

Curriculum Vitae

(2024)

Name: Davood

Surname: Zare

Date of Birth: May, 21th.1970

Place of Birth: Karaj, Tehran, IRAN

Religion: Moslem

Languages: Farsi, English

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University Degrees:

1- B.Sc. in Microbiology, 1993, Tehran University, Tehran, IRAN.

2- M.Sc. in Bacteriology, 1996, Pasture Institute of Iran, Tehran, IRAN. 2

3- PhD in Food biotechnology, 2013, University Putra Malaysia, Kuala Lumpur, Malaysia

Publications and Congress:

- 1- **Zare, D.** and Mazaheri, M. (1997) Production of Single cell oil from Whey. 4th Biochemistry Congress, 19-22 Oct. 1997. *Babol University of Medical Sciences*. I. R. Iran.
- 2- **Zare, D.**, Ameri, F. & Azin, M. (2001) Optimization of betacarotene production by *B. trispora*. 6th National Chemical Engineering Congress. Isfahan university.
- 3- Moazed, H., Gorbani, M., Rostami, R. and **Zare, D.** (2001) Optimization of SCP production from whey by *K.fragilis*. 6th National Chemical Engineering Congress. Isfahan University.
- 4- Afzali, S., Azin, M., Fooladi, J. & **Zare, D.** (2000) Screening of extracellular lipase producing strains from environment. *The first National Congress of Biotechnology*. 22-24 Feb. 2000. Tehran, Iran
- 5- **Zare, D.**, Ameri, F., Ahmadian, M. & Hamzehi, H. (2002) The effect of trisporic acid from Plus strain on production of betacarotene by *B. trispora*. *The first colorant manufacturing & environmental protection Seminar*. 18 Feb. 2002. Tehran. Iran.
- 6- **Zare, D.** and kiani, M. (2004) Comparison of betacarotene production by *B. trispora* in stirred tank and airlift bioreactor. *Pajoohesh va Sazandegii*.
- 7- **Zare, D.** and Azin, M. (2003) Increase in betacarotene production by *B. trispora* grown with whole cells of some microorganisms. *Journal of Biology*.
- 8- **Zare, D.** and Tagizadeh, T (2005) Test panel of tofu, produced from soybean by some essences, and production of fermented food (tempeh) from soy residues (okara) by *Rhizopus Oligosporus*. 4th National Congress of Biotechnology. August 2005. Kerman

- 9- Habibi, Y., **Zare, D.**, keshavarzi, M, and Heydari, A. (2005) Optimization of culture media for production of *Bacillus Coagulans* to control cotton seedling damping off. *4th National Congress of Biotechnology*. August 2005. Kerman
- 10- Azin, M., Noroozy, G., **Zare, D.** and Alempoor, F. (2005) Comparison of some species of baker yeast for the amount of growth and sugar utilization in culture. *1th International Biology Conference*. August 2005.
- 11- **Zare, D.** (2005) Bioplastics and green chemistry: A solution for nondegradeble plastics. *Iranian Association of Chemical Engineering Journal*. 2005, No: 18. 3-10 3
- 12- **Zare, D.** and Tagizadeh, T. (2006) Production of tempeh from Okara. *16th National Congress of Food Industry*. April 2006. Gorgan
- 13- Azin, M., Moravej, R. and **Zare, D.** (2006) Production of xylanase by *Trichoderma longibrachiatum* on a mixture of wheat bran and wheat straw: Optimization of culture condition by Taguchi method. *Enzyme and Microbial Technology*. June 2006
- 14- Maleki, M., Azin, M, **Zare, D.** and Ghaemi, N. (2006) Improvement of lysine production in *Corynebacterium glutamicum* by random mutagenesis. *The 1th Conference on Biotechnology and Biocatalysts*. 20-21 Nov.
- 15- **Zare, D.** and Tagizadeh, M. (2006) Fermentation and optimization of tempeh production in pilot plant. *The 1th Conference on Biotechnology and Biocatalysts*. 20-21 Nov.
- 16- **Zare, D.**, Azin, M., Asad, S., dastgeyb, S., asgarian, H. and Kabiri, M. (2007) Comparison of full factorial and taghuchi method as two statistic methods for optimization of alpha amylase production by *Aspergillus oryzae*. *The 5th National Biotechnology Congress of Iran*. 24-26 Nov. Tehran. Iran.

