

Atefe Rezaei
PhD in Food Science and Technology

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EDUCATION

2012-2016	PhD student in Food Science & Technology, Isfahan University of Technology, Isfahan, Iran	<p>Title of PhD Thesis:</p> <p>Investigation on Almond Gum Nanofiber Preparation Using Electrospinning as a Delivery System for Flavours</p> <p>Under supervision of Dr. Ali Nasirpour and Prof. Hossein Tavanaei and Dr. Milad Fathi</p>
2010-2012	M Sc. Student in Food Science & Technology, University of Tehran, Tehran, Iran	<p>Title of M Sc. Thesis:</p> <p>Optimization of shelf life of a functional drink based on fermented extract of Echium amoneum</p> <p>Under supervision of Prof. Seyed Mohammad Ali Ebrahimzadeh Mosavi and Prof. Faramarz Khodaeiyan and Prof. Zahra Emam Jomeh</p>
206-2010	B Sc. Degree in Food Science & Technology, Ramin University of Agriculture and Natural Resources, Ahwaz, Iran.	

EXPERIENCE

- Assistant Professor at the Department of Food Science and Technology, School of Nutrition and Food Science, Isfahan University of Medical Sciences, Isfahan, Iran. 2017 until now.
- Teaching food science courses in Isfahan University of Medical Sciences and Isfahan University of Technology.

RESEARCH INTERESTS

- Nanotechnology in food science and technology
- Encapsulation of food ingredients and bioactive compounds
- Delivery systems
- Food hydrocolloids
- Food formulation

HONORS AND AWARDS

- Recipient of the second rank student award among all undergraduate M Sc. students of Food Science and Technology Department, University of Tehran, Tehran, Iran, 2010-2012.
- Recipient of the first rank student award among all undergraduate B Sc. students of Agriculture Faculty, Ramin University of Agriculture and Natural Resources, Ahwaz, Iran, 2006-2010.

JOURNAL PUBLICATIONS

1. Bahrami, A., Delshadi, R., Cacciotti, I., Faridi Esfanjani, A., **Rezaei, A.**, Tarhan, O., Lee, C.C., Assadpour, E., Tomas, M., Vahapoglu, B., Capanoglu Guven, E., Williams, L., Jafari, S.M. **2022** Targeting foodborne pathogens via surface-functionalized nano-antimicrobials. *Advances in Colloid and Interface Science*. 302. 102622.
IF= 12.984
2. Amani, F., **Rezaei, A.**, Damavandi, M.S., Sedaghat Doost, A., Jafari, S.M. **2022**. Colloidal carriers of almond gum/gelatin coacervates for rosemary essential oil: characterization and in-vitro cytotoxicity. *Food chemistry*. 377. 131998.
IF=7.5
corresponding author
3. Salehi, O., Sami, M., **Rezaei, A.** **2021**. Limonene loaded cyclodextrin nanosponge: Preparation, characterization, antibacterial activity and controlled release, *Food Bioscience*, 42, 101193.
IF=4.24
corresponding author

4. Amani, F., Sami, M., **Rezaei, A.** 2021. Characterization and Antibacterial Activity of Encapsulated Rosemary Essential Oil within Amylose Nanostructures as a Natural Antimicrobial in Food Applications. *Starch*, 73, 2100021.

IF=2.741

corresponding author

5. **Rezaei, A.**, Khavari, S., Sami, M. 2021. Incorporation of thyme essential oil into the β -cyclodextrin nanosponges: Preparation, characterization and antibacterial activity. *Journal of Molecular Structure* ,1241, 130610.

IF= 3.196

First author and corresponding author

6. Rashidinejad, A., Tarhan, O., **Rezaei, A.**, Capanoglu, E., Boostani, S., Khoshnoudi-Nia, S., Samborska, K., Garavand, F., Shaddel, R., Akbari-Alavijeh, S & Jafari, S.M. 2021. Addition of milk to coffee beverages; the effect on functional, nutritional, and sensorial properties. *Critical Reviews in Food Science and Nutrition*, DOI: 10.1080/10408398.2021.1897516.

IF=11.176

7. Rashidinejad, A., Boostani, S., Babazadeh, A., Rehman, A., **Rezaei, A.**, Akbari-Alavijeh, S., Shaddel, R., Jafari, S.M. 2021. Opportunities and challenges for the nanodelivery of green tea catechins in functional foods. *Food Research International*, 142, 110186.

