

PERSONAL INFORMATION

Gulzhan Khamitova

EDUCATION

- March 2017 – October 2020 [Doctor of Philosophy in Chemical and Pharmaceutical Sciences and Biotechnology, University of Camerino \(\[www.unicam.it\]\(http://www.unicam.it\)\)](#). **PhD research grant** in the field of food chemistry. PhD topic: optimization the extraction process of espresso coffee. PhD research supervisor was Professor S.Vittori.
- October 2019- March 2020 [Visiting Scholar, University of Aveiro \(\[www.ua.pt\]\(http://www.ua.pt\)\)](#). During the PhD research, I had six-month research mobility in the department of “Organic Chemistry, Natural and Agro-Food Products” at the University of Aveiro. I worked under supervision of Professor M.A.Coimbra.
- September 2011 – September 2012 [Master of Science in Chemical Engineering with Design, University of Manchester \(\[www.manchester.ac.uk\]\(http://www.manchester.ac.uk\)\)](#). Taught program based on fundamentals of Chemical and Process Engineering. Master thesis project was under supervision of Professor P. Carbone. The MSc topic: “Computational simulation of volatile organic compounds by adsorption on polyphenylene dendrimer”
- September 2005- June 2009 [Bachelor in Chemistry at the Al-Farabi Kazakh National University \(\[www.kaznu.kz\]\(http://www.kaznu.kz\)\)](#). The topic of the final thesis for qualification: “Analyses of rare metals in the water basins”

WORK

- October 2017 – April 2018 Graduate teaching assistant at the University of Camerino (Italy)
- January 2016 – March 2017 Teaching assistant at the Nazarbayev University (Kazakhstan)
- May 2013 – December 2015 Research assistant in the National Laboratory Astana, Nazarbayev University (Kazakhstan)
- September 2012 – April 2013 Teaching assistant in higher education at the Nazarbayev University (Kazakhstan)

CONFERENCES and
WORKSHOPS

- June - July 2021 Participated as a professional in the second edition of International Summer School on Food Sustainability at the University of Parma (Italy). The major topics were in Economics, Environment, Food, Humanities and Law. All lectures were implemented in the field of food and sustainability.
- November 2020 Participated in the workshop of Force academy. The workshop was based on circular bioeconomy: wood and food value chain partnerships. In a nutshell, it was a one of a time one-week intensive free international course for university students that provided 2 ECTS from the University of Genoa, funded by the EU Horizon 2020 framework through the FORCE project.

- September 2019 I took part in organization of “6th MS Food Day” conference in Camerino (Italy). The 6 MS Food DAY is a biannual conference focused on all topics related to the use, methods and applications of mass spectrometry in food. It represents an excellent occasion for presenting the state-of-the-art of mass spectrometry in food chemistry & technology, along with the latest innovations and novelty in instrumentation and applications. In this conference, the results of PhD research project were presented in oral and the poster sections.
- June 2019 Participated in COCOTEA 2019 (Germany) conference. COCOTEA 2019 conference combined an inter-disciplinary opportunity for scientists to discuss different areas of Tea, Coffee and Cocoa, and to report innovative scientific achievements. These topics include biology, chemistry, technology, metabolomics, nutrition and health, Quality & Safety Control and sustainability. In this conference, I presented the results of PhD research project in the poster session.
- May 2019 Participated in “Societa Italiana di Nutraceutica (SINut)” conference. The SINut is committed to promoting courses and congresses at a regional, national and international level. Every year it becomes the organizer of the National Congress of Nutraceuticals. Also, this is actively engaged in the creation of publications and other editorial material aimed at promoting scientific and organizational initiatives.
- (June 2018)
- September 2018 Participated in organization of CHIMALI XII Italian Food Chemistry congress. The CHIMALI XII congress was organized under the patronage of the Interdivisional Group of Food Chemistry (GICA), Italian Chemical Society, was a traditional reference point, primarily for the Italian Food Chemists, but also for the food technologists and for all the professionals interested in the subjects of the Food Chemistry discipline (food composition, identification of new compounds following technological processing of food, characterization of bioactive molecules in food, contaminants, and residues in food, and more recently characterization of novel foods, food supplements, and food for special medical purposes). In this congress, the PhD research project data were presented in oral and poster sessions.
www.chimali2018.unicam.it
- September 2018 Participated in Association for Science and Information on Coffee (ASIC) conference (USA). The ASIC - Association for the Science and Information on Coffee - is an association dedicated to organizing the leading biennial conference on the science and technology of coffee, covering the completely coffee value chain. In this conference, I presented the results of PhD research project in the poster session. www.asic-cafe.org
- August 2018 Participated in “International Mass Spectrometry Conference (IMSC 2018, Italy)”. The IMSC 2018 covered all aspects of mass spectrometry, from fundamentals of instrumentation and applications. The conference was organized with short courses, oral and poster sessions, workshops, awards, commercial exhibition, social programs and companies’ user meetings. In this conference, I attended short courses “Solid-Phase Microextraction (SPME)” and presented obtained results of PhD research study.
- December 2017 The conference “The quality of Coffee: a never-ending research”, organized by the International Hub for Coffee Research and Innovation, was held in University of Camerino, Italy, on November 30th – December 1st, 2017. The conference aimed to bring together the most qualified researchers and industry experts to advance the knowledge about coffee. I was involved in this conference as an organizer and researcher. Therefore, I had opportunity to present about the PhD research project in oral session.