- 17- **Zare, D.** and Tagizadeh, M. (2007) Optimization of tofu production content in pilot plant by taghuchi method. *The 5th National Biotechnology Congress of Iran*. 24-26 Nov. Tehran. Iran.
- 18- **Zare, D.** (2008) Tofu or Asian cheese as food product from soy in Iran. *Sonboleh*, April, 10-
- 19- Asgarian, E., Ghadam, P., **Zare, D.** and Safari, N. (2008) Extraction and isolation of carotenoid pigments from Haloferax IRU1, Iranian Extreme Halophile archae, By TLC. *Proceedings of the 15th National & Third international Conference of Biology*. 19-21 Aug. University of Tehran.
- 20- **Zare, D.**, Khanjani, S., Mazaheri, M. & Azin, M. (2008) Effect of different carbon/nitrogen ratio and induction factors in betacarotene production by *Blakeslea trispora*. *Proceedings of the 15th National & Third international Conference of Biology*. 19-21, Aug. University of Tehran.
- 21- **Zare, D.**, Tagizadeh, M. (2008) Utilization of Lighvan whey microflora to produce fermented Tofu. *15th International Student Conference of Biotechnology*. 15-17 Nov. University of Tehran.
- 22- **Zare, D.**, Tagizadeh, M., Azin, M. and Heydarian, M. (2009) Weight and flavor optimization in tofu production by taghuchi method. *Iranian Science and Food Journal*.
- 23- **Zare, D.** (2009) Biofuel production methods. *Iranian Association of Chemical Engineers Journal*.
- 24- **Zare, D.**, Azin, M, Rasi. H. & Mirdamadi, S. (2009) Enhancement of Tylosin Production in *Streptomyces fradiae* by Mutation. *Pajouhesh va Sazandegi*.
- 25- Abdehagh, N., Heydarian, S.M., Bonakdarpour, B., **Zare, D.** (2009) Removal of H₂S from synthetic waste gas streams using a biotrickling filter with polyurethane foam as synthetic bed, The 6th International Chemical Engineering Congress & Exhibition, *Kish, Iran*, 16-20 November

- 26- Abdehagh, N., Taghinejad Namini, M., Bonakdarpour, B., Heydarian, S.M., **Zare, D.** (2011) The use of response surface methodology for the study of the effect of liquid recirculation rate on the hydrogen sulfide removal performance of a biotrickling filter employing immobilised *Thiobacillus thioautotrophicus*, *International Chemical Engineering Congress & Exhibition, Kish, Iran, 21-24 November*
- 27- Abdehagh, N., Taghinejad Namini, M., Heydarian, S.M., Bonakdarpour, B., **Zare, D.** (2011) Performance of a biotrickling filter employing thiobacillus thioautotrophicus immobilized on polyurethane foam for hydrogen sulfide removal , *Iranian Journal of Environmental Health Science and Engineering*, 8 (3) , pp. 245-254
- 28- M. T. Namini, Abdehagh, N., Heydarian, S. M., Bonakdarpour, B., **Zare, D.** (2012) Hydrogen Sulfide Removal Performance of a Bio-trickling Filter Employing Thiobacillus thioautotrophicus Immobilized on Polyurethane Foam under Various Starvation Regimes. *Biotechnology and Bioprocess Engineering* 17: 000-000, DOI 10.1007/s12257-012-0035-0
- 29- **Zare, D.**, Muhammad, K., Bejo, M. H. B., & Ghazali, H. M. (2012) Development and validation of an ion-pair chromatographic method for simultaneous determination of *trans*- and *cis*- urocanic acid in fish samples. *Journal of Chromatography A*, 1256, 144-149.
- 30- **Zare, D.**, Muhammad, K., Bejo, M. H. B., & Ghazali, H. M. (2013) Changes in urocanic acid, histamine, putrescine and cadaverine levels in Indian mackerel (*Rastrelliger kanagurta*) during storage at different temperatures. *Food Chemistry*, 139, 320-325.
- 31- Mohammadi, S., Heydarian, S. M., Mazaheri Assadi, M. Jahangiri, M. & **Zare, D** (2014) Vacuum residue bio-degradation using a bubble column fermentor, *Petroleum Science and Technology*, 32, 75-83

