

Curriculum Vitae

Dr. Younes Ghasemi

Personal Information:

Younes Ghasemi, Pharm.D., Ph.D.

Professor at Department of Pharmaceutical Biotechnology

Shiraz University of Medical Sciences, P.O. Box 71468-64685, Shiraz, Iran.

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Educations:

2012-2013: Visiting Academic Scholar in Industrial Biotechnology and Bioprocessing, School of Chemical and Biomolecular Engineering, University of Sydney, Sydney, Australia.

2002-2003: Fellowship in Molecular Biotechnology, School of Molecular & Microbial Sciences, University of Queensland, Brisbane, Australia.

1997-2002: Ph. D, Department of Pharmaceutical Biotechnology, Faculty of Pharmacy, Tehran University of Medical Sciences, Tehran, Iran.

1991-1997: Pharm D, School of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran.

Academic Position:

- Assistant Professor, School of Pharmacy, Shiraz University of Medical Sciences, 2003-2007.
- Associate Professor, School of Pharmacy, Shiraz University of Medical Sciences, 2007-2011.
- Professor, School of Pharmacy, Shiraz University of Medical Sciences, 2011-present.

Honors:

- Highly Cited Researcher: Top 1% mostly cited scientists of the world, 2021 to present (ESI)
- Second Rank Winner: The 27th Razi Research Festival on Medical Sciences, Tehran, Basic Medical Sciences, awarded by the Vice President, 2022.
- h-index= 66 (Google Scholar), 58(Scopus)

- Member of the National Institute for Medical Research Development (NIMAD), Iran
- Member of the Pharmaceutical Biotechnology Board, Ministry of Health and Medical Education, Iran

Executive and Managerial Position:

- Head of Pharmaceutical Sciences Research Center, Shiraz University of Medical Sciences, 2006 to Present
- Vice-chancellor of Research and Technology, Shiraz University of Medical Sciences, Shiraz, Iran, 2018-2020
- Member of Pharmaceutical Biotechnology Specialty Board, Ministry of Health and Medical Education, Iran, 2010 to Present
- Chief-Editor of "Iranian Journal of Medical Sciences", 2019-2021
- Dean of Advanced Medical Sciences and Technology School, Shiraz University of Medical Sciences, 2015-2018
- Head of Biotechnology Incubator, Shiraz University of Medical Sciences, 2008-2021.
- CEO/Member of the board of two start-up companies
- CEO/Member of Health Accelerator

• **Supervision of theses and dissertations:**

- PharmD students 110; MSc students 25; PhD students 35

Research interests:

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- Bioprocess and Fermentation
 - Protein Purification
 - In Silico* Biotechnology
 - Nanobiotechnology
 - Probiotics & Prebiotics

Publications:

- Authored books and book chapters: 10
- Conference presentations/Abstracts: 285
- Gene Bank Insertions: 412
- Patents: 2
- Journal papers: 503 published papers (2003- 2023)

Selected publications (2019-2024):

- 1) Eskandarinia A, Morowvat M.H, Niknezhad S.V, Baghbadorani M.A, Michálek M, Chen S, Nemati M.M, Negahdaripour M, Heidari R, Azadi A, Ghasemi Y. A photocrosslinkable and hemostatic bilayer wound

dressing based on gelatin methacrylate hydrogel and polyvinyl alcohol foam for skin regeneration. **International Journal of Biological Macromolecules**. 2024, 266,131231

- 2) Hosseinpour-Soleimani F, Salmasi Z, Ghasemi Y, Tajbakhsh A, Savardashtaki A. MicroRNAs and proteolytic cleavage of receptors in cancers: A comprehensive review of regulatory interactions and therapeutic implications. **Heliyon** .2024,10, e28167
- 3) Abedi M, Ghasemi Y, Nemati M.M. Nanotechnology in toothpaste: Fundamentals, trends, and safety. **Heliyon**.2024, 10, e24949.
- 4) Emami M, Zomorodian K, Yazdanpanah S, Ghasemi Y, Mirzaei E, Derakhshan M.A. Multifunctional Bi-layer collagen nanofiber-collagen/PLLA/Zataria multiflora essential oil nanofiber for wound healing: Antibacterial, antifungal and antioxidant properties. **Journal of Drug Delivery Science and Technology**. 2024, 92, 105285.
- 5) Mohkam M, Nezafat N, Ghasemi Y. An in silico approach to de novo design of anti-microbial peptide from inspired Komodo dragon's original VK6 peptide. **International Journal of Data Mining and Bioinformatics**. 2024, 28, 18-39.

