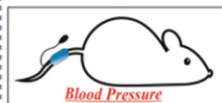




# World Journal of Neuroscience

**1991**

The first QTL in rodents was mapped in 1991, when investigators found evidence of a blood pressure regulatory locus on rat Chr. 10.



**1996**

The first behavioral QTL described in rats, by Moisan *et al.*, was located on Chr. 8 and affected motor activity.



The Rat Genome Database is a collaborative effort between leading research institutions involved in rat genetic and genomic research. This database has already collected over 1900 QTLs for rats until now.

**1986**

**1990**

**2014**

**1988**

The pioneer studies on QTLs mapping stemmed from agricultural research. The first QTL analysis was carried out in the tomato.



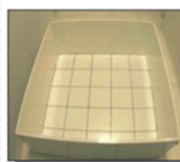
**1995**

Flint *et al.* were the first authors to describe behavioral QTLs in mice.



**1999**

Ramos *et al.* mapped the first genomic region influencing an emotionality-related trait in rats.



ISSN: 2162-2000



# Journal Editorial Board

ISSN 2162-2000 (Print) ISSN 2162-2019 (Online)

<http://www.scirp.org/journal/wjns>

---

## Editors-in-Chief

**Prof. Gjumrakch Aliev**

University of Atlanta, USA

**Prof. Xuejun Sun**

The Second Military Medical University, China

## Editorial Board

**Prof. Federico Bermudez-Rattoni**

National Autonomous University of Mexico, Mexico

**Dr. Sheng Chen**

Zhejiang University, China

**Prof. Raymond Chong**

Georgia Health Sciences University, USA

**Dr. Joseph D. Miller**

University of Southern California, USA

**Dr. Robert E. Clark**

University of California, San Diego, USA

**Prof. Alberto Fernández-Teruel**

Autonomous University of Barcelona, Spain

**Dr. Alexander G. Rabchevsky**

University of Kentucky, USA

**Dr. Matthias Klugmann**

University of New South Wales, Australia

**Dr. Jim Lagopoulos**

University of Sydney, Australia

**Dr. Xinbo Li**

Casey Eye Institute, Oregon Health and Science University, USA

**Dr. Qingyi Ma**

University of Southern California, USA

**Dr. Hui Mao**

Emory University, USA

**Dr. M. C. Morganti-Kossmann**

National Trauma Research Institute, Australia

**Prof. Philippe Paquier**

Vrije Universiteit Brussel, Belgium

**Dr. Ildikó Rácz**

University of Bonn, Germany

**Dr. Paula Riess Sherwood**

University of Pittsburgh, USA

**Prof. Ferdinando Rossi**

University of Turin, Italy

**Prof. Giuseppe Sartori**

University of Padua, Italy

**Prof. Jon Sverre Skranes**

Norwegian University of Science and Technology, Norway

**Dr. Yujiao Jennifer Sun**

University of California, San Francisco, CA, USA

**Prof. Xiao-Qing Tang**

University of South China, China

**Dr. Fei Wang**

Second Military Medical University, China

**Dr. Marzenna Wiranowska**

University of South Florida, USA

**Dr. Junhao Yan**

Peking University Health Science Center, China

**Dr. Jie Zheng**

University of California at Davis, USA

## Table of Contents

**Volume 4    Number 3**

**June 2014**

**The Long Way from Complex Phenotypes to Genes: The Story of Rat Chromosome 4 and Its Behavioral Effects**

G. F. de Medeiros, F. J. Corrêa, M. E. Corvino, G. de Souza Izídio, A. Ramos.....203

**Identification of Genetic Variants Underlying Anxiety and Multiple Sclerosis in Heterogeneous Stock Rats**

A. Baud, J. Flint, A. Fernandez-Teruel, The Rat Genome Sequencing Mapping Consortium.....216

**Behavioral Characteristics of Pharmacologically Selected Lines of Rats: Relevance to Depression**

D. J. Knapp, L. C. Daws, D. H. Overstreet.....225

**Animal Models of Obsessive-Compulsive Disorder: Strain Differences**

T. P. Maio, G. B. Filgueiras, D. C. Cunha, C. Estanislau.....240

