. S. P.1, Viana G. S. B.2; 1 Faculty Of Medicine Of Juazeiro Do Norte; 2 Federal University Of Ceará.

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DOPAMINERGIC AND CHOLINERGIC INTERACTION ON CATALEPSY BEHAVIOR IN RATS. Noronha E. C., Gomes P. B., Oliveira M. M. S., Nogueira C. R. A., Viana G. S. B., Sousa F. C. F.; Department of Physiology and Pharmacology, UFC, Ceará.

DOXYCYCLINE DISRUPTS TRANSTHYRETIN AMYLOID IN A FAMILIAL AMYLOIDOTIC POLYNEUROPATHY TRANSGENIC MICE MODEL. Cardoso I.1, Saraiva M. J.1,2; 1 Molecular Neurobiology Unit, IBMC; 2 Institute for Biomedical Sciences Abel Salazar, Porto University, Porto.

EARLY MALNOURISHED RATS ARE NOT AFFECTED BY ANOREXIA INDUCED BY A SELECTIVE SEROTONIN REUPTAKE INHIBITOR IN THE ADULT LIFE. Freitas Silva S. R., Toscano A. E., Barreto Medeiros J. M., Cabral Filho J. E., Souza S. L., Deiró T. C. B. J., Castro C. M. M. B., Manhães de Castro R.; Depto de Nutrição, UFPE, Grupo de Pesquisa - Nutrição, Neuropsicofarmacologia e Imunidade.

EFFECT EVALUATION OF APOMORPHINE ADMINISTRATION ASSOCIATED WITH ATROPINE IN THE INDUCTION OF YAWNING - PENILE ERECTION SYNDROME (YES) IN RATS. Gamberini M. T., Ferraro L. H. C., Silva G. B., Nasello A. G.; Department of Physiology, Medical School of Santa Casa of São Paulo.

EFFECT OF PRETREATMENT WITH GABAERGIC DRUGS ON COCAINE INDUCED SEIZURES IN MICE. Macêdo D. S., Santos R. S., Belchior L. D., Aguiar L. M. V., Viana G. S. B., Sousa F. C. F.; Universidade Federal do Ceará –UFC, Fortaleza, CE, Brasil.

EFFECT OF THE CHRONIC ADMINISTRATION OF FLUOXETINE ON THE SOMATIC GROWTH OF THE INTESTINE OF NEONATE RATS. Callou K. R. A., Pinto F. C. L., Aragão R. S., Santos C., Soares A., Cavalcanti K. M., Cavalcanti Marinho S. M. O., Moraes S. R. A., Castro R. M.

EFFECT OF THE ISOMERIC MIXTURE OF ALPHA AND BETA AMYRIN (AMI) FROM PROTIUM HEPTAPHYLUM (AUBL) MARCH ON BEHAVIOR OF MICE. Aragão G. F., Carneiro L. M. V., Bandeira P. N., Lemos T. L. G., Viana G. S. B.; Department of Physiology and Pharmacology and Department of Organic Chemistry, Federal University of Ceará (UFC), Fortaleza CE, Brasil.

EFFECT OF THE NEONATAL TREATMENT WITH CLOMIPRAMINE ON THE PARAMETERS OF SOMATIC GROWTH IN RATS. Silva M. C., Souza S. L., Oliveira de Lira L., Manhães de Castro F. M., Deiró T. C. B. J., Nogueira M. I., Manhães de Castro R.; Nutrição, UFPE; Anatomia-ICBIII, USP.

EFFECT OF TWO DIFFERENT TERPENE-CONTAINING EUCALYPTUS ESSENTIAL OILS ON MOUSE BEHAVIOR. Teixeira G. F. D.1, Campos A. R.2, Lima R. C. Jr.2, Freitas M.O. 3, Silveira E. R.3, Rao V. S.1; 1 Curso de

Fisioterapia, Faculdade Integrada do Ceará; 2 Laboratório de Produtos Naturais, Departamento de Fisiologia e Farmacologia/UFC; 3 Departamento de Química Orgânica e Inorgânica/UFC.

EFFECT OF TYPICAL AND ATYPICAL NEUROLEPTICS ON KETAMINE-INDUCED BEHAVIORAL ALTERATIONS IN OPEN FIELD TEST. Malveira G. C. H., Sousa F. B. M., Vasconcelos S. M. M., Macêdo D. S.; Faculdade Integrada do Ceará – FIC; Universidade Estadual do Ceará – UECE, Fortaleza, CE.

EFFECTS OF AQUEOUS AND ALCOHOLIC EXTRACTS FROM CASEARIA SYLVESTRIS SW. (GUAÇATONGA) ON MOUSE PHRENIC NERVE-DIAPHRAGM (PND) PREPARATIONS. Alves C. M. V.1, Andreo-Filho N.1, Leite G. B.2, Rodrigues-Simioni L.2, Silva M. G.1, Oshima-Franco Y.1, 2, 3; 1 Universidade de Sorocaba, Sorocaba, SP; 2 Universidade Estadual de Campinas, Campinas, SP; 3 Universidade Metodista de Piracicaba; Piracicaba, SP, Nova Piracicaba- Piracicaba, SP.

EFFECTS OF ARAUCARIA ANGUSTIFOLIA LECTIN ON PENTYLENETETRAZOLE-INDUCED CONVULSIONS IN MICE. Lima S. R., Oliveira S. M., Matos S. G., Mota M. R. L., Gadelha T. S., Cavada B. S., Assrey A. M. S., Criddle D.M., Vasconcelos S. M. M.; Universidades Estadual and Federal do Ceará – UECE, UFC, Fortaleza, CE, Brasil.

EFFECTS OF DIACLEA GRANDIFLORA ON TREMORINE-INDUCED TREMORS IN MICE. Morais L. C. S. L., Almeida R. N., Quintans-Júnior L. J., Franco C. I. F., Florêncio C. P.; Laboratório de Tecnologia Farmacêutica, Universidade Federal da Paraíba, João Pessoa, PB, Brazil.

EFFECTS OF LINALOL ON THE ISOLATED SCIATIC NERVE OF RAT. Gonçalves J. C. R.2; Montenegro F. C.2, Almeida R. N.1, Medeiros I. A.1, Araújo D. A. M.1,2; 1 Laboratório de Tecnologia Farmacêutica, Universidade Federal da Paraíba; 2 Departamento de Biologia Molecular, CCEN, Universidade Federal da Paraíba, João Pessoa, PB, Brasil.

EFFECTS OF THE ESSENTIAL OIL OF GINGER ON SHORT-TERM MEMORY AND LONG TERM MEMORY OF MICE. Miranda G. B.1, Coutinho B. C.1, Almeida T. C. C.1, Fonseca K. S.2, Viana G. S. B.2, Felipe C. F. B.1; 1 Faculty of Medicine of Juazeiro do Norte; 2 Federal University of Paraíba.

EFFECTS OF THE ESSENTIAL OIL OF GINGER ON THE POTENTIATION OF THIOPIENTAL SLEEPING TIME BY CARBON TETRACHLORIDE. Leite G. L.1, Solon P. C. D.1, Souza S. M. C.1, Nobre M. E. P.1, Viana G. S. B.2, Felipe C. F. B.1; 1 Faculty of Medicine of Juazeiro do Norte; 2 Federal University of Ceará.

EFFECTS OF THEOPHYLLINE ON RATS AFTER INTRACEREBRAL INJECTION OF 6-OHDA. Bruin G. S., Oliveira R. A., Bruin V. M. S., Cunha G. M. A.; Departamento de Fisiologia e Farmacologia, UFC.

ENERGY DRINKS: EFFECTS OF CAFFEINE AND TAURINE IN ETHANOL-INDUCED LOCOMOTOR ACTIVITY IN MICE. Trindade A. A., Takahashi S., Quadros I. M. H., Ferreira S. E., Souza-Formigoni M. L. O.; Department of Psychobiology, Federal University of Sao Paulo (UNIFESP), Brazil.

FREQUENCY OF LABELED GRANULE CELLS WITH HILAR BASAL DENDRITES (HBDS) IN THE PILO- AND CHX+PILO EPILEPTIC RATS. Bittencourt S., Paulo, I., Mello L. E. A. M.; Department of Physiology, Universidade Federal de São Paulo, São Paulo-SP, Brazil.

