

## Facultatea de Biologie și Geologie

Str. Gheorghe Bilașcu nr.44  
Cluj-Napoca, RO-400015  
Tel/Fax.: 0264-43.18.58  
bioge@ubbcluj.ro  
<http://bioge.ubbcluj.ro>

<http://news.doctorat.ubbcluj.ro/>

### Doctoral School of Integrative Biology

#### 1. Doctor



Nume prenume: Erdelyi-Molnár Imola

e-mail: [imola.molnar@ubbcluj.ro](mailto:imola.molnar@ubbcluj.ro)

2. Titlul tezei de doctorat: **The complex analysis of the resistance traits and genomic composition in the somatic hybrids between Solanum tuberosum and Solanum chacoense, with or without deficiency in DNA mismatch repair system**

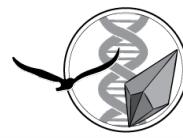
3. Conducător de doctorat: Prof. dr. Elena Rakosy-Tican

4. Subdomeniul în care este inclusa tema de doctorat: Inginerie Genetică Vegetală

3. Data susținerii doctoratului (link-ul de pe site): 2017.02.10

<https://doctorat.ubbcluj.ro/ro/sustinerile-publice-ale-tezelor-de-doctorat/?an=2017&luna=2&facultate=4&domeniu=0>

4. Calificativul acordat de comisie: Excelent



## 5. Articole științifice (cu factor de impact):

Tomazatos A, von Possel R, Pekarek N, Holm T, Rieger T, Baum H, Bialonski A, Maranda , Erdelyi-Molnár I, Spînu M, Lühken R, Jansen S, Emmerich P, Schmidt-Chanasit J, Cadar D (2021). Discovery and genetic characterization of a novel orthenairovirus in *Ixodes ricinus* ticks from Danube Delta, Infection, Genetics and Evolution, 104704. **FI: 2.773**

Cruceriu D, Erdelyi-Molnar I, Diaconeasa Z, Margineanu AM, Aurori A, Rakosy-Tican E (2020). Comparative characterization of somatic hybrids of *solanum bulbocastanum* + s. *Tuberosum* Cv. ‘rasant’ with their parents in relation to biochemical responses to wound stress and trichome composition, STUDIA UBB CHEMIA 65 (2), 133-148. **FI: 0.494**

Aurori A, Molnar I, Rakosy-Tican E (2020). The effect of auxins in inducing organogenesis or somatic embryogenesis in mature sunflower zygotic embryo derived apex, Notulae Botanicae Horti Agrobotanici Cluj-Napoca 48 (1), 150-161. **FI: 1.168**

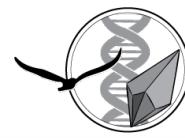
Rakosy-Tican E, Lörincz-Besenyei E, Molnár I, Thieme R, Hartung F, Sprink T, Antonova O, Famelaer I, Angenon G, Aurori A (2019). New phenotypes of potato co-induced by mismatch repair deficiency and somatic hybridization, Frontiers in Plant Science, 10: 3. **FI: 4.106**

Molnár I, Besenyei E, Thieme R, Thieme T, Aurori A, Baricz A, Banciu HL and Rakosy-Tican E (2017). Mismatch repair deficiency increases the transfer of antibiosis and antixenosis properties against Colorado potato beetle in the somatic hybrids *Solanum tuberosum* (+) *S. chacoense*, Pest Management Science, 73(7): 1428–1437. **FI: 3.249**

Cruceriu D, Molnár I, Diaconeasa ZM, Aurori A, Socaci C, Rakosy-Tican E (2017). In vitro culture as a stressful factor triggers different physiological responses in somatic hybrids between *Solanum tuberosum* and *S. bulbocastanum*, Notulae Botanicae Horti Agrobotanici, 45(1): 75–81. **FI: 0.648**

Rakosy-Tican E, Thieme R, Nachtigall M, Molnár I and Dénes TÉ (2015). The recipient potato cultivar influences the genetic makeup of the somatic hybrids between five potato cultivars and one cloned accession of sexually incompatible species *Solanum bulbocastanum* Dun, Plant Cell Tissue and Organ Culture, 122: 395–407. **FI: 2.39**

Rigó K, Majoros G, Szekeres S, Molnár I, Jablonszky M, Majláthová V, Majláth I and Földvári G (2016). Identification of Hepatozoon erhardovae Krampitz, 1964 from bank voles (*Myodes glareolus*) and fleas in Southern Hungary, Parasitology Research, 115(6): 2409–2413. **FI: 2.329**



Baricz A, Cristea A, Muntean V, Teodosiu G, Andrei A-S, Molnár I, Alexe M, Rakosy-Tican E and Banciu HL (2015). Culturable diversity of aerobic halophilic archaea (Fam. Halobacteriaceae) from hypersaline, meromictic Transylvanian lakes, Extremophiles, 19(2): 525–537. **FI: 2.346**

