

Curriculum vitae Europass



Informații personale

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Naționalitate(-tăți) Romana
Data nașterii 30.01.1974
Sex M

Locul de muncă **Centrul de Cercetari Biologice Jibou**
Postul si functia **Cercetator Stiintific Gradul I, director**
Domeniul ocupațional **Cercetare stiintifica in domeniul biologiei vegetale si moleculare**

Indici scientometrici la data
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Experiența profesională

Experienta in Cercetare:

- Centrul de Cercetari Biologice Jibou, Romania 05.2009- prezent
- Geomicrobiologie si Ecologie Microbiana, Universitatea de Stat din Arizona, Statele Unite ale Americii 04.2008-04.2009 (Laboratorul Profesorului Ferran Garcia-Pichel)
- Grupul de cercetare in Fiziologia Plantelor si Biologie Moleculara, Universitatea din Turku, Turku, Finlanda 08.2006-03.2008 (Grupul Profesorului Eva-Mari Aro)
- Universitatea Mount Allison, Sackville, Canada 2004- 2006 (Grupul Profesorului Douglas Campbell)
- Centrul de Cercetari Biologice din Szeged, Ungaria din 10.1998- 2004 (Grupul Dr. Imre Vass)
- Laboratorul de Fotosinteza, Institutul de Microbiologie al Academiei de Stiinta a Republicii Cehe, Trebon, 10.2002 (Grupul Dr. Josef Komenda)
- Institutul de Cercetari Biologice, Cluj-Napoca, Romania, asistent de cercetare, 10.1997-10.1998 (Grupul Dr. Victor Bercea).

Educație și formare

2009-prezent cercetator stiintific gradul I la Centrul de Cercetari Biologice Jibou, Romania
2008-2009 bursa postdoctorala la Universitatea de Stat din Arizona, Statele Unite ale Americii
2006-2008 bursa postdoctorala Fundatia Universitatii din Turku, Finlanda
2004-2006 Bursa postdoctorala **NATO Science** la Mount Allison University, NB, Canada
1999-2003 doctorat in Biologia mediului inconjurator (**summa cum laude**) – **Universitatea din Szeged, Ungaria**
1997-1998 master in Manipularea genetica a plantelor- Universitatea "Babes-Bolyai", Facultatea de Biologie si Geologie Cluj-Napoca, Romania.
1992-1997 licentiat in Microbiologie, Universitatea "Babes-Bolyai", Facultatea de Biologie si Geologie Cluj-Napoca, Romania.

Domenii de cercetare

- Studiul diversitatii hidrogenazelor bidirectionale din mediu in scopul identificarii unor enzyme cu potential economic deosebit.
- Efectul luminii vizibile si a UVB asupra aparatului fotosintetic
- Protease implicate in repararea fotosistemului II;
- Strategii diferite de expresie a genelor *psbA* in scopul adaptarii la diferite conditii de mediu ;
- Studiul producerii de bio-hidrogen de catre cianobacterii ca sursa importante de energie nepoluanta prin captare energiei solare.
- Factori care influenteaza transcrierea genelor ce codifica hydrogenazele.

Tehnici folosite

- tehnici de investigare a lantului transportor de electroni fotosintetic: flash and continuous oxygen evolution, fluorescence induction, flash fluorescence, and thermoluminescence.
- tehnici de investigare a functiilor proteinelor: electroforeza (SDS-PAGE, blue-native two dimensional electrophoresis), Western blotting, Imuno-detection
- tehnici post-genomice de investigare a expresiei genelor: RT-Q-RT-PCR.
- Electroforeza in gel de acrilamida cu gradient de denaturant (DGGE).

