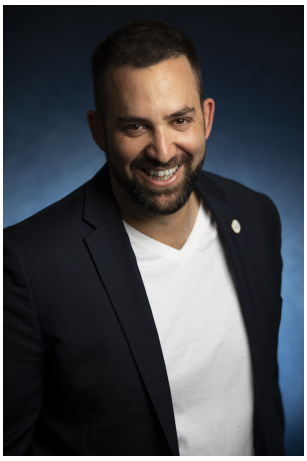
Date: 24-06-2024

R E S U M E

June-2024

1. PERSONAL DETAILS



Full Name:	Assaf Yosef Zinger
Identity No:	036556892
Date of birth:	28/11/1984
Place of birth:	Israel
Marital status:	married
Phone numbers:	+972-(52)-883-6230
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2. ACADEMIC DEGREES

2018	PhD , Faculty of Chemical Engineering, Technion-Israel Institute of Technology, Haifa, Israel
2016	MSc , Faculty of Chemical Engineering, Technion-Israel Institute of Technology, Haifa, Israel
2013	BSc , Faculty of Biomedical Engineering, Technion-Israel Institute of Technology, Haifa, Israel

3. ACADEMIC APPOINTMENTS

2021 - Present	Assistant Professor, Faculty of Chemical Engineering, Technion-Israel Institute of Technology, Haifa, Israel
2021 - Present	Adjunct Assistant Professor, Cardiovascular science, Houston Methodist Academic Institute,USA
2021 - Present	Adjunct Assistant Professor, Neurosurgery, Houston Methodist Academic Institute,USA
2024 - Present	Visiting Professor, Drug Science and Technology (DSTF), Universita Di Torino,Italy

2018 - 2021	Postdoctoral fellow, Center for Musculoskeletal Regeneration, Houston Methodist Research Insittute,USA
2018 - 2021	Postdoctoral fellow, Department of Orthopedics and Sports Medicine, Houston Methodist Hospital,USA

4. PROFESSIONAL EXPERIENCE (OUTSIDE ACADEMIA)

2012 - 2013	**Chairman**, Technion Academic Sports Association (ASA), Technion Students Association (TSA)
2012 - 2013	**Chairman**, Technion Students Association (TSA), Technion Students Association (TSA)
2012 - 2013	**Chairman**, “Effect” - Technion Students Association Corporation, Technion Students Association (TSA)
2012 - 2013	**Vice-chairman**, “Michlol” student store, Technion Students Association (TSA)
2003 - Present	**Brigade Operations Officer**, **Tank Company Commander**, **Executive Officer (XO) in The Armored Corps Headquarters** (Major in res.), Israel Defense Force

5. RESEARCH INTERESTS (BRIEFLY)

- **Biomimicry**. Synthesis of biomimetic nanoparticles to target and treat inflammation, cancer, and neurodegenerative diseases.
- **Infant Therapy**. We seek to explore and understand natural biological processes that occur during childhood with the goal of applying this knowledge to treat infants in a new way.
- **Drug Delivery**. Developing drug delivery system for the sustained release of genetic cargo, proteins, and small molecules.
- **Traumatic Brain Injury**. Developing novel therapies for patients suffering from traumatic brain injury.
- **Drug Delivery Systems Intra Vital Imaging**. Providing invaluable insights into the pharmacokinetics and efficacy of therapeutic interventions.

6. TEACHING EXPERIENCE

2014 - 2016	Laboratory in Biomedical Engineering- Biomechanics- 335003, Teaching Assistant , Undergraduate, recitation instructor , Technion-Israel Institute of Technology, Haifa
2014 - 2018	Chemical Engineering labs 1- 054310, Teaching Assistant , Undergraduate, recitation instructor , Technion-Israel Institute of Technology, Haifa

