



IS Petnica

Marija Veljković



Mesto





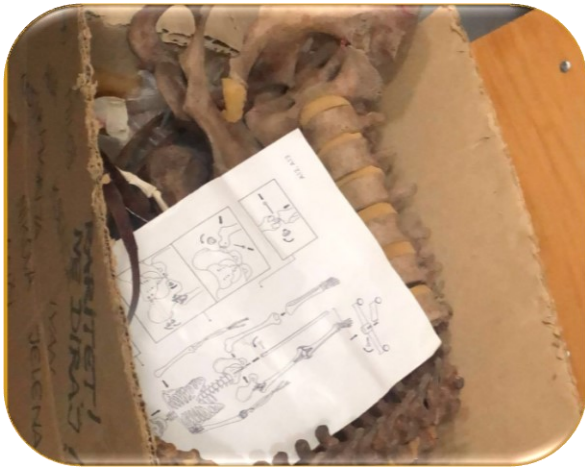
Team



Laboratorije



BIO LAB



Biblioteka



sci hub
to open science

save

Zhang, Z., & Smith, D. L. (2008). *Determination of amide hydrogen exchange by mass spectrometry: A new tool for protein structure elucidation*. *Protein Science*, 2(4), 522-531. doi:10.1002/pro.5560020404

10.1002/pro.5560020404

Determination of amide hydrogen exchange by mass spectrometry: A new tool for pr... 3 / 10 148%

524 Z. Zhang and D.L. Smith

Fig. 2. Microbore high-performance liquid chromatography system and associated apparatus used to admit peptides into the mass spectrometer for molecular weight analysis.

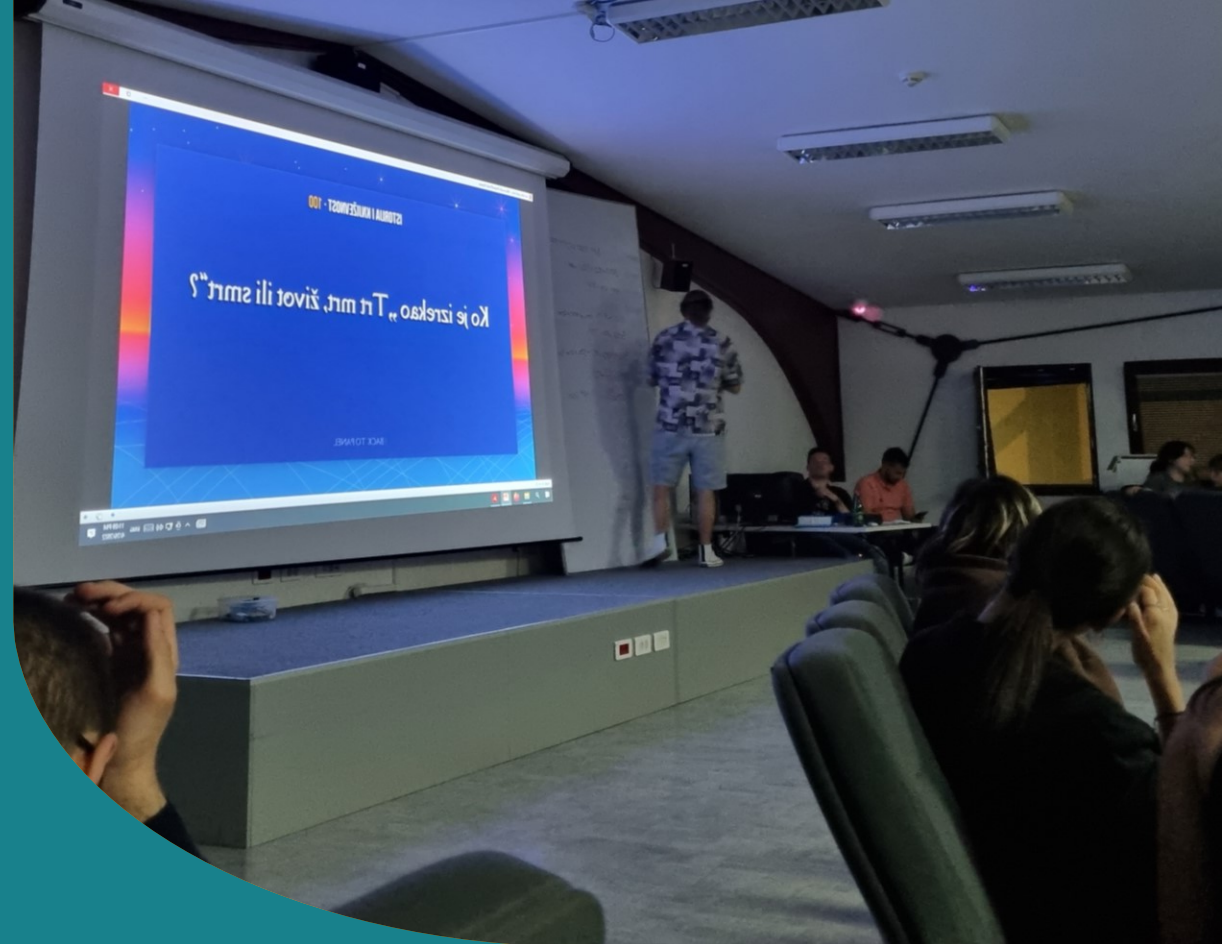
exchange. For the present conditions, (two peptides derived from the N-terminus (including residues 1-36) and seven peptides from the C-terminus (including residues 67-104)) will be used to illustrate the method. These peptides are identified in Table 1.

Quantification of peptide amide deuterium

As peptides elute from the reversed-phase HPLC column, they are transmitted to the FABMS probe tip where they are desorbed with high energy xenon atoms and analyzed by mass spectrometry to determine their molecular weights (MH⁺). Typical FAB mass spectra of the 95-104 segment of cytochrome c after (1) no incubation in D₂O, (2) complete deuteration are presented in Figure 3. Each of the molecular ion patterns in Figure 3 have contributions from the natural abundance of isotopes (¹³C, etc.) and an excess of deuterium. Although the mass spectrum presented in Figure 3A is for cytochrome c that was not incubated in D₂O, the peptides have an excess of deuterium because the digestion was performed in a mixture of H₂O and D₂O. Hence, a small number of deuterons were both gained and lost by the peptides during the 10-min digestion. Although HPLC conditions have been chosen to minimize hydrogen exchange, deuterated peptides lose some peptide amide deuterons during HPLC separation. The deuterium content of the peptide comprising residues 95-104 was determined from the centroid of the

Aktivnosti

-pab kviz
-mafija



- FOOD -