FROM NEUROETHOLOGY TO VIDEO-EEG AND CELLULAR ANALYSIS IN EPILEPSY RESEARCH. Garcia-Cairasco N., Romcy-Pereira R. N., Galvis-Alonso O. Y., Tilelli C. Q., Furtado M. A., Foresti M. L., Oliveira J. A. C., Vecchio F.; Neurophysiology and Experimental Neuroethology Laboratory, Physiology Department, Ribeirão Preto School of Medicine, University of São Paulo, Ribeirão Preto, SP, Brazil.

GABAERGIC AND GLUTAMATERGIC RECEPTOR ALTERATIONS IN THE HIPPOCAMPUS, STRIATUM AND FRONTAL CORTEX AFTER PILOCARPINE-INDUCED STATUS EPILEPTICUS. Nogueira C. R. A.1, Oliveira A. A.1, Freitas R. M.1, Vasconcelos S. M. M.1, Sousa F. C. F.1, Fonteles M. M. F.1,2; 1 Department of Physiology and

Pharmacology, Laboratory of Neuropharmacology; 2 Department of Pharmacy, Federal University of Ceará, Fortaleza, Brazil.

**HIPPOCAMPAL OPIOID NEUROTRANSMISSION AND MEMORY IN RATS.** Renault L. M. P., Xavier G. F.; Department of Physiology, Biosciences Institute, University of São Paulo, Brazil.

**IMPAIRMENT OF CONTEXTUAL AVERSIVE MEMORY AFTER INFUSION OF THE AMPA RECEPTOR ANTAGONIST - DNQX- IN THE HIPPOCAMPUS.** Ferrari E. A. M., Scarpim B. V., Siqueira L. O., Melo L. L.; Laboratório de Sistemas Neurais e Comportamento, Departamento de Fisiologia e Biofísica, IB, UNICAMP, Campinas, SP, Brasil.

**INDUCED-MORPHINE ACUTE BEHAVIOUR CHANGES ARE PARTIALLY REVERTED BY NALOXONE.** Rodrigues-Costa E. C.1, Carvalho-Freitas M. I. R.2, Sakai M.2, Fonseca E. S. M.2, Stankevicius D.1, Palermo - Neto J.2, Felício L. F.2; 1 Department of Pharmacology ICB1, USP-SP; 2 Department de Patology FMVZ, USP-SP.

**INFLUENCE OF AGE AND SPECIFIC AREAS IN THE CENTRAL NERVOUS SYSTEM AND LIVER PHOSPHOLIPIDS' FATTY ACIDS IN MALNOURISHED RATS.** Costa S. P. M.1, Lima V. L. M.2, Aléssio M. L. M.1; 1 Fisiologia e Farmacologia; 2 Bioquímica CCB, UFPE. Recife, PE.

**INVOLVEMENT OF THE GABAERGIC, DOPAMINERGIC AND OPIOID SYSTEMS IN THE ANTIDEPRESSANT-LIKE EFFECTS OF ZINC IN THE FORCED SWIMMING TEST.** Ferreira P. K.1, Santos A. R. S.2, Rodrigues A. L. S.1; 1 Departamentos de Bioquímica; 2 Ciências Fisiológicas, CCB, Universidade Federal de Santa Catarina, Florianópolis, SC.

**IS OXYTOCIN PRESENT IN THE SNAKE BOTHROPS JARARACA?** Conceição I. M.1, Lázari M. F. M.2, Breno M. C.1, Alpointi R. F.1, Silveira P. F.1; 1 Laboratory of Pharmacology, Instituto Butantan, São Paulo, SP, Brazil; 2 Department of Experimental Endocrinology, Instituto de Farmacologia, Universidade Federal de São Paulo, São Paulo, SP, Brazil.

**MECHANISMS INVOLVED IN THE BLOOD-BRAIN BARRIER BREAKDOWN INDUCED BY PHONEUTRIA NIGRIVENTER SPIDER VENOM IN RATS.** Le Sueur L. P., Collares-Buzato C. B., Cruz-Höfling M. A.; Depto de Histologia e Embriologia, Instituto de Biologia, Universidade Estadual de Campinas (UNICAMP), Campinas, Brasil.

**MODULATION OF PRESYNAPTIC EXCITABILITY BY KAINATE AND NEUROPEPTIDE Y RECEPTORS IN THE RAT HIPPOCAMPUS: RELEVANCE FOR EPILEPTOGENESIS AND NEUROPROTECTION.** Malva J. O.1,2, Silva A. P.1, Xapelli S. A.1, Pinheiro P. S., Cavadas C.1, Oliveira C. R.1,2; 1 Center for Neuroscience of Coimbra, Department of Zoology, University of Coimbra, Coimbra, Portugal; 2 Institute of Biochemistry, Faculty of Medicine, University of Coimbra, Coimbra, Portugal.

**NEUROBIOLOGICAL EFFECTS OF THE EXTRACT AND SRTX1 FRACTION FROM SCAPTICOSA RAPTORIA SPIDER VENOM (LYCOSIDAE; ARANEAE).** Ribeiro A. M., Santos W. F.; Lab. of Neurobiology and Venoms, Department of Biology, FFCLRP-University of São Paulo, Brazil.

**OPIOID SYSTEM MODULATED CATALEPSY INDUCED BY NITRIC OXIDE INHIBITORS.** Malheiros M. L., Nucci-da-Silva L. P.; Dept. Health Science, University of Ribeirão Preto.

**PHARMACOLOGICAL AND BIOCHEMICAL EFFECTS OF MN2+ AND BOTHROPSTOXIN-I (BHTX-I) FROM BOTHROPS JARARACUSSU SNAKE VENOM ON THE MOUSE EXTENSOR DIGITORUM LONGUS (EDL) MUSCLE PREPARATION.** Randazzo-Moura P.1, Leite G. B.1, Dal-Belo C. A.1, Silva G. H.2, Cintra A. C. O.3, Giglio J. R.3, Cruz-Höfling M. A.2, Oshima-Franco Y.1, Rodrigues-Simioni L.1; 1 Deptos de Farmacologia/FCM; 2 Histologia e Embriologia/IB - UNICAMP/SP, 3 Depto de Bioquímica, FMRP, USP/SP.

**PHARMACOLOGICAL MANIPULATION OF THE OPIOID SYSTEM DURING THE LACTATION IN YOUNG AND ADULTS RATS ON CORTICAL SPREADING DEPRESSION.** Rocha-de-Melo A. P., Albuquerque J. M. S., Lima K. R., Oliveira A. C. P., Francisco E. S., Guedes R. C. A.; Departamento de Nutrição, UFPE, Recife, PE.

**ROLE OF BASAL ACETYLCHOLINE RELEASE IN THE SPATIAL COGNITIVE DEFICIT CAUSED BY SEVERE THIAMINE DEFICIENCY AND CHRONIC ETHANOL CONSUMPTION.** Pires R. G. W.1, Pereira S. R. C.2, Ribeiro A. M.1; 1 Departamento de Bioquímica e Imunologia, Instituto de Ciências Biológicas, UFMG; 2 Departamento de Psicologia Experimental, FAFICH, UFMG.

**ROLE OF NEUROTENSIN ON AMPHETAMINE-INDUCED BEHAVIORAL SENSITIZATION IN ANIMALS WITH DISTINCT RESPONSE TO FST.** Costa F. G.1,2, Frussa-Filho R.3, Felício L. F.1; 1 Department of Pathology, FMVZ, USP; 2 Department of Pharmacology, ICB, USP; 3 Department of Pharmacology, UNIFESP.

**STUDY OF CENTRAL EFFECTS OF ISOLATED FRACTIONS FROM PETIVERIA ALLIACEA LINN (TIPI) IN MICE.** Gomes P. B.1, Noronha E. C.1, Oliveira M. M. S.1, Nogueira C. R. A.1, Bezerra J. N. S.2, Neto, M. A.2, Viana G. S. B.1, Sousa F. C. F.1; 1 Department of Physiology and Pharmacology; 2 Department of Organic Chemistry, UFC, Ceará, Brasil.