2014 - 2018	Chemical Engineering labs 2- 054400 , Teaching Assistant , Undergraduate, recitation instructor , Technion-Israel Institute of Technology, Haifa
2014 - 2018	Research Project 1- 054367 , Teaching Assistant , Undergraduate, recitation instructor , Technion-Israel Institute of Technology, Haifa
2014 - 2018	Research Project 2- 054368 , Teaching Assistant , Undergraduate, recitation instructor , Technion-Israel Institute of Technology, Haifa
2021 - 2022	Introduction to Chemical and Biochemical Engineering- 054135 , Lecturer , Undergraduate , Technion-Israel Institute of Technology, Haifa
2022 - Present	Bioninspired Nano Engineering and Translational Therapeutics, Topics in Chemical Engineering 2- 056386 , Lecturer , Undergraduate and Graduate , Technion-Israel Institute of Technology, Haifa
2023 - Present	Industry and Technion's Interdisciplinary Research Exposure - 054477 , Lecturer , Undergraduates , Technion-Israel Institute of Technology, Haifa
2024 - 2024	Bioinspired Nanoengineering for Therapy and Diagnostic , Lecturer , Graduate , University of Turin
2024 - 2024	Bioinspired Nanoengineering for biotech drugs , Lecturer , Undergraduate and Graduate , University of Turin
2024 - Present	Principles of Chemical Engineering 1m- 54203 , Lecturer- 33% , Undergraduates , Technion-Israel Institute of Technology, Haifa

7. ACTIVITIES

2012 - 2013	**Member**, Technion Senate and International Board of Governors.
2016 - Present	**Invited Speaker**, American Technion Society (ATS).
2019 - 2020	**Invited Speaker**, "Presidential Forum on the Road" at: New York, Washington DC, Seattle, San Francisco, San Diego, Los Angeles, Boston, Texas- Comprising a $1.8 billion global fundraising initiative for the Technion- Israel Institute of Technology.
2021 - 2023	**High School Student Mentor**, Asif School, Misgav, Israel
2021 - Present	**Judge**, Technion disciplinary court for faculty members up and including the rank of Assistant Professor.
2021 - Present	**Technion Ambassador**, American Technion Society (ATS).
2023 - Present	**Member**, Catalysis Center
2024 - Present	**Member**, LS&E - Technion Life Sciences and Engineering Infrastructure Center, Users Committee

8. DEPARTMENTAL ACTIVITIES

2016 - 2018	**Founder** and **Director** of "Tzameret" project for encouraging excellent high school students (mainly from the periphery) to study at the academy, Technion-Israel Institute of Technology, Haifa
2021 - Present	**Chemical Engineering Department representative** at Biomedical Engineering Department Council, Technion-Israel Institute of Technology, Haifa
2021 - Present	**Co-Founder** and **Co-Director** of the Chemical Engineering Undergraduate Excellence program, Technion-Israel Institute of Technology, Haifa
2022 - Present	**Member**, Graduate Studies Committee, Technion-Israel Institute of Technology, Haifa

9. PUBLIC PROFESSIONAL ACTIVITIES

2015 - Present	**Board Member**, Israeli Institute of Chemical Engineers
2018 - Present	**Manuscripts Scientific Reviewer**, Nature Materials; Nano Letters; Cellular and Molecular Neurobiology; Small; Scientific Reports; Trends in Cancer; Journal of Controlled Release; Drug Delivery and Translational Research; Frontiers Bioengineering; Advanced Functional Materials; ACS Nano; PNAS.
2020 - 2021	**Invited Speaker**, Science Abroad (IAC)
2020 - Present	**Grants Scientific Reviewer**, Rett Syndrome Research Trust
2021 - 2022	**Academic Representative**, Controlled Release Society, Nanomedicine and Nanoscale Delivery (NND) Focus Group
2021 - Present	**Research proposals reviewer**, Pazy foundation, RSRT foundation
2023 - 2024	**Scientific Committees Member**, National foundations
2023 - 2024	**Secretary**, Controlled Release Society, Nanomedicine and Nanoscale Delivery (NND) Focus Group
2023 - Present	**Associate Editor** and **Editorial Board Member**, RSC Pharmaceutics
2023 - Present	**Editorial Board Member**, Journal of Controlled Release
2023 - Present	**Guest Associate Editor**, Bioengineering & Translational Medicine

10. MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Controlled Release Society (CRS)
- Royal Society of Chemistry (RSC)
- European Society for Molecular Imaging (ESMI)

11. FELLOWSHIPS, AWARDS AND HONORS

2019 **Outstanding Postdoc of the Year- Houston Methodist Research Institute- for outstanding publications, grants submissions, leadership, extracurricular activities and overall excellence.**, Center for Musculoskeletal Regeneration, Department of Orthopedics and Sports Medicine/ Department of Orthopedics and Sports MedicineDepartment of Orthopedics and Sports Medicine/ Department of Orthopedics and Sports Medicine, Houston Methodist Research Institute (HMRI)/ Houston Methodist Hospital

