



ЕВРОПЕЙСКИ СЪЮЗ
ЕВРОПЕЙСКИ СТРУКТУРНИ И
ИНВЕСТИЦИОННИ ФОНДОВЕ



ОПЕРАТИВНА ПРОГРАМА
НАУКА И ОБРАЗОВАНИЕ ЗА
ИНТЕЛИГЕНТЕН РАСТЕЖ

"НА КОКТЕЙЛ ОТ ЗНАНИЯ"

INSTITUTE OF CHEMISTRY
UNIVERSITY OF SZEGED, FACULTY OF SCIENCE AND INFORMATICS

Departments

- Department of Applied and Environmental Chemistry
- Department of Physical Chemistry and Materials Science
- Department of Organic Chemistry
- Department of Inorganic and Analytical Chemistry

MTA-SzTE Bioinorganic Chemistry Research Group

Leader Prof. Tamás Kiss

MTA-SzTE Bioinorganic Chemistry Research Group

Topics:

- Metal complexes for potential therapeutic purposes
 - e.g. Ru(III) half-sandwich complexes
 - Zn(II), Cu(II) chelators for Alzheimer therapy
 - Cu(II), Zn(II) ternary complexes of salicylate derivatives
 - Monensin complexes
- Selective toxic metal ion chelation and detection
 - Development of fluorescent chemosensors
- Modelling of copper homeostasis – CueR protein
- Metalloenzyme models
- Artificial metallonucleases – Colicin E7 protein

Transcriptional activator CueR protein:
purification, characterization and
potential bioanalytical application

- Selectivity towards monovalent transition metal ions
- Metal Ion sensor development

Hans Erik Melager, Lars Hammingen, Peter Thulstrup, Ria Balogh, Attila Jencsó, Dániel Szunyogh

DTU

http://www2.sci.u-szeged.hu/artmetprof/index_eng.htm

INTRODUCTION
(Zin-Huei Kim, Journal of Bacteriology, 2011)

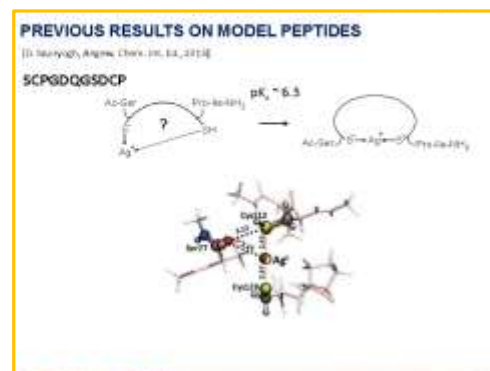
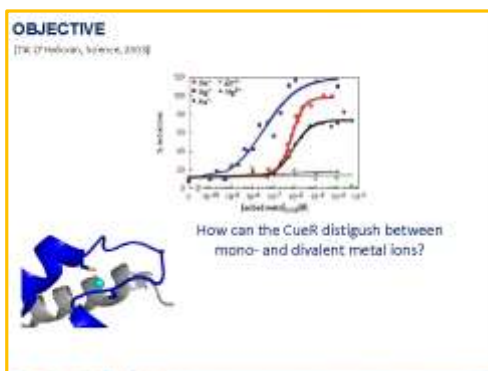
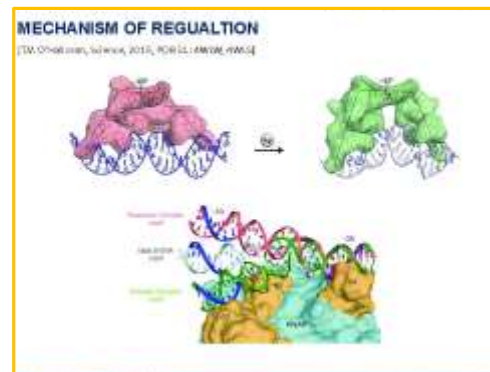
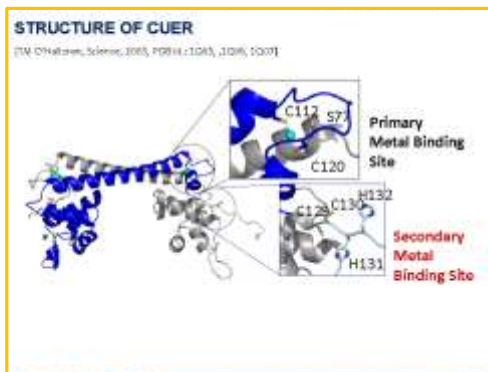
Metalloregulatory protein: CueR (Cu efflux regulator)

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Проект BG05M2OP001-2.009-0028 "Постигане на оптимална среда за обучение, научни изследвания, иновации и устойчиво развитие на човешкия капитал в сферата на химическите науки: Адаптиране на образованието днес за утрешния ден", финансиран от Оперативна програма „Наука и образование за интелигентен растеж“, съфинансирана от Европейския съюз чрез Европейските структурни и инвестиционни фондове.