- 32- **Zare, D.**, Muhammad, K., Bejo, M. H. B., & Ghazali, H. M. (2015) Determination of urocanic acid, a compound implicated in histamine toxicity and assessment of biogenic amines relation to urocanic acid content in selected fish and fish products, *Journal of Food Composition and Analysis*, 37, 95-103
- 33- **Zare, D.**, Muhammad, K., Bejo, M. H. B., & Ghazali, H. M. (2015) Determination of trans- and cis-urocanic acid in relation to histamine, putrescine and cadaverine contents in tuna (*Auxis thazard*) at different storage temperatures, *Journal of Food Science*, 80(2):479-483
- 34- Ezzat, M.A., **Zare D.**, Karim, R. and Ghazali, H.M. (2015) *Trans*- and *cis*-urocanic acid, biogenic amine and amino acid contents in *ikan pekasam* (fermented fish) produced from Javanese carp (*Puntius gonionotus*) and black tilapia (*Oreochromis mossambicus*), *Food Chemistry*, 172, 893-899
- 35- **Zare, D.** & Ghazali, H. M. (2015) Assessing the quality of sardine based on biogenic amines using a fuzzy logic model, *Food Chemistry*, 221, 936–943
- 36- Poursefollah, A., Zare, D. & Mirzaei, M. (2018) Combined Encapsulation of *Bifidobacterium bifidum* and Beta-Carotene Using Casein-Carrageenan and Estimation of their Durability during Storage and in Simulated Gastric Acid Situation. *Food Technology & Nutrition*, 5 (4) 1-17
- 37- Dani, N., **Zare, D.**, Mazaheri, M., Soltani, N. & Irani, S. H. (2016) Screening of microalgae for lipid production. The 17th International and Iranian Congress of Microbiology. 23-25 August. Tehran University.
- 38- **Zare, D.** & Taghizadeh, T. (2016) Optimiztion of okara fermentation and production of burger from fermented okara, *Journal of Applied microbiology in Food Industry*, 2 (1): 25-38

- 39- Bagheri, F. & **Zare, D.** (2018) Intestinal microbiome and related diseases: A recent updated review. *Bioscience Biotechnology. Research. Communication.* 11(1): 89-96
- 40- Shariati, S. **Zare, D.** & Mirdamadi, S. (2019) Screening of carbon and nitrogen sources using mixture analysis designs for carotenoid production by *Blakeslea trispora*. *Food Science and Biotechnology*, 28 (2), 469-479. DOI: 10.1007/s10068-018-0484-0
- 41- M Mirzaei, S Mirdamadi , M Safavi, **D Zare**, M Hadizadeh,M M Asadi. (2019) In vitro and cellular antioxidant activity evaluation of novel peptides derived from *Saccharomyces cerevisiae* protein hydrolysate: structure–function relationship. *Amino Acids*.51(8):1167-1175. doi: 10.1007/s00726-019-02752-z.
- 42- Azizi M., **D. Zare.**, Akhavan AS., Azin M (2019) Increasing beta carotene production by *Blakeslea trispora* using addition of *Serratia marcescens*. 3rd international and 15th national biotechnology congress of Islamic republic of Iran. 3-5 September, Tehran, Iran
- 43- **D. Zare**, Enshaeeeyeh, M (2019) Miscellaneous Methods for the Detection of Biogenic amines. In: *Biogenic Amines in Food*, eds : S. Bahrudin and Tofalo R., Royal Society of Chemistry, Cambridge, CB4 0WF, UK
- 44- N. Dani, **Zare, D**, M. M. Assadi, S. Irani, N. Soltani (2021) Isolation, screening and medium optimization of native microalgae for lipid production using nutritional starvation strategy and statistical design, *International Journal of Environmental Science and Technology*, 1-16.
- 45- N Sinaei, **Zare, D**, Azin, M (2020) Screening of isolated bacteria from Persian Gulf petroleum contaminated sediments with capability of poly hydroxybutyrate production and identification of the physicochemical structure of the produced biopolymer, *Modarres Journal of Biotechnology*, **12 (1): 1-15**