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| October 2017 | The 5 MS Food DAY was a biannual conference focused on all topics related to the use, methods and applications of mass spectrometry in food. It represented an excellent occasion for presenting the state-of the-art of mass spectrometry in food chemistry & technology, along with the latest innovations and novelty in instrumentation and applications. In this conference, I presented the results of research study in the poster session. |
| June 2017 | The 2nd MS NatMedDay conference was organized by the Italian Chemistry Society. The conference was focused on all topics related to natural molecules and molecular complexes: characterization and biomedical effects. It had an opportunity to present the poster in this conference. |
| September 2013 | The 246th ACS Fall conference was focused to all topics related to chemistry field. As a junior researcher, we had an opportunity to present our research study outcomes in the poster session. Therefore, we attended couple of short courses in this conference. |

ACHIEVEMENTS and AWARDS

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| April 2017 – April 2020 | PhD research fellowship from University of Camerino and region of Marche |
| October 2017 | The winner of the 5 MS Food DAY conference attendance fellowship from Italian Chemical Society. |
| August 2018 | Awarded fellowship to attend and participate in the International Mass Spectrometry Conference 2018. |
| November 2011 | Fellowship to participate “Festival of Thinkers conference” was awarded by His Excellency Sheikh Nahayan Mabarak Al Nahayan and Minister of Higher Education and Scientific Research of United Arab Emirates. |
| January 2010 – September 2012 | Scholarship from Center for International Programmes known as “Bolashak” and the government of Republic of Kazakhstan. This scholarship allowed me to study Master of Science degree in the United Kingdom for two years. |
| September 2005 – June 2009 | The fellowship was awarded by the Ministry of Education in Kazakhstan. This fellowship allowed me to obtain Bachelor degree in Kazakhstan. |

RESEARCH INTERESTS

Chemistry, Analytical and Instrumental Chemistry, Food Chemistry and Biotechnology, Pharmacy, Sustainability and Environment.

PUBLICATIONS

1. Effect of perforated disc height and filter basket on espresso coffee carbohydrates content and composition. Journal: European Food Research Technology 248, 1217–1226 (2022), Published 12 January 2022. Khamitova, G., Passos, C.P., Lopes, G.R., Coimbra M.A., Mustafa A.M., Vittori S., Caprioli G. <https://doi.org/10.1007/s00217-022-03960-w>
2. Analyses of phytosterols content in Italian standard espresso coffee. Journal: Beverages 2021, 7(3), 61. Published 27 August 2021. Nzekoue F.K., Alessandroni L, Caprioli G, Khamitova G, Navarini L, Ricciutelli M, Sagratini G, Sempere A.N, Vittori S. <https://doi.org/10.3390/beverages7030061>
3. Optimization of the extraction from spent coffee grounds using the desirability approach. Journal: Antioxidants. Published 29 April 2020.