- 6) Rahbar M.R, Nezafat N, Morowvat M.H, Savardashtaki A, Ghoshoon M.B, Mehrabani-Zeinabad K, Ghasemi Y. Targeting Efficient Features of Urate Oxidase to Increase Its Solubility. **Applied Biochemistry and Biotechnology**. 2024, 196, 1-27.

- 7) Abedi M, Asadi M, Mehrzadeh M, Rahiminezhad Z, Ghasemi Y, Alimardani V. Two-Dimensional (2D)-Based Hybrid Composites for Cancer Diagnosis and Therapy. **Engineering Materials**. 2024, F2207, 295-327. (Book Chapter)

- 8) Asadi M, Soltani-Fard E, Vosough P, Hajighahramani N, Savardashtaki A, Nezafat N, Ghasemi Y. Designing a Self-Assembled Peptide Nano-vaccine Against Staphylococcus aureus: An In Silico Approach. **BioNanoScience**. 2024, 14

- 9) Mirmajidi S.H, Irajie C, Savardashtaki A, Nezafat N, Morowvat M.H, Ghasemi Y. Optimization of Spore Production in Bacillus coagulans Using Response Surface Methodology Approach. **Applied Biochemistry and Biotechnology**. 2024, 196,1-13

- 10) Nemati M.M, Abedi M, Ghasemi Y, Ashrafi H, Haghdel M. Formulation and evaluation of antioxidant and antibacterial activity of a peel-off facial masks moisturizer containing curcumin and Rosa Damascena extract. **Journal of Cosmetic Dermatology**.2024, 23

- 11) Ghoshoon N, Ghasemi Y, Jahandar H, Ghoshoon M.B, Nezafat N. Evaluation of Different Signal Peptides for Secretory Production of Recombinant Human Interferon-gamma: Bioinformatics Approach. **Letters in Drug Design and Discovery**. 2023, 20, 181-191
- 12) Moradbeygi F, Ghasemi Y, Farmani A.R, Hemmati S. Glucarpidase (carboxypeptidase G2): Biotechnological production, clinical application as a methotrexate antidote, and placement in targeted cancer therapy. **Biomedicine and Pharmacotherapy**. 2023, 166,115292
- 13) Karizak A.Z, Salmasi Z, Gheibihayat S.M, Asadi M, Ghasemi Y, Tajbakhsh A, Savardashtaki A. Understanding the regulation of "Don't Eat-Me" signals by inflammatory signaling pathways in the tumor microenvironment for more effective therapy. **Journal of Cancer Research and Clinical Oncology**, 2023, 149, 511-529
- 14) Mirmajid S.H, Irajie C, Savardashtaki A, Negahdaripour M, Nezafat N, Ghasemi Y. Identification of potential RapJ hits as sporulation pathway inducer candidates in *Bacillus coagulans* via structure-based virtual screening and molecular dynamics simulation studies. **Journal of Molecular Modeling**. 2023, 29, 256
- 15) Doostmohammadi M, Niknezhad S.V, Forootanfar H, Ghasemi Y, Jafari E, Adeli-Sardou M, Amirsadeghi A, Ameri A. Development of Ag NPs/allantoin loaded PCL/GEL electrospun nanofibers for topical wound treatment. **Journal of Biomaterials Applications**. 2023, 38, 692-706

