


NAME	MÁTYÁS CSERHÁTI	
Position	Research assistant	
Age:	30	
Beginning of Ph.D studies:	2003-2006 Ph.D. student	
Supervisors:	Dénes Dudits, János Györgyey, Sándor Pongor	
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Workplaces:

Agricultural Biotechnology Center, Gödöllő, bioinformatics group (2002-2003)
 Biological Research Center, Szeged, Plant Cell Division Cycle and Stress Adaptation group (2003-2010)

Areas of expertise

- Algorithm development
- Database programming
- Oligonucleotide chip development
- Data mining, data analysis

Diplomas:

biologist, M.Sc. (ELTE-TTK, 2003) (thesis: Miklós Cserző, Agricultural Biotechnology Center, Gödöllő, bioinformatics group)
 informatician programmer, B.Sc. (SZTE-TTIK, 2010) (thesis: Tamás Gergely, dept. Of software development)

Ph.D. courses:

Molecular Cell Biology I
 Molecular Cell Biology II
 Application of probability theory in discrete mathematics
 Diverse topics in graph theory
 Information theory in biophysics
 Informatics basis in bioinformatics
 Introduction to structural bioinformatics
 Bioinformatics, sequence, and genome databases
 Ph.D. Journal Club (3 semesters)

Foreign workshops

2004: Ghent, VIB, Belgium, Vlaamse Instituut voor Biotechnologie (3 month Hungarian Flemish cooperation)
 2004: Ghent, VIB, Belgium, Vlaamse Instituut voor Biotechnologie (2 month Hungarian Flemish cooperation)
 2008: Ghent, VIB, Belgium, 5 day course

2010: Munich, Germany, Genomatix, 2 day course

International conferences

2005: Ghent, Belgium, Vlaamse Instituut voor Biotechnologie

2005: V. international Ph.D. students' conference, Miskolc, lecture

2006: 3. EPSO (European Plant Science Organization) conference, Visegrád, poster

National conferences

2005: Wheat Consortium, Mátraháza (lecture)

2006: Wheat Consortium, Mátraháza (lecture)

2006: Spring Wind Ph. D. students' conference, Kaposvár (lecture)

2008: Wheat Consortium, Mátraháza

Taught courses

English translation course

Bioinformatics in molecular biology practical course

Known programming languages:

C/C++, Visual C#, awk, csh, perl, Java, HTML, MySQL, Oracle, Javascript, PHP, XML, SPSS, R, Matlab, Flash, UPPAAL, Smalltalk, Sixtus, Prolog, Occam, Pascal, BASIC, Assembly

Linux and Windows expertise (Word, Excel, Access, Powerpoint)

Experimental expertise

- Primer design and testing
- Q-PCR
- RT-PCR

Language certificates:

- English: advanced written and oral language certificate
- German: intermediate oral language certificate
- Dutch: intermediate written and oral language certificate
- Norwegian: intermediate written language certificate
- Swedish: advanced written language certificate

Publications:

Book chapters

Cserhádi, M. and Györgyey J. 2006. „Génkutatás *in silico*” („Gene research *in silico*”), chapter in „A búza nemesbítésének tudománya” („The science of wheat breeding”). Editor: Dénes Dudits. ISBN-10: 963-87189-2-7. ISBN-13: 978-963-87189-2-1.

Dudits, D., Cserhádi, M., Miskolczi, P., Horváth, G. The growing family of plant cyclin-dependant kinases with multiple functions in cellular and developmental regulation. 2006. Cell cycle control and development. Editor Dirk Inzé. Blackwell Publishing, Oxford.

Articles

Cserhádi, M., Turóczy, Z., Zombori, Z., Cserző, M., Dudits, D., Pongor, S., Györgyey, J. Dyadscan: a machine-learning enumeration algorithm for analysis of abiotic stress induced *Arabidopsis* and rice promoters in gene discovery. 2010. BMC Bioinformatics. (submitted)

Turóczy, Z., Kis, P., Török K., **Cserhádi, M.**, Lendvai, Á., Dudits, D., Horváth, G. Pascal, Overproduction of a rice aldo-keto reductase increases oxidative and heat stress tolerance by malondialdehyde and methylglyoxal detoxification. 2010. Plant Molecular Biology. (submitted)

