



HRVATSKO DRUŠTVO ZA BIOTEHNOLOGIJU
CROATIAN SOCIETY OF BIOTECHNOLOGY
KROATISCHE GESELLSCHAFT FÜR BIOTECHNOLOGIE
SOCIÉTÉ CROATE DU GENIE BIOLOGIQUE



Primjena tehnika genetičkog inženjerstva u industrijskoj biotehnologiji

Anita Slavica

pregled

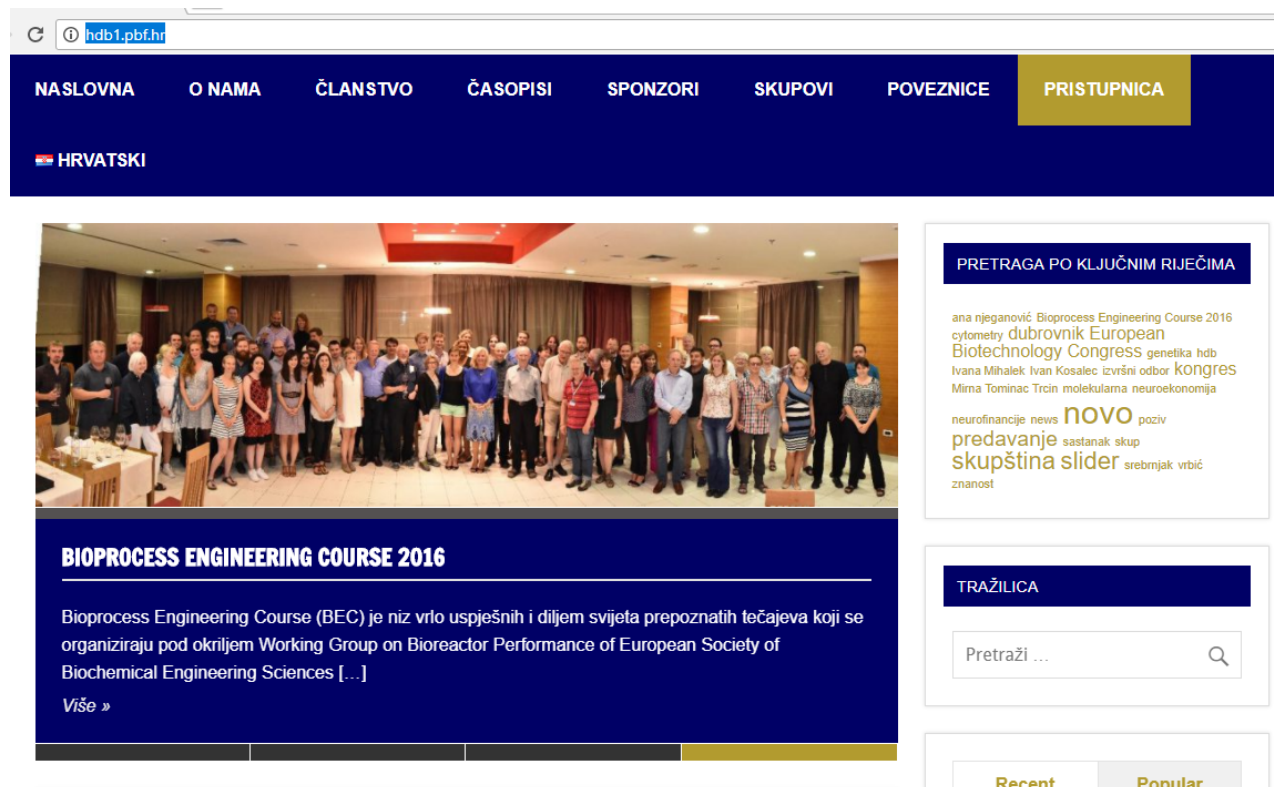
- o Hrvatskom društvu za biotehnologiju
- industrijska biotehnologija - temelj europske bio-industrije
- industrijska biotehnologija - dva primjera

(1) povezanost strukture i funkcije oksidaze D-aminokiselina i

(2) fiziologija bakterije *Lactobacillus amylovorus* DSM 20531^T

Hrvatsko društvo za biotehnologiju (1)

- <http://hdb1.pbf.hr>
- član Europske federacije za biotehnologiju, EFB (<http://www.efb-central.org>),
- član European Biotechnology Thematic Network Association, EBTNA (<http://www.ebtna.net>)
- član Hrvatskog inženjerskog saveza (<http://his-hr.hr/his>)



The screenshot shows the website hdb1.pbf.hr. The navigation menu includes: NASLOVNA, O NAMA, ČLANSTVO, ČASOPISI, SPONZORI, SKUPOVI, POVEZNICE, and PRISTUPNICA. Below the menu is a blue bar with the text "HRVATSKI" and a small flag icon. The main content area features a large group photo of people at a conference. Below the photo is a blue banner with the text "BIOPROCESS ENGINEERING COURSE 2016". Underneath the banner, there is a text block: "Bioprocess Engineering Course (BEC) je niz vrlo uspješnih i diljem svijeta prepoznatih tečajeva koji se organiziraju pod okriljem Working Group on Bioreactor Performance of European Society of Biochemical Engineering Sciences [...]". Below this text is a link "Više »". To the right of the main content area, there is a sidebar with a search bar labeled "PRETRAGA PO KLJUČNIM RIJEČIMA" and a search input field with the text "Pretraži ...". Below the search bar, there are two buttons: "Recent" and "Popular".