**SYMPATHETIC NEUROTRANSMISSION IN HYPERTENSION CAUSED BY AN ANTAGONIST OF ADENOSINE RECEPTORS.** Morato M.1,2, Sousa T.1, Guimarães S.1, Moura D.1, Albino-Teixeira A.1; 1 Institute of Pharmacology and Therapeutics, Faculty of Medicine of Porto and IBMC; 2 Pharmacology, Department Faculty of Pharmacy of Porto, Portugal.

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**A MORPHOMETRIC STUDY OF THE PROGRESSIVE CHANGES OF NADPH DIAPHORASE NEUROFIL AND TYPE I NADPH-D CONTAINING CELLS DURING RAT BARREL FIELD DEVELOPMENT.** Freire M. A. M.1, Gomes-Leal W.1, Carvalho W. A.1, Guimarães J. S.1, Franca J. G.3, Picanço-Diniz C. W.1, Pereira A. Jr.2†; Departments of 1 Morphology and 2 Physiology, Federal University of Pará, Belém, PA; 3 Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro, Rio de Janeiro. † Current address: Department of Neurobiology, Duke University Medical Center, Durham, North Carolina.

**ADMINISTRATION OF L-ARGININE EARLY IN LIFE IN NORMAL AND MALNOURISHED RATS: EFFECTS ON NADPH-DIAPHORASE NEURONS IN VISUAL CORTEX, ANALYSED AT ADULTHOOD.** Maia L. M. S. S.1, Frazão M. F.1, Souza T. K. M.1, Silva M. B.1, Gurgel M. A.1, Picanço-Diniz C. W.2, Santos A. A.1, Guedes R. C. A.1; 1 Dept. Nutrition, UFPE, Recife; 2 Dept. Anatomy, UFPA, Belém.

**ASCENDING PROJECTIONS OF OCULOMOTOR ACCESSORY NUCLEUS.** Santos E. D. Jr., Bittencourt J. C., Elias C. F.; Dept. of Anatomy, ICB, USP, São Paulo.

**BRAIN PROJECTIONS TO THE PARAVENTRICULAR NUCLEUS OF THE HYPOTHALAMUS: A RETROGRADE TRACING STUDY IN THE RAT.** Pinto-Ribeiro F., Almeida A.; Life and Health Sciences Research Institute, School of Health Sciences, University of Minho, Braga.

**CART IMMUNOREACTIVE FIBERS INNERVATE MEDIAL PREOPTIC NUCLEUS NEURONS EXPRESSING MCH MRNA DURING LACTATION.** Rondini T. A., Bittencourt J. C., Elias C. F.; Dept. of Anatomy, ICB, USP, São Paulo.

**CATALASE ACTIVITY AND NITRITE FORMATION IN HIPPOCAMPUS, FRONTAL CORTEX AND STRIATUM AFTER STATUS EPILEPTICUS INDUCED BY PILOCARPINE.** Nascimento V. S.2, Maia F. D.2, Freitas R. M.2, Sousa F. C. F.2, Viana G. S. B.2, Fonteles M. M. F.2; 1 Department of Pharmacy; 2 Department of Physiology and Pharmacology, Laboratory of Neuropharmacology, Federal University of Ceará, Fortaleza.

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CIRCADIAN RHYTHM OF THE GLYCOGEN PHOSPHORYLASE ACTIVITY IN THE CEREBRAL GANGLIA OF THE LAND SNAIL MEGALOBULIMUS OBLONGUS. Fraga L. S. 1; Reis M. 1; Achaval M. 2, Silva R. S. M. 1, Zancan D.M. 1; 1 Department of Physiology; 2 Department of Morphological Sciences, UFRGS, Porto Alegre.

CIRCADIAN VARIATION IN GFAP DISTRIBUTION IN THE MOUSE SUPRACHIASMATIC NUCLEUS. Cunha M. J. B., Costa S. O., Araújo J. F., Costa M. S. M. O., Santos J. W. Q.; Laboratório de Cronobiologia, Departamentos de Morfologia e Fisiologia, Centro de Biociências, UFRN, Natal.

COMPARATIVE ANALYSIS OF CYTOCHROME OXIDASE DISTRIBUTION IN THE PRIMARY SOMATOSENSORY CORTEX OF LARGE AMAZONIAN RODENTS, AGOUTI (DASYPROCTA PRIMNOLOPHA) AND PACA (CUNICULUS PACA. Santiago L. F. 1, Rocha E. G. 1, Dias I. A. 1, Freire M. A. M. 2, Franca J. G. 4, Pereira A. Jr. 3†, Picanço-Diniz C. W. 2; Departments of 1 Histology, 2 Morphology, 3 Physiology, Federal University of Pará, Belém; 4 Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro; †Current address: Department of Neurobiology, Duke University Medical Center.

COMPARISON OF THE EFFECTS OF MANGANESE (Mn<sup>2+</sup>) IONS ON MOUSE AND CHICK NEUROMUSCULAR PREPARATIONS. Bueno L. G. F.1, Leite G. B.1, Cogo J. C.2, Corrado A. P.3, Oshima-Franco Y.1, Rodrigues-Simioni L.1; 1 Departamento De Farmacologia, FCM, UNICAMP; 2 UNIVAP; 3 FMRP, SP.

COMPARISON OF THE NEUROMUSCULAR EFFECTS OF ISOFORMS OF PHOSPHOLIPASE A<sub>2</sub> AND CROTAPOTIN FROM CROTALUS DURISSUS TERRIFICUS, C. D. CASCAVELLA AND C. D. COLLILINEATUS VENOMS IN MOUSE NERVE-MUSCLE PREPARATIONS. Hernandez-Oliveira S. S.1, Borja-Oliveira C. R. 1, Oshima-Franco Y.1, Toyama M. H.2, Marangoni S.2, Rodrigues-Simioni L.1; 1 Department of Pharmacology, FCM, Universidade Estadual de Campinas, UNICAMP; 2 Department of Biochemistry, IB, UNICAMP, Campinas, SP.

DIFFERENTIAL QUANTITATIVE DISTRIBUTION OF NADPH-DIAPHORASE NEURONS IN THE SPINAL CORD OF A LARGE AMAZONIAN RODENT, AGOUTI (DASYPROCTA PRIMNOLOPHA). Santos S. C. T.1, Freire M. A. M.1, Guimarães J. S.1, Oliveira J. L. F.1, Pereira A. Jr.2†, Picanço-Diniz C. W.1, Leal W. G.1; 1 Laboratory of Functional Neuroanatomy, Department of Morphology; 2 Department of Physiology, Center of Biological Sciences, Federal University of Pará, 66075-900, Belém, PA, Brazil; † Current address: Department of Neurobiology, Box 3209 101 Research Drive Bryan Research Building, Duke University Medical Center, Durham, North Carolina 27710.

DISSOCIATION OF RETINAL OUTPUTS IN THE TRIGGERING OF ANXIETY: I. IMPORTANCE OF THE RETINAL-COLLICULAR PROJECTION. Cardenas F. P., Morato S.; FFCLRP, USP.

DISSOCIATION OF RETINAL OUTPUTS IN THE TRIGGERING OF ANXIETY: II. IMPORTANCE OF RETINAL-CORTICAL PROJECTION. Costa A. C., Cardenas F. P., Rico J. R., Morato S.; FFCLRP, USP.

DISTRIBUTION OF COCAINE- AND AMPHETAMINE-REGULATED TRANSCRIPT (CART) IN THE HYPOTHALAMUS OF THE MONKEY (CEBUS APPELLA): AN IMMUNOHISTOCHEMISTRY AND IN SITU HYBRIDIZATION STUDY. Cavalcante J. C.1, Candido P. L.1,2, Casatti C. A.3, Bittencourt J. C.1,4, Elias C. F.1,4; 1 Laboratory of Chemical Neuroanatomy, Department of Anatomy, University of São Paulo; 2 University of Santo Amaro; 3 Department of Basic Sciences, School of Dentistry of Aracatuba, University of São Paulo State; 4 Center of Neuroscience and Behavior, Department of Psychology, University of São Paulo.

