

2023 Volume 15 Issue 2



NOTULÆ SCIENTIÆ BIOLOGICÆ





NOTULAE SCIENTIA BIOLOGICAE

2023 Volume 15, Issue 2

Publisher:

Society of Land Measurements and Cadastre from Transylvania (SMTCT)

Society/institution:

Horticulture and Forestry Society from Transylvania

Abstracted and/or indexed:

- [Scopus](https://www.scopus.com/sourceid/21101047445#tabs=1) – [Cite Score](#) (<https://www.scopus.com/sourceid/21101047445#tabs=1>). Subject area:
 - Agricultural and Biological Sciences: Agricultural and Biological Sciences (miscellaneous)
 - Agricultural and Biological Sciences: Agronomy and Crop Science
 - Agricultural and Biological Sciences: Forestry
 - Agricultural and Biological Sciences: Horticulture
 - Agricultural and Biological Sciences: Plant Science
 - Biochemistry, Genetics and Molecular Biology: Biochemistry, Genetics and Molecular Biology (miscellaneous)
 - Medicine: Medicine (miscellaneous)
- [Directory of Open Access Journals](#)
- [Elton B Stephens Company \(EBSCO\)](#)
- [ProQuest](#)
- [Centre for Agriculture and Biosciences International \(CABI\)](#)
- [Chemical Abstracts Service \(CAS\)](#)
- [Ulrich's Periodicals Directory](#)
- [Bielefeld Academic Search Engine \(BASE\)](#)
- [British Library Direct \(BLD\)](#)
- [The European Library](#)
- [OCLC WorldCat](#)
- [Harvard Library](#)
- [CrossRef](#)
- [Information Matrix for the Analysis of Journals \(MIAR\)](#)
- [Google Scholar](#)
- [Scilit](#)

ISSN 2067-3264

www.notulaebiologicae.ro

Editorial Board

Editors-in-Chief

- [Radu E. SESTRAS](#), Horticulture and Forestry Society from Transylvania (SHST), Cluj-Napoca, Romania
- [Sorana D. BOLBOACĂ](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Oscar VICENTE](#), COMAV, Universitat Politècnica de València, Valencia, Spain

Advisory Editors

- [Cornel CĂTOI](#), University of Agricultural Sciences and Veterinary Medicine (UASVM) Cluj-Napoca, Romania (Rector, UASVM)
- [Doru C. PAMFIL](#), UASVM Cluj-Napoca, Romania (President, Cluj-Napoca Branch of Romanian Academy)
- [Viorel MITRE](#), SHST/UASVM Cluj-Napoca, Romania (President, SHST)

Associate Editors

- [Monica BOSCAIU](#), Polytechnic University of Valencia, Spain
- [Birsen ÇAKIR](#), Ege University, Izmir, Turkey
- [Milić ČUROVIĆ](#), Montenegro Univ., Podgorica, Montenegro
- [Hossam S. EL-BELTAGI](#), Cairo University, Egypt; King Faisal University, Al-Ahsa, Saudi Arabia
- [Lorentz JÄNTSCHI](#), Polytechnic University of Cluj-Napoca, Romania
- [Ioanna KAKABOUKI](#), Agricultural University of Athens, Iera Odos, 75, 11855, Athens, Greece
- [Kamil KUČA](#), University of Hradec Králové, Hradec Králové, Czech Republic
- [Leonardo LEONARDI](#), University of Perugia, Italy
- [Allan Klynger Da Silva LOBATO](#), Universidade Federal Rural da Amazônia, Paragominas, Brazil
- [Felicia LOGHIN](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Andrei Daniel MIHALCA](#), UASVM Cluj-Napoca, Romania
- [Andrei MOCAN](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [José Alberto PEREIRA](#), Instit. Politécnico de Bragança, Portugal
- [Ioana Delia POP](#), UASVM Cluj-Napoca, Romania
- [Agnieszka SEKARA](#), Agricultural University of Kraków, Kraków, Poland
- [Adriana F. SESTRAS](#), UASVM Cluj-Napoca, Romania
- [Lei SHI](#), Huazhong Agricultural University, Wuhan, China
- [Pilar S. TESTILLANO](#), Biological Research Centre, Madrid, Spain
- [Robert VEBERIČ](#), University of Ljubljana, Ljubljana, Slovenia
- [Dan VODNAR](#), UASVM Cluj-Napoca, Romania