Hrvatsko društvo za biotehnologiju (2)

- European Biotechnology Congress
Dubrovnik, 25.-27. svibnja 2017. godine



Hrvatsko društvo za biotehnologiju (3)

- European Summit of Industrial Biotechnology
November 14-16 2017
(<https://esib.at>)

esib /

Special Session II
Croatian - Austrian
Science Day

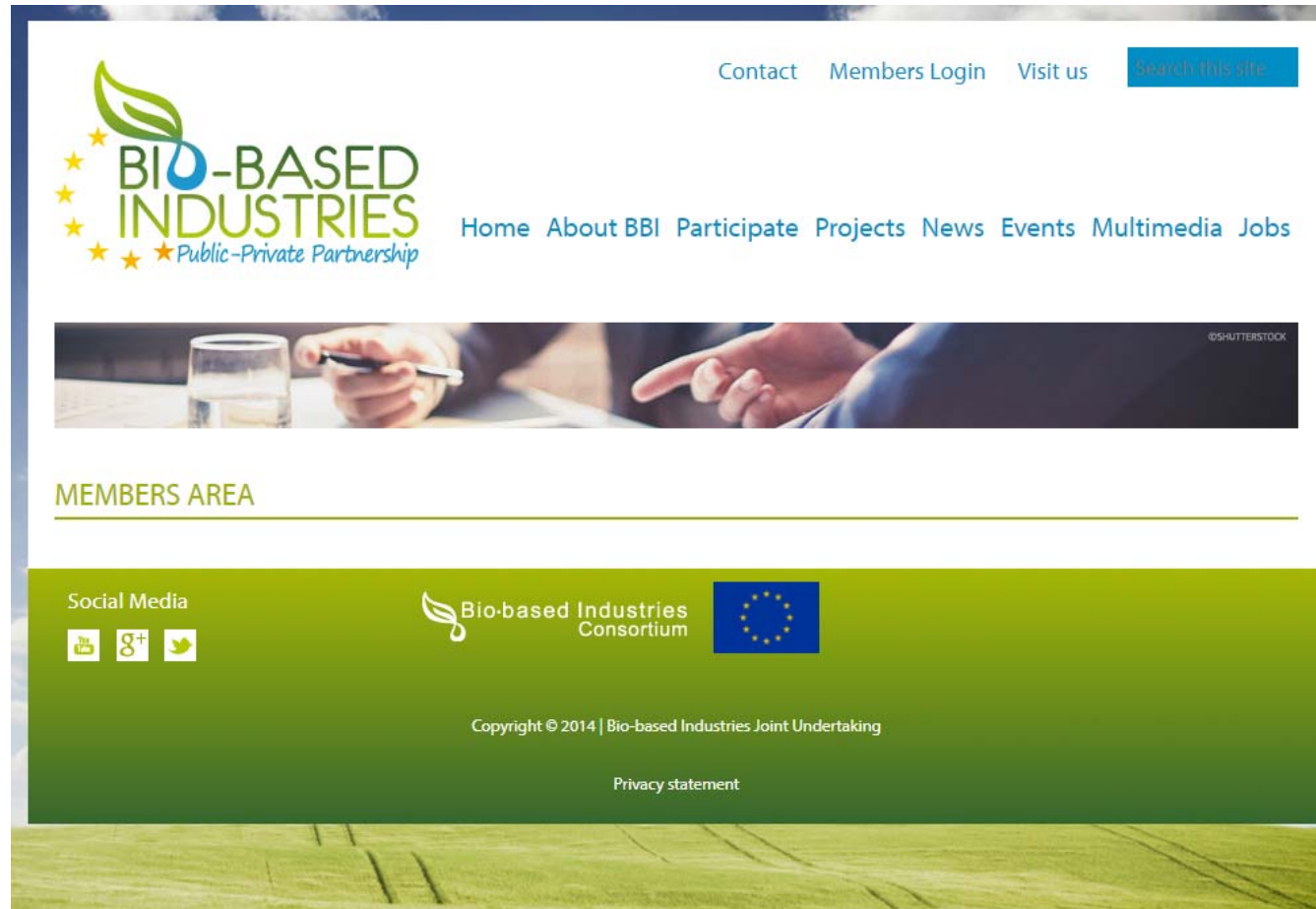
|| 15th of November 2017, Graz

The European Union aims to strengthen the European regions. esib is the platform to discuss possibilities and develop perspectives for strong cooperations in central Europe. Industrial Biotechnology in Croatia and Austria - we take the first step, we get involved, we evolve new strategies - let's join forces and interests!



About

industrijska biotehnologija - temelj europske bio-industrije (1)



industrijska biotehnologija - temelj europske bio-industrije (2)

„Biotechnology uses substances, materials or extracts derived from living cells, employing 22 million Europeans in a €1.5Tn endeavor, being the premier global economic growth opportunity this century.”