Molnár I, Papp J, Simon A and Anghel SD (2013). Deactivation of Streptococcus mutans biofilms on a tooth surface using He dielectric barrier discharge at atmospheric pressure, Plasma Science and Technology, 15(6): 535–541. **FI: 0.596**

#### 6. Participare la conferințe științifice internaționale și naționale (autor/ii, titlul conferinței, anul, țara, link-ul)

Erdelyi-Molnár I, Rakosy-Tican E (2020). Insecticide resistance mechanisms which ensures recurrence of Colorado Potato Beetle, International Euroasia Congress on Scientific Researches and Recent Trends VII, Baku, Azerbaijan

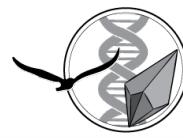
Erdelyi-Molnár I, Besenyei E, Rakosy Tican E (2016). Antibiosis and antixenosis properties of somatic hybrids and backcross progenies (*S. chacoense* + *S. tuberosum*) to the Colorado potato beetle, Asociația Română de culturi de țesuturi și celule vegetale, Cluj-Napoca, Romania

Cruceriu D, Erdelyi-Molnár I, Sconta Z, Margineanu AM, Aurori A, Rakosy-Tican E (2016). Characterization of several resistance mechanisms in somatic hybrids between *Solanum bulbocastanum* and the cultivar *tuberosum* ‘Rasant’. International Symposium “Young Researchers in BioSciences”, Cluj-Napoca, Romania

Mustață RA, Molnár I, Denes TE, Aurori A, Rakosy-Tican E (2016). In vitro analysis for drought tolerance of different transgenic potato lines resistant to PVY, Asociația Română de culturi de țesuturi și celule vegetale, Cluj-Napoca, Romania

Rákosy-Tican E, Thieme R, Aurori A, Molnár I, Dénes TE, Besenyei E, Marginean AM, Cruceriu D, Mustata RA (2016). The application of combinatorial biotechnology in improving potato resistance to biotic and abiotic stress, Asociația Română de culturi de țesuturi și celule vegetale, Cluj Napoca, Romania

Dénes TÉ, Molnár I, Mustață RA, Vass I, Cseri A, Vass I, Rákosy-Tican E (2016). Photosynthetic response under long-term drought stress in somatic hybrids between potato and *Solanum bulbocastanum*, Asociația Română de culturi de țesuturi și celule vegetale, Cluj Napoca, Romania



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Cruceriu D, Aurori A, Molnár I, Diaconeasa Z, Socaciu C, Rakosy-Tican E (<http://bioge.ubbcluj.ro>). Physiological effects of the in vitro culture on explants belonging to Solanum, Asociația Română de culturi de țesuturi și celule vegetale, Cluj-Napoca, Romania

Dénes TÉ, Mustata AR, Taoutaou A, Molnár I, Rákosy-Tican E (2015). Histochemical localization of molecules involved in oxidative burst in Solanum bulbocastanum + Solanum tuberosum somatic hybrids infected by agro-infiltration with late blight effectors, Pannonian Plant Biotechnology Workshop; "Integration fundamental research into the practical agriculture", Ljubljana, Slovenia

Margineanu AM, Erdelyi-Molnár I, Rakosy-Tican E (2015). Correlation between trichome density and Colorado beetle resistance in the somatic hybrids between potato and S. chacoense, Pannonian Plant Biotechnology Association Conference „Integration fundamental research into the practical agriculture Progress and Perspectives, Ljubljana, Slovenia

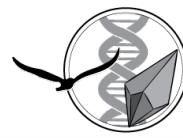
Rákosy-Tican E, Thieme R, Nachtigall M, Hammann T, Denes TE, Erdelyi-Molnár I (2015). Somatic hybridization between Solanum bulbocastanum and potato – the influence of recipient cultivar, somatic incompatibility and stacking of two late blight resistance genes, Pannonian Plant Biotechnology Association Conference Integration fundamental research into the practical agriculture Progress and Perspectives”, Ljubljana, Slovenia

Margineanu AM, Erdelyi-Molnár I, Besenyei E, Rakosy-Tican E (2015). Trichome density and Colorado Potato Beetle choice test, performed in somatic hybrids between two potato cultivars and Solanum chacoense, International Symposium ”Young Researchers in BioSciences”, Cluj-Napoca, Romania

Rákosy-Tican E, Molnár I, Dénes TÉ, Cseri A, Mustață R, Vass I (2015). Integrating phenotyping for drought tolerance into biotechnological potato improvement for multiple resistance traits, Plant Phenotyping Symposium, Barcelona, Spain

Cruceriu D, Erdelyi-Molnár I, Sconta Z, Aurori A, Socaciu C, Rakosy-Tican E (2015). Cultura in vitro: factor stresat pentru explantele vegetale, Conferinta Nationala Anuala de Comunicari stiintifice, Bistrita, Romania

