

## CATALINA STEDEL

University of Thessaly, Department of Biochemistry and Biotechnology,  
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### EDUCATION

**PhD** in Chemical Engineering Technical University "Gh. Asachi"of Iasi 2004-2008  
**Thesis title:**, *Identification and characterization of enzymes involved in metabolism of annual and wood plants and microorganism*  
**B.Sc in Biology**, "Alexandru Ioan Cuza" University of Iasi 1998-2002  
**B.Sc in Soil Science**, University of Agronomic Science and Veterinary Medicine of Bucharest 1990-1995

### PROFESSIONAL & RESEARCH EXPERIENCE

**University of Thessaly , Larissa, Greece** March 2015- present  
**Department of Biochemistry and Biotechnology**  
*Postdoctoral Researcher*

**INCDSB- Institute of Biological Research Iasi** 2012- March 2015  
**Department of Applied and Experimental Biology**  
*Postdoctoral Researcher*

**Medicotest SRL Galati-clinical laboratory testing** May 2010- Decembrie2011  
*Biologist*

**Municipal Hospital ,, Anton Cincu” Tecuci-Galati** October 2009 –May 2010  
*Biologist-clinical training*

**Agricultural University of Athens, Greece** October 2008 –September 2009  
**Department of Agricultural Biotechnology**  
**Laboratory of Molecular Biology**  
*Postdoctoral Researcher Fellow*

**Agricultural University of Athens, Greece** May 2004 – September 2008  
**Department of Agricultural Biotechnology**  
**Laboratory of Molecular Biology**  
*Marie Curie Research Fellow*

**College of Agriculture and National Economy- Tecuci, Galati** September 1996- June 1998  
*Teacher of Soil Science*

## SKILLS & TECHNIQUES

### **Molecular biology techniques:**

- plasmid isolation and purification for DNA sequencing
- isolation of DNA and RNA from bacteria and plants
- cloning strategies (including : restriction enzyme digestion, ligation, bacterial transformation)
- RT-PCR, PCR and real- time RT-PCR
- cytology and *in situ* RNA-RNA hybridization technique
- immunohistochemistry ( including: embedding, sectioning and staining preparations) and microscopy of plant tissues
- Agrobacterium rizhogenes mediated plant transformation
- establishment and maintenance of root organ culture
- molecular taxonomy techniques: ARDRA, IGS-RFLP , MLSA
- bioinformatics analysis

### **Microbiology techniques – basic laboratory techniques**

- knowledge of growth of *E.coli* and *Rhizobia* bacterial culture
- media preparation and sterilisation
- inoculating agar plates and broth, growth media and growth on selective media, storing bacterial strain, culture transfer technique

### **Clinical laboratory techniques- basic**

**Computer software:** Microsoft Word, Excel, and Power Point, Adobe Photoshop

**Language:** English –fluent, **Romanian** - mother tongue

## TRAINING & DEVELOPMENT

**Agricultural University of Athens, Greece**

12<sup>th</sup>-20<sup>th</sup> November

**Molecular Biology Laboratory, “Training in bioinformatics and modern techniques of molecular phylogeny”**

**Institute of Biological Research Iasi in collaboration with the Faculty of Biology of „Alexandru Ioan Cuza” University, Iasi**  
*„ Training in molecular biodiversity” - workshop*

