

Tamara Kamal Athamneh



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EDUCATION

2003-2008	- Bachelor in pharmacy, Jordan University of Science and Technology
2011-2014	- Master of Science in pharmaceutical technology, Jordan University of Science and Technology
2016-2020	- PhD in pharmaceutical technology , The University of Hamburg

EXPERIENCES

6-2024 – Present	- Research and innovation advisor, Manaseer Group
10-2021– present	- Assistant professor, Jordan University of Science and Technology (JUST)
9-2023 – 9-2024	- Deputy director at center of innovation and excellence, JUST
2-2021 – 10-2021	- Assistant professor, Hashemite University
3-2016 – 3-2020	- Research Associate, Hamburg University of Technology (TUHH) and University of Hamburg

RESEARCH EXPERIENCES

- Nano-medicine
- Aerogel technology
- Drug delivery

CURRICULUM VITAE

COURSES TAUGHT

- Introduction to nanoscience and nanotechnology
- Nano biomaterials
- Nano medicine
- Nanofabrication and characterization
- Special topics in nanotechnology a
- Special topics in nanotechnology b

CONFERENCES

Conference	Year	Location	Role	Contribution / Award
1 4th International Seminar on Aerogels	2018	Hamburg, Germany	Presenter	Hyaluronic acid–alginate aerogel as potential drug carrier
2 Pharmacy Fourth International Conference (Applied Science Private University)	2019	Amman, Jordan	Presenter	Oral presentation; Postgraduate Oral Presentation Award
3 ProcessNet Fachgruppen Adsorption & Hochdruckverfahrenstechnik Meeting	2019	Freiberg, Germany	Presenter	Alginate–hyaluronic acid nanoporous microspheres
4 International Conference on Aerogels for Biomedical & Environmental Applications	2020	Santiago de Compostela, Spain	Presenter	Best Oral Presentation – Early Career Investigator Forum
5 Symposium on Aerogel for Biomedical Applications	2021	Porto, Portugal	Presenter	First Communication Prize (Wound dressing aerogels)
6 2nd International Conference on Aerogels for Biomedical & Environmental Applications (AERoGELS2022)	2022	Athens, Greece	Attendee	Attendance
7 7th International Seminar on Aerogels 2024	2024	Hamburg, Germany	Attendee	Attendance only (no abstract documented)

CURRICULUM VITAE

8	5th International Conference on Aerogels for Biomedical and Environmental Applications	2025	Zurich, Switzerland	presenter	Preparation and Characterization of Copper-Crosslinked Alginate-Hyaluronic Acid Aerogels as Potential Wound Dressing Materials with Enhanced Antibacterial Properties
9	International Conference on Advanced Materials	2025	Irbid, Jordan	Attendance	Member in the scientific committee of the conference

WORKSHOPS

3-12-2021– 4-12-2021	Project risk management. Organized by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Dead sea, Jordan
18-2-2024 – 19-2-2024	Statistical Analyzing and Interpretation of Results Using JMP. Organized by JUST, Irbid Jordan
20-2-2024— 21-2-2021	Applying Quality Matters Rubric. Organized by JUST, Irbid Jordan

EXTERNAL RESEARCH FUNDING

2024	- Hikma Pharmaceutical Company (PI) , USD 42300
2025	- IREX-HEIGH Grant (PI) , USD 106775
2025	- Abdul Hameed Shuman Foundation (Co-I) , USD 13000

INTERNAL RESEARCH FUNDING

2022	preparation and characterization of Alginate/Hyaluronic acid nanoparticles as a drug carrier – USD 5345 (PI)
2023	Detection of prostate-specific antigen by using a biosensor based on a screen printed electrode modified with silver nanoparticles or graphene oxide nanoparticles- USD 4725 (PI)
2023	Investigation of the antibacterial activity of zinc oxide nanoparticles loaded in alginate/hyaluronic acid aerogel for wound dressing applications- USD 5360 (PI)
2024	<i>In Vivo</i> Evaluation of Alginate/ Hyaluronic Acid Hydrogel Loaded with Zinc Oxide Nanoparticles for Wound Dressing Applications- USD 6685 (PI)
2025	<i>In vivo</i> safety assessment of topical titanium dioxide nanomaterial- USD 4475 (PI)
2025	Studying the in-vivo effect of copper cross-linked alginate hydrogel loaded with metallic nanoparticles for wound healing- USD 6900 (PI)

CURRICULUM VITAE

COMMITTEES

2008-now	Member in the Jordan Pharmacists Association JPA
2020-2024	Member, the aerogel European cost action
2024-now	Chief of Executive Committee, Ziad Al- Manaseer Scientific Research and Innovation Award
2022-2023	Member in the Higher Education Committee- Institute of nanotechnology- JUST
2022-2024	Member in the Scientific Research Committee-Institute of nanotechnology- JUST
2025	Member in the scientific committee of the 4 th International Conference on Advanced Materials
2025-now	Member in the Social Committee- Institute of nanotechnology- JUST