- 16) Heydari M, Kalani M, Ghasemi Y, Nejabat M. The Effect of Ophthalmic and Systemic Formulations of *Lactobacillus sakei* on Clinical and Immunological Outcomes of Patients With Dry Eye Disease: A Factorial, Randomized, Placebo-controlled, and Triple-masking Clinical Trial. **Probiotics and Antimicrob Proteins**.2023,
- 17) Albaghlany R.M, Shahsavani M.B, Hoshino M , Moosavi-Movahedi A.A , Ghasemi Y , Yousefi R. Optimizing expression, purification, structural and functional assessments of a novel dimeric incretin (GLP-1cpGLP-1) . **Biochimie**. 2023,
- 18) Niknezhad S.V, Kianpour S, Jafarzadeh S., Alishahi M, Najafpour Darzi GH, Morowvat M.H, Ghasemi Y, Shavandi A. Biosynthesis of exopolysaccharide from waste molasses using *Pantoea* sp. BCCS 001 GH: a kinetic and optimization study. **Scientific Reports**. 2022, 12, 10128
- 19) Behmard E, Barzegari E, Najafipour S, Kouhpayeh A, Ghasemi Y, Asadi-Pooya A.A. Efflux dynamics of the antiseizure drug, levetiracetam, through the P-glycoprotein channel revealed by advanced comparative molecular simulations. **Scientific Reports**. 2022, 12, 13674
- 20) Kazemi A, Hemmati S, Morowvat M.H, Gholami A, Ghasemi Y. Isolation and screening of alpha-galactosidase-producing probiotics with anti-flatulence potential. **Minerva Biotechnology and Biomolecular Research**. 2022, 34, 122-130

- 21) Vakili B, Nezafat N, Negahdaripour M, Ghasemi Y. A structural vaccinology approach for in silico designing of a potential self-assembled nanovaccine against *Leishmania infantum*. **Experimental Parasitology**. 2022, 239, 108295
- 22) Vahedi F, Ghasemi Y, Atapour A, Zomorodian K, Ranjbar M, Monabati A, Nezafat N, Savardashtaki A. B-Cell Epitope Mapping from Eight Antigens of *Candida albicans* to Design a Novel Diagnostic Kit: An Immunoinformatics Approach. **International Journal of Peptide Research and Therapeutics**. 2022, 28, 110
- 23) Nayeri Rad A.H, Shams G, Avelar R.A, Morowvat M.H, Ghasemi Y. Potential senotherapeutic candidates and their combinations derived from transcriptional connectivity and network measures. **Informatics in Medicine Unlocked**. 2022, 30, 100920
- 24) Taghizadeh S, Savardashtaki A, Irajie C, Rahbar M.R, Ghasemi Y. Recombinant Expression and Antibacterial Properties of BmTXKS2 Venom Peptide in Fusion with GST. **International Journal of Peptide Research and Therapeutics**. 2022, 28, 1-7
- 25) Movahedpour A, Mostafavi-Pour Z, Sarkari B, Taheri-Anganeh M, Nezafat N, Savardashtaki A, Ghasemi Y. Designing a Multi-Epitope Antigen for Serodiagnosis of *Strongyloides stercoralis* Based on L3Nie. 01 and IgG Immunoreactive Epitopes. **Avicenna Journal of Medical Biotechnology**. 2022, 14, 114-124

- 26) Khorsand M, Khajeh S, Eslami M, Nezafat N, Ghasemi Y, Razban V, Mostafavi-Pour Z. Telmisartan anti-cancer activities mechanism through targeting N-cadherin by mimicking ADH-1 function. **Journal of Cellular and Molecular Medicine**.2022, 26, 2392-2403
- 27) Ghoshoon M.B, Raei M.J, Shabanpoor M.R, Sadeghian I, Ghasemi Y*. Whole cell immobilization of recombinant E. coli cells by calcium alginate beads; evaluation of plasmid stability and production of extracellular L-asparaginase. **Separation Science and Technology** . 2022, 57, 2836-2842
- 28) Mosaddeghi P, Eslami M, Farahmandnejad M, Mobasheri M, Ghasemi Y*. A systems pharmacology approach to identify the autophagy-inducing effects of Traditional Persian medicinal plants. **Scientific Reports**. 2021, 11, 336
- 29) Abdollahi S, Morowvat M.H, Savardashtaki A, Irajie C, Najafipour S, Ghasemi Y. Evaluating Five Escherichia coli Derivative Strains as a Platform for Arginine Deiminase Overproduction. **Recent Patents on Biotechnology**. 2022, 16, 174-183
- 30) Aghaleh M, Rafiee A., Morowvat M.H, Ghasemi Y. Evaluating the cytotoxicity of single-walled and multi-walled carbon nanotubes as a scaffold for human chondrocyte stem cell precursors and optimizing the operational conditions. **Materials Today Communications**. 2021, 29, 102979