2020 **Lindau Nobel Laureate 2020 Meeting elected participant**, virtual conference, Center for Musculoskeletal Regeneration, Department of Orthopedics and Sports Medicine/ Department of Orthopedics and Sports MedicineDepartment of Orthopedics and Sports Medicine/ Department of Orthopedics and Sports Medicine, Houston Methodist Research Institute (HMRI)/ Houston Methodist Hospital

2022 **Alon Scholarships for outstanding young scientists**, Chemical Engineering, Technion-Israel Institute of Technology, Haifa

2022 **Global Young Academy member**, Chemical Engineering, Technion-Israel Institute of Technology, Haifa

2022 **Outstanding Poster Award**, Chemical Engineering, Gordon Research Conferences

2022 **Young Investigator Award**, Controlled Release Society Bioinspired and Biomimetic focus group, Chemical Engineering, Technion-Israel Institute of Technology, Haifa

2022 **The Norman Seiden Fellowship in Nanotechnology and Optoelectronics**, Chemical Engineering, Technion-Israel Institute of Technology, Haifa

2022 **Umbrella Award for 2022 focusing on Life Science and Engineering: Data Analytics, Neuroscience, and Multiscale Biomedical Engineering**, Chemical Engineering, Technion- Israel Institute of Technology, RWTH Aachen University, Julich Forschungszentrum

2023 **ERC Starting Grant**, Chemical Engineering, Technion-Israel Institute of Technology, Haifa

2023 **Lindau Nobel Laureate 2023 Meeting elected participant**, Chemical Engineering, Technion-Israel Institute of Technology, Haifa

2024 **Fellow of the Royal Society of Chemistry (RSC)**, Chemical Engineering, Royal Society of Chemistry

12. GRADUATE STUDENTS

Completed PhD theses

Completed MSc Theses

PhD Theses in Progress

2025	Sivan Arber , Developing of Bioinspired Nanoparticles for Therapuetics Delivery to the Human Nervous System ,(**Dr. Assaf Zinger**)
2026	Si Naftaly , Breast Milk Biomimetic Nanoparticles for Infant Therapy ,(**Dr. Assaf Zinger**)
2027	Rawan Mhajne , Biomimetic Nanoparticles Tunable Protein Corona ,(**Dr. Assaf Zinger**)
2028	Ilana Elizarov , Designing Biomimetic Nanoparticles for Drug Delivery ,(**Dr. Assaf Zinger**)
2028	Ofri Vizenblit , Modulating Triple Negative Breast Cancer Microenvironment Using Biomimetic Nanoparticles ,(**Dr. Assaf Zinger**)

MSc Theses in Progress

2024	Roni Baron , Continuous Monitoring Of Health By Wearable Mass Spectrometry ,(**Prof. Hossam Haick** Co-Supervisor with **Dr. Assaf Zinger**)
2024	Shir Erez , Personalized Resected Tumor Biomimetic Nanoparticles ,(**Dr. Assaf Zinger**)
2024	Sivan Barash , Treating Neurodegenerative Diseases Using Biomimetic Nanoparticles ,(**Dr. Assaf Zinger**)
2025	Anat Lyubin , Biomimetic Nanoparticles Central Nervous System Biodistribution ,(**Dr. Assaf Zinger**)

13. SPONSORED LONG-TERM VISITORS AND POST-DOCTORAL ASSOCIATES

14. RESEARCH GRANTS

Competitive

2022 - 2024	**Israel Cancer Association**, Resected Tumor Biomimetic Nanoparticles for Personalized and Prophylactic Immunotherapies, 30330 USD, Assaf Yosef Zinger (PI)
2022 - 2024	**Israel Cancer Research Fund**, Modulating Triple Negative Breast Cancer Microenvironment Using Biomimetic Nanoparticles, 134919 USD, Assaf Yosef Zinger (PI)

2022 - 2025	**Israel Science Foundation**, Personal Research Grants, Particular Nano Particles (PNP): a Human Proteins-Based Novel Nanotechnology Tool for Studying the Nano Scale Characteristics for Improved Inflammation Targeting, 341718 USD, Assaf Yosef Zinger (PI)
2022 - 2025	**Israel Science Foundation**, New-Faculty Equipment Grants Program, Equipment for Bioinspired NanoEngineering and Translational Therapeutics lab, 268310 USD, Assaf Yosef Zinger (PI)
2023 - 2024	**ERA-NET NEURON**, Pain After Covid- Multidisciplinary Action Network (PAC-MAN), 50000 EUR, Assaf Yosef Zinger (CO)
2024 - 2029	**European Research Council**, MILKOSOMES- Breast Milk Biomimetic Nano Particles as a Versatile, Non-Invasive, Oral Drug Delivery Tool, 2,437,500 EUR , Assaf Yosef Zinger (PI)