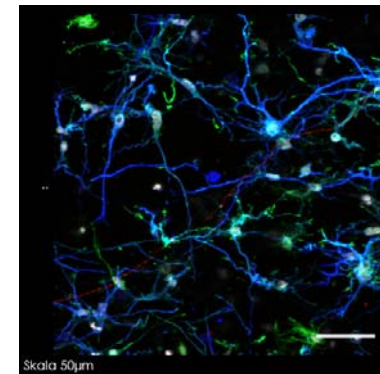
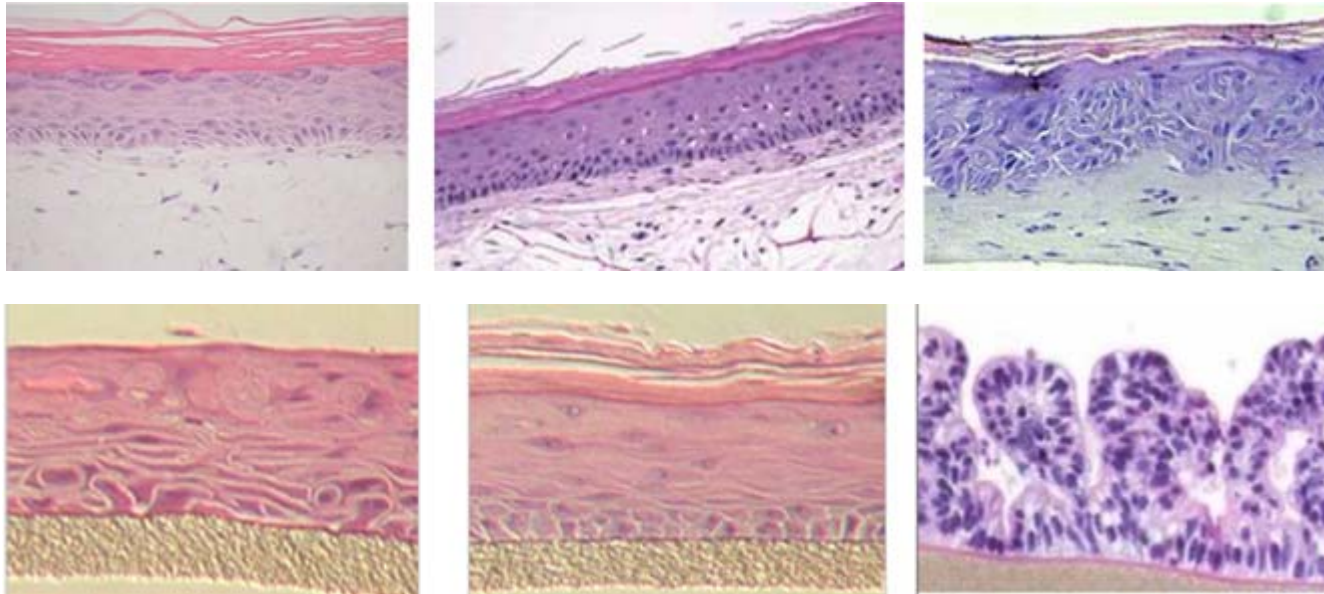
„Biotechnology will deliver solutions to unimagined problems, providing food security, health and well-being to mankind for centuries to come.”

Current Opinion in Biotechnology, 24S, S6-S13, 2013.

industrijska biotehnologija - temelj europske bio-industrije (3)

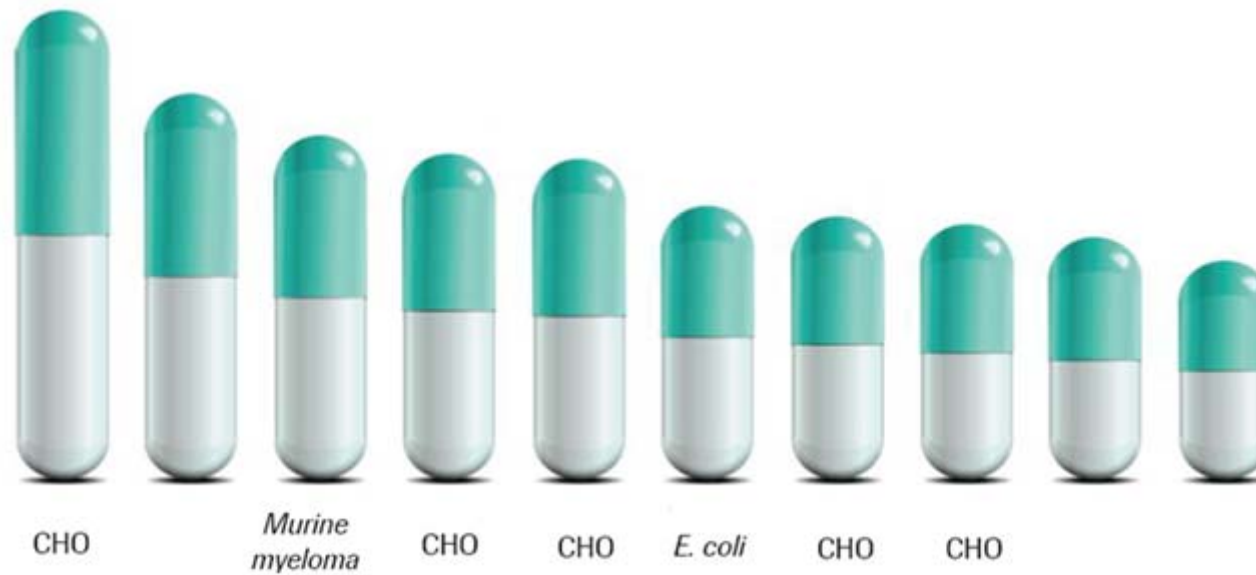
- ulaganje u istraživanja i inovacije - $2,8 \cdot 10^9$ EUR (2014-2020):
 - razvoj multifunkcionalnih biokatalizatora;
 - primjena ekstremofila i ekstremozima;
 - proizvodnja bioaktivnih sastojaka hrane (proteina, karotenoida, polifenola, ...), biokemikalija, biomaterijala, biogoriva...