DISTRIBUTION OF GROWTH ASSOCIATED PROTEIN (GAP-43), GLIAL FIBRILARY ASSOCIATED PROTEIN (GFAP), CALBINDIN-28KD (CB) AND PARVALBUMIN (PV) IN V1 OF NORMAL ADULT CEBUS MONKEYS AND AFTER OCULAR LESIONS. Botelho E. P., Soares J. G. M., Perreira S. S., Gattass R.; IBCCF, UFRJ, Brazil.

DISTRIBUTION OF THE SENSORY FIBERS IMMUNOREACTIVE FOR THE TRPV1 (CAPSAICIN) RECEPTOR IN THE HUMAN PROSTATE. Avelino A.2, Dinis P.1, Charrua A.2, Nagy I.3, Quintas J.1, Reis M.1, Cruz F.1,2; 1 Dept. of Urology, Hospital de S. João; 2 Institute of Histology and Embryology, Faculty of Medicine of Porto; 3 Dept. of Anaesthesia, Imperial College and Chelsea and Westminster Hospital, London.

EVIDENCE FOR AN INCREMENT IN RAT HYPOTHALAMIC AND HIPPOCAMPAL MEMBRANE-BOUND CYSTYL AMINOPEPTIDASE ACTIVITY AFTER A SINGLE INJECTION OF STREPTOZOTOCIN. Murena-Nunes C., Abdalla F. M. F., Silveira P. F.; Laboratory of Pharmacology, Instituto Butantan, São Paulo, SP, Brazil.

EVOLUTION OF COMMISSURAL AND THALAMOCORTICAL SYSTEMS IN RATS AND OPOSSUMS. Furtado D. A.1,2, Hedin-Pereira C.2, Lent R.1; 1 Departamento de Anatomia, Instituto de Ciências Biomédicas, UFRJ; 2 Programa de Neurobiologia, Instituto de Biofísica Carlos Chagas Filho, UFRJ.

EXPRESSION OF CALCIUM BINDING PROTEINS AND NITRIC OXIDE SYNTHASE IN THE SUPERIOR COLLICULUS AND LATERAL GENICULATE NUCLEUS AFTER RETINAL DEAFFERENTATION. Batista S. S., Otsuka R. D., Britto L. R. G.; Department of Physiology and Biophysics, Institute of Biomedical Sciences, University of São Paulo.

FLUORESCENCE HISTOCHEMICAL DISTRIBUTION OF ALANYL AMINOPEPTIDASE IN RAT DIENCEPHALON USING NAPHTHYLAMIDE DERIVATIVE. Alponti R. F., Murena-Nunes C., Peña E. M., Silveira P. F.; Laboratory of Pharmacology, Instituto Butantan, São Paulo, SP, Brazil.

FRONTAL CORTEX AND STRIATAL NEUROTRANSMITTERS CONTENT DURING STATUS EPILEPTICUS INDUCED BY PILOCARPINE. Oliveira G. R.1, Freitas R. M.1, Maia F. D.1, Vasconcelos S. M. M.1, Fonteles M. M. F.1,2, Viana G. S. B. 1; 1 Department of Physiology and Pharmacology, Laboratory of Neuropharmacology; 2 Department of Pharmacy, Federal University of Ceará, Fortaleza, Brazil.

INVOLVEMENT OF THE RAPHE NUCLEI IN THE HOMEOSTATIC RESPONSES TO BLOOD VOLUME ALTERATION: AN IMMUNOCISTOCHEMISTRY STUDY USE FOS EXPRESSION IN RATS. Frazão R.1, Nogueira M. I.2; 1 Anatomy Department, UNISA, University of Santo Amaro; 2 Anatomy Department, Institute of Biomedical Sciences, USP, São Paulo, SP, Brazil.

MODE OF CEMBRANOID ACTION ON MOUSE EMBRYONIC MUSCLE ACETYLCHOLINE RECEPTOR. Ulrich H.1, Marioni R. R.1, Hess G. P.3, Eterovic V. A.2; 1 Dept. of Biochemistry, Instituto de Química, Univ. de São Paulo, Sao Paulo, Brazil; 2 Dept. of Biochemistry and Center for Molecular and Behavioral Neuroscience, Univ. Central del Caribe, Bayamon, Puerto Rico; 3 Dept. of Molecular Biology and Genetics, Cornell University, Ithaca, NY, USA.

NADPH-DIAPHORASE NEURONS OF THE CEBUS MONKEY STRIATE CORTEX: DISTRIBUTION AND DENDRITIC GEOMETRY. Amorim A. K. J.1, Silveira L. C. L.1, Nascimento J. L. M.1, Filho M. S.1, Muniz J. A. P. C.2; 1 Depto. de Fisiologia, Universidade Federal do Pará, Belém, Brazil; 2 Centro Nacional de Primatas, Ananindeua, Pará, Brazil.

PILOCARPINE-INDUCED SEIZURES IN RATS: MONOAMINES LEVELS AND DOPAMINERGIC RECEPTOR DENSITIES IN FRONTAL CORTEX. Freitas R. M.1, Vasconcelos S. M. M.1, Sousa F. C. F.1, Viana G. S. B.1, Fonteles M. M. F.1,2; 1 Department of Physiology and Pharmacology, Laboratory of Neuropharmacology; 2 Department of Pharmacy, Federal University of Ceará, Fortaleza, Brazil.

PILOCARPINE-INDUCED SEIZURES IN YOUNG AND ADULT RATS: MONOAMINES LEVEL AND MUSCARINIC AND DOPAMINERGIC RECEPTORS DENSITIES. Maia F. D.1, Freitas R. M.1, Vasconcelos S. M. M.1, Sousa F. C. F.1, Fonteles M. M. F.1,2, Viana G. S. B.1; 1 Department of Physiology and Pharmacology, Laboratory of Neuropharmacology; 2 Department of Pharmacy, Federal University of Ceará, Fortaleza, Brazil.

QUANTITATIVE ULTRASTRUCTURAL ANALYSIS OF AXONAL DAMAGE FOLLOWING RATACTUTE SPINAL CORD INJURY. Oliveira J. L. F.1, Corkill D. J. C. 2, Guimarães J. S.1, Picanço-Diniz C. W.1, Freire M. A. M.1, Perry V. H.2, Leal W. G.1; 1 Laboratory of Functional Neuroanatomy, Department of Morphology, Federal University of Pará, Belém, PA, Brazil; 2 Biomedical Sciences Building, CNS Inflammation Group, Basset Crescent East, Southampton, UK.

**RETINAL PROJECTIONS TO THE ZONA INCERTA OF THE COMMON MARMOSET (CALLITHRIX JACCHUS).** Rodrigues L. P.1, Rocha O. D.1, Britto L. R. G.2, Costa M. S. M. O.1, Cavalcante J. S.1; 1 Laboratory of Chronobiology, CB-UFRN, Natal, RN, Brazil; 2 Dept. Physiol. Biophys, ICB-USP, São Paulo-SP, Brazil.

**STRONG EXPRESSION OF SEROTONIN 2A RECEPTORS IN DOPAMINERGIC MESENCEPHALIC NUCLEI OF THE DOMESTIC CHICK.** Toledo C. A. B.1, Metzger M.2; 1 Laboratory of Neuroscience, City University of São Paulo (UNICID); 2 Institute of Biomedical Sciences, University of São Paulo.

**THE MORPHOMETRICAL ANALYSIS OF THE 5HT NEURONS IN THE RAPHE NUCLEI OF THE COMMON MARMOSET (CALLITHRIX JACCHUS).** Abe L. K.1, Cavalcante J. S.2, Cavalcante J. C.1, Britto L. R. G.2, Costa M. S. M. O.3, Nogueira M. I.; 1 Lab de Neurociências, Depto de Anatomia ICB-USP; 2 Lab. Neurobiologia Celular, Depto de Fisiologia ICB-USP; 3 Lab. Cronobiologia, CB-UFRN.

**THE SUPRACHIASMATIC NUCLEUS IN THE CEBUS APPELLA: 5-HT PROJECTIONS AND CYTOARCHITECTURAL ORGANIZATION.** Pinato L.1, Allemandi W.1, Abe, L. K.1, Rizzolo R. J. C.2, Cavalcante J. S.3, Costa M. S. M.3, Nogueira M. I.1; 1 Anatomy Department, Institute of Biomedical Sciences, USP, São Paulo, SP, Brazil; 2 Anatomy Department, UNESP, Araçatuba-SP, Brazil; 3 Lab Crono, UFRN, Natal-RN, Brazil.