Industrial and other sources

2021 - N/A	**Technion- Israel Institute of Technology**, Research Start-Up Funds, 950000, USD, Assaf Yosef Zinger (PI)
2022 - 2023	**Russell Berrie Nanotechnology Institute**, Biomimetic Nanovesicles for elucidating misfolded ubiquitin secretion mechanism in Alzheimer's Disease, 40000, USD, Assaf Yosef Zinger (PI), Prof. Michael Glickman, Co-PI
2022 - 2024	**The Seiden Fellow in Nanotechnology and Optoelectronics**, Career Advancement Chair, 10000, USD, Assaf Yosef Zinger (PI)
2022 - 2025	**Council for Higher Education**, Alon Scholarship, 52335, USD, Assaf Yosef Zinger (PI)
2024 - 2025	**Technion EVPR Fund: Nahum Wilbush Research Fund , ITS**, Unlocking Nature's Potential: Harnessing the Power of Human Breast Milk to Boost Intestinal Permeability for Macromolecules, 50000, NIS, Assaf Yosef Zinger (PI)

15. PUBLICATIONS

15.1 Theses

Assaf Zinger, (2018) "Developing Bio-active Nanoparticles for Performing Precise and Personalized Medical Tasks Inside the Body", Advisor: Dr. Avi Schroeder, Technion–Israel Institute of Technology, Haifa, Israel.

15.2 Refereed papers in professional journals

(1) Mancino, C.; Pollet, J.; Zinger, A.; Jones, K. M.; Villar, M. J.; Leao, A. C.; Adhikari, R.; Versteeg, L.; Tyagi Kundu, R.; Strych, U. 2024. Harnessing RNA technology to advance

therapeutic vaccine antigens against chagas disease. ACS Applied Materials & Interfaces, 16, 15832-15846
(2) Baudo, G.; Flinn, H.; Holcomb, M.; Tiwari, A.; Soriano, S.; Taraballi, F.; Godin, B.; Zinger, A.; Villapol, S. 2023. Sex-dependent improvement in traumatic brain injury outcomes after liposomal delivery of dexamethasone in mice. bioRxiv,
(3) Poley, M.; Mora-Raimundo, P.; Shammai, Y.; Kaduri, M.; Koren, L.; Adir, O.; Shklover, J.; Shainsky-Roitman, J.; Ramishetti, S.; Man, F.; De Rosales, R.; Zinger, A.; Peer, D.; Ben-Aharon, I.; Schroeder, A. 2022. Nanoparticles accumulate in the female reproductive system during ovulation affecting cancer treatment and fertility. ACS nano, 16, 5246-5257
(4) Einoch Amor, R.; Zinger, A.; Broza, Y. Y.; Schroeder, A.; Haick, H. 2022. Artificially intelligent nanoarray detects various cancers by liquid biopsy of volatile markers. Advanced healthcare materials, 11, 2200356
(5) Zinger, A.; Sushnitha, M.; Naoi, T.; Baudo, G.; De Rosa, E.; Chang, J.; Tasciotti, E.; Taraballi, F. 2021. Enhancing inflammation targeting using tunable leukocyte-based biomimetic nanoparticles. ACS nano, 15, 6326-6339
(6) Zinger, A.; Soriano, S.; Baudo, G.; De Rosa, E.; Taraballi, F.; Villapol, S. 2021. Biomimetic nanoparticles as a theranostic tool for traumatic brain injury. Advanced Functional Materials, 2100722
(7) Zinger, A.; Cvetkovic, C.; Sushnitha, M.; Naoi, T.; Baudo, G.; Anderson, M.; Shetty, A.; Basu, N.; Covello, J.; Tasciotti, E.; Amit, M.; Xie, T.; Francesca, T.; Krencik, R. 2021. Humanized Biomimetic Nanovesicles for Neuron Targeting. Advanced Science, 2101437
(8) Boada, C. A.; Zinger, A.; Rohen, S.; Martinez, J. O.; Evangelopoulos, M.; Molinaro, R.; Lu, M.; Villarreal-Leal, R. A.; Giordano, F.; Sushnitha, M.; De Rosa, E.; Simonsen, J.; Shevkoplyas, S.; Tarballi, F.; Tasciotti, E. 2021. LDL-based lipid nanoparticle derived for blood plasma accumulates preferentially in atherosclerotic plaque. Frontiers in Bioengineering and Biotechnology, 9, 794676
(9) Zinger, A.; Baudo, G.; Naoi, T.; Giordano, F.; Lenna, S.; Massaro, M.; Ewing, A.; Kim, H. R.; Tasciotti, E.; Yustein, J. T.; Taraballi, F. 2020. Reproducible and Characterized Method for Ponatinib Encapsulation into Biomimetic Lipid Nanoparticles as a Platform for Multi-Tyrosine Kinase-Targeted Therapy. ACS Applied Bio Materials, 3, 6737-6745
(10) Molinaro, R.; Martinez, J. O.; Zinger, A.; De Vita, A.; Storci, G.; Arrighetti, N.; De Rosa, E.; Hartman, K. A.; Basu, N.; Taghipour, N.; Claudia, C.; Tasciotti, E. 2020. Leukocyte-mimicking nanovesicles for effective doxorubicin delivery to treat breast cancer and melanoma. Biomaterials science, 8, 333-341
(11) Bochner, F.; Mohan, V.; Zinger, A.; Golani, O.; Schroeder, A.; Sagi, I.; Neeman, M. 2020. Intravital imaging of vascular anomalies and extracellular matrix remodeling in orthotopic pancreatic tumors. International journal of cancer, 146, 2209-2217
(12) Boada, C.; Zinger, A.; Tsao, C.; Zhao, P.; Martinez, J. O.; Hartman, K.; Naoi, T.; Sukhovershin, R.; Sushnitha, M.; Molinaro, R.; Barry, T.; P, C. J.; Ennio, T. 2020. Rapamycin-loaded biomimetic nanoparticles reverse vascular inflammation. Circulation research, 126, 25-37
(13) Amit, M.; Takahashi, H.; Dragomir, M. P.; Lindemann, A.; Gleber-Netto, F. O.; Pickering, C. R.; Anfossi, S.; Osman, A. A.; Cai, Y.; Wang, R.; Knutsen, E.; Shimizu, M.; Ivan, C.; Rao, X.;

