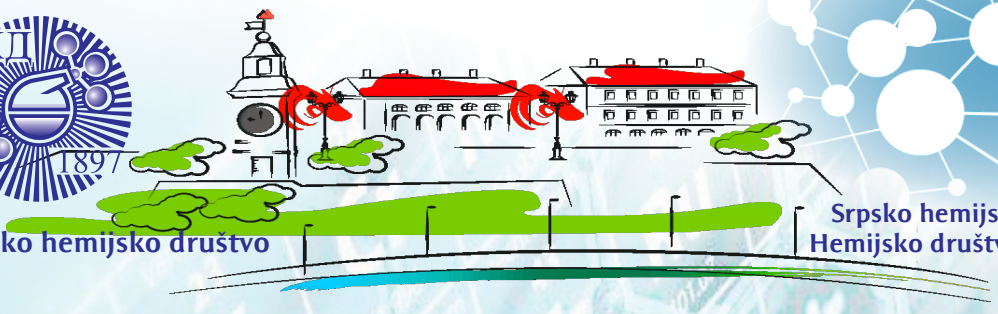

Srpsko hemijsko društvo

Srpsko hemijsko društvo
Hemijsko društvo Vojvodine

55. savetovanje Srpskog hemijskog društva

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Posttranslacione modifikacije (PTM) epitopa glavnih alergena kikirikija nastale kao rezultat prečišćavanja

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Alergije na kikiriki su zastupljene kod velikog procenta svetske populacije, i mogu izazvati kako blage tako i ozbiljne simpotome. Ara h 1, Ara h 2, Ara h 3 i Ara h 6 su alergeni kikirikija sa dobro okarakterisanim IgE epitoplima, ali se malo zna o uticaju PTM na njihove osobine. Naš cilj je bio da proučimo PTM koje se nalaze na epitopima pomenutih prečišćenih proteina korišćenjem bottom-up metoda u proteomici.
Najveći broj modifikacija sadrži Ara h 2 (14), dok se kao najčešće javljaju hidroksilacija Pro, dehidratacija i deamidacija (N, Q). Naši rezultati su pokazali da epitopi alergena kikirkija jesu nosioci PTM, koje bi mogle da utiču na njihovu alergenost i digestibilnost. U cilju boljeg razumevanja potencijalnih uticaja modiikacija na alergenost neophodno je detljnije proučiti ovaj fenomen i na drugačije pripremljenim ekstraktima kikirikija.

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Post-translational modifications (PTMs) of major peanut allergen epitopes occurring as a result of purification process

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Peanut allergy affects a large portion of world population causing reactions ranging from mild to severe. Seed storage proteins Ara h 1, Ara h 2, Ara h 3 and Ara h 6 are peanut allergens, with well characterized IgE epitopes but little is known about PTMs effect on their properties. Our aim was to investigate PTMs present on known epitopes of said purified proteins using bottom-up proteomcs methods.
Out of the 4 allergens, Ara h 2 has the highest number of PTMs (14), while the most common are hydroxylation Pro, dehydration and deamidation (N, Q). Peanut allergen epitopes are indeed carriers of PTMs that could affect protein allergenicity and digestibility. Further investigation on peanut extracts prepared in different ways is necessary in order to fully understand the impact protein modifications could have on their allergenic potential.

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