**TOPOGRAPHICAL DISTRIBUTION OF RETINAL GANGLION CELLS IN THE FOUR-EYED FISH ANABLEPS ANABLEPS.** Oliveira F. G.1, Coimbra J. P.1, Mota D. L.2, Bittencourt A. M.2, Montag L.3, Francilena 3, Costa B. L. S. A.1; 1 Departamento de Fisiologia e Farmacologia; 2 Departamento de Histologia e Embriologia, Universidade Federal de Pernambuco, Recife, PE; 3 Museu Paraense Emílio Goeldi, Brazil.

## Neuroscience Education and Neurophilosophy

**CHALLENGES OF MULTIDISCIPLINARY RESEARCH ON NEUROSCIENCE.** Espindola F. S.1, Destro-Filho J. B.2, Pereira W. F.3, Shinosaki J. S. M.3, Ballester G.4, Noriaki-Ide A.2,4; 1 Biochemistry Lab, Institute for Biochemistry and Genetics, University of Uberlândia (UFU), MG; 2 Control Systems Lab., School of Electronic Engineering, University of Uberlândia (UFU), MG; 3 Neuroscience Lab, Institute for Biomedical Sciences, University of Uberlândia (UFU), MG, 4 Department of Neurology, School of Medicine, University of São Paulo.

**CO-EVOLUTIONARY INTERFACES: THE COMMUNICATION PROCESS AMONG BRAIN, COMPUTER AND BODY THAT DANCES.** Zuanon R.; Pontifícia Universidade Católica de São Paulo University; Anhembi Morumbi University.

**MERLEAU-PONTY'S CRITICISM OF THE MENTAL FUNCTIONS LOCALIZATIONIST HYPOTHESIS IN VIEW OF THE NEUROSCIENCES DEVELOPMENT.** Soares E., Bueno J. L. O.; IP-NEC, USP; Associative Procedures Laboratory, Time Control and Memory, FFCL, USP, Ribeirão Preto SP.

**THE CONTROVERSY ABOUT MODULAR AND DISTRIBUTED THEORIES OF BRAIN FUNCTION.** Andrade E. M. F., Sarmento S. A., Andrade E. M. F.; Health Sciences Center, Federal University of Paraíba, Brazil.

**THE EMBODIED NATURE OF COMMUNICATION.** Greiner C.; Graduate Studies on Communication and Semiotics and Faculty of Body Arts, Catholic University of Sao Paulo.

**THE LINGUISTICS PLASTICITY METHODOLOGY: A LITERACY METHODOLOGY BASED ON THE NEURAL PLASTICITY THEORY.** Freire J. L.; Faculdades São José, Rio de Janeiro, RJ, Brazil.

**THE SUPERVENIENCE ARGUMENT OF JAEGWON KIM.** Leclerc A., Lyra, C. E. S.; Federal University of Paraíba, Brazil.

**THINKING CAUSES, MENTAL CAUSATION AND THE PRACTICAL REALISM OF LYNNE RUDDER BAKER.** Lyra C. E. S., Leclerc A.; Federal University of Paraíba, Brazil.

## Psychology and Medicine

**A MISCONCEPTION ABOUT THE RELATIONSHIP BETWEEN THE FLASH-LAG EFFECT AND TEMPORAL ORDER JUDGMENTS.** Cravo A. M., Baldo M. V. C.; Department of Physiology and Biophysics, Institute of Biomedical Sciences, University of São Paulo, São Paulo.

**ANALYSIS OF DATABASE OF CEFACE (1996-2003): NERVOUS SYSTEM AGENTS CAUSING ADVERSE REACTIONS.** Macatrão L., Ferreira M. A. M., Francelino E. V., Fonteles M. M. F.; Pharmacovigilance Center of Ceará (CEFAC), Department of Pharmacy, Federal University of Ceara.

**ANXIETY LEVELS DURING PREGNANCY.** Teixeira-Silva F.1, Faturi C. B.2, Leite J. R.2; 1 Universidade Federal de Sergipe, Departamento de Fisiologia, Sergipe; 2 Universidade Federal de São Paulo, Departamento de Psicobiologia, São Paulo.

**BETTER ORIENTATION ABOUT HOW TO USE MEDICINES CORRECTLY IN MARACANAÚ MUNICIPALITY.** Teixeira C. C., Lucas D. H., Freitas, Vinicius M.; Pharmacy Students of Fortaleza University and Maracanaú trainers apprentices.

**CENTRAL AND PERIPHERAL NERVOUS SYSTEM IN THE CHRONIC FORM OF CHAGAS' DISEASE.** Viana P. C.1, Fernandes R. M. F.1, Marques V. D.1, Marques W. Jr.1, Elias J. Jr.2, Santos A. C.2, Barreira A. A.1; 1 Department of Neurology, Psychiatry and Medical Psychology; 2 Internal Medicine from Ribeirão Preto Medical Faculty, São Paulo University.

**CHRONIC RENAL FAILURE: SLEEP CHANGES IN PATIENTS WITH CHRONIC RENAL FAILURE SUBMITTED TO HEMODIALYSIS AT DIFFERENT TIME OF THE DAY.** de Sousa R. M., Magalhães S. C., Bastos J. P. C., Bruin V. M. S., Adrianzen O. A. G., Nepomuceno L. A. M.; Faculty of Medicine of the Federal University of Ceará.

**DEVELOPMENT OF "PROVERBS MEMORY GAMES" FOR ELDERLY AND ADULTS.** Santos M. T. F.; Occupational Therapy, Specialist in Elderly Health (FIOCRUZ), Department of Psychology at UNICAP, Catholic University, Recife.

**DIABETES MELLITUS: EXCESSIVE DAYTIME SOMNOLENCE, RESTLESS LEGS, AND SLEEP DISORDERS IN PATIENTS WITH DIABETES MELLITUS TYPE II.** Lopes L. A., Magalhães S. C., Bruin V. M. S., Lins C. M. M., Montenegro R. Jr., Lima D. C., Quental D.P., Gurgel V.; Faculty of Medicine of the Federal University of Ceará.

**DIVIDED ATTENTION EFFECT ON FREE RECALL OF SEMANTICALLY RELATED WORDS.** Olivera L. G., Vaz L. J., Ruiz A. M. N., Pompeia S., Bueno O. F. A.; Department of Psychobiology, UNIFESP/EPM, São Paulo.

**EFFECTS OF CARDIOVASCULAR TRAINING ON EXERCISE TOLERANCE, AEROBIC CAPACITY AND QUALITY OF LIFE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS.** Carvalho M. R. P., Sato E. I., Tebexreni A. S., Heidecher R. T. C., Schenkman S., Neto T. L. B.; Department of Medicine, Rheumatology Division; Physiologic exercise laboratory, Medical Center of Sports and Physical Activity (CEMAFE), Universidade Federal de São Paulo, São Paulo.

**ELABORATION OF A PHARMACEUTICAL ATTENTION PLANE TO PATIENTS USING BENZODIAZEPINIC REGISTERED ON PSYCHOSOCIAL ATTENTION CENTER LOCALIZED ON MARACANAÚ (CEARÁ, BRAZIL).** Bezerra E. O.1; Nepamuceno H. H. L.2; Silva P. S. P.2, Jácome M. B.3; 1 Estudante de Farmácia da Universidade



de Fortaleza; 2 Estudante de Farmácia da Universidade Federal do Ceará; 3 Farmacêutica da Assistência Farmacêutica de Maracanaú.

**EMOTIONAL FACTORS AND REACTION TIMES IN A REAL WORLD SETTING.** Ranvaud R.1, Pallicca G.2, Morya E.1, Miyamoto N. T.1; 1 Departamento de Fisiologia e Biofísica, Instituto de Ciências Biomédicas, Universidade de São Paulo, SP, Brasil; 2 Centro Studi e Documentazione A.S.S.I. Giglio Rosso Viale Michelangelo, Firenze Italia.