industrijska biotehnologija - temelj europske bio-industrije (4)

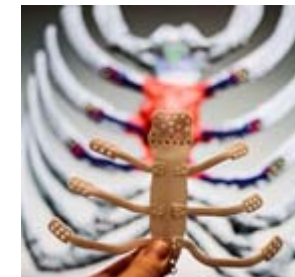
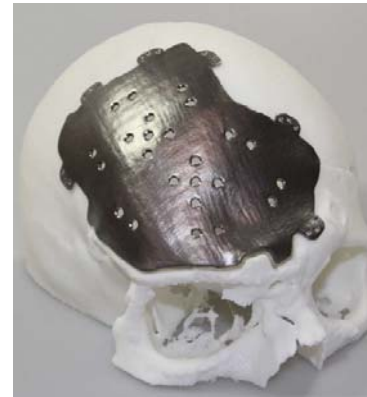
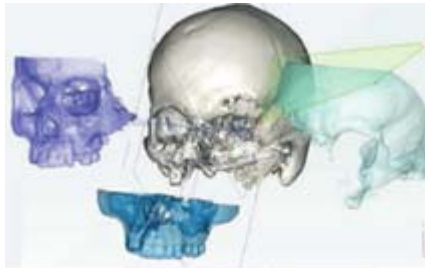


industrijska biotehnologija - temelj europske bio-industrije (5)

- najprodavaniji lijekovi u svijetu - mabs (10^9 USD; 2014)

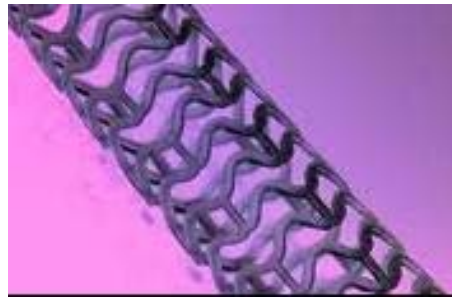


industrijska biotehnologija - temelj europske bio-industrije (6)

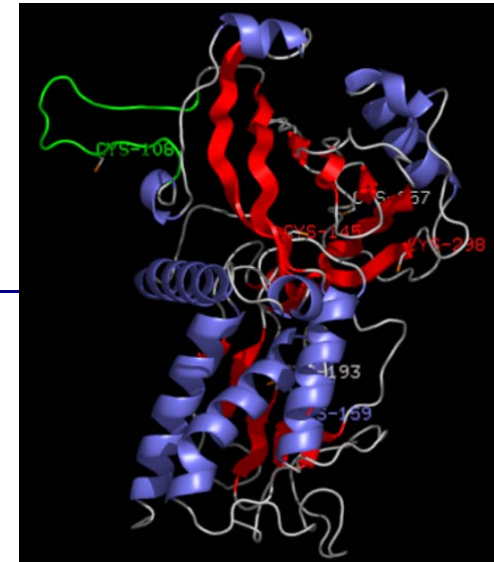
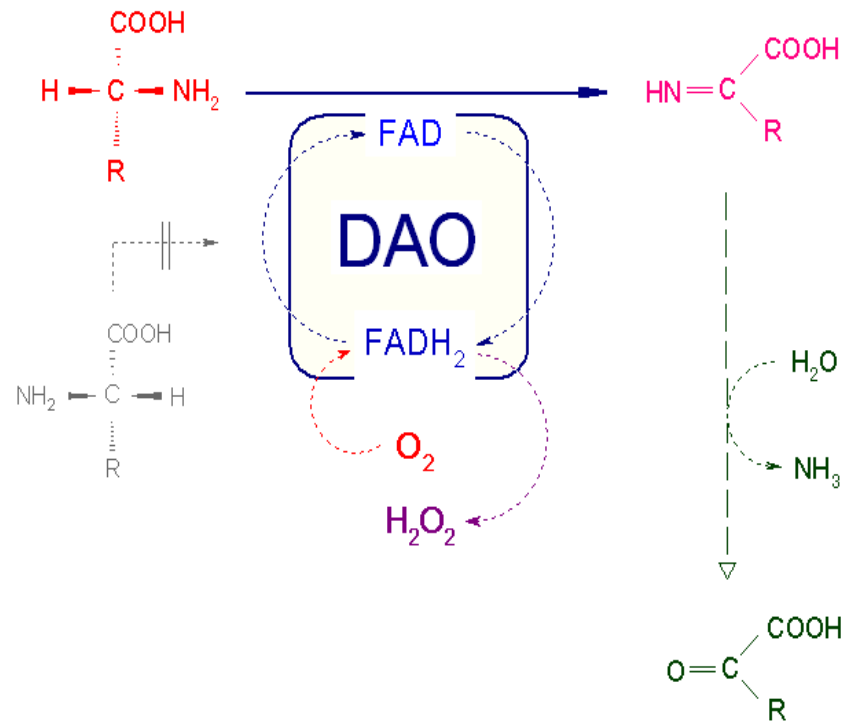


industrijska biotehnologija - temelj europske bio-industrije (7)