Editorial Board - Scientific Members & Section Editors

- [Anthony Jide AFOLAYAN](#), University of Fort Hare, Alice Campus, South Africa
- [Ioan Vasile ABRUDAN](#), Transilvania University, Braşov, Romania
- [Douglas D. ARCHBOLD](#), University of Kentucky, Lexington, USA
- [Grigore BĂCIUT](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Umberto BERNABUCCI](#), University of Tuscia, Viterbo, Italy
- [Dimitrios BILALIS](#), Agricultural University of Athens, Athens, Greece
- [Anca Dana BUZOIANU](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Suriyan CHA-UM](#), National Center for Genetic Engineering & Biotechnology - BIOTEC, Thailand
- [Ioan COMAN](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Vasile CRISTEA](#), Babes-Bolyai University, Cluj-Napoca, Romania
- [Róbert FARKAS](#), Szent István University, Budapest, Hungary
- [Ana FITA](#), Polytechnic University of Valencia, Spain
- [László FODOR](#), Szent István University, Budapest, Hungary
- [Marek GAJEWSKI](#), Warsaw Agricultural University, Warsaw, Poland
- [Stefano GREGO](#), University of Tuscia, Viterbo, Italy
- [Hulya ILBI](#), Ege University, Izmir, Turkey
- [Florin IORAŞ](#), Buckinghamshire New University, High Wycombe, United Kingdom
- [Alexandru IRIMIE](#), 'Ion Chiricuta' Cancer Institute, Cluj-Napoca, Romania
- [Kaushalendra Kumar JHA](#), Indian Institute of Forest Management, Bhopal, India
- [Stefania MASCI](#), University of Tuscia, Viterbo, Italy
- [Dan MIHU](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Meena MISRA](#), Institute of Frontier Sciences & Biotechnology, Baramunda, Bhubaneswar, India
- [Bernardo MURILLO-AMADOR](#), Centro de Investigaciones Biológicas del Noroeste, La Paz, Mexico
- [Vladimir PEŠIĆ](#), University of Montenegro, Podgorica, Montenegro
- [Neiva Izabel PIEROZZI](#), Instituto Agronômico de Campinas, CPDR Geneticos Vegetais, Brazil
- [Jaime PROHENS](#), Polytechnic University of Valencia, Valencia, Spain
- [Cosmin I. PUJA](#), University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Chen QIN](#), School of Life Science, Shanghai Univ., Shanghai, China
- [Adrián RODRÍGUEZ-BURRUEZO](#), Polytechnic University of Valencia, Valencia, Spain
- [Marco SARIGU](#), Università degli Studi di Cagliari, Cagliari, Italy
- [Klaus SCHALLER](#), Research Center Geisenheim, Geisenheim, Germany
- [Anoop Kumar SRIVASTAVA](#), ICAR – Central Citrus Research Institute, Nagpur, India
- [Franci STAMPAR](#), University of Ljubljana, Ljubljana, Slovenia
- [Feng XU](#), Yangtze University, Jingzhou 434025, Hubei Province, China

Editorial and Administrative Support

- [Adriana D. BACIU](#), UASVM Cluj-Napoca, Romania
- [Cătălina DAN](#), UASVM Cluj-Napoca, Romania
- [Mihail KANTOR](#), Mycology and Nematology Genetic Diversity and Biology Laboratory USDA, ARS, Beltsville, MD 20705, USA
- [Laura Ioana MACAVEI](#), Università degli Studi di Modena e Reggio Emilia, Modena, Italy
- [Lucica MIHALTE](#), UASVM Cluj-Napoca, Romania
- [Irina M. MORAR](#), UASVM Cluj-Napoca, Romania
- [Andreea D. ONA](#), UASVM Cluj-Napoca, Romania
- [Corina F. SERBAN](#), Washington State University, Stone Fruit Breeding & Genetics, IAREC, Prosser, WA 99350-8694, USA
- [Alina M. TRUȚĂ](#), UASVM Cluj-Napoca, Romania

Linguistic Editors

- [Mihaela RUSU](#), UASVM Cluj-Napoca, Romania
- [Rodica STAN](#), UASVM Cluj-Napoca, Romania

Journal Office

- [Roxana L. STOIAN](#), UASVM Cluj-Napoca, Romania
- [Silviu L. MIC](#), UASVM Cluj-Napoca, Romania

Technical Support

- [Ligia CRĂCIUN](#), UASVM Cluj-Napoca, Romania
- [Diana-Maria MIRCEA](#), UASVM Cluj-Napoca, Romania
- [Diana Alexandra POP](#), UASVM Cluj-Napoca, Romania
- [Paula STAN \(GAVRIS\)](#), UASVM Cluj-Napoca, Romania

Notice

To be cited **Notulae Scientia Biologicae** or abbreviated title **Not Sci Biol**.

The Editorial Board of Not Sci Biol is not responsible for statements and opinions published; they represent the views of the authors or persons to whom they are credited. Publication of research information does not constitute a recommendation or endorsement of products involved.