Wang, J.; Silverman, D. A.; Tam, S.; Zhao, M.; Caulin, C.; Zinger, A.; Tasciotti, E.; Dougherty, P. M.; El-Naggar, A.; Calin, G. A.; Myers, J. N. 2020. Loss of p53 drives neuron reprogramming in head and neck cancer. Nature, 578, 449-454
(14) Zinger, A.; Koren, L.; Adir, O.; Poley, M.; Alyan, M.; Yaari, Z.; Noor, N.; Krinsky, N.; Simon, A.; Gibori, H.; Majd, K.; Yelena, M.; Shira, K.; Sivan, O.; Eran, F.; Neta, M.; M, L. b. M.; Lior, L.; Jeny, S.; Janna, S.-R.; Yoav, B.; Dov, H.; Ziv, G.; Tal, D.; Robert, L.; Ronit, S.-F.; Avi, S. 2019. Collagenase nanoparticles enhance the penetration of drugs into pancreatic tumors. ACS nano, 13, 11008-11021
(15) Molinaro, R.; Pastò, A.; Corbo, C.; Taraballi, F.; Giordano, F.; Martinez, J. O.; Zhao, P.; Wang, X.; Zinger, A.; Boada, C.; Hartman, K. A.; Tasciotti, E. 2019. Macrophage-derived nanovesicles exert intrinsic anti-inflammatory properties and prolong survival in sepsis through a direct interaction with macrophages. Nanoscale, 11, 13576-13586
(16) Abumanhal-Masarweh, H.; Koren, L.; Zinger, A.; Yaari, Z.; Krinsky, N.; Kaneti, G.; Dahan, N.; Lupu-Haber, Y.; Suss-Toby, E.; Weiss-Messer, E.; Schlesinger-Laufer, M.; Shainsky-Roitman, J.; Schroeder, A. 2019. Sodium bicarbonate nanoparticles modulate the tumor pH and enhance the cellular uptake of doxorubicin. Journal of controlled release, 296, 1-13
(17) Abumanhal-Masarweh, H.; da Silva, D.; Poley, M.; Zinger, A.; Goldman, E.; Krinsky, N.; Kleiner, R.; Shenbach, G.; Schroeder, J. E.; Shklover, J.; Janna, S.-R.; Avi, S. 2019. Tailoring the lipid composition of nanoparticles modulates their cellular uptake and affects the viability of triple negative breast cancer cells. Journal of controlled release, 307, 331-341
(18) Zinger, A.; Adir, O.; Alper, M.; Simon, A.; Poley, M.; Tzror, C.; Yaari, Z.; Krayem, M.; Kasten, S.; Nawy, G.; Herman, A.; Nir, Y.; Akrish, S.; Klein, T.; Shainsky-Roitman, J.; Hershkovitz, D.; Schroeder, A. 2018. Proteolytic nanoparticles replace a surgical blade by controllably remodeling the oral connective tissue. ACS nano, 12, 1482-1490
(19) Krinsky, N.; Kaduri, M.; Zinger, A.; Shainsky?Roitman, J.; Goldfeder, M.; Benhar, I.; Hershkovitz, D.; Schroeder, A. 2018. Synthetic cells synthesize therapeutic proteins inside tumors. Advanced healthcare materials, 7, 1701163
(20) Karny, A.; Zinger, A.; Kajal, A.; Shainsky-Roitman, J.; Schroeder, A. 2018. Therapeutic nanoparticles penetrate leaves and deliver nutrients to agricultural crops. Scientific Reports, 8, 1-10
(21) Goldman, E.; Zinger, A.; Da Silva, D.; Yaari, Z.; Kajal, A.; Vardi-Oknin, D.; Goldfeder, M.; Schroeder, J. E.; Shainsky-Roitman, J.; Hershkovitz, D.; Schroeder, A. 2017. Nanoparticles target early-stage breast cancer metastasis in vivo. Nanotechnology, 28, 43LT01
(22) Yaari, Z.; Da Silva, D.; Zinger, A.; Goldman, E.; Kajal, A.; Tshuva, R.; Barak, E.; Dahan, N.; Hershkovitz, D.; Goldfeder, M.; Shainsky Roitman, J.; Schroeder, A. 2016. Theranostic barcoded nanoparticles for personalized cancer medicine. Nature communications, 7, 1-10
(23) Dror, S.; Sander, L.; Schwartz, H.; Sheinboim, D.; Barzilai, A.; Dishon, Y.; Apcher, S.; Golan, T.; Greenberger, S.; Barshack, I.; Malcov, H.; Zilberberg, A.; Levin, L.; Nessling, M.; Friedmann, Y.; Igras, V.; Barzilay, O.; Vaknine, H.; Brenner, R.; Zinger, A.; Schroeder, A.; Gonen, P.; Khaled, M.; Erez, N.; Hoheisel, J. D.; Levy, C. 2016. Melanoma miRNA trafficking controls tumour primary niche formation. Nature cell biology, 18, 1006-1017
(24) Zoabi, N.; Golani?Armon, A.; Zinger, A.; Reshef, M.; Yaari, Z.; Vardi?Oknin, D.; Shatsberg,

