

CURRICULUM VITAE

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Date of birth: January 5, 1971.
Place of birth: Split, Croatia
Citizenship: Croatian

EDUCATION

- 2000-2005 Faculty of Food Technology and Biotechnology, University of Zagreb.
Ph.D. in Molecular Biotechnology.
Thesis: "The influence of palindromes on homologous recombination and stability of the yeast genome" (Supervisor: Prof. Zoran Zgaga, Ph.D.)
- 1995-2000 Faculty of Science, University of Zagreb.
M.Sc. in Molecular and Cellular Biology.
Thesis: "The influence of short heterologous sequences on plasmid integration in the yeast *Saccharomyces cerevisiae* genome" (Supervisor: Prof. Zoran Zgaga, Ph.D.)
- 1989-1995 Faculty of Food Technology and Biotechnology, University of Zagreb.
B.Sc. in Food Technology and Biotechnology.
Thesis: "Transformation of the yeast *Saccharomyces cerevisiae* with plasmids containing heterologous termini" (Supervisor: Prof. Zoran Zgaga, Ph.D.)

CURRENT POSITION

Assistant professor - Laboratory for Biology and Microbial Genetics, Department of Biochemical Engineering, Faculty of Food Technology and Biotechnology, University of Zagreb.

Group leader - "Genetics of death in yeast" at the Mediterranean Institute for Life Sciences (MedILS), Split, Croatia.

RESEARCH AND SCIENTIFIC INTEREST

Molecular genetics of the yeast *Saccharomyces cerevisiae*

- yeast transformation and mechanisms of genetic recombination
- homologous versus illegitimate recombination
- influence of palindromes on the genome stability
- genetics of aging and death

Bioinformatics

- palindrome content of genomes of living organisms

Genetics of non-*Saccharomyces* yeasts

- development of transformation systems

RESEARCH PROJECTS

- 2007-present Group leader - "Genetics of death in yeast" at the Mediterranean Institute for Life Sciences (MedILS), Split, Croatia.
- Researcher - "Palindromes in the genomes and mechanisms of gene targeting in yeast" at Faculty of Food Technology and Biotechnology (Group leader: Prof. Zoran Zgaga, Ph.D.) and "Functional analysis and molecular characterisation of vine yeasts" at Faculty of Agriculture (Group leader: Sandi Orlić, Ph.D.).
Both projects are part of scientific program "Yeast molecular biology and biotechnology" (Program leader: Prof. Slobodan Barbarić, Ph.D.) funded by Ministry of Science, Education and Sports of the Republic of Croatia.
- 2000-2006 Researcher - "Recombination mechanisms in the yeast *Saccharomyces cerevisiae*" at Faculty of Food Technology and Biotechnology, University of Zagreb funded by Ministry of Science and Technology of the Republic of Croatia (Group leader: Prof. Zoran Zgaga, Ph.D.)
- 2001 – 2002 Researcher - "Developing of *Actinoplanes sp* for industrial production of acarbose" at Faculty of Food Technology and Biotechnology funded by PLIVA, Croatia (Group leader: Prof. Zoran Zgaga, Ph.D.)
- 1996 – 2000 Researcher - "Yeast transformation and mechanisms of genetic changes" at Faculty of Food Technology and Biotechnology funded by Ministry of Science and Technology of the Republic of Croatia (Group leader: Prof. Zoran Zgaga, Ph.D.)

TEACHING ACTIVITY

- 2007 – present Assistant professor – Lectures and practical courses on "Molecular genetics", "Genetic engineering" and "Genetics of Eukaryotes", Faculty of Food Technology and Biotechnology, University of Zagreb.
- 1995-2007 Teaching assistant - Practical courses on "Molecular Genetics" and "Genetic Engineering", Faculty of Food Technology and Biotechnology, University of Zagreb.
1998. – present Co-supervisor of 9 B.Sc. thesis

AWARDS

- 2005 Annual award of The Society of Professors and Scientists in Zagreb for young scientist and artists, Zagreb, Croatia.
- 1999 Award of the Biotechnical Foundation of Faculty of Food Technology and Biotechnology, Zagreb, Croatia.
- 1994 Rector's award for the best student work done on Faculty of Food Technology and Biotechnology, University of Zagreb for academic year 1993/1994, Zagreb, Croatia.

INVITED LECTURES

- "The yeast *S. cerevisiae*: palindromes, genome stability and homologous recombination", MedILS Summer School "Creating Interdisciplinary Research projects", July 31 – August 11 2006. Mediterranean Institute for Life Sciences, Split, Croatia.
- "Surviving death by mating" MedILS Summer School "Surviving Death - Interdisciplinary Approach" July 29 - August 4 2007. Mediterranean Institute for Life Sciences, Split, Croatia.

PUBLICATIONS

Articles

Svetec, I.K., Štafa, A., Zgaga, Z. (2007) Genetic side effects accompanying gene targeting in yeast: the influence of short heterologous termini. *Yeast* **24**: 637-52.

Štafa, A., **Svetec, I. K.**, Zgaga, Z. (2005) Inactivation of the *SGS1* and *EXO1* genes synergistically stimulates plasmid integration in yeast. *Food Technology and Biotechnology* **43**: 103-108.

Lisnić, B., **Svetec, I. K.**, Šarić, H., Nikolić, I., Zgaga, Z. (2005). Palindrome content of the *Saccharomyces cerevisiae* genome. *Curr. Genet.* **18**: 289-297.