Conference proceedings, abstracts

Cserhádi, M., Pongor, S. and Györgyey, J: Statistical methods for finding biologically relevant motifs in promoter regions and a few of its implementations, In: 5th International Conference of PhD Students, University of Miskolc, Hungary, 14-20 August 2005, (Eds L. Lehoczky and L. Kalmár) Published by University of Miskolc, Innovation and Technology Transfer Centre, pp. 41-46, 2005

Cserhádi, M., Pongor, S., Dudits, D., and Györgyey, J: (2006). „Usage of enumeration-based algorithms for finding promoter motifs.” Tavaszi Szél 2006 conference. Kaposvár. ISBN 963 229 773 3

Cserhádi M.: Usage of enumeration method based algorithms for finding promoter motifs in plant genomes. *Acta Biol Szeged 2006*, 50(3-4):145.

Dénes, D., **Cserhádi, M.**, Miskolczi, P., Fehér, A., Ayaydin, F. and Horváth, G. V.: Use of Alfalfa In Vitro Cultures in Studies on Regulation of Cyclin-Dependent Kinase (CDK) Functions. 2006. Proceedings of the 11th IAPTC&B Congress, Beijing. Editors: Z. Xu, J. Li, I.K. Vasil, Y. Xue and W. Yang.

András Cseri, András Palágyi, **Mátyás Cserhádi**, János Pauk, Dénes Dudits, Ottó Törjék: EcoTILLING analysis of drought related candidate genes in barley. Plant Abiotic Stress - from signaling to development, 2nd meeting of INPAS (International Network of Plant Abiotic Stress), 14-17 May 2009, Tartu, Estonia

Posters

Cserhádi, M., Turóczy, Z., Dudits, D., Horváth, G., and Györgyey, J: Bioinformatic analysis of heptamer palindromes in rice stress promoters. 3rd EPSO conference, Visegrád.

Turóczy, Z., Kis, P., **Cserhádi, M.**, Dudits, D., Horváth, G. Response of rice AKR genes to abiotic stresses: expression profiling and enzyme activity characterization. 3rd EPSO conference, Visegrád.

Lectures

Cserhádi M., Györgyey J., Selection and development of oligonucleotides for wheat test chip. Wheat Consortium, Mátraháza. 2005.

Cserhádi, M., Györgyey J., Advances in the development of the wheat oligonucleotide test chip. Wheat Consortium, Mátraháza. 2006, November 6.

Cserhádi, M., Turóczy, Z., Sečenji, M., Pongor, S., Cserző, M., Dudits, D., Horváth V., G., Györgyey, J. Analysis of plant promoters to understand abiotic stress processes. 2006. Straub days lecture, November 15-17.

Veronika Pócs, Klára Manninger, Krisztián Halász, Éva Hunyadi-Gulyás, Emília Szájlí, **Mátyás Cserhádi**, Huijun Duan, Katalin Medzihradzsky, János Györgyey, Noémi Lukács: Proteomic changes of the wheat apoplast associated with resistance against leaf rust. 15th International Congress of the Hungarian Society for Microbiology: July 18-20, 2007, Eötvös Loránd University (Budapest, Hungary)

Pócs Veronika, **Cserhádi Mátyás**, Hunyadi-Gulyás Éva, Manninger Sándorné, Györgyey János, Medzihradzsky Katalin, Lukács Noémi: COMMON CIS-REGULATORY ELEMENTS IN THE GENE EXPRESSION OF APOPLAST PROTEINS CONNECTED TO WHEAT LEAF RUST INFECTION. 2007 congress of the Hungarian Biochemical Association. Augusztus 26-29. Debrecen University (Debrecen)

EcoTILLING Analysis of Candidate Genes for Drought Tolerance in Barley. Törjék O., Cseri A., Palágyi A., **Cserhádi M.**, Dudits D. (Invited speaker) 2nd Workshop on TriticGen COST action FA0604: Triticeae genomics for the advancement of essential European crops. Albena, Bulgaria, September 22-24, 2008.

Turóczy, Z., Kis, P., **Cserhádi, M.** Dare to bet? –from the *in silico* predictions to the demonstration of stress induced gene expression. 7th Biologist Days, Cluj Napoca, Romania