Z.; Shomar, A.; Shainsky?Roitman, J.; Schroeder, A. 2013. The Evolution of Tumor?Targeted Drug Delivery: From the EPR Effect to Nanoswimmers. Israel Journal of Chemistry, 53, 719-727

Accepted (or in press) papers

Submitted papers

(1) Naftaly, S.; Pery, T.; Mhajne, R.; Ashkar, R.; Davidovich Pinchas, M; Zinger, A; Harnessing the Power of Human Breast Milk to Boost Intestinal Permeability for Nanoparticles and Macromolecules.

Review papers

(1) Zinger, A. 2023. Speak up! But how? Nature Reviews Bioengineering, 1, 684-686
(2) Zinger, A. 2023. Unleashing the potential of cell biomimetic nanoparticles: Strategies and challenges in their design and fabrication for therapeutic applications. Journal of controlled release, 358, 591-600
(3) Zinger, A.; Cooke, J. P.; Taraballi, F. 2021. Biomimetic nano drug delivery carriers for treating cardiovascular diseases. Nanomedicine: Nanotechnology, Biology and Medicine, 33, 102360
(4) Zinger, A.; Brozovich, A.; Pasto, A.; Sushnitha, M.; Martinez, J. O.; Evangelopoulos, M.; Boada, C.; Tasciotti, E.; Taraballi, F. 2020. Bioinspired extracellular vesicles: lessons learned from nature for biomedicine and bioengineering. Nanomaterials, 10, 2172