- 46- N Sinaei, Zare, D, Azin, M (2021) Production and characterization of poly 3-hydroxybutyrate-co-3-hydroxyvalerate in wheat starch wastewater and its potential for nanoparticle synthesis, *Brazilian Journal of Microbiology*, 52 (2), 561-573
- 47- **D Zare**, Muhammad K., & Ghazali, HM (2021) The manner of urocanic acid accumulation in fish by tracking histidine ammonia lyase activity during storage of vacuum-packed, eviscerated, and whole fish, *Journal of Food Processing and Preservation* 45 (3), e15288
- 48- H Aryaee, **Zare, D**, Ariaei, P, Mirdamadi, S, Naghizadeh Raeisi, S (2020) Sensory evaluation using fuzzy logic model and evaluation of physicochemical properties, antioxidant activity and total phenol of fruit juice prepared from mulberry during storage, *Food Science and Technology* 17 (106), 47-61
- 49- H Aryaee, **Zare, D**, Ariaei, P, Mirdamadi, S, Naghizadeh Raeisi, S (2020) Sensory evaluation of strawberry fruit juice by fuzzy logic and evaluation of antioxidant activity during frozen storage, *Innovative Food Technologies* 8 (1), 111-128
- 50- Azizi M, **Zare D**, Akhavan Sepahy, A, Azin M (2021) Evaluating the Effect of Microbial Stimulation and Oxidative Stress on Increasing β -Carotene Production in *Blakeslea trispora*, *MMB: 4 (1): 1-11*
- 51- Aryaee H, **Zare D**, Ariaii P, Mirdamadi S, Naghizadeh Raeisi S (2023) Production of a mixed fruit juice powder using mixture analysis and a fuzzy model. *International Food Research Journal* 30 (4)
- 52- Aryaee H, Ariaii P, **Zare D**, Mirdamadi S, Naghizadeh Raeisi S (2023) Evaluation of the physicochemical characteristics of a blend fruit juice powder mixed with *Lactiplantibacillus plantarum*: a comparison of spray drying and freeze drying, *Journal of Food Processing and Preservation* (1), 5597647
- 53 Hassani FS, Hadizadeh M, **Zare D**, Mazinani S (2024) Comparison of different methods for preparation of nanochitosan as anticancer agent *Polymer Bulletin* 81 (1), 827-842

- 53- Saedi A, Naghavi NS, Farazmand A, **Zare D**, Mohammadi-Sichani M (2023) Nitrate removal from industrial wastewater using six newly isolated strains of aerobic heterotrophic denitrifiers in an attached growth Environmental Technology, 1-11
- 54- Mahooti M, Abdolalipour E, Sanami S, Zare D (2024) Inflammatory Modulation Effects of Probiotics: A Safe and Promising Modulator for Cancer Prevention, Current Microbiology 81 (11), 372
- 55- **Zare D**, Aryaee H, Mirdamadi S, Shirkhan F (2024) A Review on Isolation Sources of *Lactiplantibacillus Plantarum* in Iran and Other Countries from Food Sources and with Food Applications, Microbiology, Metabolites and Biotechnology
- 56 Azman- EM, Zare D, Nurhayati Y, Karim R, Ghazali HM (2024) Physicochemical properties, urocanic acid and biogenic amine contents of black pomfret (*Parastromateus niger*) as affected by fermentation times Food Research 8 (2), 92-104
- 57- Hassani FS, Hadizadeh M, **Zare D**, Mazinani S (2023) Investigation of the Effect of Chitosan Nanoparticles Synthesis Method on Their Anticancer Activity, International Journal of Nanoscience 22 (01), 2250053

Research Activities:

- 1- Production of SCO from whey (assistant researcher). 1994-1996. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran. IRAN.
- 2- Production of Tylosin by *Streptomyces fradiae* (executive researcher). 1998-1999. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran. IRAN.
- 3- Pilot plant scale production of *Bacillus thuringiensis* M-H-14 (assistant researcher) 1989-Continued. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran. IRAN.
- 4- Pilot-scale production of L-lysine (assistant researcher).1998-2000. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran. IRAN.
- 5- Pilot-scale production of microbial rennet. 1999-2001. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.