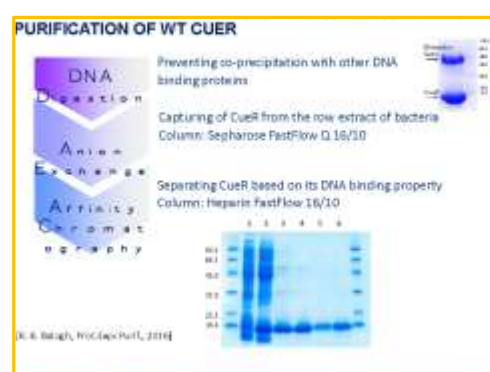


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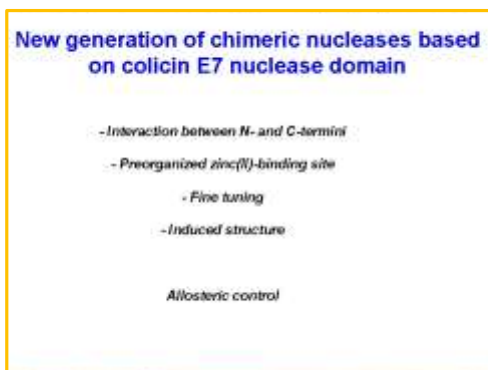
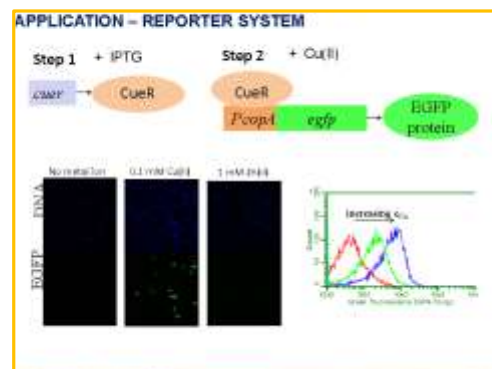
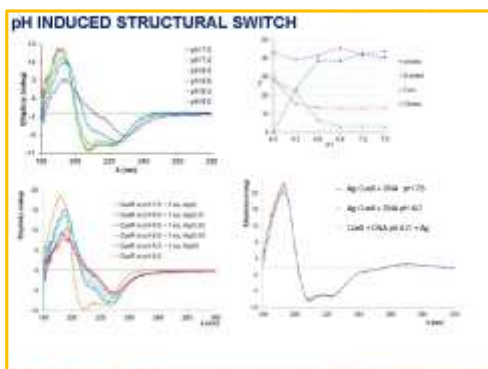
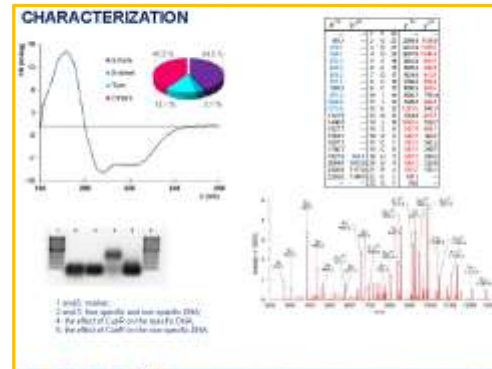
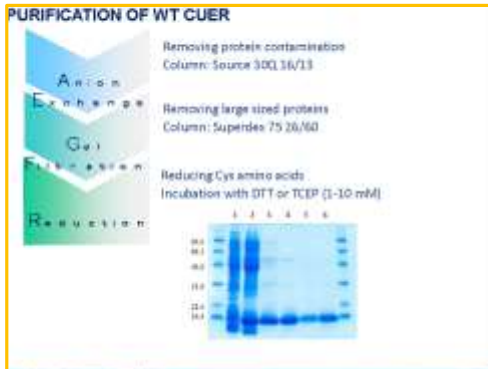
OUTLINE

Protein Purification and Characterization	
- FPLC (HPLC)	- EMSA
- FT-MS, MS/MS	- CD/MDMS
- CD	- Mutations
Metal Ion and DNA binding properties	
- CD	- X-ray
- FT-MS	- EMSA
- PAC	- AFM
Application	
- Genetic engineering	
- Fluorescent microscopy	
- FACS	