Aims and scope

[Notulae Scientia Biologicae](#) is a quarterly peer-reviewed journal aimed at disseminating significant research and original papers, critical reviews and short reviews on life sciences and medicine, development of new methodologies that can be of interest to a wide audience of scientists in all areas of biology sciences. The journal encourages authors to frame their research questions and discuss their results in terms of the major questions of biology, agriculture, horticulture, forestry, biotechnology and medicine, thereby maximizing the impact, spreading and value of their research. The papers must be of potential interest to a significant number of scientists and, if specific to a local situation, must be relevant to a wide body of knowledge in life and medical sciences. Articles should make a significant contribution to the advancement of knowledge or toward a better understanding of existing biological, agricultural and medical concepts. An international Editorial Board advises the journal. The total content of the journal may be used for educational, non-profit purposes without regard to copyright. The distribution of the material is encouraged with the condition that the authors and the source (Notulae Scientia Biologicae or Not Sci Biol) are mentioned.

Submission

The journal offers to authors a fully web-enabled online manuscript submission, instructions for authors and review system available at <https://www.notulaebiologicae.ro>

Papers are published in English (British spelling) and the authors are fully responsible for the originality of their papers and for the correctness of their subject-matter, language and formal attributes. Authors whose mother tongue is not English are strongly urged to have their manuscripts reviewed linguistically before submission.

Manuscripts submitted must be edited, for clarity and conformity purposes according to Author's guidelines, and must not have been previously published or simultaneously submitted elsewhere.

The papers can be submitted online by the "corresponding author" (the main author, or the person who takes responsibility for the integrity of the work as a whole, from submission to the published article). The submission process is described on the web site.

An Author Statement, available on the website, should be enclosed by "senior author" declaring that the paper has not been published anywhere else, permission to reproduce the material, authorship credit, contributors and creditors for the integrity of the work as a whole, to avoid the conflicts of interest and scientist fraud, and respecting the ethical principles of publishing, research and scientific rights.

Publication Frequency

Quarterly (four issues per volume/year):

Issue 1: January-March

Issue 2: April-June

Issue 3: July-September

Issue 4: October-December

Publication Ethics and Publication Malpractice Policy

The journal respects the publication ethics norms, based on internationally accepted best practice guidelines for journal editors, notably the Committee on Publication Ethics ([COPE](#)), the World Association of Medical Editors Ethics ([WAME](#)), the International Committee of Medical Journal Editors ([ICMJE](#)) and Consolidated Standards of Reporting Trials ([Consort](#)).

Editor-in-Chief
Prof. dr. h.c. Radu E. SESTRĂȘ

Table of Contents - Vol 15, No 2 (2023)

CONTENT	Article number
Editorial	
Introduction pages, Notulae Scientia Biologicae 15(2), 2023 Radu E. SESTRAS	11611 PDF
Review articles	
Utilization of <i>Pteridophyta</i> species in Cyathea Park, Bali, as traditional medicine agents: A field study and meta-synthesis review Ni Ketut Ayu JULIASIH, I Made Dwi MERTHA ADNYANA	11522 PDF
Environmental stress tolerance, hydro-distilled essential oils characteristics and biological activities of <i>Eucalyptus torquata</i> Luehm. Sonia Ben RABEH, Kaouther Ben YAHIA, Samir DHAHRI, Souda BELAÏD, Imen CHEMLALI, Chokri Ben ROMDHANE, Mehrez ROMDHANE, Ezzeddine SAADAOU	11502 PDF
Role of bulking agents, process optimization, and different earthworm species in the vermiremediation process of industrial wastes: A review Snigdha NATH, Asif QURESHI, Subhasish DAS	11490 PDF
Efficient use of timber resources in Mexico: Historical development and current challenges Joel RASCÓN-SOLANO, Oscar A. AGUIRRE-CALDERÓN, Wibke HIMMELSBACH, Juan A. NÁJERA-LUNA, Eduardo ALANÍS-RODRÍGUEZ, Javier JIMÉNEZ-PÉREZ, Eduardo TREVIÑO-GARZA	11508 PDF
Research articles	
Epidemiology of <i>Enterococcus faecium</i> isolates sampled from different sources in Romania using MLST technique and eBURST algorithm Ioan BĂCILĂ, Endre JAKAB, Dana ȘUTEU, Octavian POPESCU	11546 PDF
Study of the effect of <i>Moringa oleifera</i> leaves powder in Southwestern Algerian diabetic patients: a pilot clinical trial Sarra HENOUDA, Saida KAROUCHE, Amina ATTOU, Ahmed BOULAL	11554 PDF
Neuroprotective role of a protoberberine alkaloid against aluminum-induced neuroinflammation and excitotoxicity Ratna BABURAJ, Rajendra SANDUR V, Kuntal DAS	11488 PDF
Effect of <i>Ficus carica</i> extract on hematological parameters and antioxidant defense system in erythrocytes of albino rats exposed to nickel chloride Souhila NEMICHE, Nadia AIT HAMADOUCHE, Said NEMMICHE	11466 PDF

