

*Sara Rasoul-Amini* ; [rasoulamini@sums.ac.ir](mailto:rasoulamini@sums.ac.ir); *H-index: 19*;

Pharm D

PhD in Medicinal / Pharmaceutical Chemistry;

Second affiliated in the **department of nanomedicine**, School of Novel Sciences and Technologies, SUMS.

Associate Professor, Department of Medicinal Chemistry, Shiraz School of Pharmacy, SUMS

Responsible for **Electronic Learning** in Shiraz School of Pharmacy, SUMS

**Research Courses:**

**Sabbatical** in School of Pharmacy, University of Queensland, Australia: focused on rearrangement synthesis of carbohydrates; solid phase peptide synthesis, and conjugation of **carbo-lipo-peptide** for “*Drug Delivery*” modifications: **2002-2003**.

**Research Fellowship Granted from Australian Government:** School of Chemistry, University of Sydney, Australia: focused on design and synthesis of **peptides and cyclopeptides (Vaccine Peptides)**: **2012-2013**.

**Research Fields:**

**Teaching Fields:**

**General Chemistry** (Theory & practical);

**Organic Chemistry** (Theory & Practical);

**Advanced Organic Chemistry** for PhD students: peptide synthesis;

**Analytical Chemistry** (Theory & practical);

**Medicinal Chemistry** for PharmD students;

**Advanced Medicinal Chemistry** for PhD students in Medicinal Chemistry;

**Cell Culture** (Theory & Practical) for PhD students in Pharmaceutical Biotechnology;

**Protein Chemistry** for PhD students in Pharmaceutical Biotechnology;

**Instrumental Analysis** for PharmD, master and PhD students;

**Community Pharmacy training** for pharmD students: responsible for topics including: **Chemotherapeutic Agents**; Vitamins and Supplements; Blood Affecting Drugs; Antibacterial, Antifungal & Antiviral drugs;

**Nanomedicine** for master students in nanomedicine;

**Nanotechnology** for master students in nanomedicine.

**Running Projects:**

**Post Doc project:** titled as: **Design, synthesis ,evaluation of DNA interaction and primary cytotoxicity based on MTT for some ureidoquinolines**. started in 2018.

**Three NIMAD grants** titled as:

**1- Design, Synthesis, Biophysical Studies on Possible DNA Interaction and Primary Screening of Cytotoxicity of Some Aryl-Linkers Ending to Nitrogen:** started in 2018.

**2- Design, synthesis and DNA topoisomerase inhibition for some bis-aryl-alkanes:** started in 2018.

**3- Design, Synthesis, and Primary In Vitro Studies for Some Aryl-Linker-Amino Acids as DNA and DNA Topoisomerase Interacting Cytotoxic Agents:** started in 2019.

**Memberships:**

Medical Council Organization of Iran: 2000-present;

**Board in Medicinal/Pharmaceutical Chemistry**, Ministry of Health and Education of Medical Sciences, Iran: Feb 2017-present;

**Board in Medical Nanotechnology**, Ministry of Health and Education of Medical Sciences, Iran: Jun2019-present;

**Medical Education Group in Academy of Medical Sciences:**2018-present.

**Book Chapter:**

- Ghasemi Y., *Rasoul-Amini S.*, Morowvat M.H. Algae for the Production of SCP, Chapter (VII), in Bioprocess Sciences and Technology. 2011: 1<sup>st</sup> Edition, Nova Press, New York, USA.

**Book translation:**

- *Rasoul-Amini S.*, Dabbagh S., Vosough F., Parhizgar E., Vakilnejad M. Computational Drug Design, by David C. Young. **2012: 1<sup>st</sup> Edition**, Jame-Negar Publication, Tehran, Iran; **2019: 2<sup>nd</sup> Edition**.