Membru in organisme
consultaive la nivel national:

-Membru in Comisia de Biologie si Biochimie a **CNATDCU**;
-Membru in Colegiul Consultativ al Cercetarii Dezvoltarii si Inovarii (**CCCDI**)
-Coordonator al domeniului Stiintele Vietii din cadrul Grupului de lucru **Evaluare
Institutionala a CCCDI**

Referent la reviste
Internationale

“Physiologia Plantarum”- din 2005 Pentru articole ce trateaza efectul UV asupra
aparaturii fotosintetic;
“Photosynthesis Research”- din 2008 pe domeniul de stress abiotic asupra
Fotosistemului II
“BBA- Bioenergetics”- din 2006 Pe domeniu efectului fotooxidativ asupra aparatului
fotosintetic;

Limba materna

Romana

Limbi straine cunoscute

Autoevaluare
Nivel european (*)

Limba Engleza

Limba Franceza

Înțelegere				Vorbire				Scriere	
Ascultare		Citire		Participare la conversație		Discurs oral		Exprimare scrisă	
C2	Utilizator experimentat	C2	Utilizator experimentat	C2	Utilizator experimentat	C2	Utilizator experimentat	C2	Utilizator experimentat
B2	Utilizator independent	B2	Utilizator independent	A2	Utilizator elementar	A2	Utilizator elementar	B1	Utilizator independent

(*) [Nivelul Cadrului European Comun de Referință Pentru Limbi Străine](#)

Colaboratori Importanti:

Dr. Eva-Mari Aro- Plant physiology and Molecular Biology, Turku University, Turku,
Finland;
Dr. Douglas A Campbell- Biology Department, Mount Allison University, Sackville,
Canada;
Dr. Imre Vass- Institute of Plant Biology, Biological Research Center, Szeged,
Hungary;
Dr. Peter Nixon Imperial College, London UK;
Dr. Josef Komenda- Laboratory of Photosynthesis, Institute of Microbiology Trebon,
Czech Republic;
Dr Jean Houmard- Laboratoire Génétique Moléculaire, Ecole Normale Supérieure,
Paris, France

Anexa 1

Lista Publicatiilor

Dr. Cosmin Ionel Sicora

Articles in refereed scientific journals

1. Paula Mulo, Cosmin Sicora and Eva-Mari Aro, **(2009)** *Cyanobacterial psbA gene family –optimization of oxygenic*, **Cellular and Molecular Life Sciences**, 66: 3697-3710 (Impact factor: 7.047)
2. **C.I. Sicora**, Ho FM, Salminen T., Styring S., Aro EM. **(2009)** *Transcription of a “silent” cyanobacterial psbA gene is induced by microaerobic conditions*, **Biochim. Biophys. Acta**, 1787 Issue: 2 Pages: 105-112. Impact Factor: 3.688)
3. **Cosmin I. Sicora**, Christopher M. Brown, Otilia Cheregi, Imre Vass and Douglas A. Campbell **(2008)** *The psbA gene family responds differentially to light and UVB stress in Gloeobacter violaceus PCC 7421, a deeply divergent cyanobacteria*. **Biochimica et Biophysica Acta** 1777:130–139 (Impact factor: 3.835)
4. **Cosmin Sicora** and Eva-Mari Aro **(2007)** *Characterization of biohydrogen production and gene expression under changing environmental conditions*. **Photosynthesis Research** 91, PS1.12 . (Impact factor: 2.139)
5. Pengpeng Zhang, **Cosmin I. Sicora**, Natalia Vorontsova, Yagut Allahverdiyeva, Natalia Battchikova, Peter J. Nixon, Eva-Mari Aro **(2007)** *Expression of inducible inorganic carbon complexes is under the control of FtsH protease in Synechocystis sp. PCC 6803*. **Photosynthesis Research** 91:223 PS9.15 (Impact factor: 2.139)
6. Pengpeng Zhang, **Cosmin I. Sicora**, Natalia Vorontsova, Yagut Allahverdiyeva, Natalia Battchikova, Peter J. Nixon, Eva-Mari Aro **(2007)** *FtsH protease is required for induction of inorganic carbon acquisition complexes in Synechocystis sp. PCC 6803* **Molecular Microbiology** **65(3)**, 728–740. (Impact factor: 5.462)
7. Otilia Cheregi, **Cosmin Sicora**, Peter B. Kós, Myles Barker, Peter J. Nixon and Imre Vass **(2007)** *The role of the FtsH and Deg proteases in the repair of UV-B radiation-damaged Photosystem II in the cyanobacterium Synechocystis PCC 6803*. **BBA- Bioenergetics** 1767(6):820-828. Epub 2006 Dec 5. (Impact factor: 3.835)