November 2012

**Institute of Genetics and Biophysics, A.B.T., (IGB-ABT) Naples, Italy**

24<sup>th</sup>-28<sup>th</sup> April, 2006

*“Integral Workshop on Lotus Plant Transformation and in Vitro Technologies”*

**John Innes Center, Norwich, UK**

18<sup>th</sup>-20<sup>th</sup>, September, 2006

*“Integral Metabolomics workshop”*

**John Innes Center, Norwich, UK**

13<sup>th</sup>- 15<sup>th</sup> September, 2006

*“Tilling in Lotus japonicus”*, workshop

**List of publications in peer-reviewed journals.** (5-years impact factor are given)

1. Aydi Ben Abdallah R, Nefzi A, Jabnoun-Khiareddine H, Messaoud C, Stedel C, **Papadopoulou KK**, Mokni-Tlili S, Daami-Remadi M. (2016) A putative endophytic *Bacillus cereus* str. S42 from *Nicotiana glauca* for biocontrol of *Fusarium* wilt disease in tomato and gas chromatography-mass spectrometry analysis of its chloroform extract. *Archives of Phytopathology and Plant Protection*, 49: 343–361
2. Craita M.Rosu\*, **Catalina Stedel\***, Andrei Stefan, Culita Sarbu, Lucian D.Gorgan, Nikolaos E. Labrou, Emmanoil Flemetakis, Rodica C. Efrose. Genetic diversity and phylogeny of native rhizobia associated with white clover plants (*Trifolium repens* L.) in Romania. (2016) *SYSTEMATIC AND APPLIED MICROBIOLOGY* (submitted) (\* equal contribution of first two authors)
3. Stefan, A; Rosu, CM; **Stedel, C**; Gorgan,LD; Efrose, RC. Inferred genetic variability of some indigenous *Rhizobium leguminosarum* isolates from red clover (*Trifolium pratense*, L) nodules. *ACTA BIOLOGICA HUNGARICA* 2015; 66 (3) pp.316-325 **Impact Factor: 0.61**
4. Tani,E; Tsaballa, A; **Stedel,C**; Kalloniati,C; Papaefthimiou,D; Polidoros,E; Darzentas,N; Ganopoulos,I; Flemetakis,E; Katinakis,P; Tsaftaris,A. The study of a SPATULA-like bHLH transcription factor expressed during peach (*Prunus persica*) fruit development. *PLANT PHYSIOLOGY AND BIOCHEMISTRY* 01/2011; 49(6):654-6301 **Impact Factor: 3.43**
5. Tsikou,D; **Stedel,C**; Kouri,ED; Udvardi,KM; Wang,L.; Katinakis,P; Labrou, EN; Flemetakis,E. Characterization of two novel nodule-enhanced  $\alpha$ -type carbonic anhydrases from *Lotus japonicus*. *BIOCHIMICA ET BIOPHYSICA ACTA-PROTEINS AND PROTEOMICS* 01/2011; 1814(4):496-504 **Impact Factor: 3.28**
6. Kouri, ED; Labrou,NE; Garbis,SD; Kalliampakou,KI; **Stedel,C**; Dimou,M; Udvardi,MK; Katinakis,P; Flemetakis, E. Molecular and biochemical characterization of the parvulin-type PPIases in *Lotus japonicus*. *PLANT PHYSIOLOGY* 05/2009; 150(3):1160-73 **Impact Factor: 7.36**
7. Tani,E; Polidoros,AN ; Flemetakis,E; **Stedel,C**; Kalloniati,C; Demetriou,K; Katinakis,P; Tsaftaris AS. Characterization and expression analysis of AGAMOUS-like, SEEDSTICK-like, and SEPALLATA-like MADS-box genes in peach (*Prunus persica*) fruit. *PLANT PHYSIOLOGY AND BIOCHEMISTRY* 05/2009; 47(8):690-700. **Impact Factor: 3.43**
8. Rogato,A; D'Apuzzo,E; Barbulova,A; Omrane,S; **Stedel,C**; Simon-Rosin,U; Katinakis,P; Flemetakis,M; Udvardi,M; Chiurazzi, M;. Tissue-specific down-regulation of LjAMT1;1 compromises nodule function and enhances nodulation in *Lotus japonicus*. *PLANT MOLECULAR BIOLOGY* 10/2008; 68(6):585-95 **Impact Factor: 3.87**
9. Kouri, E.D; Kalliampakou,K.I; **Stedel, C**; Katinakis, P; Flemetakis, Emmanoil. Studying peptidyl-prolyl cis-trans isomerases. Pinning down plant parvulins. *FEBS JOURNAL* ,Volume: 275 , Supplement: 1 Pages:202-202 Published: JUN 2008
10. Efrose, RC; Flemetakis, E; Sfichi, L; **Stedel, C**; Kouri, ED; Udvardi, MK; Kotzabasis, K; Katinakis, P. Characterization of spermidine and spermine synthases in *Lotus japonicus*: induction

and spatial organization of polyamine biosynthesis in nitrogen fixing nodules. *PLANTA* 228 (1):37-49 (2008) **Impact Factor: 3.59**

11. Flemetakis, E; Efroze, RC; Ott, T; **Stedel, C**; Aivalakis, G; Udvardi, MK; Katinakis, P. Spatial and temporal organization of sucrose metabolism in *Lotus japonicus* nitrogen-fixing nodules suggests a role for the elusive alkaline/neutral invertase. *PLANT MOLECULAR BIOLOGY* 62 (1-2):53-69 (2006) **Impact Factor: 3,87**