**Nucleotide Sequences published at Pub Med(NCBI): 103 cases.**

**Publications:**

1. Khalaj A., Abdollahi M., Kebriaeezade A., Adibpour N.; Pandi Z., **Rasoul-Amini S.** The antinociceptive and antiinflammatory activities and lack of ulcerogenicity of a bezodioxine-4-one and its analogous benzoxazines as cyclic acetal-like derivatives of salicylic acid and salicylamide in mice and rats. **Indian Journal of Pharmacology.** 2002; 34(3):184-188.
2. Mc Geary R.P., **Rasoul-Amini S.**, Tang V. and Toth I. Nucleophilic substitution reactions of pyranose polytosylates. **Journal of Organic Chemistry.** 2004; 69: 2727-30.
3. **Rasoul-Amini S.**, Khalaj A., Shafiee A., Daneshtalab M., Madadkar Sobhani A., Fouladdel S., Azizi E. Anti-tumor activity of new quinoline derivatives in human breast cancer T47D cells. **International Journal of Cancer Research.** 2006; 2(2):102-08.
4. Madadkar Sobhani A., **Rasoul-Amini S.**, Tyndall J.D. A., Azizi E., Daneshtalab M., Khalaj A. A Theory of Mode of Action of Azolylalkylquinolines as DNA Binding Agents Using Automated Flexible Ligand Docking. **Journal of Molecular Modeling and Graphics.** 2006; 25:459-69.
5. Ghasemi Y., **Rasoul-Amini S.**, Morowvat M.H., Moasavi Azam S.B., Shokravi S., Mohagheghzadeh A., Ghoshoon M.B., Rae M.J. Bioconversion of hydrocortisone by unicellular microalgae *Oocystis pusilla*. **Biotechnology.** 2008; 7(2), 293-8.
6. Ghasemi Y., **Rasoul-Amini S.**, Morowvat M.H., Ghoshoon M.B., Rae M.J., Nouri F., Negintaji N., Parvizi R. Characterization of hydrocortisone biometabolites and 18S rRNA gene in *Chlamydomonas reinhardtii* cultures. **Molecules.** 2008; 13 (10): 2416-2425.
7. Ghasemi Y., Ebrahiminezhad A., **Rasoul-Amini S.**, Zarrini G., Ghoshoon M.B., Rae M.J., Morowvat M.H., Kafilzadeh F., Kazemi F. An optimized medium for screening L-asparaginase producing *Escherichia coli*. **American Journal of Biochemistry and Biotechnology.** 2008; 4 (4): 422-424.
8. Ghasemi Y., Mohagheghzadeh A., Moshavash M., Ostovan Z., **Rasoul-Amini S.**, Morowvat M.H., Ghoshoon MB, Rae MJ, Mosavi-Azam SB. Biotransformation of monoterpenes by *Oocystis pusilla*. **World Journal of Microbiology and Biotechnology.** 2009; 25: 1301-1304.
9. **Rasoul-Amini S.**, Ghasemi Y, Morowvat MH, Mohagheghzadeh A. PCR amplification of 18S rRNA, Single Cell Protein production and fatty acid evaluation of some naturally isolated microalgae. **Food Chemistry.** 2009; 116: 129-136.
10. Ghasemi Y., **Rasoul-Amini S.**, Morowvat M.H., Ghoshoon M.B., Rae M.J., Khoubani S., Negintaji N., Nouri F., Shokravi S. C-20 Ketone Reduction of Hydrocortisone by a rice field microalga *Chlorella vulgaris* MCCS 013. **Chemistry of Natural Compounds.** 2009; 45: 824-825.
11. Morowvat M.H., **Rasoul-Amini S.**, Ghasemi Y. *Chlamydomonas* as a new organism for biodiesel production. **Bioresource Technology.** 2010; 101: 1-5.
12. **Rasoul-Amini S.**, Ghasemi Y., Morowvat M.H., Ghoshoon M.B., Rae M.J., Moasavi-Azam M.B., Shokravi S., Montazeri-Najafabady N., Nouri F., Parvizi R., Negintaji N., Khoubani S. Characterization of hydrocortisone bioconversion and 16S rRNA gene in *Synechococcus nidulans* cultures. **Applied Biochemistry and Microbiology.** 2010; 46: 191-197.
13. Ghasemi Y., Mohagheghzadeh A., Ostovan Z., Moshavash M., **Rasoul-Amini S.**, Morowvat M.H. Biotransformation of some monoterpenoid ketones by *Chlorella vulgaris* MCCS 012. **Chemistry of Natural Compounds.** 2010; 46 (5): 734-737.