- 6- Production of Beta carotene by *Blakeslae trispora*. 1999-2001. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 7- Pilot scale production of Tofu and Tempeh (executive researcher). 2004-2006. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 8- Pilot scale production of Lactic acid by *Lactobacillus*, (assistant researcher). 2002-2004. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 9- Extraction of Tannin and production of edible Mushrooms from Pistachio (assistant researcher). 1997-1999. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 10- Pilot scale of SCP production for Fish food. (assistant researcher). 2002-2004. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 11- Enhance of alcohol production from molasses (assistant researcher). 2003-2005. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 12- Enhance of glucoamylase production by mutation & selection from *A.orysea* (supervisor) 1998-1999. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 13- Production of SCP from whey (supervisor) 2002. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 14- Pilot scale of H₂S biofilteration by *Thiobacillus sp.* (assistant researcher). 2005-2007. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 15- Isolation and screening of microorganisms in order to bio lightening of Vacuum bottom residue. (executive researcher). 2008- 2010, Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.

- 16- Bio lightening of Vacuum bottom residue in pilot plant. (executive researcher) 2008-2010
Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 15- Isolation of *Lactobacillus* Bacteria from yoghurts. (assistant researcher). 2007-2009.
Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 16- HPLC analysis of *trans*- and *cis*-urocanic acid in fish samples. (executive researcher). 2009-2012. Faculty Food Science & Technology, University Putra Malaysia
- 17- HPLC analysis of biogenic amines in fish samples. (executive researcher). 2009-2012.
Faculty Food Science & Technology, University Putra Malaysia
- 18- Enhancement of beta carotene production using fed batch method in *Blakeslea trispora*, (executive researcher). 2014-at present. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 19- Screening of microalgae for production of bioplastic and lipid. (executive researcher). 2014-at present. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 20- Screening of bacteria for the production of bioplastic and lipid. (executive researcher). 2014-at present. Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.
- 21- Optimization of Kefir grain for production of kefir. (executive researcher) 2018-at present, Biotechnology Center. Iranian Research Organization for Science & Technology. Tehran, IRAN.

Executive responsibilities:

- 1- Head of Biotechnology Laboratory. 1996-2003.
- 2- Head of Biotechnology Pilot plant. 2005-2000

- 3- Deputy of Department of Biotechnology at IROST, 2014-2018
- 4- Head of Biotechnology Pilot plant. 2018-at present
- 5- Head of graduate school of Irostr. 2020- 2021
- 6- Head of General Directorate of Research and Technology 2022-2023

Scientific Adviser to:

- Biotechnology Scientific Group, Biotechnology Center, IROST.
- Biotechnology Committee, Khawrazmi Scientific Award, IRAN. 1997-at present
- Biotechnology Committee, Young Khawrazmi Scientific Award, IRAN. 2002-at present

Teaching Experiences:

- **Industrial Microbiology**, University of Science & Technology. (M.Sc students), Tehran, Iran. 1998-1999.
- **Biotechnology**, Institute Pasteur of IRAN, (PhD students), Tehran, Iran. 1996-2000
- **Industrial Microbiology**, Tehran University, school of science (PhD students), Tehran, Iran. 2002-2005.
- **Industrial microbiology**. Tehran University, School of medical science (PhD students), Tehran, Iran. 2002-2005.
- **Industrial Microbiology**, University of Shahed, (B.Sc students), 2014-at present
- **Statistic and design of experiment**, Iranian Research Organization for Science and Technology, 2014-at present
- **Industrial Microbiology**, Safadasht Azad University, (M.Sc students), 2015-2017
- **Industrial Microbiology**, Ghods Azad University, (M.Sc students), 2016-2017

- **Fermentation Industry**, Ghods Azad University, (Bachelor students), 2017

Workshops:

- International workshop for Technology up gradation on food, leather, pulp & paper (Participant) 1998. Iranian Research Organization for Science & Technology, Mashhad. Iran.

- Workshop on Microbiology monitoring of coastal waters (participant) 2002. Kuwait.

- International workshop for ethanol production. (participant) 2008. Gazvin. Iran.

- Workshop on HPLC Waters, (participant), 2011, Kuala Lumpur, Malaysia

- Workshop TLC Merck, (participant), 2011, Kuala Lumpur, Malaysia

- Workshop of Design of experiment using Response Surface Methodology (executive), 2016 Tehran. Iran

- The place of biotechnology in modern science (executive), 2016 Azad University of Safadasht Tehran. Iran

- Commercialization of knowledge based projects (executive), 2017 Azad University of Safadasht Tehran. Iran