**ENVIRONMENTAL INFLUENCES ON THE CENTRAL NERVOUS SYSTEM AND ON SICK PERSON BEHAVIOR.** Barbosa A. S., Tatmatsu D.; Psicologia da Universidade Federal do Ceará; Psicologia da Universidade Federal do Ceará.

**EPIDEMIOLOGIC RATES OF ANTIHYPERTENSIVE DRUGS AND ORAL HYPOGLYCEMIC AGENTS IN MARACANAÚ—CE, BRAZIL.** Silva C. B.1, Silva J. L.1, Silva F. I. F.1, Jácome M. B.2; 1 Graduate Students of Pharmacy; 2 Pharmacist of Pharmaceutical Assistance Service.

**EVALUATION OF THE EFFECTS OF ZEN'S MEDITATION PRACTICE IN VOLUNTEERS WITH ANXIETY COMPLAINT.** Sales E. S., Kozasa E. H., Dractcu M., Leite J. R.; Department of Psychobiology, UNIFESP, EPM.

**FREE-RECALL OF SEMANTICALLY, PHONETICALLY AND PERCEPTUALLY DISTINCT RELATED ITEMS.** Ruiz A. M.1, Pompeia S.1, Manzano G. M.2, Kohn A.3, Bueno O. F. A.1; 1 Departamento de Psicobiologia; 2 Setor de Neurofisiologia Clínica, Universidade Federal de São Paulo (UNIFESP), Brazil; 3 Laboratório de Engenharia Biomédica, Escola Politécnica USP, Brazil.

**GENETIC EPIDEMIOLOGICAL STUDY OF ALZHEIMER'S DISEASE IN 20 CUBAN FAMILIES.** Duarte D., Yance L.; Genetic Service, University Hospital Dr. Carlos J. Finlay, Havana, Cuba.

**GUILLAIN-BARRÉ'S SYNDROME, AFTER DENGUE, IN CHILD: A RARE CASE REPORT.** Martins L. B., Wanderley R. C., Santos A. E.; Universidade Federal da Paraíba.

**HAND POSTURE AND HANDEDNESS RECOGNITION: A REACTION TIME STUDY.** Guimarães-Silva S.1, Gawryszewski L. G.1, Lameira A. P.1, Carvalho A.1, Pereira A. Jr.1, Vargas C. D.3, Umiltà C. A.4; 1 Progr. Neuroimunologia, Dep. Neurobiologia, UFF, Niterói, Brazil; 2 Instituto de Biofísica, UFRJ, Brazil; 3 Department of Neurobiology, Duke University, USA; 4 Dipartimento di Psicologia Generale, Università di Padova, Italy.

**HAND POSTURE AND SIMON EFFECT: A REACTION TIME STUDY.** Ferreira F. M.1, Gawryszewski L. G.1, Lameira A. P.1, Carvalho A. A.1; Guimarães-Silva S.1, Pereira A. Jr.2, Vargas C. D.3, Umiltà C. A.4; 1 Progr. Neuroimunologia, Dep. Neurobiologia, UFF, Niterói, Brazil; 2 Department of Neurobiology, Duke University, USA; 3 Instituto de Biofísica, UFRJ, Brazil; 4 Dipartimento di Psicologia Generale, Università di Padova, Italy.

**HAND POSTURE, S-R SPATIAL COMPATIBILITY AND CROSSED-HAND EFFECT: A REACTION TIME STUDY.** Gawryszewski L. G.1, Guimarães-Silva S.1, Lameira A. P.1, Carvalho A.1, Pereira A. Jr.2, Vargas C. D.3, Umiltà C. A.4; 1 Progr. Neuroimunologia, Dep. Neurobiologia, UFF, Niterói, Brazil; 2 Instituto de Biofísica, UFRJ, Brazil; 3 Department of Neurobiology, Duke University, USA; 4 Dipartimento di Psicologia Generale, Università di Padova, Italy.

**HOW IS SLEEP AFFECTED BY PULSOTHERAPY IN SYSTEMIC LUPUS ERITHEMATOUS?** Souza L. N. C., Mesquita R. V. C., Magalhães S. C., Rocha F. A. C., Bruin V. M. S., Carvalho R., Magalhães M. C.; Faculty of Medicine of the Federal University of Ceará.

**IMPLANTATION OF THE SYSTEM OF INDIVIDUALIZED KITS TO PATIENTS WITH TUBERCULOSIS AND LEP-ROSY IN THE COUNTY OF MARACANAÚ — CEARÁ.** Araújo I. S., Jácome M. B., Silva C. B., Silva P. S. P.

**INFLUENCE OF EMOTIONAL PICTURES IN THE AFFECTIVE STATE AND IN THE CONCENTRATION OF IMMUNOGLOBULIN A AND VOLUME OF SALIVA.** Mendonça de Souza A. C. F., Nascimento B. E. M., Dines I., Rumjanek V., Volchan E.; Instituto de Biofísica, Carlos Chagas Filho e Departamento de Bioquímica Médica, UFRJ.

**LEVELS-OF-PROCESSING EFFECT ON FREE RECALL OF DISTINCT ITEMS.** Vaz L. J., Oliveira L. G., Ruiz A. M. N., Pompeia S., Bueno O. F. A.; Department of Psychobiology, UNIFESP, EPM, São Paulo, Brazil.

**MELATONIN LEVELS SHOW A PHASE ADVANCE IN PARKINSON'S DISEASE.** Magalhães S. C., Dias T. R., Bruin V. M. S., Andrade G. M., Bruin P. F. C., Leal A.; Faculty of Medicine of the Federal University of Ceará.

**MORPHOMETRY OF THE NERVOUS CELLS OF THE SMALL INTESTINE SUBMUCOUS PLEXUS AFTER PAR-ENTERERIC ADMINISTRATION OF L-GLUTAMINE AND/OR PHYSICAL EXERCISE.** Montenegro R. F. P., Neves P. R. A., Afonso L. B., Guimarães B. M., Nascimento E., Castro R. M., Moraes S. R. A.; Departamento de Anatomia, CCB, UFPE, Recife, PE, e Departamento de Nutrição, CCS, UFPE.

**NEONATAL ACTION OF SSR1 TREATMENT ON WEIGHT EVOLUTION, AND ITS PATTERNS.** Lemos Neto A. A., Cordeiro de Souza I. A., Manhães de Castro F. M., Araújo de Brito C., Viana de Souza D., Rodrigues de Mariz N., Oliveira J. R. M., Prota J. R. M., Manhães de Castro R., Freitas Silva S. R.; "Nutrição, Neuropsicofarmacologia e Imunidade" Depto. de Nutrição, UFPE.

**NEONATAL CHRONIC TREATMENT WITH SRE ALTERS THE WEIGHT EVOLUTION.** Cordeiro de Souza I. A., Lemos Neto A. A., Manhães de Castro F. M., Araújo de Brito C., Viana de Souza D., Rodrigues de Mariz N., Manhães de Castro R., Freitas Silva S. R.; Nutrição, Neuropsicofarmacologia e Imunidade" Depto. de Nutrição, UFPE.

**NEONATAL TREATMENT WITH CLOMIPRAMINE IMPAIRS THE WEIGHT EVOLUTION, BUT IT DOESN'T ALTER THE MATURATION OF REFLEXES AND PHYSICAL CHARACTERISTICS IN RAT.** Oliveira de Lira L., Manhães de Castro F. M., Deiró T. C. B. J., Souza S. L., Silva M. C., Nogueira M. I., Manhães de Castro R.; Nutrição- UFPE; Anatomia-ICBIII, USP.

**NEUROPSYCHOLOGY OF PERCEPTION IN THE HUMAN EARLY COGNITIVE DEVELOPMENT.** Oliveira A. L. D.1, Albuquerque F.2; 1 Department of Biological Sciences, State University of Ceará, Fortaleza, Brazil; 2 Department of Physiology, Federal University of Rio Grande do Norte, Natal, Brazil.

**OBJECTS IN DEPTH: PRELIMINARY RESULTS ON ATTENTIONAL DEMANDS IN 3-D.** Rondinoni C., Galera C.; University of São Paulo, Ribeirão Preto, Brazil.