**Publications(Continued):**

14. Ghasemi Y., **Rasoul-Amini S.**, Ebrahiminezhad A., Zarrini G., Kazemi A., Mousavi-Khorshidi S., Ghoshoon M.B., Raei M.J. Halotolerant amylase production by a novel bacterial strain, *Rheinheimera aquimaris*. **Research Journal of Microbiology**, 2010; 5: 144-9.
15. Naseri T.A., **Rasoul-Amini S.**, Morowvat M.H., Ghasemi Y. Single cell protein: Production and process. **American Journal of Food Technology**. 2011; 6: 103-116.
16. **Rasoul-Amini S.**, Montazeri-Najafabady N., Mobasher M.A., Hoseini-Alhashemi S., Ghasemi Y. *Chlorella* sp.: A new strain with highly saturated fatty acids for biodiesel production in bubble-column photobioreactor. **Applied Energy**. 2011; 88:1-4.
17. Ebrahiminezhad A., **Rasoul-Amini S.**, Ghasemi Y. L-asparaginase production by moderate halophilic bacteria isolated from Maharloo salt lake. **Indian Journal of Microbiology**. 2011; 51: 307-311.
18. **Rasoul-Amini S.**, Fotooh-Abadi E, Ghasemi Y. Biotransformation of monoterpenes by immobilized microalgae. **Journal of Applied Phycology**. 2011; 23: 975-81.
19. Ghasemi Y., **Rasoul-Amini S.**, Fotooh-Abadi E. The Biotransformation, biodegradation, and bioremediation of organic compounds by Microalgae. **Journal of Phycology**. 2011; 47: 969-980.
20. Ghasemi Y., **Rasoul-Amini S.**, Kazemi A., Zarrini G., Morowvat M.H., Kargar M. Isolation and Characterization of some moderately halophilic bacteria with lipase activity. **Microbiology**. 2011; 80(4):483-7.
21. Ghasemi Y., Shahbazi M., **Rasoul-Amini S.**, Kargar M., Safari A., Kazemi A., Montazeri-Najafabady N. Identification and characterization of feather degrading bacteria from keratin rich wastes. **Annals of Microbiology**. 2011- In press (published online in Jul 2011).
22. Ghasemi Y., **Rasoul-Amini S.**, Naseri A. T., Montazeri-Najafabady N., Mobasher M.A., Dabbagh F. Microalgae Biofuel Potentials (Review). **Applied Biochemistry and Microbiology**. 2012; 48(2):124–142.
23. Ghasemi Y., Mohkam M., Ghasemian A., **Rasoul-Amini S.** Experimental design of medium optimization for invertase production by *Pichia* sp. **Journal of Food Sciences and Technology**. 2012: In press.
24. Ghasemi Y., Shahbazi M., **Rasoul-Amini S.**, Kargar M., Safari A., Kazemi A., Montazeri-Najafabady N. Identification and characterization of feather degrading bacteria from keratin rich wastes. **Annals of Microbiology**. 2012; 62: 737-747.
25. Ghasemi Y., Dabbagh F., **Rasoul-Amini S.**, Borhani-Haghighi A., Morowvat M.H. The possible role of HSPs on Behçet's disease: a bioinformatic approach. **Computers in Biology and Medicine**. 2012; 45: 1079-1085.
26. Ebrahiminezhad A., Ghasemi Y., **Rasoul-Amini S.**, Barar J, Davaran S. Impact of amino-acid coating on the synthesis and characteristics of iron-oxide nanoparticles (IONs). **Bulletin of the Korean Chemical Society**. 2012; 33: 3957-3962.
27. Ebrahiminezhad A., Davaran S., **Rasoul-Amini S.**, Barar J., Moghadam M., Ghasemi Y. Synthesis, Characterization and Anti-*Listeria monocytogenes* Effect of Amino Acid Coated Magnetite Nanoparticles. **Current Nanoscience**. 2012; 8(6): 868-874.
28. Ebrahiminezhad A, **Rasoul-Amini S**, Davaran S, Barar J, Ghasemi Y. Impacts of iron oxide nanoparticles on the invasion power of *Listeria monocytogenes*. **Bulletin of the Korean Chemical Society**. 2012; 33(12): 3357-62.