15.3 Books

Monographs and textbooks

Edited Books

15.4 Book chapters

15.5 Refereed papers in conference proceedings

15.6 Patents (granted)

1. Delivery system comprising a proteolytic enzyme or effector thereof for use in a method for oral treatment and uses thereof. Avraham D Schroeder, **Assaf Zinger**, Avishay Herman. US Patent. Application number US10918701B2, (2021).
2. Collagenase-loaded liposomes for enhancing drug delivery. Avi Schroeder, **Assaf Zinger**. US Patent. Application number US20210059936A1, (2021).
3. Neurosome/astrosome compositions and methods of use. **Assaf Zinger**, Caroline Elizabeth Cvetcovic, Robert Conrad Krencik, Ennio Tasciotti, Francesca Taraballi. Application number WO2021091582A1, (2020).
4. Tunable leukocyte-based biomimetic nanoparticles and methods of use. **Assaf Zinger**, Francesca Taraballi. Application number US20220280428A1, (2022).

15.7 Research reports and other publications

16. CONFERENCES

16.1 Plenary, keynote or invited talks

International

1. ***"From Drug Delivery To Cell Communication- Targeting Diseased Tissues, The Cell Way"***, Controlled Release Society (CRS) Local Chapters + RTG2375 Meeting, Germany, 2022. (Invited Talk)

2. ***"From Drug Delivery To Cell Communication- Targeting Diseased Tissues The Cell Way"***, 35th Umbrella Symposium, Germany, 2022. (Invited Talk)

3. ***"mRNA Encapsulating Biomimetic Nanoparticles for Treating Rare Pediatric Diseases"***, 35th Umbrella Symposium, Germany, 2022. (Invited Talk)

4. ***"Precision Targeting of Diseased Tissues with Biomimetic Nanoparticles, and the Imaging Challenges that Come with That…"***, European Molecular Imaging Meeting - EMIM 2024, Portugal, 2024. (Invited Talk)

5. ***"Unlocking The Cellular Blueprint: Precision Targeting of Diseased Tissues With Biomeimetic Nanoparticles"***, 18th Liposome Research Days 2024, United Kingdom, 2024. (Invited Talk)

National

1. ***"Enzymatic Biosurgery"***, Biomedical Engineering National Conference, Israel, 2015. (Invited Talk)

2. ***"Enhancing inflammation targeting using tunable leukocyte-based biomimetic nanoparticles"*** , PAT-ICRS 2021, Israel, 2021. (Invited Talk)

3. ***"From Drug Delivery to Cellular Communication. Targeting Diseased Tissue The Cell Way"***, Biomaterials for Medical Application Symposium, Israel, 2022. (Invited Talk)

4. ***"From Drug Delivery to Cellular Communication. Targeting Diseased Tissue The Cell Way"*** , IMA BioHub, Israel, 2022. (Invited Talk)

5. ***"Targeting Diseased Tissues, The Cell Way"***, NEWCHEM II, Israel, 2022. (Invited Talk)

6. ***"Targeting Diseased Tissues, The Cell Way"***, ICRS 2023, Israel, 2023. (Invited Talk)

7. ***"Targeting Diseased Tissues, The Cell Way"***, Israel Society for Clinical Laboratory Sciences (ISCLS), Israel, 2023. (Plenary)

8. ***"Targeting Diseased Tissues, The Cell Way"***, LS&E Advanced Research Day, Israel, 2023. (Invited Talk)

16.2 Contributed Talks and Posters

International Oral

1. Selected presentation, ***"Pancreatic Ductal Adenocarcinoma Nano-Diggers"***, Gordon Research Conference (GRC), USA. 06-2017 .

2. On demand talk, ***"Enhancing Inflammation Targeting Using Tunable Leukocyte-Based Biomimetic Nanoparticles"***, Controlled Release Society (CRS). Virtual conference, USA. 07-2021 .

3. Oral presentation, ***"From Drug Delivery to Cell Communication- Targeting Diseased Tissues, The Cell Way "***, Controlled Release Society (CRS), Canada. 07-2022 .

International Poster

1. ***"Enzymatic Biosurgery"***, Controlled Release Society (CRS), United Kingdom. 07-2015 .

2. ***"Pancreatic Ductal Adenocarcinoma Nano-Diggers"***, Cancer Nanotechnology Gordon Research Conference (GRC), USA. 06-2017 .

3. ***"Engineered Extracellular Vesicles: From Drug Delivery to Cell Communication"***, Cancer Nanotechnology Gordon Research Conference (GRC), USA. 06-2019 .

4. ***"Enhancing Inflammation Targeting Using Tunable Leukocyte-Based Biomimetic Nanoparticles"***, Controlled Release Society (CRS). Virtual conference, USA. 07-2021 .