**PERSPECTIVES OF GENE THERAPY FOR PAIN CONTROL FROM SUPRASPINAL AREAS: A STUDY ON THE DYNAMICS OF HSV-1 VECTOR MIGRATION FROM THE MEDULLA OBLONGATA.** Martins I.1, Pinto M.1, Wilson S. P.2, Lima D.1, Tavares I.1; 1 Institute of Histology and Embryology, Faculty of Medicine and IBMC, University of Oporto, Portugal; 2 Department of Pharmacology, Physiology and Neuroscience, University of South Carolina School of Medicine, Columbia, USA.

**PHONOLOGICAL WORKING MEMORY IN CHILDREN WITH LEARNING DISABILITIES.** Barbosa T., Bueno O. F. A., Galduróz R. F. S.; Universidade Federal de São Paulo, Escola Paulista de Medicina, Departamento de Psicobiologia.

**PHYSICAL THERAPY PROGRAM AS A SUPPORT STRATEGY FOR FUNCTIONAL INDEPENDENCE IN PARKINSON'S DISEASE.** Inoue M. M. E. A., Bizarro R., Morais R. M., Martinez G. P. C.; Physical Therapy Department, Universidade do Sagrado Coração, USC Bauru, São Paulo, Brazil; University of San Francisco, San Francisco, USA.

**PHYSICAL TRAINING ENHANCES PHAGOCYTIC FUNCTION BUT NOT LYMPHOPROLIFERATIVE RESPONSE IN STRESSED RATS.** Tenório M.1, Ferro T.1, Leandro C.1, Nascimento E.1, de-Lima T.2, Folador A.2, Pithon-Curi

T.2, Manhães-de-Castro R.1, de-Castro C.1, Curi R.2; 1 Group: Nutrition, Neuropsychopharmacology and Immunology, UFPE; 2 Laboratory of Cell Physiology, ICB, USP.

**PREDICTABILITY AND MENTAL REPRODUCTION ON HUMAN MOTOR PERFORMANCE.** Biagioni G.1, Ribeiro do Valle L. E.2, Alouche S. R.1,3; 1 Faculdade de Fisioterapia, Universidade Metodista de São Paulo; 2 Instituto de Ciências Biomédicas, Universidade de São Paulo; 3 Universidade Bandeirante de São Paulo.

**PRIMACY ON THE FREE RECALL OF PSEUDOWORDS.** Rodrigues C. C., Bueno O. F. A.; Departamento de Psicobiologia, Escola Paulista de Medicina, Universidade Federal de São Paulo.

**PROERECTILE EFFECT OF AN ALKALOIDAL RICH FRACTION FROM ASPIDOSPERMA SPP.** Campos A. R., Lima R. C. Jr., Uchoa D. E. A., Silveira E. R., Santos F. A., Rao V. S. N.; Universidade Federal do Ceará.

**PROPOSAL OF PRECISION IN THE MEASURES OF MURINOMETRIC EVALUATION OF THE CRANIUM GROWTH IN RATS.** Silva H. J., Cunha D.A., Barros K. M. F. T., Marinho S. M. O. C., Toscano A. E., Moraes S. R. A., Manhães de Castro R.; Departamento de Nutrição Universidade Federal de Pernambuco (UFPE), Grupo de Pesquisa: Desnutrição e Desenvolvimento Fisiológico.

**SLEEP-WAKE CYCLE AND COGNITIVE FUNCTION IN MEDICAL STUDENTS.** Rolim S. A. M., Medeiros A. L., Lima P. F., Almondes K. M., Araújo J. F.; Laboratório de Cronobiologia, Departamento de Fisiologia, CB/UFRN, Natal, RN, Brasil.

**SLEEP-WAKE PATTERN OF PSYCHOLOGY STUDENTS.** Lague C. M., Ferreira C. L., Almondes K. M., Silva N. G. Group and Studies: Psychology and Health, Department of Psychology, Federal University of Rio Grande do Norte, Natal.

**SUBJECTIVE RATINGS AND PHYSIOLOGICAL RESPONSES TO PHOTOGRAPHIC STIMULI OF THE "INTERNATIONAL AFFECTIVE PICTURE SYSTEM" (IAPS) OF BRAZILIAN UNIVERSITY STUDENTS.** Ribeiro R. L.1, Silva F. T.2, Pompéia S.1, Buen, O. F. A.1; 1 Psychobiology Department, Universidade Federal de São Paulo (UNIFESP), São Paulo SP, Brazil; 2 Physiology Department, Universidade Federal de Sergipe (UFS), Aracaju SE, Brazil.

**THE ANXIETY IN COLLEGE STUDENTS: THE REALITY OF THE COURSE OF PSYCHOLOGY.** Ferreira C. L., Lague C. M., Almondes K. M., Maia E. M. C.; Group and Studies: Psychology and Health, Department of Psychology, Federal University of Rio Grande do Norte, Natal, RN.

**THE CUE SIZE EFFECT ON SUBJECTIVE PICTURES.** Rossini, J. C., Galera, C.; FFCLRP-DPE, University of São Paulo, Brazil.

**THE EFFICACY OF NEUROPSYCHOLOGICAL REHABILITATION (NR) ON COGNITIVE PERFORMANCE OF PATIENTS WITH MEMORY LOSS.** Silva R. S., Bueno O. F. A., Bertolucci P. H. F.; Psicobiologia, Neurocirurgia and Clinical Neurology Departments; Universidade Federal de São Paulo, UNIFESP/EPM, Brazil.

**THE INFLUENCE OF ENVIRONMENT SOUND OVER HUMAN MOTOR PERFORMANCE.** Gobbi F. C. M.1, 2, Alouche S. R.1,3; 1 Universidade Bandeirante de São Paulo; 2 Centro de Reabilitação, Hospital Israelita Albert Einstein; 3 Universidade Metodista de São Paulo.

**THE PROFILE OF THE PHARMACIST TRAINEE IN THE PHARMACEUTICAL ASSISTANCE IN THE COUNTY OF MARACANAÚ.** Jácome M. B., Araújo I. S.; Pharmacist of the Pharmaceutical Assistance of the county of Maracanaú; Pharmacy trainee in Maracanaú.

**THE RELATIONSHIP BETWEEN THE PATTERN OF THE SLEEP-WAKE CYCLE AND ANXIETY IN MEDICAL STUDENTS.** Almondes K. M., Medeiros A. L. D., Lima P. F., Rolim S. A. M., Araújo J. F.; Laboratory of Chronobiology, Department of Physiology, Federal University of Rio grande do Norte, Natal.

**TRANSFER OF LEARNING IN VISUO-MOTOR TASKS.** Teixeira N. B.1, Alouche S. R.1,2; 1 Faculdade de Fisioterapia, Universidade Metodista de São Paulo; 2 Universidade Bandeirante de São Paulo.

## Nutrition and Neuroendocrinology

**ACUTE STRESS ANTICIPATES AND AMPLIFIES THE LH PREOVULATORY SURGE.** Rodovalho F. V.1, Moura M. D.1, Franci C. R.1, Attis A. C. F.2, Viviani F.2, Anselmo-Franci J. A.2; 1 Faculdade de Medicina de Ribeirão Preto; 2 Faculdade de Odontologia de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto.

**DUAL MECHANISM CONTROLLING THE CORTICOSTERONE SECRETION IN RESPONSE TO STRESS IN FEMALE RATS.** Ferreira-Silva I. A.1, Franci C. R.1, Lucion A. B.2, Anselmo-Franci J. A.3; 1 FMRP, USP; 2 ICBS, UFRGS; 3 FORP, USP.

**EFFECT OF CHOLECYSTOKININ (CCK) ON SEXUAL BEHAVIOR OF MALE RATS.** Tieppo C. A.1, Aguiar J. E. R.1, Correa P. H.1, Felício L. F.2, Nasello A. G.1; 1 Faculdade de Ciências Médicas da Santa Santa Casa de São Paulo, São Paulo; 2 Faculdade Medicina Veterinária da USP, São Paulo, São Paulo, Brazil.

**LACTATION IN RATS TREATED WITH FLUOXETINE DURING THE SUCKLING PERIOD.** Souza S. L., Oliveira de Lira L., Silva M. C., Deiró T. C. B. J., Nogueira M. I., Manhães de Castro R.; Nutrição, UFPE; Anatomia, ICB III, USP.