- [In vitro regeneration of *Haloxylon ammodendron*](#)
Ping WANG, Lingjuan MAN, Li MA, Jiixin QI, Yanping REN, Zhengpei YAO, Bo WANG,
Cong CHENG, Hua ZHANG 11585
[PDF](#)
- [Evaluation of cross-genus transferability of SSR markers from other legumes to two closely related *Onobrychis* \(Fabaceae\) taxa](#)
Ioan BĂCILĂ, Dana ŞUTEU, Ana COSTE, Zoltan R. BALÁZS, Gheorghe COLDEA 11549
[PDF](#)
- [Seed diversity and germination behavior in *Nerium oleander* L.](#)
Ezzeddine SAADAOU, José J.M. GÓMEZ, Kaouther Ben YAHIA, Emilio CERVANTES 11411
[PDF](#)
- [Morphological characterization and cytological studies of the green-stemmed and the red-stemmed *Basella alba*](#)
Abolade O. BOLAJI, Atanda S. OLADEJO, Oluwatobi I. ADENIRAN 11338
[PDF](#)
- [Multivariate analysis of the salinity-induced alterations in morphology, physiology, nodulation, and yield in two contrasting mungbean varieties](#)
Ganesh D. MANKAR, Uttam R. WAYASE, Deepak B. SHELKE, Kiran B. RASKAR, Pankaj S. MUNDADA, Mahendra L. AHIRE, Tukaram D. NIKAM, Rajkumar B. BARMUKH 11365
[PDF](#)
- [Influence of biologics on the productivity of winter wheat varieties under irrigation conditions](#)
Antonina PANFILOVA, Margaryta KORKHOVA, Nataliia MARKOVA 11352
[PDF](#)
- [Wickerhamomyces anomalus WO2 inoculation protects *Suaeda fruticosa* from salt stress by the stimulation of the production of carotenoids and sugars and the augmentation of sodium translocation](#)
Chahrazed AIBECHE, Warda SIDHOUM, Omar KHELIL, Fadila CHERIFI,
Kheira ERROUANE, Nawel SELAMI, Slimane CHOUBANE, Abderrahmane SENINA,
Chahinez MARDHI, Abderrezak DJABEUR 11442
[PDF](#)
- [Mycorrhizal status of *Argania spinosa* \(L.\) Skeels in northeastern of Morocco](#)
Soukaina MAAZOUZI, Jalila AOJJDAD, Karima SELMAOUI, Mohamed CHLIYEH,
Najoua MOUDEN, Soukaina MSAIRI, Salwa ELANTRY, Mustapha AZEROUAL,
Mohamed OUAJDI, Mohamed KARIMI, Amina OUAZZANI TOUHAMI, Allal DOUIRA 11405
[PDF](#)
- [Combined treatment with gibberellic acid and thidiazuron improves fruit quality of 'Red Dream' grape cultivar](#)
Su-Yeon LEE, Jae-Yun HEO 11499
[PDF](#)
- [Evaluation of two sampling methods for even-age *Pinus* forest in northern Mexico](#)
Viridiana S. GALVÁN-MORENO, Jesús M. OLIVAS-GARCÍA, Joel RASCÓN-SOLANO,
Javier HERNÁNDEZ-SALAS 11564
[PDF](#)
-

Journal Contact

Mailing Address

[Notulae Scientia Biologicae](#)

Radu E. SESTRAS, Editor-in-Chief

Society of Land Measurements and Cadastre from Transylvania - SMTCT

134 Donath Street, 400293

Cluj-Napoca, Romania

Horticulture and Forestry Society from Transylvania

3-5 Manastur St., 400372 Cluj-Napoca, Romania

Phone: +40 264-596 384; Fax: +40 364-819 182

Email: rsestras@notulaebiologicae.ro

Technical Support Contact

Email: editor1@notulaebiologicae.ro

Publisher

- [Society of Land Measurements and Cadastre from Transylvania \(SMTCT\)](#)

Journal Sponsorship: Societies/Institutions

- [Society of Land Measurements and Cadastre from Transylvania \(SMTCT\)](#)
- [Horticulture and Forestry Society from Transylvania](#)
- [University of Agricultural Sciences and Veterinary Medicine \(UASVM\)](#)

Sources of Support

Additional agencies or organizations that provide financial or in-kind support:
SC TOPOCAD





Electronic ISSN 2067-3264
www.notulaebiologicae.ro