Frece, J., Kos, B., **Svetec, I. K.**, Zgaga, Z., Mrša, V., Šušković, J. (2005). Importance of S-layer proteins in probiotic activity of *Lactobacillus acidophilus* M92. *J. Appl. Microbiol.* **98**: 285-292.

Svetec, I. K., Lisnić, B., Zgaga, Z. (2002). A 110 bp palindrome stimulates plasmid integration in yeast. *Period. Biol.* **104**: 421-424.

Svetec, I. K., Stjepandić, D., Borić, V., Mitrikeski, P. T., Zgaga, Z. (2001). The influence of a palindromic insertion on plasmid integration in yeast. *Food Technol. Biotechnol.* **39**: 169-173.

Koren, P., **Svetec, I. K.**, Mitrikeski, P. T., Zgaga, Z. (2000). The influence of homology size and polymorphism on plasmid integration in yeast *CYC1* region. *Curr. Genet.* **37**: 292-297.

Conference papers

Zgaga, Z., Gjuračić, K., **Svetec, I. K.**, Mitrikeski, P. T., Gregorić, S. Plasmid integration in yeast: Conceptions and misconceptions, Kniewald, Z. (Ed.), *Current Studies of Biotechnology, Vol. II*, Zagreb, Croatia (2001) 135-142.

Conference abstracts

Štafa, A., Lisnić, B., **Svetec, I.K.**, Zgaga, Z. (2005) Inactivation of the *SGS1* and *EXO1* genes synergistically stimulates the efficiencies of yeast transformation. *Second Congress of Croatian Geneticists*, Supetar, Island of Brač, Croatia, September 24-27. Book of abstracts. Franekić Čolić, Jasna; Ugarković, Đurđica (ur.). Zagreb, 2005. 87-87.

Lisnić, B., Štafa, A., **Svetec, I.K.**, Zgaga, Z. (2005) Palindromic sequences in the *Saccharomyces cerevisiae* genome. *Second Congress of Croatian Geneticists*, Supetar, Island of Brač, Croatia, September 24-27. Book of abstracts. Franekić Čolić, Jasna; Ugarković, Đurđica (ur.). Zagreb, 2005. 41-41.

Frece, J., Kos, B., **Svetec, I.K.**, Zgaga, Z., Mrša, V., Šušković, J. (2004) Functional role of S-layer proteins in probiotic strain *Lactobacillus acidophilus* M92. *2nd Central European Meeting and 5th Croatian Congress of Food Technologists, Biotechnologists and Nutritionists*, Opatija, Croatia, October 17-20. Book of Abstracts. Karlović, Damir; Mrša, Vladimir; Lelas, Vesna; Šušković, Jagoda; Colić-Barić, Irena; Delaš, Ivančica (ur.). Zagreb: EURO-V.A.L.d.o.o., 2004. 115.

Svetec, I.K., Lisnić, B., Zgaga, Z (2003) Palindromes: required but risky. *EMBO Lecture Course on New Developments in Genomics for Biomedicine*, Brdo, Slovenia, April 8-13. Book of abstracts. Dolinar, Marko; Gubenšek, Franc (ur.). Ljubljana: Institute "Jožef Štefan", Ljubljana, 2003. 54-54.

Zgaga, Z., Lisnić, B., **Svetec, I.K.** (2003) Size-dependent palindrome-induced intrachromosomal recombination in yeast. *Cinquieme Colloque des Replication, Recombinaison, Reparation*, Presque ile de Giens, France, June 9-12. Paris, 2003. 89-89.

Svetec, I.K., Stjepandić, D., Lisnić, B., Kovač, M.; Mitrikeski, P.T., Gregorić, S., Zgaga, Z. (2002) Palindromes as inducers of mitotic recombination in yeast *First Croatian Congress on Molecular Biosciences*, Opatija, Croatia, June 9-13. Book of Abstracts. Kućan, Željko; Flogel, Mirna (ur.). Zagreb: Faculty of pharmacy, University of Zagreb, 2002. 65.

Zgaga, Z; **Svetec, I.K.**, Mitrikeski, P.T., Gregorić, S. (2001) Plasmid integration in yeast: concepts and misconceptions. *Biotechnology and Environment*, Zagreb, Croatia, February 19-22. Book of abstracts. Kniewald, Zlatko (ur.). Zagreb: Croatian Society of Biotechnology, 2001. 16.

Svetec, I.K., Mitrikeski, P.T., Zgaga, Z. (2000) Integration of plasmid DNA with short heterologous ends in *Saccharomyces cerevisiae*. Seventh Congress of Croatian Biologists, Hvar, Croatia, September 24-29. Book of abstracts. Nikola Ljubešić (ur.). Croatian Biological Society, Zagreb, 2000. 78-79.

Mitrikeski, P.T., **Svetec, I.K.**, Koren, P., Zgaga, Z. (1998) Plasmid integration is preferred in the C-terminal part of the yeast *ura3* gene. *First Congress of Croatian Geneticists*, Hvar, Croatia, June 1-4. *Periodicum biologorum*, Vol.100, Supplement 1. Vitale, Branko (ur.). Zagreb: Hrvatsko prirodoslovno društvo, 1998. 39-40.

Zgaga, Z., Gjuračić, K., Koren, P., **Svetec, I.K.** (1997) Yeast transformation and horizontal gene transfer. *18th International Specialized Symposium on Yeasts (ISSY)*, Bled, Slovenia, August 24-29. Book of Abstracts. Raspor, Peter; Smole-Možina Sonja; Zagorc, Tatjana; Batič, Mart (ur.). Ljubljana: Slovenian Microbiological Society.; International Commission for Yeasts, 1997. L8-05.