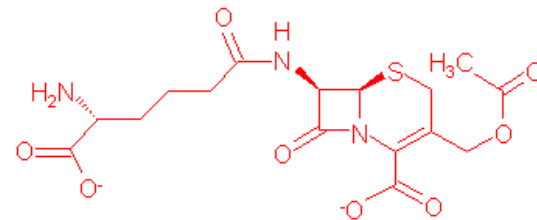
- biopolimeri (mliječne kiseline)



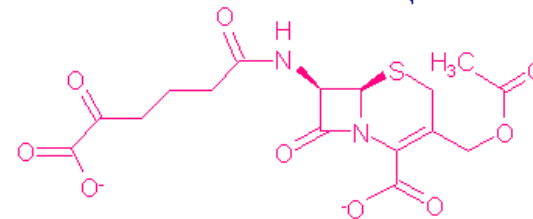
povezanost strukture i funkcije oksidaze D-aminokiselina (DAO) (1)



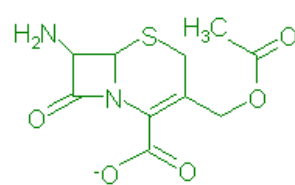
povezanost strukture i funkcije oksidaze D-aminokiselina (DAO) (2)



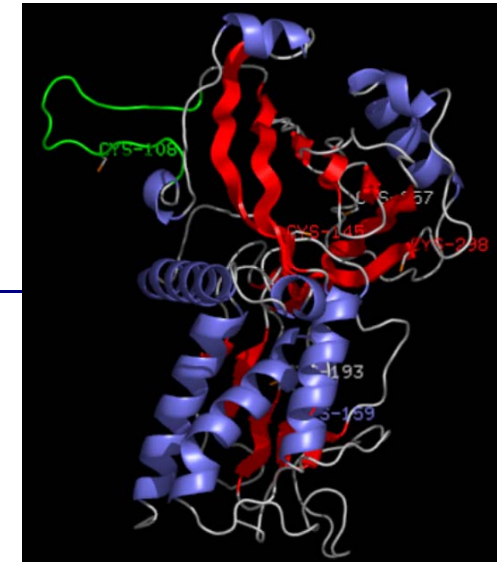
cephalosporin C



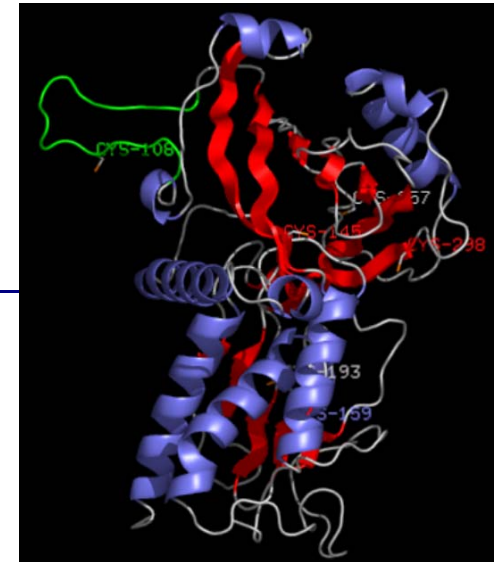
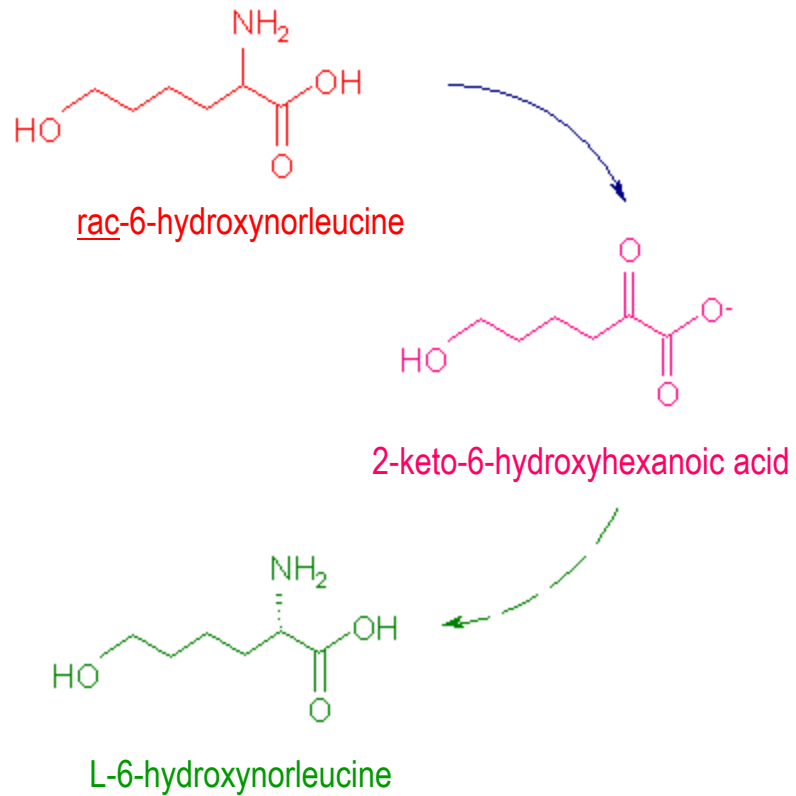
α -ketoadipyl-7-aminocephalosporanic acid