**Publications(Continued):**

29. Sadraeian M, Ghoshoon MB, Mohkam M, Karimi Z, **Rasoul\_amine S**, Ghasemi Y. Modification in media composition to obtain secretory production of STxB-based vaccines using *Escherichia coli*. *Virologica Sinica*. 2013; 28: 43-48.
30. Ebrahiminezhad A., Ghasemi Y., **Rasoul-Amini S.**, Barar B, Davaran S. Preparation of novel magnetic fluorescent nanoparticles using amino acids. *Colloids and Surfaces B: Biointerfaces*. 2013; 102: 534-539.
31. Soltani Rad M.N., Behrouz S., Movahedian A., Doroodmand M.M., Ghasemi Y., **Rasoul-Amini S.**, Ahmadi-Gandomani A., Rezaie R. Doped nano-sized copper(I) oxide (Cu<sub>2</sub>O) on melamine\_formaldehyde resin: a highly efficient heterogeneous nano catalyst for click synthesis of some novel 1H-1,2,3-triazole derivatives having antibacterial activity. *Helvetica Chimica Acta*. 2013; 96: 688-701.
32. Sadraeian M., **Rasoul-Amini S.**, Khoshnood M.J., Mohkam M., Ghoshoon M.B., Ghasemi Y. Induction of antitumor immunity against cervical cancer by protein HPV-16 E7 in fusion with Ricin B chain in tomur-bearing mice. *International Journal of Gynecological Cancer*. 2013; 23: 809-814.
33. Sadraeian M., Khoshnood M.J., Mohkam M., **Rasoul-Amini S.**, Hesaraki M., Ghasemi Y. Prevention and inhibition of TC-1 cell growth in tumor bearing mice by HPV16 E7 protein in fusion with shiga toxin B-subunit from *Shigella dysenteriae*. *Cell Journal*. 2013; 176-181.
34. Ghasemi, Y. , Mohkam, M., Ghasemian, A., **Rasoul-Amini, S.** Experimental design of medium optimization for invertase production by *Pichia* sp. *Journal of Food Science and Technology*. 2014; 51(2): 267-275.
35. Mobasher A., Ghasemi Y., Montazeri-Najafabady N., Ghasemian A., **Rasoul-Amini S.**, Hemmati S., Ebrahimi S. Two step production of optimized interferon beta 1b; A way to overcome its toxicity. *Journal of pure and Applied Microbiology*. 2014; 7(4): 2867-71.
36. Montazeri-Najafabady N, Ghasemi Y., Mobasher A., Ghasemian A., **Rasoul-Amini S.**, Ebrahimi S. Codon optimization, cloning and expression of interleukin 11 in two different *E. coli* systems. *Journal of pure and Applied Microbiology*. 2014; 7(4): 2717-22.
37. **Rasoul-Amini S.**, Mousavi P., Montazeri-Najafabady N., Mobasher M.A., Mousavi S.B., Vosough F., Dabbagh F., Ghasemi Y. Biodiesel properties of native strain of *Dunaliella Salina*. *International Journal of Renewable Energy Research*. 2014; 4(1): 39-41.
38. Kazemi A., **Rasoul-Amini S.**, Shahbazi M., Safari A., Ghasemi Y. Isolation, identification, and media optimization of high-level cellulase production by *Bacillus* sp. BCCS A3, in a fermentation system using response surface methodology. *Preparative Biochemistry and Biotechnology*. 2014; 44(2):107-118.
39. Ebrahiminezhad A., **Rasoul-Amini S.**, Ghoshoon M.B., Ghasemi Y. *Chlorella vulgaris*, a novel microalgal source for L-asparaginase production. *Biocatalysis and Agricultural Biotechnology*. 2014; 3(2): 214–217.
40. **Rasoul-Amini S.**, Montazeri-Najafabady N., Shaker S., Safari A., Kazemi A., Mousavi P., Mobasher M.A., Ghasemi Y. Removal of nitrogen and phosphorus from wastewater using microalgae free cells in bath culture system. *Biocatalysis and Agricultural Biotechnology*. 2014; 3(2): 126- 131.
41. Ebrahiminezhad A., Najafipour S., Kouhpayeh A., Berenjian A., **Rasoul-Amini S.**, Ghasemi Y. Facile fabrication of uniform hollow silica microspheres using a novel biological template. *Colloids and Surfaces B: Biointerfaces*. 2014; 118:249–253.