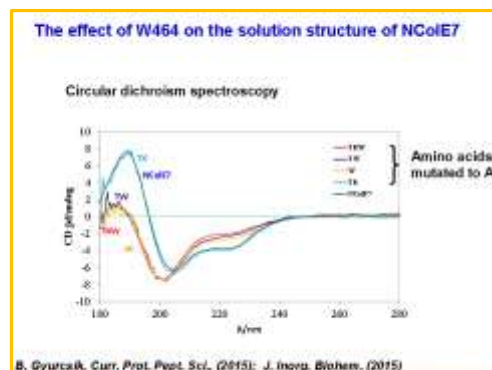
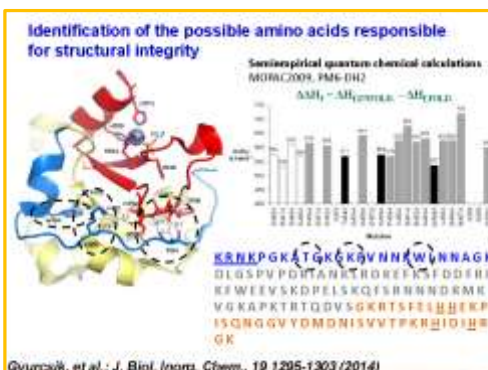
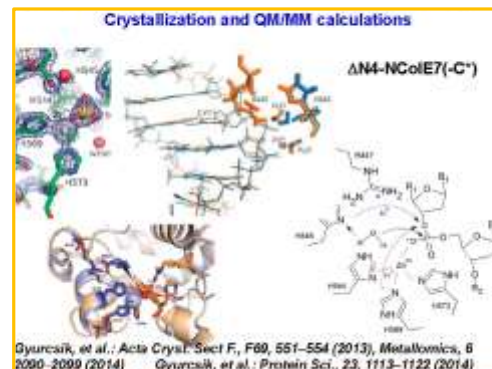
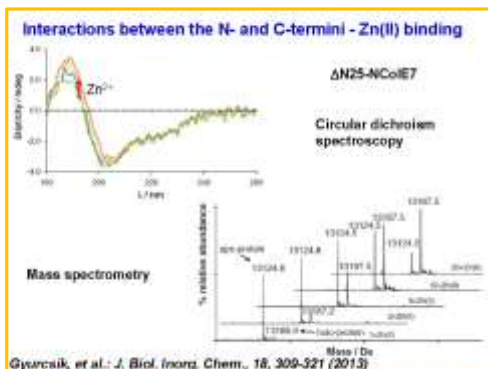
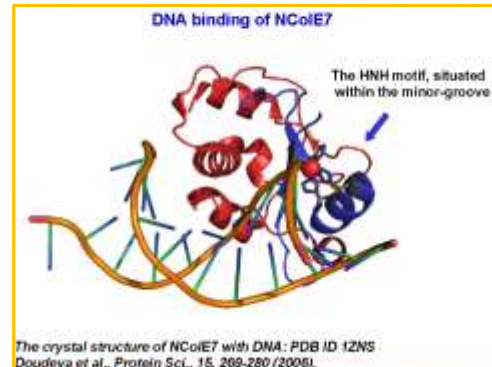
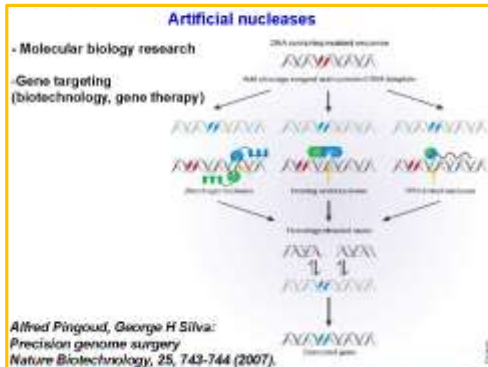