8. **Cosmin I. Sicora**, Sarah E. Appleton, Christopher M. Brown, Jonathon Chung, Jillian Chandler, Amanda M. Cockshutt, Imre Vass and Douglas A. Campbell (2006) *Cyanobacterial psbA families in Anabaena and Synechocystis encode trace, constitutive and UVB induced D1 isoforms*. **Biochimica et Biophysica Acta (BBA) - Bioenergetics** Volume 1757, Issue 1, Pages 47-56. (Impact factor: 4.237)
9. Jean-Charles Cadoret, Bernard Rousseau, Irene Perewoska, **Cosmin Sicora**, Otilia Cheregi, Imre Vass and Jean Hoummard (2005) *Cyclic nucleotides, the photosynthetic apparatus and response to a UV-B stress in the cyanobacterium Synechocystis sp. PCC 6803*. **Journal of Biological Chemistry** Oct 2005; 280: 33935 -33944. (Impact factor: 5.854)
10. Subramanyam Rajagopal, **Cosmin Sicora**, Zsuzsanna Valkonyi, Laszlo Mustardy and Prasanna Mohanty (2005) *Protective effect of supplemental low intensity white light on ultraviolet-B exposure-induced impairment in cyanobacterium Spirulina platensis: formation of air vacuoles as a possible protective measure*. **Photosynthesis Research** 85 (2): 181-189.(Impact factor: 2.295)
11. **Cosmin Sicora** and Imre Vass (2005) *Photoinhibition Of PSII Affects Differentially The Activity Parameters Measured Under Single-Turnover Flash or Continuous Illumination* Satellite Meeting of 13th International Congress on Photosynthesis Trois-Rivieres, Québec, Canada, **Photosynthesis Research** Suppl. (in press). (Impact factor: 2.295)
12. Otilia Cheregi, **Cosmin Sicora**, Peter B Kos, Peter J Nixon and Imre Vass (2005) *The FtsH protease is required for the repair of Photosystem II in the cyanobacterium Synechocystis 6803 damaged UV-B radiation*. **BMC Plant Biology** 2005, 5(Suppl 1):S8 doi:10.1186/1471-2229-5-S1-S8.(Impact factor: 2.65)
13. **Cosmin Sicora**, Ronney Wiklund Christer Jansson and Imre Vass (2004) *Charge stabilization and recombination in Photosystem II containing the D1' protein product of the psbA1 gene in Synechocystis 6803*. **Phys. Chem. Chem. Phys.** 6, pp4832 – 4837 (Impact factor: 2.076)
14. **Cosmin Sicora**, Zoltan Mate and Imre Vass (2003) *The interaction of visible and UV-B light during photodamage and repair oh photosystem II*. **Photosynthesis Research** 75:127-137. (Impact factor: 2.239)
15. M. Tichy, L. Lupinkova, **C. Sicora**, I. Vass, S. Kuvikova, O. Prasi and Josef Komenda (2003) "Synechocystis 6803 mutants expressing distinct forms of the Photosystem II D1 protein from Synechococcus 7942: relationship between the psbA coding region and sensitivity to visible and UV-B radiation." **Biochimica et Biophysica Acta** 1605 55-66. (Impact factor: 4.431)

16. **Sicora, C.** and Vass, I. (2000) "The interaction of visible and UV-B light in damaging the electron transport of Photosystem II in the cyanobacterium *Synechocystis 6803*" **Plant Physiol. Biochem.** 38 (suppl.): 110. (Impact factor: 1.292)

17. **Cosmin Ionel Sicora**, Mihail Dragan-Bularda and Imre Vass (2000) *UV-B-Induced Damage and Recovery of Photosynthetic Activity in the Cyanobacterium Synechocystis sp. PCC 6803*. **Studia Universitatis Babes-Bolyai, Biologia**, XLV, 2, 2000, pp 82-90.

Articles in refereed scientific edited volumes and conference proceedings

1. **Cosmin Ionel Sicora** and Eva-Mari Aro (2008) *Differential expression of hoxY gene, encoding the small subunit of bidirectional hydrogenase, under Ar-induced microaerobic conditions in Synechocystis sp. PCC6803 and Anabaena sp. PCC7120* In: Allen JF, Gantt E, Golbeck JH, Osmond B (eds) *Photosynthesis 2007. Energy from the Sun. Proceedings of the 14th International Congress on Photosynthesis*. Springer, Heidelberg, *in press*.