5. ***"Humanized Biomimetic Nanovesicles for Neuron Targeting"***, Drug Carriers in Medicine and Biology Gordon Research Conference (GRC), USA. 07-2022 .

6. ***"Humanized Biomimetic Nanovesicles for Neuron Targeting"***, Cancer Nanotechnology Gordon Research Conference (GRC), USA. 07-2023 .

National Oral

1. ***"Enzymatic Biosurgery"***, The 9th Annual Meeting of the Israel Chapter of the Controlled Release Society, Israel. 09-2014 .

2. ***"Enzymatic Biosurgery"***, The 50th Israel Chemical Engineering National Conference, Israel. 02-2015 .

3. ***"Enzymatic Biosurgery"***, Nano summer school, Israel. 06-2016 .

4. ***"Nano Drillers"***, The 10th Annual Meeting of the Israel Chapter of the Controlled Release Society, Israel. 09-2016 .

5. ***"Enhancing Inflammation Targeting Using Tunable Leukocyte-based Biomimetic Nanoparticles"***, Houston Methodist Association for Postdoctoral and Trainee Affairs (MAPTA), 3rd Summer Science Symposium, USA. 09-2020 .

National Poster

1. ***"Enzymatic Biosurgery"***, The 9th Annual Meeting of the Israel Chapter of the Controlled Release Society, Israel. 09-2014 .

2. ***"Enzymatic Biosurgery"***, Biomedical Engineering National Conference, Israel. 02-2015 .

3. ***"Enzymatic Biosurgery"***, The 50th Israel Chemical Engineering National Conference, Israel. 02-2015 .

4. ***"Enzymatic Nano-Surgery"***, Nano Summer School, Israel. 06-2016 .

5. ***"Nano drillers"***, The 10th Annual Meeting of the Israel Chapter of the Controlled Release Society, Israel. 09-2016 .

6. ***"Nano drillers"***, Chemical Engineering Department Conference, Israel. 11-2017 .

7. ***"Collagenase nanoparticles enhance the penetration of drugs into pancreatic tumors"***, Jacobs Graduate Research Day, Israel. 01-2018 .

8. ***"Changing the protein to lipid ratio alters the biological effect of leukocyte-based biomimetic nanoparticles"***, Texas Biomaterials Day, USA. 05-2019 .

9. ***Changing the protein to lipid ratio alters the biological effect of leukocyte-based biomimetic nanoparticles"***, Rice University Innovation Symposium, USA. 10-2019 .

16.3 Participation in organizing conferences

1. The 1st Young Israeli Chapter of the Controlled Release Society (YICRS), Israel, 02-2016, **Chairman** and **Board Member** .

2. The 2nd Young Israeli Chapter of the Controlled Release Society, Israel, 02-2017, **Chairman** and **Board Member** .

3. Cellular Targeting of Nanoparticles for Cancer Therapy, Diagnostics and Imaging, Gordon Research Seminars (GRS), USA, 06-2019, **Chairman** .

4. International Controlled Release Society Annual Meeting- Scientific Outreach, Canada, 07-2022 , **Session Chair** .

5. Drug Delivery and Nanomedicine Students Symposium, Israel, 07-2022, **Academic mentor** .

6. International Controlled Release Society Annual Meeting, Canada, 07-2022, **Abstracts Chair** and a member of the international Controlled Release Society Annual Meeting Planning Committee (AMPC) .

7. The 3rd Young Israeli Chapter of the Controlled Release Society, Israel, 12-2022, **Academic mentor**, **Session Moderator** .

8. International Controlled Release Society Annual Meeting- Scientific Outreach, USA, 07-2023, **Session Chair** .

9. International Controlled Release Society Annual Meeting, USA, 07-2023, **Abstracts Chair** and a member of the international Controlled Release Society Annual Meeting Planning Committee (AMPC) .

10. 18th Liposome Research Days 2024, United Kingdom, 06-2024, **Session Chair** .

11. International Controlled Release Society Annual Meeting, Italy, 07-2024, **Co-Chair** and a member of the international Controlled Release Society Annual Meeting Planning Committee (AMPC) .

12. International Controlled Release Society Annual Meeting, USA, 07-2025, **Chair** and a member of the international Controlled Release Society Annual Meeting Planning Committee (AMPC) .

17. NOTES

1. During the "Iron Swords" war, I served for 100 days as an Executive Officer in the armored corps headquarters. For my service, I was awarded the Israeli Armored Corps Excellency Award.