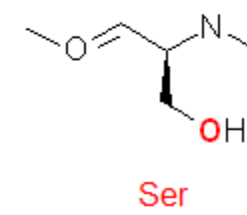
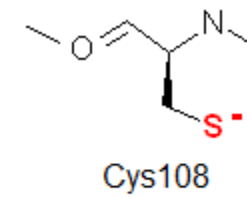
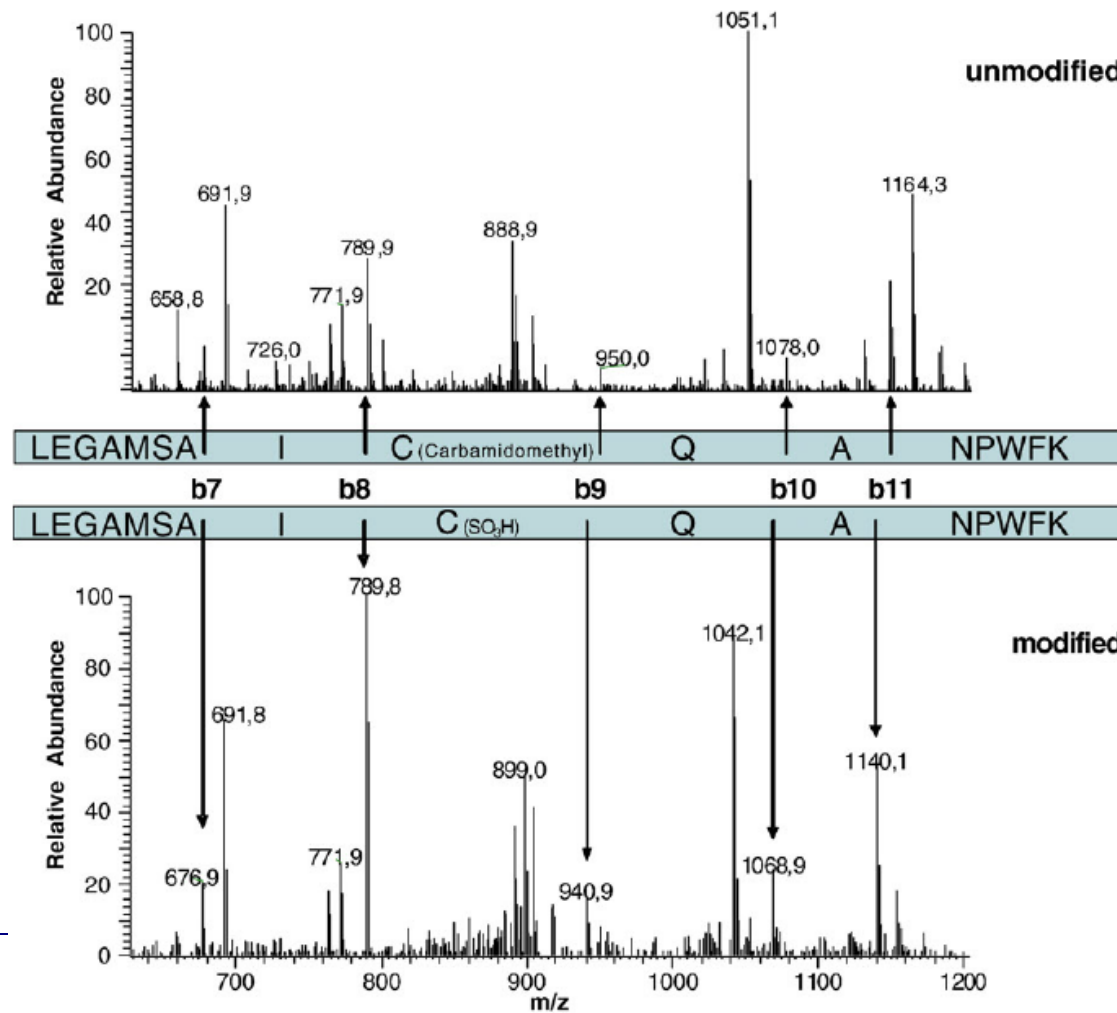
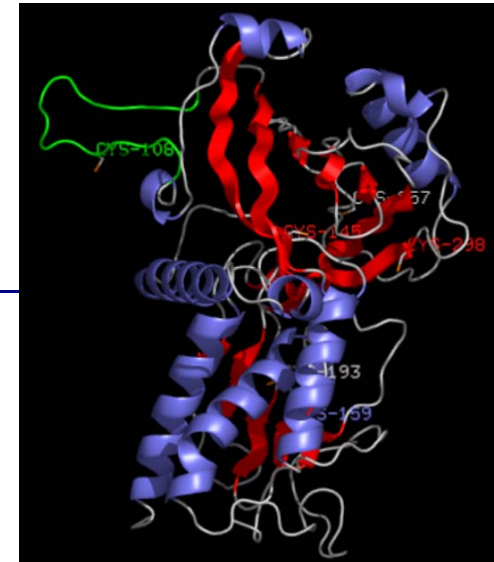
7-aminocephalosporanic acid (7-ACA)