**LEPTIN INHIBITS GLUCOCORTICOID-INDUCED RETROGRADE RELEASE OF ENDOCANNABINOIDS IN THE HYPOTHALAMUS BY BLOCKING MEMBRANE GLUCOCORTICOID RECEPTOR SIGNALING.** Malcher-Lopes R.1, Tasker J. G.1,2; 1 Neuroscience Program; 2 Neurobiology Division of the Department of Cell and Molecular Biology, Tulane University, New Orleans, USA.

**RATS FEEDING CONSUMPTION INCREASE AFTER CEASING TREATMENT WITH FLUOXETINE DURING NEONATAL PERIOD.** Aranha B. C., Santos G. H. F.1, de Vasconcelos R. G.1, Marinho M. G. S.1, Leite R. M. P., Silva I. G., Macedo E. M. C.1, Freitas Silva S. R., Jesus Deiró R. A.1, Deiró T. C. B. J.2, Cabral Filho J. E., Manhães-de-Castro R.1; 1 Lab. Nutrição, Neuropsicofarmacologia e Imunidade, UFPE; 2 Depto. Ciências Nutrição, UFBA.

**ROLE OF DIET PROTEINS IN THE DEVELOPMENT OF FOOD ALLERGY AND IN THE PREDATORY BEHAVIOR.** Mirotti L. C.1, Mucida D. S.2, Basso A. S.1, Russo M.2, Sá-Rocha L. C.1; 1 Patologia e Toxicologia, FMVZ, USP SP; 2 Imunologia ICB IV-USP SP.

**SEROTONERGIC PARTICIPATION IN THE WEIGHT EVOLUTION DURING SUCKLING IN RATS.** Pinto F. C. L., Callou K. R. A., Aragão R. S., Santos C., Soares A., Silva H. J., Marinho S. M. O. C., Moraes S. R. A., Manhães de Castro R.

**THE TRPV1 AGONIST ANANDAMIDE IS A SIGNALLING MOLECULE IN INFLAMED URINARY BLADDER.** Charrua A.1, Dinis P.2, Avelino A.1, Nagy I.3, Yacoub M.4, Cruz F.1,2; 1 Institute of Histology and Embriology, Faculty of Medicine of Porto, Porto, Portugal; 2 Dept. of Urology, Hospital S. João, Porto, Portugal; 3 Dept. of Anaesthesia, Imperial College, Chelsea and Westminster Hospital, London, UK; 4 Novartis Institute for Medical Research, London, UK.

**TO TAKE CARE FOR THE PUPPIES OR TO SEARCH FOR FOOD? INFLUENCE OF THE MORPHINE TREATMENT DURING LATE PREGNANCY.** Sukikara M. H.1, Canteras N. S.2, Felício L. F.1; 1 Department of Pathology, FMVZ; 2 Department of Biomedical Sciences, ICB, USP, SP.

**WEIGHT GAIN DURING THE BREAST FEEDING IS ALTERED BY TREATMENT WITH FLUOXETINE (SSRI) IN THE RAT?** Melo L. A., Lemos Neto A. A., Deiró T. C. B. J., Pombo P. S., Cabral Filho J. E., Manhães de Castro R.; Departamento de Nutrição, Laboratório de Nutrição Psicofarmacologia e Imunidade/LAFINNT-UFPE.

## K

## Neuropathology

**BRAZILIAN VERSIONS OF STROKE SCALES AND CLINICAL ASSESSMENT TOOLS PLUS PROPOSAL TO ESTABLISHMENT OF A CEREBROVASCULAR DISORDERS PROTOCOL: AN ATTEMPT TO STANDARDIZATION AND REDUCTION IN THE MORBIMORTALITY AT BRAZILIAN NEUROLOGY /STROKE UNITS.** Vitral R. W. F., Rauph B. G.; 1 Universidade Federal de Juiz de Fora, Minas Gerais, Brasil/ Center for Cognitive and Neural Systems (CNS), Boston, MA, USA; 2 Universidade Federal de Juiz de Fora, Minas Gerais, Brasil/ NIPAN – Núcleo Integrado de Pesquisas em Acidentes do Sistema Nervoso, Neurofisiologia, Neurobiologia e Neurocomputação, CNPq.

**CEREBELLAR NEURODEGENERATION INDUCED BY VITAMIN B1 DEFICIENCY.** Oliveira F. A., Galan D. T., Arantes R. M. E., Ribeiro A. M., Cruz J. S.; Departments of Physiology & Biophysics; Pathology; Biochemistry & Immunology; ICB-UFMG, Belo Horizonte MG.

**EFFECTS OF THE AMAZONIAN ARBOVIRUS CARAJAS ON THE NEONATAL MOUSE CENTRAL NERVOUS SYSTEM FOLLOWING EXPERIMENTAL INFECTION.** Macedo C.A.C., Guimarães J.S.1, Dos Santos Z.A.1, Medeiros A. C.1, Paula L. S.1, Borges J.1, Freire M. A. M.1, Gomes-Leal W. 1, Picanço-Diniz C. W.1, Vasconcelos P. F. C.2; 1 Laboratory of Functional Neuroanatomy, Department of Morphology, University of Pará, Belém, PA, Brazil; 2 Evandro Chagas Institute, Department of Arbovirology, 66090-000, Belém, PA, Brazil.

**HYPERGLYCEMIA AND DIABETES CHANGE AMPA AND KAINATE RECEPTOR SUBUNITS EXPRESSION IN RAT RETINA.** Santiago A. R.1,2, Neto A. M.2, Rosa S.2, Garrido M. J.1, Santos P. F.2,3, Cristóvão A. J.2,3, Ambrósio A. F.1,2; 1 Center of Ophthalmology of Coimbra, IBILI, Faculty of Medicine; 2 Center for Neuroscience and Cell Biology; 3 Department of Zoology; University of Coimbra, Portugal.

**HYPERGLYCEMIA AND OXIDATIVE STRESS CAUSE RETINAL ENDOTHELIAL CELL DYSFUNCTION.** Ambrósio A. F.1,2, Leal E. C.1, Aveleira C.1, Sá M.1, Serra A.1, Castilho A.1, Cunha-Vaz J.1; 1 Center Ophthalmology, IBILI, Faculty Medicine, University Coimbra, Coimbra, Portugal; 2 Center Neuroscience Cell Biology, Coimbra, Portugal.

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**NEUROTOXIC EFFECTS OF ISCHEMIA IN THE RETINA OF A NEW WORLD MONKEY, THE MARMOSET CALLITHRIX JACCHUS.** Ferreira R. J. L.1, Silva B. C.1, Figueiroa C. H. M.1, Macedo J. S.1, Silveira A. B.2, Castro C. M. M. B.3, Andrade da Costa B. L. S.1; 1 Departamento de Fisiologia e Farmacologia; 2 Departamento de Histologia e Embriologia; 3 Departamento de Medicina Tropical, Universidade Federal de Pernambuco – Recife, PE, Brazil.

**POSSIBLE CONTRIBUTIONS OF APP METABOLISM TO ALZHEIMER'S DISEASE PATHOLOGY.** Crespo-López M. E., Henriques A. G., Serafim T., Amorim M. R., da Cruz e Silva E. F., da Cruz e Silva O. A. B.; Centro de Biologia Celular, Universidade de Aveiro, Aveiro, Portugal.

**TAUROURSODEOXYCHOLIC ACID, A BILE ACID WITH IN VIVO ANTI-APOPTOTIC AND NEUROPROTECTIVE PROPERTIES.** Rodrigues C. M. P.1, Nan Z.2, Keene C. D.2, Duan W-M.2, Solá S.1, Castro R. E.1, Kren B. T.3, Low W. C.2, Steer C. J.3; 1 Centro de Patogénese Molecular, Faculty of Pharmacy, University of Lisbon, Lisbon, Portugal; and Departments of 2 Neurosurgery and 3 Medicine, University of Minnesota Medical School, Minneapolis, MN, USA.

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**Santos Dumont** flying in "14-bis"  
(November 12, 1906)



**Santos Dumont** winning  
the Deutsch Prize  
(October 29, 1901)

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