Molnár I, Boitor R, Thieme R, Thieme T, Rakosy-Tican E (2014). The evaluation of resistance to Colorado potato beetle and detection of glycoalkaloid content by using Fourier transform infrared spectroscopy in Solanum tuberosum + Solanum chacoense somatic hybrids, PPBA, Mosonmagyaróvár, Hungary



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Mustata AR, Molnár I, Rakosy-Tican E (2014). The evaluation of [bioge.ubbcluj.ro](http://bioge.ubbcluj.ro), plant regeneration and viability after in vitro stress selection sustains drought resistance in potato marker-free transgenic lines carrying PVYCP intron containing hairpin construct, PPBA, Mosonmagyaróvár, Hungary

Mărgineanu AM, Molnár I, Rakosy-Tican E (2014). Trichomes types and their density in parental species Solanum tuberosum and S. chacoense and their derived somatic hybrids PPBA, Mosonmagyaróvár, Hungary

Dénes TÉ, Molnár I, Kruppa K, Szakács É, Lángné-Molnár M, Rákosy-Tican E (2014). The ploidy and genome composition of Solanum tuberosum and Solanum bulbocastanum somatic hybrids and their derived backcross progenies, PPBA, Mosonmagyaróvár, Hungary

Molnár I, Thieme R, Rakosy-Tican E (2014). Resistance analysis of Solanum somatic hybrids to Colorado potato beetle, Conference Young Researchers In Bioscience, Cluj Napoca, Romania

Mustata AR, Molnár I, Rakosy-Tican E (2014). Inducing in vitro drought resistance to marker-free, transgenic potato lines, Conference Young Researchers In Bioscience, Cluj Napoca, Romania

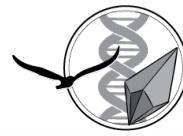
Dénes TÉ, Molnár I, Kruppa K, Molnár-Lángné M, Thieme R, Rákosy-Tican E (2014). Cytological analysis the genome composition of somatic hybrids and backcross progenies between cultivated potato and Solanum bulbocastanum, Conference Young Researchers In Bioscience, Cluj Napoca, Romania

Rakosy-Tican E, Molnár I, Thieme R, Thieme T (2014). Mismatch repair deficiency increases the resistance to Colorado potato beetle of the somatic hybrids S. chacoense + potato, 19th Triennial Conference of EAPR, Brussels, Belgium

Thieme R, Rakosy-Tican E, Molnár I, Thieme T (2014). Wild species as genetic resources of resistance to Colorado potato beetle (*Leptinotarsa decemlineata*), 19th Triennial Conference of EAPR, Brussels, Belgium

Molnár I, Taoutaou A, Rakosy-Tican E (2013). Detection of leptine glycoalkaloids by using FTIR and RAPD markers in Solanum somatic hybrids, Eurobiotech Conference, Bratislava, Slovakia

Rakosy-Tican E, Molnár I, Thieme R, Taoutaou A (2013). New data supporting combinatorial biotechnology towards potato resistant to its most voracious pest Colorado potato beetle. Eurobiotech Conference, Bratislava, Slovakia



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Molnár I, Thieme R, Rakosy-Tican E (2013). The evaluation of resistance to Colorado potato beetle and linked RAPD markers in Solanum tuberosum + Solanum chacoensesomatic hybrids, VIPCA Conference on Plant Diseases and Resistance Mechanisms, Vienna, Austria

Rakosy-Tican E, Molnár I, Mustata R, Taoutaou A, Thieme R (2013). Combining different biotechnological tools for better introgression of resistance traits in potato, PPBA, Plants for the future Conference, Cluj Napoca, Romania

Dénes TÉ, Molnár I, Rákossy-Tican E (2013). Cytogenetic analysis of somatic hybrids and backcross progenies between potato and Solanum bulbocastanum, PPBA, Plants for the future Conference, Cluj Napoca, Romania

Molnár I, Rakosy-Tican E (2012). Cytogenetic analysis of the somatic hybrids of Solanum tuberosum and late blight resistant Solanum bulbocastanum, PPBA, Debrecen, Hungary

Speth H, Molnár I, Rakosy-Tican E (2012). Screening of the somatic hybrids potato + Solanum chacoensefor their resistance to Colorado potato beetle by using the choice test, PPBA, Debrecen, Hungary

### 7. Participare în proiecte de cercetare (A) și proiecte pentru comunitate (B):

#### A.

2011 –2016 Member of Research Grant (PN II) of the Romanian Government

2014 –2016 Member of Bilateral Austria-Romanian Project COP-BIL

2017 –2018 Member of Research Grant (IDEI) of the Romanian Government

2020 – Postdoctoral Research Grant of Babes-Bolyai University

**Google scholar (link-ul):** <https://scholar.google.com/citations?user=dtNJIikAAAAJ&hl=ro>

**Cont pe Researchgate:** [https://www.researchgate.net/profile/Imola\\_Molnar3](https://www.researchgate.net/profile/Imola_Molnar3)

**Data:** 07/01/2021

**Semnătură:** Erdelyi-Molnár Imola