



New Technologies Research Group

Nano Biotechnology Department

Dr. Vahideh Valizadeh, Ph.D.

Position: Faculty Member

Rank: Assistant Professor

Education: Ph.D., Pharmaceutical Biotechnology, Pasteur Institute of Iran

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Research Interest(s)/ Specialization(s):

1. Protein Engineering
2. Strain Development
3. Nano carriers

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Publications:

Google Scholar: <https://scholar.google.com/citations?user=G8-VrIcAAAAJ&hl=en>

PubMed:

<https://pubmed.ncbi.nlm.nih.gov/?term=vahideh+valizadeh%5BAuthor%5D&sort>



<https://www.webofscience.com/wos/woscc/summary/45343a03-9754-4a64-b16d-55987a0fccf1-010f7c4c1a/relevance/1>

مسئولیت

عینا

/ / تاریخ

زیر

محتوای برعهده ایشان .

Brief Scientific Bio:

I have been fully engaged in research since 2011 when starting my MS project in the field of bacterial antibiotic resistance detection both by phenotypic (disc diffusion, MIC and E-test) and genotyping (PCR, Multiplex PCR) methods, especially focused on MRSA (Methicillin resistant *S. aureus*) strains. During my PhD degree in Biotechnology Research Center (BRC), Pasteur Institute of Iran in 2015, I was dealing with recombinant protein design, expression, purification and immunization techniques. I started my academic carrier in Nano-Biotechnology department in Pasteur Institute of Iran. The main subject of my research interest is related to pharmaceutical enzyme engineering in order to enhance their stability and activity (especially enzymes). In my research rout, I have learned valuable laboratory techniques including cell and bacterial culture systems, enzyme engineering and functional assays, vector and primer design, PCR, Real-time PCR, Overlap PCR, RFLP, Gene cloning, protein expression and purification techniques, HPLC, SDS-PAGE, Western blot, ELISA, IFAT and also handling, bleeding and injection of laboratory animals (immunization).

Currently, my research is mostly focused on engineering therapeutic or industrially important enzymes to tailor their structure in order enhancing their activity and stability. Moreover, immobilizing the target enzymes on / into the nanocarriers including nanofibers or niosomal gels is another field of my studies. During these researches the novel serratiopeptidase which is the truncated and modified form of the native enzyme has been designed with enhanced thermal stability and activity. The novel enzyme has been filed as US patent, recently (US11499145B2).