

**ANALELE ȘTIINȚIFICE**  
**ALE**  
**UNIVERSITĂȚII „ALEXANDRU IOAN CUZA”**  
**DIN IAȘI**  
(SERIE NOUĂ)  
SECȚIUNEA II

**a. GENETICĂ ȘI**  
**BIOLOGIE**  
**MOLECULARĂ**

**TOMUL XVII, Fascicula 4**

**2016**

**Editura Universității „ALEXANDRU IOAN CUZA” Iași**

## **FOUNDING EDITOR**

**Professor Ion I. BĂRA, PhD**

## **EDITOR IN CHIEF**

Professor Vlad ARTENIE, PhD University “Alexandru Ioan Cuza”, Iași  
vartenie@uaic.ro

## **ASSISTANT EDITOR**

Professor Lucian HRIȚCU, PhD University “Alexandru Ioan Cuza”, Iași  
hritcu@uaic.ro

## **PRODUCTION EDITOR**

Lecturer Eugen UNGUREANU, PhD University “Alexandru Ioan Cuza”, Iași  
aeu@uaic.ro

## **EDITORS**

Academician Professor Octavian POPEȘCU, PhD	“Babeș Bolyai” University, Cluj Napoca, Romania
Professor Roderich BRANDSCH, PhD	“Albert Ludwigs” University, Freiburg, Germany
Professor Huijen FENG, PhD	Xinxiang University, Henan, China
Professor Gogu GHIORGHITĂ, PhD	University Bacău, Romania
Professor Peter LORENZ, PhD	University of Applied Sciences, Saarbrücken, Germany
Professor Long-Dou LU, PhD	Xinxiang University, Henan, China
Professor Toshitaka NABESHIMA, PhD	Meijo University, Nagoya, Japan
Professor Janos NEMCSOK, PhD	University Szeged, Hungary
Professor Alexander Yu. PETRENKO, PhD	“V. N. Karazin” Kharkov National University, Ukraine
Professor Alexander RUBTSOV, PhD	“M.V. Lomonosov” State University, Moscow, Russia
Associate Professor Costel DARIE, PhD	Clarkson University, Potsdam, NY, U.S.A.
Associate Professor Mihai LESANU, PhD	State University, Chisinau, Republic of Moldova
Lecturer Harquin Simplicie FOYET, PhD	University of Maroua, Cameroon
Christian GAIDDON, PhD	INSERM U1113, Strasbourg, France
Cristian ILIOAIA, PhD	Ecole Normale Supérieure, Cachan, France
Andrew Aaron PASCAL, PhD	CEA-Saclay, France

## **ASSOCIATE EDITORS**

Professor Dumitru COJOCARU, PhD	University “Alexandru Ioan Cuza”, Iași
Professor Simona DUNCA, PhD	University “Alexandru Ioan Cuza”, Iași
Professor Costică MISĂILĂ, PhD	University “Alexandru Ioan Cuza”, Iași
Professor Zenovia OLTEANU, PhD	University “Alexandru Ioan Cuza”, Iași
Professor Marius ȘTEFAN, PhD	University “Alexandru Ioan Cuza”, Iași
Professor Ovidiu TOMA, PhD	University “Alexandru Ioan Cuza”, Iași
Associate Professor Lucian GORGAN, PhD	University “Alexandru Ioan Cuza”, Iași
Associate Professor Anca NEGURĂ, PhD	University “Alexandru Ioan Cuza”, Iași
Lecturer Csilla Iuliana BĂRA, PhD	University “Alexandru Ioan Cuza”, Iași
Lecturer Elena CIORNEA, PhD	University “Alexandru Ioan Cuza”, Iași
Lecturer Cristian CÎMPEANU, PhD	University “Alexandru Ioan Cuza”, Iași
Lecturer Mirela Mihaela CÎMPEANU, PhD	University “Alexandru Ioan Cuza”, Iași
Lecturer Lăcrămioara OPRICĂ, PhD	University “Alexandru Ioan Cuza”, Iași
Lecturer Cristian TUDOSE, PhD	University “Alexandru Ioan Cuza”, Iași

## **SECRETARIATE BOARD**

Lecturer Călin Lucian MANIU, PhD University “Alexandru Ioan Cuza”, Iași  
Associate Professor Marius MIHĂȘAN, PhD University “Alexandru Ioan Cuza”, Iași

## **EDITORIAL OFFICE**

**Universitatea „Alexandru Ioan Cuza”, Facultatea de BIOLOGIE**  
**Laboratorul de Biochimie și Biologie Moleculară**  
**Bulevardul Carol I, Nr. 20A, 700506, Iași, România**  
**[www.gbm.bio.uaic.ro](http://www.gbm.bio.uaic.ro) / [gbmpapers@yahoo.com](mailto:gbmpapers@yahoo.com)**