IF= 6.475

8. Rashidinejad, A., Bahrami, A., Rehman, A., **Rezaei, A.**, Babazadeh, A., Singh , H & Jafari, S.M. 2020. Co-encapsulation of probiotics with prebiotics and their application in functional/synbiotic dairy foods. *Critical Reviews in Food Science and Nutrition*, 30, 1-25. DOI: 10.1080/10408398.2020.1854169. **IF=11.176**

9. **Rezaei, A.**, Varshosaz, J., Fesharaki, M., Farhang, A., Jafari, S.M. 2019. Improving the solubility and in vitro cytotoxicity (anticancer activity) of ferulic acid by loading it into cyclodextrin nanosponges. *International Journal of Nanomedicine*, 14, 4589-4599.

First author and corresponding author

IF=6.4

10. **Rezaei, A.**, Nasirpour, A. 2019. Evaluation of release mechanisms and kinetics of curcumin and curcumin- β -cyclodextrin inclusion complex incorporated in electrospun almond gum/PVA nanofibers in simulated saliva and simulated gastrointestinal conditions. *BioNanoScience*. <https://doi.org/10.1007/s12668-019-00620-4>.

First author and corresponding author

- 11. Rezaei, A., Fathi, M., S.M. Jafari. 2019.** Nanoencapsulation of hydrophobic and low-soluble food bioactive compounds within different Nanocarriers. *Food Hydrocolloids*, 88, 146-162.

First author and corresponding author

IF=9.147

- 12. Rezaei, A., Nasirpour, A. 2018.** Encapsulation of curcumin using electrospun almond gum nanofibers: fabrication and characterization. *International Journal of food properties*, 21, 1608-1618.

First author and corresponding author

IF=2.727

- 13. Rezaei, A., Nasirpour, A., Tavanai, H., fathi, M. 2016.** A study on the release kinetics and mechanisms of vanillin incorporated in almond gum/polyvinyl alcohol composite nanofibers in different aqueous food simulants and simulated saliva. *Flavour and Fragrance Journal*, 31, 442–447.

First author and corresponding author

IF=2.57

- 14. Rezaei, A., Nasirpour, A., Tavanai, H. 2016.** Fractionation and some physicochemical properties of almond gum (*Amygdalus communis* L.) exudates. *Food Hydrocolloids*, 60-461-469.

First author and corresponding author

IF=9.147

- 15. Rezaei, A., Tavanai, H., Nasirpour, A. 2016.** Fabrication of electrospun almond gum/PVA nanofibers as a thermostable delivery system for vanillin. *International Journal of Biological Macromolecules*, 91-536-543.

First author and corresponding author

IF=6.95

- 16. Rezaei, A., Nasirpour, A., Fathi, M. 2015.** Application of cellulosic nanofibers in food science using electrospinning and its potential risk. *Comprehensive Reviews in Food Science and Food Safety*, 14: 269-284.

First author and corresponding author

IF=12.81

PATENTS

1. **Rezaei, A.**, Nasirpour, A., Tavanaei, H. Production of almond gum (*Amygdalus communis* L.) nanofibers for encapsulation and delivering the temperature, light and oxygen sensitive materials in pharmaceutical and food industry. **2016**, patent number: 90206.
2. **Rezaei, A.**, Gharakhani, D. Production of milk powder fortified by colostrum. **2017**, patent number: 95185.
3. **Rezaei, A.** Fortification of pomegranate juice by ferulic acid encapsulated in cyclodextrin nanosponges. **2021**. Patent number: 48352961268989.

INTERNATIONAL BOOKS

1. Hadis Rostamabadi, Seid Reza Falsafi, Sareh Boostani, Iman Katouzian, **Atefe Rezaei**, Elham Assadpour, Seid Mahdi Jafari, Chapter 1 - Design and formulation of nano/micro-encapsulated natural bioactive compounds for food applications, Editor(s): Seid Mahdi Jafari, In Nanoencapsulation in the Food Industry, Application of Nano/Microencapsulated Ingredients in Food Products, **Academic Press**, Volume 6, **2021**, Pages 1-41, ISBN 9780128157268, <https://doi.org/10.1016/B978-0-12-815726-8.00001-5>.
2. **Atefe Rezaei.**, Marjan Daeihamed., Esra Capanoglu., Merve Tomas., Safoura Akbari-Alavijeh., Rezvan Shaddel., Sara Khoshnoudi-Nia., Sareh Boostani., Hadis Rostamabadi., Seid Reza Falsafi., Seid Mahdi Jafari. **2021**. Safety and Regulatory Issues of Nanoencapsulated Food Ingredients. **Academic Press** Volume 7 in Nanoencapsulation in the Food Industry. Chapter 2 - Possible health risks associated with nanostructures in food, Pages 31-118