PUBLICATIONS

1	2026	How Effective are Nanotechnology-Based Therapeutics to Treat Autoimmune Diseases. Muna Barakat, Juhaina M Abu Ershaid, Lujain F Alzaghari, Shaymaa B Abdulrazzaq, Daniah Raad, Eliza Hasen, Raja'a A Al-Qudah, Dinesh Kumar Chellappan, Tamara Athamneh , Mohammad AA Al-Najjar, Akram Ashames
2	2026	Investigation of safety and efficacy of ZnO nanoparticle-loaded alginate-hyaluronic acid hydrogel for wound dressings: In vitro and in vivo studies. Alaa Abuawad, Areen Alshweiat, Tamara Athamneh , Farah Bani Yaseen, Amin Omar, Hiba Alzoubi, Ali Hmedat, Lujain Aljarrah, Bara'a Magableh, Farah Alzoubi, Yamen Bani Younes, Ahmad Bani Younes
3	2026	Silver Nanoparticle-Modified Screen-Printed Carbon Electrodes for the Electrochemical Sensing of the Prostate-Specific Antigen. Yahia F Makableh, Tamara Athamneh , Rama Matar, Ahmad Abu-Baker, Sara Hijazi, Aws Al-Qaisi
4	2026	Cost-effective, scalable synthesis of cilnidipine nanocrystals for enhanced oral bioavailability and hypertension treatment. MM Alsmadi, A Jararweh, R Obaidat, T Athamneh
5	2025	Effect of Lignin and other Biopolymers on Hyperlipidemia and Gut Microbiota. Amira Abu-Omar, Eliza Hasan, Joana Gil-Chávez, Tamara Athamneh , Husam Abazid, Pavel Gurikov, Mohammad AA Al-Najjar
6	2025	Preparation and characterization of copper-crosslinked alginate–hyaluronic acid aerogels as potential wound dressing materials with enhanced antibacterial properties. Tamara Athamneh , Mohammad AA Al-Najjar, Raghad Garafat, Alaa Mahmood Abuawad, Areen Alshweiat, Muna Barakat, Wael Fatehi Abu-Irmaileh, Adel Maher Hamdan, Tasneem Ali Odat, Razan Altarabeen, Yamen Bani Younes, Irina Smirnova
7	2025	Investigation of the antibacterial activity of ZnO-loaded alginate/hyaluronic acid aerogels for wound dressing applications. Tamara Athamneh , Alaa Abuawad, Tasneem Odat, Areen Alshweiat, Rana Obaidat, Farah Bani Yaseen, Mohammad A Al-Najjar, Raghad Garafat, Razan Altarabeen, Irina Smirnova, Pavel Gurikov
8	2024	Comparison between solvent evaporation and supercritical CO2 technology in taste-masking of Azithromycin bitter-taste using pH-sensitive Eudragit EPO or Eudragit S100 polymers. Hadeia Mashaqbeh, Rana Obaidat, M Alsmadi Mo'tasem, Tamara Athamneh
9	2024	Preparation and characterization of soluplus-based nanosuspension for dissolution enhancement of indomethacin using ultrasonic assisted precipitation method for formulation and Box-Behnken design for optimization. Areen Alshweiat, Eqbal Abu-Alkebash, Alaa