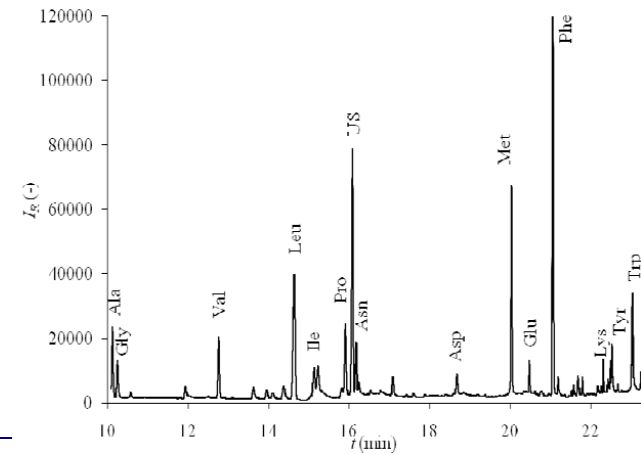
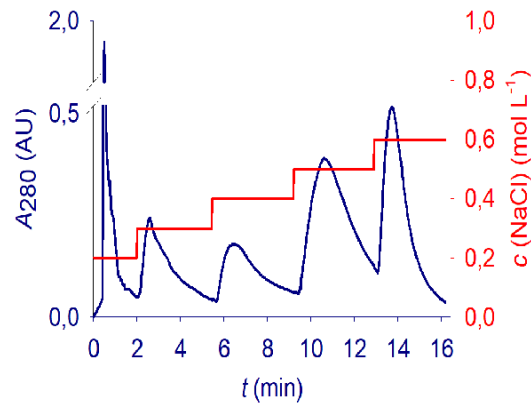
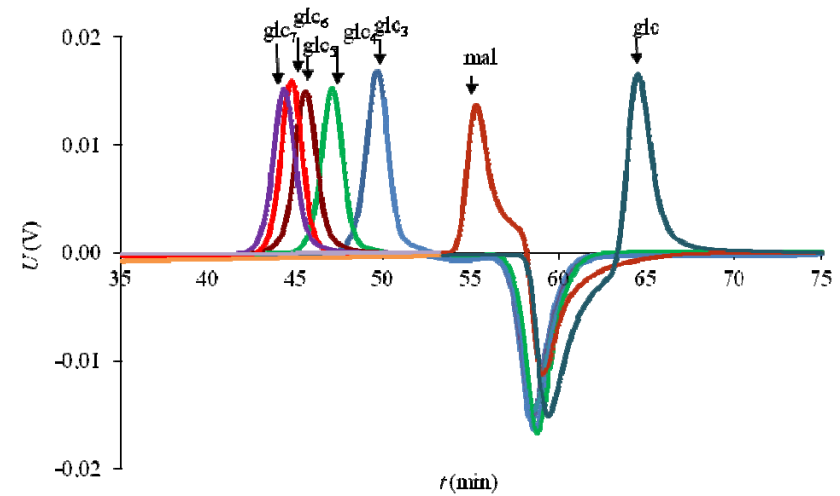
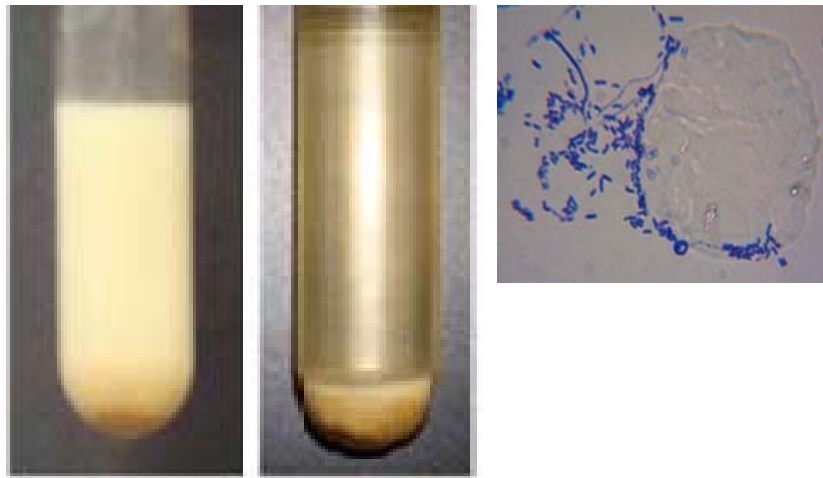
povezanost strukture i funkcije oksidaze D-aminokiselina (DAO) (3)



povezanost strukture i funkcije oksidaze D-aminokiselina (DAO) (4)