- Gigliobianco M.R., Campisi B., Peregrina D.V., Censi R., Khamitova G., Angeloni S., Caprioli G., Zannotti M., Ferraro S., Giovannetti R., Angeloni C., Lupidi G., Pruccoli L., Tarozzi A., Voinovich D., Di Martino P. <https://doi.org/10.3390/antiox9050370>
4. A new analytical method for the simultaneous quantification of isoflavones and lignans in 25 green coffee samples by HPLC-MS/MS. Journal: Food Chemistry. Published 27 April 2020. Angeloni S., Navarini L., Khamitova G., Maggi, F., Sagratini G., Vittori S., Caprioli G. <https://doi.org/10.1016/j.foodchem.2020.126924>
 5. Spent coffee grounds: a potential commercial source of phytosterols. Kamgang Nzekoue F., Khamitova G., Angeloni S., Sempere A.N., Tao J., Maggi F., Xiao J., Sagratini G., Vittori S., Caprioli G. Journal: Food Chemistry. Published: 17 April, 2020. <https://doi.org/10.1016/j.foodchem.2020.126836>
 6. The impact of different filter baskets, heights of perforated disc and amount of ground coffee on the extraction of organics acids and the main bioactive compounds in espresso coffee. Food Research international. Published: 3 April 2020. Khamitova G., Angeloni S., Fioretti L., Ricciutelli M., Sagratini G., Torregiani E., Vittori S., Caprioli G. <https://doi.org/10.1016/j.foodres.2020.109220>
 7. Water flow and transport in porous media for in-silico espresso coffee. International Journal of Multiphase Flow. Published: 26 February 2020. Giacomini J., Khamitova G., Maponi P., Vittori S., Fioretti L. <https://doi.org/10.1016/j.ijmultiphaseflow.2020.103252>
 8. Optimization of espresso coffee extraction through variation of particle sizes, perforated disk height and filter basket aimed at lowering the amount of ground coffee used. Journal: Food Chemistry. Published: 13 January 2020. Khamitova, G., Angeloni, S., Borsetta, G., Xiao, J., Maggi, F., Sagratini, G., Vittori, S., Caprioli, G. <https://doi.org/10.1016/j.foodchem.2020.126220>
 9. Quantification of lignans in 30 ground coffee samples and evaluation of theirs extraction yield in espresso coffee by HPLC-MS/MS triple quadrupole. Journal: International Journal of Food Sciences and Nutrition. Published: 06 June 2019. Simone Angeloni, Luciano Navarini, Gulzhan Khamitova, Gianni Sagratini, Sauro Vittori & Giovanni Caprioli. <https://doi.org/10.1080/09637486.2019.1624693>
 10. "Current municipal solid waste management in the cities of Astana and Almaty of Kazakhstan and evaluation of alternative management scenarios". Journal: Clean technologies and Environmental Policy, V.J.Inglezakis, K.Moustaka, G.Khamitova, D.Tokmurzin, Y.Sarbassov, R.Rakhmatulina, B.Serik, Y.Abikak, S.G. Pouloupoulos., April 2018, volume 30, issue 3, pp 503-516., <https://doi.org/10.1007/s10098-018-1502-x>
 11. Municipal solid waste management in Kazakhstan: Astana and Almaty case studies. Inglezakis, V. J., Moustakas, K., Khamitova, G., Tokmurzin, D., Rakhmatulina, R., Serik, B., ... Pouloupoulos, S. G. (2017). In Chemical Engineering Transactions (Vol. 56, pp. 565-570). (Chemical Engineering Transactions; Vol. 56). Italian Association of Chemical Engineering - AIDIC. <https://doi.org/10.3303/CET1756095>

SKILLS

LANGUAGE SKILLS

English – C2 (TOEFL 109)

Italian – B2

Kazakh – mother tongue

Russian – Proficiency

IT SKILLS

Microsoft basic skills: MS-Word, MS-Excel, Power Point, basic Python, simulation programs Aspen Plus.