- 31) Rezaei M., Ghasemi Y., Sharifan A., Bakhoda H. Optimization and modeling of gamma aminobutyric acid (gaba) extraction conditions from lactobacillus brevisibrc10818 affected by heat shock by response surface methodology. **Journal of Food Science and Technology (Iran)**. 2021, 18, 167-179
- 32) Montazeri-Najafabady N, Ghasemi Y, Dabbaghmanesh M.H, Abootalebi S.N, Gholami A. Exploring the bone sparing effects of postbiotics in the post-menopausal rat model. **BMC Complementary Medicine and Therapies**. 2021, 21, 155.
- 33) Bagheri A, Nezafat N, Eslami M, Ghasemi Y, Negahdaripour M. Designing a therapeutic and prophylactic candidate vaccine against human papillomavirus through vaccinomics approaches. **Infection, Genetics and Evolution**. 2021, 95, 105084
- 34) Farahi E, Mokhtari M.J, Ghasemi Y, Nezafat N. Designing a novel multi-epitope vaccine against htlv-1 related adult t-cell leukemia/lymphoma: An in silico approach. **Current Proteomics**. 2021, 18, 310-325
- 35) Amirsadeghi A, Jafari A, Hashemi S.S, Kazemi A, Ghasemi y, Derakhshanfar A, Shahbazi M.A, Niknezhad S.V. Sprayable antibacterial Persian gum-silver nanoparticle dressing for wound healing acceleration. **Materials Today Communications**. 2021, 27, 102225.
- 36) Taghizadeh S.M, Morowvat M.H, Negahdaripour M, Ebrahiminezhad A, Ghasemi Y. Biosynthesis of Metals and Metal Oxide Nanoparticles Through Microalgal Nanobiotechnology: Quality Control Aspects. **BioNanoScience**. 2021, 11, 209-226.

- 37) Safari F, Farajnia S, Ghasemi Y, Zarghami N, Mowahed M.B. Multiplex genome editing in Chinese hamster ovary cell line using all-in-one and HITI CRISPR technology. **Advanced Pharmaceutical Bulletin**. 2021, 11, 343-350.
- 38) Ashrafi H, Azadi A, Mohammadi-Samani S, Ghasemi Y, Daneshamouz S. Fatty acid-peptide-bioconjugated micellar nanocarrier as a new delivery system for l-asparaginase: multi-criteria optimization, characterization, and pharmacokinetic study. **Colloid and Polymer Science**. 2021, 299, 153-164.
- 39) Mehrpour K, Mirzaei SA, Savardashtaki A, Nezafat N, Ghasemi Y*. Designing an HCV diagnostic kit for common genotypes of the virus in Iran based on conserved regions of core, NS3-protease, NS4A/B, and NS5A/B antigens: an in silico approach. **Biologia**. 2021, 76, 281-296.
- 40) Khajeh S, Eslami M, Nezafat N, Ghasemi Y, Razban V. Surveying FDA-approved drugs as new potential inhibitors of N-cadherin protein: a virtual screening approach. **Structural Chemistry**. 2020, 31, 2355-2369
- 41) Owji H, Eslami M, Nezafat N, Ghasemi Y*. In Silico Elucidation of Deleterious Non-synonymous SNPs in SHANK3, the Autism Spectrum Disorder Gene. **Journal of Molecular Neuroscience**. 2020, 70, 1649-1667
- 42) Zarei M, Rahbar MR, Nezafat N, Negahdaripour M, Morowvat MH, Ghasemi Y*. Computational analysis of arginine deiminase sequences to provide a guideline for protein engineering. **Current Proteomics**. 2020, 17, 132-146.