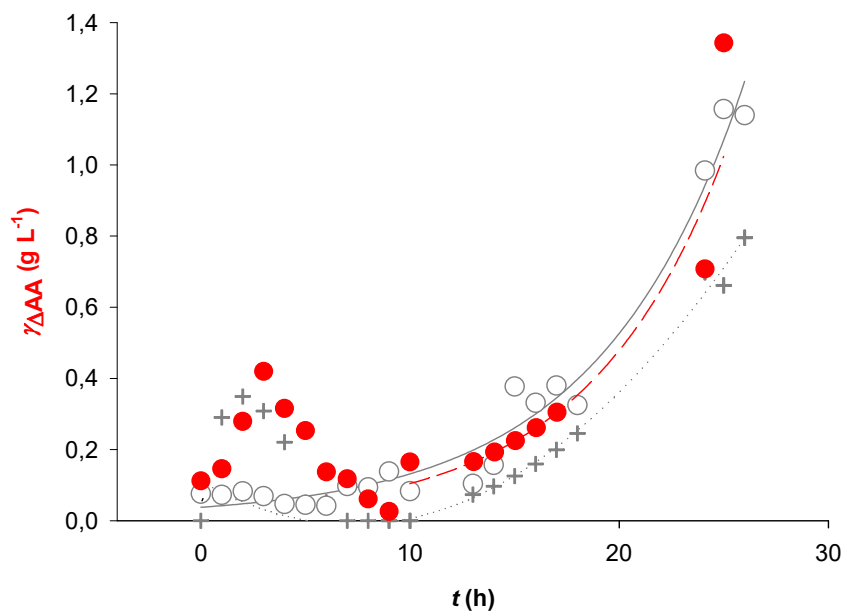
fiziologija bakterije *Lactobacillus amylovorus* DSM 20531^T (1) - hidrolitička aktivnost



Accession	Mass	Score	Description
1 gi151143455	3381	84	hypothetical protein Lpp126_18752, partial [Lactobacillus paracasei subsp. paracasei Lpp126]

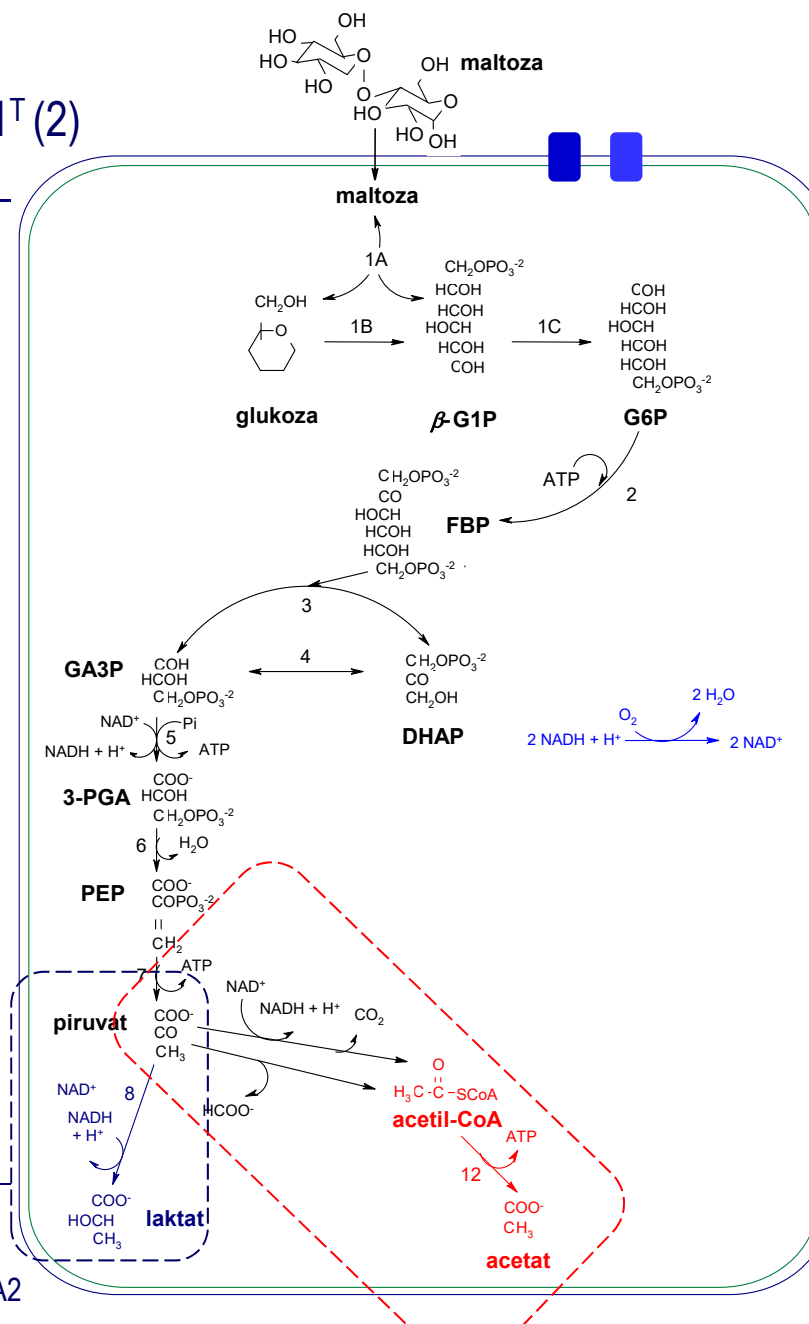
fiziologija bakterije *Lactobacillus amylovorus* DSM 20531^T (2)

- acetatni prekidač



- mutanti (1): transporteri (celobioza, ksiloza)

- mutanti (2): L-LDH i D-LDH, racemaza, amilaza





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Hvala za pozornost!

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