**Address of the researcherid.com profile: B-9346-2012**

### **Participation(oral/poster) in international scientific meetings/ conferences**

1. Craita Rosu, **Catalina Stedel**, Andrei Stefan, Nikolaos Labrou, Emmanoil Flemetakis, Rodica Efroze (2015). „ Genetic diversity of endophytic bacteria isolated from nodules of *Onobrychis viciifolia*”. 66th Hellenic Society for Biochemistry and Molecular Biology (HSBMB) Conference, Athens, Greece, 11-13 December 2015-**poster**
2. Andrei Stefan, Jannick Van Cauwenberghe, Craita Rosu, **Catalina Stedel**, Nikolaos Labrou, Emmanoil Flemetakis, Rodica Efroze. „Genetic diversity and composition of *Rhizobium leguminosarum* isolates associated with clover plants are influenced by local environmental variables.” 66 th Hellenic Society for Biochemistry and Molecular Biology (HSBMB) Conference, Athens, Greece, 11-13 December 2015-**poster**
3. R.C.Efroze, C.M.Rosu, **C.Stedel**, A.Stefan, N.E.Labrou, E.Flemetakis (2014). Molecular diversity of native rhizobial strains nodulating white clover (*Trifolium repens* L.) in Eastern Romania. 11<sup>th</sup> European Nitrogen Fixation Conference, Tenerife, Canary Island, Spain, 7-10 September 2014, pp9-47.
4. Stefan A., **Stedel C.**, Rosu C.M., Gorgan L, Sirbu C., Labrou N.E., Flemetakis E., and Efroze R.C. (2013). Genetic diversity and phylogeny of rhizobia associated with *Trifolium spp.* from Nord Eastern Romania. *Current Opinion in Biotechnology* Vol. 24, Supplement 1, July 2013, p. S129, European Biotechnology Congress 2013; 16-18 May Bratislava, Slovakia **poster**
5. Rosu C., **Stedel C.**, Stefan A., Sirbu C., Gorgan L., Flemetakis E., Labrou N.E. and Efroze R. (2012) Genetic diversity and phylogeny of rhizobial strains in Romanian legumes. 63rd Congress of the Hellenic Society of Biochemistry and Molecular Biology. Abstracts. Vol. 58. 9-11 november 2012 Heraklion, Crete, Greece.**poster**
6. **Stedel C**, Flemetakis E, Efroze R.C, Sfichi L, Kouri E, Kotzabalis K, Udvardi M, Katinakis K „ Characterization of spermidine and spermine synthases in *Lotus japonicus*: induction and spatial organization of polyamine biosynthesis in nitrogen fixing nodules”, Integral Annual Meeting, May 2007, Seville, Spain – **oral presentation**
7. M.Garcia-Calderon, M Chiurazzi, **C. Stedel**, E. Flemetakis, P. Katinakis, A. J. Marquez (2007) “Physiological consequences of plasmid glutamine synthetase deficiency in nodules of *Lotus japonicus*”. Symposium, Nitrogen 2007”, July 27-31 Lancaster University, UK. **poster**
8. Krokida, A., Dimou, M., **Stedel, C.**, Efroze, C.R., Krompas, P., Venieraki, A., Flemetakis, E., Katinakis, P (2007) “Trehalose degradation during the symbiosis of *Lotus japonicus* with *Mesorhizobium loti* strain R7A. Proceedings of the 59<sup>th</sup> Annual Conference of Hellenic Society of Biochemistry and Molecular Biology, 7-9 December, Athens, Greece, 168 **poster**
9. Evangelia D. Kouri, **Catalina Stedel**, Katerina I. Kalliampakou, Panagiotis Katinakis, Emmanouil Flemetakis (2007) “Molecular and biochemical characterization of plant parvulins, new members in an old family”. Proceedings of the 59<sup>th</sup> Annual Conference of Hellenic Society of Biochemistry and Molecular Biology, 7-9 December, Athens, Greece, 168 **poster**

- 10.** Kalliampakou, I.K, **Stedel, C.**, Dimou, M., Boleti, H., Lemoine, R., Flemetakis, E., and Katinakis, P.(2006) , “Characterization of *L.japonicus* LjPTL4 polyol transporter”. Proceedings of the 58<sup>th</sup> Annual Conference of Hellenic Society of Biochemistry and Molecular Biology, Patra, Greece,93 **poster**
- 11.** Tsikou, R.C. Efrose, K. Kalliampakou, **C. Stedel**, M.K. Udvardi, P. Katinakis, and E. Flemetakis(2006),,Moleclar and biochemical characterization of Lotus japonicas nodule specific  $\alpha$ - type carbonic anhydrases .7<sup>th</sup> European Nitrogen Fixation Conference, July 22-26, Aarhus, Denmark **poster**
- 12. Stedel C**, Flemetakis E, Efrose R, Sfichi L, Kouri E, Kotzabalis K, Udvardi M,Katinakis K Polyamine biosynthesis in *Lotus japonicus* nodules”, Integral Annual Meeting, April, 2006, Ravello, Italy **oral presentation**
- 13.** Flemetakis E., Efrose RC, **Stedel C.**, Dimou M., Aivalakis G. and Katinakis P. (2004). “Expression of alkaline/neutral invertase in *Lotus japonicus* nodules”. Proceedings of the 56<sup>th</sup> Annual Conference of Hellenic Society of Biochemistry and Molecular Biology, Larissa, Greece, 25<sup>th</sup>-27<sup>th</sup> November 2004. **poster**