- 43) Yari M, Ghoshoon MB, Nezafat N, Ghasemi Y. Experimental Evaluation of In Silico Selected Signal Peptides for Secretory Expression of Erwinia Asparaginase in Escherichia coli. **International Journal of Peptide Research and Therapeutics** 2020, 26, 1583-1591.
- 44) Gholami A, Emadi F, Nazem M, Aghayi R, Khalvati B, Amini A, Ghasemi Y. Expression of key apoptotic genes in hepatocellular carcinoma cell line treated with etoposide-loaded graphene oxide. **Journal of Drug Delivery Science and Technology** . 2020, 57, 101725
- 45) Shahryari Z, Fazaelpoor MH, Shaabani MH, Ghasemi Y*. Production of fungal phytase in an innovative trickle bed bioreactor. **Waste and Biomass Valorization**. 2020, 11, 3273-3280.
- 46) Chahardahcherik M, Ashrafi M, Ghasemi Y, Aminlari M. Effect of chemical modification with carboxymethyl dextran on kinetic and structural properties of L-asparaginase. **Analytical Biochemistry**. 2020, 591, 113537
- 47) Vakili B, Nezafat N, Zare B, Erfani N, Akbari M, Ghasemi Y*, Rahbar M, Hatam, GR. A new multi-epitope peptide vaccine induces immune responses and protection against Leishmania infantum in BALB/c mice. **Medical Microbiology and Immunology**. 2020, 209, 69-79.

- 48) Morowvat MH, Ghasemi Y. Effects of sulfur starvation on growth rates, biomass and lipid contents in the green microalga *scenedesmus obliquus*. **Recent Patents on Biotechnology**. 2020, 14, 145-153.
- 49) Mahmoodi S, Nezafat N, Ghasemi Y. Phage display as a bio-technique for cancer immunotherapy. **Letters in Drug Design and Discovery**. 2020, 17, 377-385.
- 50) Mohammadi A, Niazi A, Ara, F, Hassani F, Ghasemi Y. Transformation of the L-Asparaginase II Gene to Potato Hairy Roots for Production of Recombinant Protein. **Journal of Crop Science and Biotechnology**. 2020, 23, 81-88.
- 51) Naeli P, Yousefi F, Ghasemi Y, Savardashtaki A, Mirzaei H. The role of microRNAs in lung cancer: Implications for diagnosis and therapy. **Current Molecular Medicine**. 2020, 20, 90-101.
- 52) Zarei M, Rahbar MR, Negahdaripour M, Morowvat MH, Nezafat N, Ghasemi Y*. Cell penetrating peptide: Sequence-based computational prediction for intercellular delivery of arginine deiminase. **Current Proteomics**. 2020, 17, 117-131.
- 53) Negahdaripour M, Nezafat N, Heidari R, Erfani N, Hajighahramani N, Ghoshoon MB, Shoolian E, Rahbar MR, Najafipour S, Dehshahri A, Morowvat MH, Ghasemi Y*. Production and preliminary in vivo evaluations of a novel in silico-designed I2-based potential HPV vaccine. **Current Pharmaceutical Biotechnology**. 2020, 21, 316-324.

- 54) Taghizadeh SM, Ebrahiminezhad A, Ghoshoon MB, Dehshahri A, Berenjian A, Ghasemi, Y. Magnetic immobilization of pichia pastoris cells for the production of recombinant human serum albumin. **Nanomaterials**. 2020, 10, 111
- 55) Kianpour S, Ebrahiminezhad A, Heidari A, Khalvati B, Shahbazi M, Negahdaripour M, Mohkam M, Aghaei R, Berenjian A, Niknejad V, Ghasemi Y*. Enterobacter sp. Mediated Synthesis of Biocompatible Nanostructured Iron-Polysaccharide Complexes: a Nutritional Supplement for Iron-Deficiency Anemia. **Biological Trace Element Research**. 2020, 198, 744-755.
- 56) Yari M, Eslami M, Ghoshoon MB, Nezafat N, Ghasemi Y. Decreasing the immunogenicity of Erwinia chrysanthemi asparaginase via protein engineering: computational approach. **Molecular Biology Reports**. 2019 45, 4751-4761.
- 57) Rahbar MR, Zarei M, Nezafat N, Negahdaripour M, Ghasemi Y*. In silico defining the repeat-containing proteins in the Acinetobacter baumannii proteome, a great reservoir of templates for synthetic biology. **Current Chemical Biology**. 2019, 13, 149-158.
- 58) Mahmoodi S, Nezafat N, Negahdaripour M, Ghasemi Y*. A new approach for cancer immunotherapy based on the cancer stem cell antigens properties. **Current Molecular Medicine**. 2019, 19, 2-11.