**Publications(Continued):**

42. **Rasoul-Amini S.**, Mousavi P., Montazeri-Najafabady N., Mobasher M.A., Mousavi S.B., Vosough F., Dabagh F., Ghasemi Y. Biodiesel properties of native strain of *Dunaliella Salina*. **International Journal of Renewable Energy Research**. 2014; 4(1): 39-41.

43. Gholami A., Mohkam M., **Rasoul-Amini S.**, Ghasemi Y. Industrial production of polyhydroxyalkanoates by bacteria: opportunities and challenges. **Minerva Biotechnologica**. 2014; *accepted: in press*.

44. Ebrahiminezhad A., **Rasoul-Amini S.**, Kouhpayeh A., Davaran S., Ghasemi Y. Impacts of amine functionalized iron oxide nanoparticles on HepG2 cell line. **Current Nanoscience**. 2015; 11(1):113-119.

45. Gholami A., **Rasoul-Amini S.**, Ebrahiminezhad A., Seradj S.H., Ghasemi Y. Lipoamino Acid Coated Superparamagnetic Iron Oxide Nanoparticles Concentration and Time Dependently Enhanced Growth of Human Hepatocarcinoma Cell Line (Hep-G2). **Journal of Nanomaterials** 2015; 9 Pages.

46. Gholami A., **Rasoul-Amini S.**, Ebrahiminezhad A., Abootalebi N., Niroumand U., Ebrahimi N., Ghasemi Y. Morphological, magnetic properties and antimicrobial effect of amino and amino and lipoamino acid coated iron oxide nanoparticles compared to naked magnetic nanoparticles. **Minerva Biotechnologica**. 2016; 28(4): 177-86.

47. Ebrahimi N., **Rasoul-Amini S.**, Ebrahiminezhad A., Ghasemi Y., Gholami A., Seradj H. Comparative Study on Characteristics and Cytotoxicity of Bifunctional Magnetic-Silver Nanostructures: Synthesized Using Three Different Reducing Agents. **Acta Metallurgica Sinica**. 2016; 29(4): 326-34.

48. Banihashemi M., Safari A., Mohkam M., Shaabani M.S., **Rasoul-Amini S.**, Ghasemi Y. Statistical medium optimization to increase rhamnolipid production by *Pseudomonas aeruginosa* sp.MB2. **Minerva Biotechnologica**. 2016; 28(4): 193-200.

49. Montazeri-Najafabady N., **Rasoul-Amini S.**, Mobasher M.A., Ghasemi Y. *Chroococcus disperses*: a novel unicellular cyanobacterium for biodiesel production. **Minerva Biotechnologica**. 2016; 28(3): 126-30.

50. Salehi S., **Rasoul-Amini S.**, Adib N., Shekarchi Y. Synthesis of molecular Imprinted polymer for selective extraction of domperidone from human Serum using HPLC with fluorescence detection. **Journal of Chromatography B**. 2016; 1027: 165-173.

51. Gholami A., Mohkam M., **Rasoul-Amini S.**, Ghasemi Y. Industrial production of polyhydroxyalkanoates by bacteria: opportunities and challenges. **Minerva Biotechnologica**. 2016; 28(1):59-74.

52. Mohkam M., **Rasoul-Amini S.**, Shokri D., Berenjian A., Rahimi F., Sadraei M., Khalvati B., Gholami A., Ghasemi Y. Characterization and in vitro probiotic assessment of potential indigenous *Bacillus* strains isolated from soil rhizosphere. **Minerva Biotechnologica**. 2016; 28(1):19-28.