**Contextual Fear Extinction and Re-Extinction in Carioca High- and Low-Conditioned Freezing Rats**

V. de Castro Gomes, L. A. León, D. Mograbi, F. Cardenas, J. Landeira-Fernandez.....247

**Schedule-Induced Polydipsia: Searching for the Endophenotype of Compulsive Behavior**

P. Flores, A. Sánchez-Kuhn, A. Merchán, O. Vilches, S. García-Martín, M. Moreno.....253

**Genetic Rat Models of Schizophrenia-Relevant Symptoms**

C. del Río, I. Oliveras, T. Cañete, G. Blázquez, A. Tobeña, A. Fernández-Teruel.....261

**Differential Effects of Voluntary Ethanol Consumption on Dopamine Output in the Nucleus Accumbens Shell of Roman High- and Low-Avoidance Rats: A Behavioral and Brain Microdialysis Study**

M. G. Corda, G. Piras, M. A. Piludu, O. Giorgi.....279

# **World Journal of Neuroscience (WJNS)**

## **Journal Information**

### **SUBSCRIPTIONS**

The *World Journal of Neuroscience* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **SERVICES**

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **COPYRIGHT**

#### **COPYRIGHT AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:**

Copyright © 2014 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

#### **COPYRIGHT FOR INDIVIDUAL PAPERS OF THE JOURNAL:**

Copyright © 2014 by author(s) and Scientific Research Publishing Inc.

#### **REUSE RIGHTS FOR INDIVIDUAL PAPERS:**

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

#### **DISCLAIMER OF LIABILITY**

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### **PRODUCTION INFORMATION**

For manuscripts that have been accepted for publication, please contact:

E-mail: [wjns@scirp.org](mailto:wjns@scirp.org)



**Call for Papers**

# World Journal of Neuroscience (WJNS)

ISSN 2162-2000 (Print) ISSN 2162-2019 (Online)  
<http://www.scirp.org/journal/wjns>

**World Journal of Neuroscience (WJNS)** is an international journal dedicated to the latest advancements in Neuroscience. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of Neuroscience. All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields:

- Behavioral Neuroscience
- Cellular Neuroscience
- Clinical Neuroscience
- Cognitive Neuroscience
- Computational Neuroscience
- Developmental Neuroscience
- Molecular Neuroscience
- Neuroengineering
- Neuroimaging
- Neurolinguistics
- Systems Neuroscience

## Editors-in-Chief

**Prof. Gjumrakch Aliev**  
**Prof. Xuejun Sun**

University of Atlanta, USA  
 The Second Military Medical University, China

## Editorial Board

Prof. Federico Bermudez-Rattoni  
 Dr. Sheng Chen  
 Prof. Raymond Chong  
 Dr. Joseph D. Miller  
 Dr. Robert E. Clark  
 Prof. Alberto Fernández-Teruel  
 Dr. Alexander G. Rabchevsky  
 Dr. Matthias Klugmann  
 Dr. Jim Lagopoulos

Dr. Xinbo Li  
 Dr. Qingyi Ma  
 Dr. Hui Mao  
 Dr. M. C. Morganti-Kossmann  
 Prof. Philippe Paquier  
 Dr. Ildikó Rácz  
 Dr. Paula Riess Sherwood  
 Prof. Ferdinando Rossi  
 Prof. Giuseppe Sartori

Prof. Jon Sverre Skranes  
 Dr. Yujiao Jennifer Sun  
 Prof. Xiao-Qing Tang  
 Dr. Fei Wang  
 Dr. Marzenna Wiranowska  
 Dr. Junhao Yan  
 Dr. Jie Zheng

We are also interested in: 1) Short Reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book Reviews—Comments and critiques.

## Website and E-Mail

<http://www.scirp.org/journal/wjns>

E-mail: [wjns@scirp.org](mailto:wjns@scirp.org)



## *What is SCIRP?*

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

## *What is Open Access?*

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



Website: <http://www.scirp.org>

Subscription: [sub@scirp.org](mailto:sub@scirp.org)

Advertisement: [service@scirp.org](mailto:service@scirp.org)