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		Abuawad, Tamara Athamneh , Shoroq Abukhamees, Muna Oqal
10	2024	Agar aerogel powder particles for future life science applications: fabrication and investigations on swelling behavior and cell compatibility. Claudia Keil, Anja Hajnal, Julia Keitel, Helena Kieserling, Sascha Rohn, Tamara Athamneh , Hajo Haase, Pavel Gurikov
11	2024	Evaluation of immunomodulatory potential of probiotic conditioned medium on murine macrophages. Mohammad AA Al-Najjar, Shaymaa B Abdulrazzaq, Lujain F Alzaghari, Asma Ismail Mahmood, Amin Omar, Eliza Hasen, Tamara Athamneh , Wamidh H Talib, Dinesh Kumar Chellappan, Muna Barakat
12	2024	Recent insights into nanoformulation delivery systems of flavonoids against glioblastoma. Areen Alshweiat, Mai Jaber, Alaa Abuawad, Tamara Athamneh , Muna Oqal
13	2023	The immunostimulatory effect of probiotic conditioned medium on RAW264. 7 murine macrophages. Muna Barakat, MA Al-Najjar, Shaymaa Abdulrazzaq, Wamidh H Talib, Tamara Athamneh
14	2023	Enhanced response and selective gold nanoparticles/carbon nanotubes biosensor for the early detection of HER2 biomarker. Yahia Makableh, Tamara Athamneh , Manar Ajlouni, Sara Hijazi, Aseel Alnaimi
15	2023	In vivo tests of a novel wound dressing based on agar aerogel. Tamara Athamneh , Anja Hajnal, Mohammad AA Al-Najjar, Areen Alshweiat, Rana Obaidat, Alaa Abu Awad, Ruaa Al-Alwany, Julia Keitel, Dongwei Wu, Helena Kieserling, Sascha Rohn, Claudia Keil, Pavel Gurikov
16	2023	Enhanced synergic effect of the antibacterial activity and hydrophobicity of polydimethylsiloxane polymer loaded with titanium dioxide nanoparticles and ciprofloxacin. YF Makableh, NF Momani, T Athamneh , R Al-Abed, I Alshorman
17	2022	Nanoliposomes as Drug Delivery Systems for Antifungal Therapy. S Alobeidat, T Athamneh
18	2021	Pulmonary drug delivery with aerogels: Engineering of alginate and alginate–hyaluronic acid microspheres. Tamara Athamneh , Adil Amin, Edit Benke, Rita Ambrus, Pavel Gurikov, Irina Smirnova, Claudia S Leopold
19	2021	Evaluation of the orally administered calcium alginate aerogel on the changes of gut microbiota and hepatic and renal function of Wistar rats. Mohammad AA Al-Najjar, Tamara Athamneh , Reem AbuTayeh, Iman Basheti, Claudia Leopold, Pavel Gurikov, Irina Smirnova
20	2020	Correction to “Mechanically Strong Polyurea/Polyurethane-Cross-Linked Alginate Aerogels”. Patrina Paraskevopoulou, Irina Smirnova, Tamara Athamneh , Maria Papastergiou, Despoina Chriti, Gregor Mali, Tomaž Čendak, Margarita Chatzichristidi, Grigorios Raptopoulos, Pavel Gurikov
21	2020	Polyurea-crosslinked biopolymer aerogel beads. Patrina Paraskevopoulou, Irina Smirnova, Tamara Athamneh , Maria Papastergiou, Despoina Chriti, Gregor Mali, Tomaž Čendak, Grigorios Raptopoulos, Pavel Gurikov
22	2019	Alginate and hybrid alginate-hyaluronic acid aerogel microspheres as potential carrier for pulmonary drug delivery. Tamara Athamneh , Adil Amin, Edit Benke, Rita Ambrus, Claudia S Leopold, Pavel Gurikov, Irina Smirnova
23	2018	Enhancement of levodopa stability when complexed with β -cyclodextrin in transdermal patches. Rana Obaidat, Nizar Al-Shar'i, Bassam Tashtoush, Tamara Athamneh

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PATENTS

1	14/7/2021	Polyurea/polyurethane-crosslinked alginate aerogels
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SUPERVISION OF MASTER STUDENT

2021	Enhanced synergic effect of the antibacterial activity and hydrophobicity of polydimethylsiloxane polymer loaded with titanium dioxide nanoparticles and ciprofloxacin, Nancy Momani (Co-Advisor)
2022	A biosensor using carbon nanotube/gold nanoparticles to detection HER2 protein in breast cancer, Manar Ajlouni (Co-Advisor)
2023	Detection of prostate-specific antigen by using a biosensor based on a screen printed electrode modified with silver nanoparticles or graphene oxide nanoparticles, Shathar Obeidat (Advisor)
2023	Investigation of the antibacterial activity of zinc oxide nanoparticles loaded in alginate/hyaluronic acid aerogel for wound dressing applications, Tasneem Odat (Advisor)
2024	<i>In Vivo</i> Evaluation of Alginate/ Hyaluronic Acid Hydrogel Loaded with Zinc Oxide Nanoparticles for Wound Dressing Applications, Lujain Aljarah (Advisor)
2025	<i>In vivo</i> safety assessment of topical titanium dioxide nanomaterial, Bara'a Magableh (Advisor)
2025	Formulation and evaluation of oral administration of cilnidipine nanocrystals for treatment Hypertension diseases by enhancement solubility and dissolution rate, Aseel Jararwah (Co-Advisor)
2025	Studying the in-vivo effect of copper cross-linked alginate hydrogel loaded with metallic nanoparticles for wound healing, Farah Bani Yaseen (Advisor)

EXAMINATION COMMITTEE OF MASTER THESIS

2021	The potential effect of the essential oil of coriander seeds on bacterial biofilm and immune cells, Eliza Isaac (External examiner)
2023	The potential effect of combination (Cytidine, Uridine, and Zinc) on gut Microbiota and clinical parameters of healthy rats, Maram Othaman (External examiner)
2023	Preparation and characterization of Ketoprofen nanocrystals for dissolution enhancement, Aeshe Abdo (External examiner)
2024	Investigation of the size effect of titanium dioxide nanoparticles on the antibacterial activity of platinum silicone with and without gentamicin antibiotic, Nawwar Alyafie (Internal examiner)
2025	Nanoliposomes for targeted nucleic acid delivery, Aya Jabateh (Internal examiner)
2026	Simulation of Ceramic Filter With a Nano-Porous Activated Carbon for Water Treatment, Yara bany abed alhamameed (Internal examiner)

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REFERENCES

Professor Irina Smirnova	Hamburg University of Technology (TUHH) irina.smirnova@tuhh.de , +49 163 6314545
Professor Patrina paraskevopoulou	National and Kapodistrian University of Athens paraskevopoulou@chem.uoa.gr , +30 693 841 8988

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience.

Signature: Tamara Athamneh



Date: 18 February 2026