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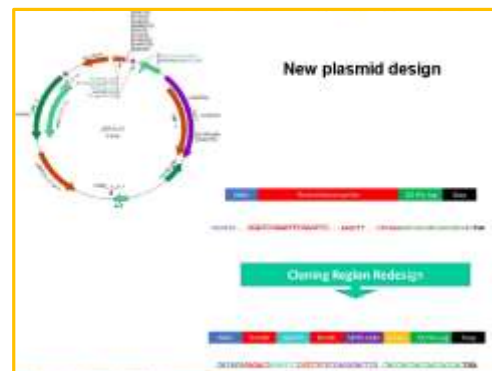
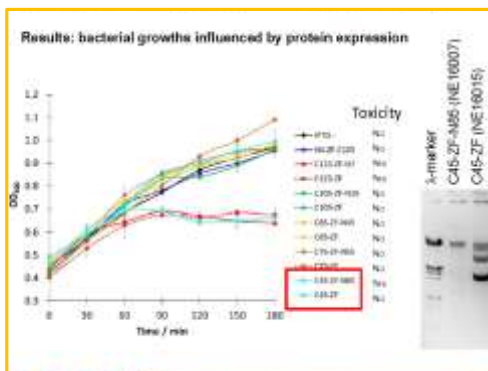
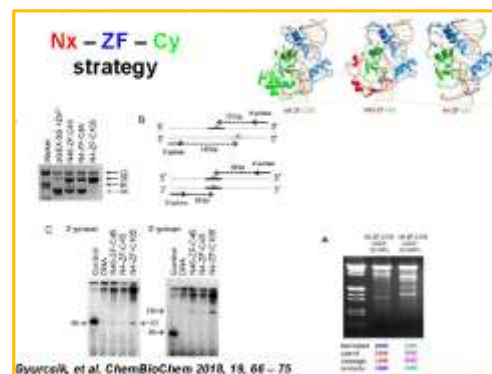
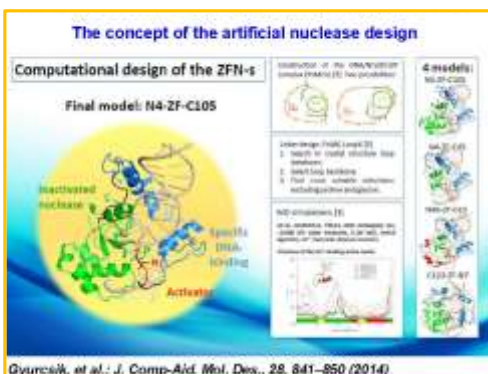
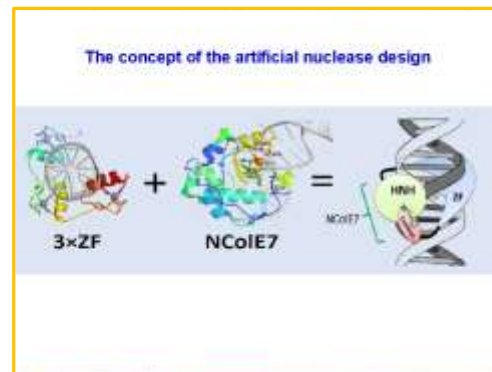
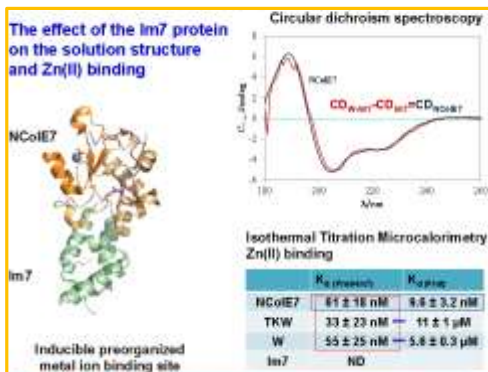


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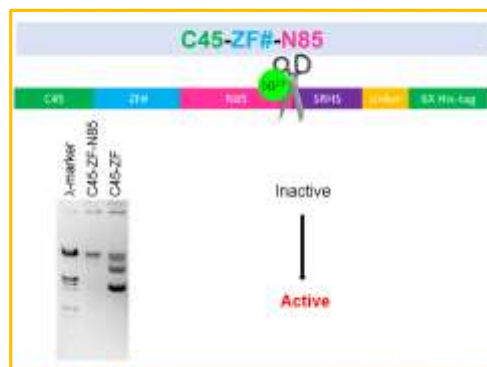
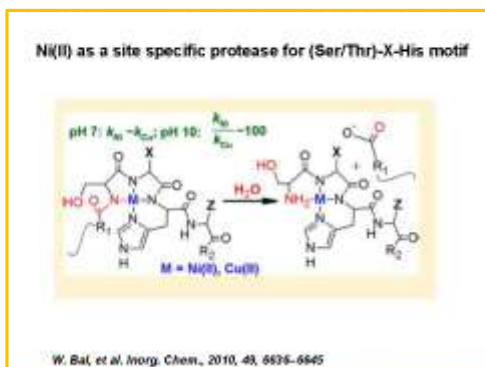


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