- 59) Hajighahramani N, Eslami M, Negahdaripour M, Ghoshoon MB, Dehshahri A, Erfani N, Heidari R, Gholami A, Nezafat N, Ghasemi Y*. Computational design of a chimeric epitope-based vaccine to protect against *Staphylococcus aureus* infections. **Molecular and Cellular Probes**. 2019, 46, 1-12.
- 60) Niknezhad V, Najafpour Gh, Kianpour S, Jafarzadeh S, Mohammadi H, Ghasemi Y, Heidari R, Shahbazi. Bacteria assisted biogreen synthesis of radical scavenging exopolysaccharide-Iron complex: An oral nano-sized nutritional supplement with high in vivo compatibility. **Journal of Materials Chemistry**. 2019, 7, 5211-5221.
- 61) Mohammadi F, Nezafat N, Berenjian A, Negahdaripour M, Zamani M, Ghoshoon MB, Morowvat MH, Hemmati S, Ghasemi Y*. Extracellular production of a potent and chemical resistant nattokinase in immobilized *Escherichia coli* using response surface methodology. **Current Pharmaceutical Biotechnology**. 2019, 19, 856-868.
- 62) Rahbar MR, Zarei M, Jahangiri A, Khalili S, Nezafat N, Negahdaripour M, Fattahian Y, Ghasemi Y*. Trimeric autotransporter adhesins in *Acinetobacter baumannii*, coincidental evolution at work. **Infection, Genetics and Evolution**. 2019, 25, 116-127.
- 63) Zarei M, Rahbar MR, Morowvat MH, Nezafat N, Negahdaripour M, Berenjian A, Ghasemi Y*. Arginine deiminase: current understanding and applications. **Recent Patent on Biotechnology**. 2019, 13,124-136.

- 64) Mosaddeghi P, Nezafat N, Negahdaripour M, Eslami M, Ghasemi Y*. Targeting negative regulators of TRIF-dependent TLR signaling pathway as a novel therapeutic strategy. **Current Signal Transduction Therapy**. 2019, 14, 1-7.
- 65) Taghizadeh S, Alimardani V, Roudbali PL, Ghasemi Y. Gold nanoparticles application in liver cancer. **Photodiagnosis and Photodynamic Therapy**. 2019, 25, 389-400.
- 66) Rahmatabadi SS, Sadeghian I, Ghasemi Y, Sakhteman A, Hemmati S. Identification and characterization of a sterically robust phenylalanine ammonia-lyase among 481 natural isoforms through association of in silico and in vitro studies. **Enzyme and Microbial Technology**. 2019, 122, 36-54.
- 67) Davani-Davari D, Negahdaripour M, Karimzadeh I, Seifan M, Mohkam M, Masoumi SJ, Berenjian A, Ghasemi Y*. Prebiotics: Definition, types, sources, mechanisms, and clinical applications. **Foods**. 2019, 8, 1-27.
- 68) Baghban R, Farajnia S, Rajabibazl M, Ghasemi Y, Mafi AA, Hoseinpoor R, Rahbarnia L, Aria M. Yeast expression systems: overview and recent advances. **Molecular Biotechnology**. 2019, 61, 365-384.

- 69) Negahdaripour M, Owji H, Eslami M, Zamani M, Vakili B, Sabetian S, Nezafat N, Ghasemi Y*. Selected application of peptide molecules as pharmaceutical agents and in cosmeceuticals. **Expert Opinion on Biological Therapy**. 2019, 19, 1275-1287.