INTERNATIONAL CONFERENCES

1. **Rezaei, A.**, Amani, F and Salehi, O. **2021**. Encapsulation of ferulic acid into cyclodextrin nanosponges:antibacterial activity and controlled release. 8th international conference on food industry science, organic farming and food security. 5 Novamner 2021, Tbilisi, Georgia.

2. **Rezaei, A.**, Nasirpour, A. **2018**. Characterization and water solubility of curcumin/cyclodextrin inclusion complex-loaded almond gum/PVA electrospun nanofibers. Proceedings of the 7th International Conference on Nanostructures (ICNS7). 27Feb- 1 Mar 2018, Tehran, Iran.
3. **Rezaei, A.**, Nasirpour, A., Tavanaei, H. **2016**. Fabrication of Almond gum based Electrospun Nanofibers as a Thermostable Matrix for Fragrance Delivery Systems in Food. Proceedings of the 6th International Conference on Nanostructures (ICNS6). 7-10 March 2016, Kish Island, Iran.
4. **Rezaei, A.**, Mousavi, S.M., Khodaiyan, F., Emam- Djomeh, Z. Development and characterization of a functional beverage from echium amoenum extract by *lactobacillus paracasei*. The 1st International Conference on New Ideas in Agriculture. 26-27 Jun **2014**, Isfahan, Iran

RESEARCH PROJECT AS PRINCIPAL INVESTIGATOR AND SUPERVISED THESIS

1. Production of almond gum-sodium caseinate complexes powder containing propolis extract for application in food formulation (2021)
2. Partial replacement of nitrite in sausage formulation by addition of incorporated thyme essential oil in casein-almond gum Millard conjugates (2021)
3. Preparation of composite films containing curcumin through complex coacervation between tragacanth gum and gelatin (2021)
4. Tragacanth gum/gelatin complex coacervates as a colloidal carrier for cinnamon essential oil: characterization and in-vitro cytotoxicity (2021)
5. Production and characterization of tragacanth gum/gelatin/PVA composite film containing thyme /rosemary essential oils nanoemulsion (2021)
6. Production and characterization of almond gum/chitosan/PVA composite film containing thyme essential oil nanoemulsion and its effect on shelf life of chicken fillets (2021)
7. Increasing the solubility and stability of rosemary essential oil by incorporation of it into gelatin/almond gum complex coacervation (2021)
8. Increasing the solubility and stability of rosemary essential oil by incorporation of it into gelatin/almond gum complex coacervation (2021)
9. Encapsulation of cinnamon essential oil in gelatin and aloe vera gel complex for application in food and pharmaceutical industries (2020)

10. The effect of tragacanth gum/chitosan/polyvinyl alcohol composite film containing cinnamon essential oil nanoemulsion on shelf life of chicken fillet (2020)
11. Nanoencapsulation of d-limonene in cyclodextrin nanosponge and investigation of its antimicrobial effect (2020)
12. Fortification of pomegranate juice using ferulic acid encapsulated into the cyclodextrin nanosponge and investigation the safety and cell toxicity (2019)
13. Increasing the solubility and stability of ferulic acid as a natural antioxidant and anticancer compound using encapsulation in cyclodextrin nanosponges for application in food formulation and evaluation of ferulic acid release in simulated saliva and simulated gastrointestinal conditions (2019)
14. Nanoencapsulation of thyme essential oil in cyclodextrin nanosponge and investigation of its antimicrobial effect (2019)

REVIEWER FOR JOURNALS

1. International Journal of Biological Macromolecules
2. Carbohydrate Polymers
3. Cellulose
4. Journal of Functional Foods
5. Food Science & Nutrition
6. Current Medicinal Chemistry
7. Journal of Biomaterials Science, Polymer Edition
8. Applied Food Research
9. Starch

ACADEMIC LINKS

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Researchgate: <https://www.researchgate.net/profile/Atefe-Rezaei>