2. **Cosmin Sicora**, Otilia Cheregi, Peter B. Kos, Peter J. Nixon, and Imre Vass (2005) *The FtsH protease is involved in the repair of UV-B radiation damaged photosystem II in Synechocystis 6803*. In **Photosynthesis: Fundamental Aspects to Global Perspectives**. (A. Van der Est and D Bruce, eds.), 511-513.

3. Douglas Campbell, Sarah Appleton, Chris Brown, **Cosmin Sicora** (2004) *Functional diversity of the PsbA (D1) protein family in cyanobacteria.*, In **Photosynthesis: Fundamental Aspects to Global Perspectives**. (A. Van der Est and D Bruce, eds.)

4. Jean-Charles Cadoret, **Cosmin Sicora**, Alessandra de Martino, Gérald Zabulon, Irène Perewoska, Chantal Guidi-Rontani, Imre Vass and Jean Houmard (2003) "Light adaptation of a *Synechocystis PCC6803* mutant impaired in cyclic nucleotide" **Planktonic primary producers meeting Federative Institute of Fundamental & Applied Ecology** (IFR 101) 5 & 6 June 2003, Paris

5. I Vass, E Turcsányi, L Sass, A Szilárd, **C Sicora**, Z Máté, É Hideg, F. Nagy, A Viczián (2001) *Damage and repair of Photosystem II under exposure to UV radiation*. **Proc. 12th Int. Congress on Photosynthesis**, Brisbane, Australia

6. **Cosmin Sicora** and Imre Vass (2001) *The Interaction Of Visible And UV-B Light In Damaging The Electron Transport Of Photosystem II In The Cyanobacterium Synechocystis 6803*. **Satellite Meeting of the 12th International Congress on Photosynthesis**, Aug 13-17, Heron Island, Australia (2001) pp. 15

Text books and other research related publications

1. **Sicora, C.** Szilárd, A., Sass, L. Turcsányi, E, Máté, Z. and Vass I. (2006) "*UV-B and UV-A radiation effects on photosynthesis at the molecular level*" in **Environmental UV Radiation: Impact on Ecosystems and Human Health and Predictive Models**, NATO Science Series, IV. Earth and Environmental Sciences – vol. 57 (Ghetti, F., Checucci. G., and Bornmann, J. eds.) pp.121-130

2. Imre Vass, Andras Szilard, and **Cosmin Sicora.** (2005) *Adverse Effects of UV-B Light on the Structure and Function of the Photosynthetic Apparatus*; In: **PESSARAKLI: Handbook of Photosynthesis**, 2nd edition page 827.

Other Scientific Publications

1. **Cosmin Sicora** *Studies concerning the molecular mechanism of UV-B induced damage and recovery of photosynthetic activity in the cyanobacterium Synechocystis sp. PCC 6803* - Proceedings of the International Training Course on Selected Topics of Modern Biology held by Biological Research Center of The Hungarian Academy of Sciences, Szeged, Hungary, **1999**

2. **Cosmin Sicora**, V. Opris *Characterization of UV-induced mutants of lactic acid bacteria*, *The 9th Congress on Microbiology and Biotechnology*, Iasi, Romania, 18-19 September 1998.

3. M. Dragan-Bularda, **C. Sicora** *Isolation of dextranase productive bacteria-*, *The 9th Congress on Microbiology and Biotechnology*, Iasi, Romania, 18-19 September **1998**.

4. **Cosmin Sicora**, M.Dragan-Bularda *Isolation of levanase productive microbial strains-* - *The 9th Congress on Microbiology and Biotechnology*, Iasi, Romania, 18-19 September **1998**.

5. **Cosmin Sicora**, M.Dragan-Bularda *Characterization and isolation of some enzymes obtained from transgenic bacteria* -Abstract "Genetic of Industrial Microorganisms Symposium", Jerusalem, Israel, 28.06-3.07 **1998**.