

Rana Dajani, PhD

Professor of Molecular Cell Biology,

The Hashemite University, Zarqa Jordan

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A. Education

University of Jordan, Amman Jordan, BS 12/89 Biology

University of Jordan, Amman, Jordan MS 1/92 Biology

University of Iowa, Iowa city, IA, USA PhD 9/2005 Molecular Cell Biology

B. Personal Statement

I am a professor of molecular cell biology at the Hashemite University in Jordan. My research field is interdisciplinary from genetics of ethnic populations in Jordan to recent transition to the impact of trauma on refugees. I have led the academic research project in collaboration with Yale University funded by elraha on Syrian refugee adolescents evaluating an intervention run by Mercy corps. Our study covered the typical surveys biomarkers, cognitive functions and genetics. The project was unique and innovative in the following ways: 1. We were able to use a diversity of measures under humanitarian conditions and conduct RCTs. We were able to collect biomarkers by engaging the adolescent refugees and their parents by explaining the science behind the research, what does a RCT mean and why it is necessary which resulted in raising awareness for science. We most importantly went back into the community to share the results of the research by giving a presentation to the adolescents so they could see with their own eyes the result of science. In my research team we employ Syrian and Jordanian research assistants who were instrumental in developing a resilience scale for Arab adolescents that resulted in a publication of its own and a research tool that is being widely used today. 2. We established true collaborations between local and international academics and between academics and NGOs by building avenues of communication and mutual trust and listening. This is important to do good science and to have an impact on programming for refugees. Our work has informed program development by mercy corps and opened up new research questions that have resulted in new research projects. As a social entrepreneur myself, I developed an intervention “We Love Reading” (WLR) changing mindsets through reading to create changemakers that has developed into a NGO that has spread to 71 countries. In this capacity I am the director of the NGO managing and directing the Program implementation in Jordan, MENA and globally as well as conducting academic research on the impact of the Program on children, adults and community in collaboration with other scientists. I create teams and invite the specialist to come study the WLR Program. Therefore I know very well the intricates and challenges of NGOs and implementation as well as partnering with government and funders and other stakeholders. I have served on the UN women Jordan advisory board, on the UNESCO international literacy prize, Beyond conflict board of directors, SHE center Dana Farber/Harvard advisory board, Global ties advisory board for their role in the MacArthur sesame project. I have run workshops for academics on writing grants, scientific writings, soft skills etc. as well as creating a manual in Arabic on how to conduct RCTs for NGOs. In terms of policy I spearheaded the effort in creating the first stem cell law governing research and therapy in the region. My experience in collaboration, creating international teams, building bridges of understanding between cultures and disciplines successfully. I am well known for speaking my mind, coming up with creative ideas and out of the box solutions, never taking no for an answer, always ready to explore new methods and ways. Comfortable with change, ready to listen and accept diversity of perspectives and opinions. I accept criticism and give constructive criticism to peers for the greater good. I have successfully applied and received one of the first grants from TEMPUS for curricula reform in Jordan. I was the higher education reform expert for Jordan and director of the center for studies at the Hashemite university in Jordan. I won the PEER award for the mentoring Program I developed for female academics. I was the former president of the society for the advancement of science and technology in the Arab world. As head of the NGO Taghyeer, we have partnered and received grants from UNICEF, USAID. Fetzer foundation, MEPI,

British academy, and collaborated with local universities, regional and international such as Queen Mary university, NYUAD, Yale, University of Chicago and Brown university. Organizing international conferences focusing on bridging research and practice and advocating incorporating the we love reading Program as a national movement under the ministry of social development. As a scientist who works in multiple disciplines conducting interdisciplinary research I offer a unique position to offer opinions from multiple perspectives to enrich the discussion and to suggest new innovative approaches, designs and projects. Also as both a scientist and a practitioner through the programs I have developed and implemented from the bottom up (grassroots and community driven) I offer perspectives from both sides of the spectrum. Having grown up in the US and in Jordan I have a deep understanding of both cultures and therefore can understand both cultures to better build bridges of communication and to ensure as much as possible no unconscious bias and power dynamics to ensure equal voices and agency. I am half Syrian and half Palestinian myself with a Jordan/US citizenship.

C. Positions and Honors

Positions and Employment

2005-2012 Assistant Professor, Department of Biology, Hashemite University, Zarqa, Jordan
 2009-2010 Founder and Director, Center for Service Learning, Hashemite University, Zarqa, Jordan
 2011-2012 Director, Center for Studies, Hashemite University, Zarqa, Jordan
 2012-2013 Visiting Assistant Professor (Fulbright Scholarship), Department of Genetics, Yale University, USA
 2013-2019 Associate Professor of Molecular Cell Biology, Dept. of Biology, Hashemite University, Jordan
 2015 (Winter) Visiting Professor, The Faraday Institute, St. Edmund's College, Cambridge University, Cambridge, UK
 2015 (Spring) Visiting Professor, Cell Therapy Center, University of Jordan, Amman, Jordan
 2017-2018 Rita Hauser Fellow, Radcliffe Institute for Advanced Studies, Harvard University, Cambridge, MA
 2019-present Full Professor of Molecular Cell Biology, Dept. of Biology, Hashemite University, Jordan
 2019-2021 Cmelikova Visiting Scholar in Leadership and Ethics, University of Richmond, Richmond, VA
 2022-2023 MIT Visiting professor Systems Awareness Lab and REACT
 2023-2024 Robert Bosch Academy Fellow, Germany
 2024-2025 Chen Yidan Visiting Global Fellow at the Harvard Graduate School of Education (HGSE).
 Other Experience and Professional Memberships
 2000-2005 Research Assistant, University of Iowa, Iowa City, IA
 2006 Founder, We Love Reading, Jordan
 2008 Founder of the Women Network in Academia
 2009 Member of the National Team for setting priorities for health research issues in Jordan
 2009 Research Member at the Jordan National Center for Women
 2009 Co-organizer of the Scientific Research Conference
 2009 Speaker at the Women Global Leaders, UAE
 2009 Speaker at the W@W, British Council
 2010 Founder and Director of the Service Learning Center, Hashemite University, Jordan
 2010 Director of Taghyeer Organization, Amman Jordan
 2011 TEDxHashemite University women organizer
 2011-2014 Higher Education Reform Expert, TEMPUS, Jordan
 2011 Speaker at the TEDxDeadSea
 2012-2013 Member, Fetzer Advisory Council on Natural Sciences, Fetzer Institute, Kalamazoo, MI
 2012 Co-organizer for student learning outcome workshops, Hashemite University, Jordan
 2012 Mentor AMENDS Program, Stanford University, Stanford, CA
 2012 Speaker at the World Economic Islamic Forum, Johor Bahru, Malaysia
 2013 Fulbright Occasional Lecturer, Williams College, Williamstown, MA
 2013-present Associate Editor, Human Gene
 2013 Expert Consultant in Education Sector, Islamic Development Bank, Saudi Arabia

2013-present Member, UN Women Jordan Advisory Council

2013 Launched the Women Mentoring for Social Entrepreneurs, Synergos

2013 Speaker at the Council on Middle Eastern Studies, Yale University

2018 Member of the Council of Centre for Arab Genomic Studies (CAGS)

2018 Member of the National Committee for Biotechnology, Ministry of Health, Jordan

2019 President of OWSD Jordan

2019-present President of the Society for the Advancement of Science and Technology in the Arab World

2021 Fellow Int Society for Science and religion ISSR Cambridge

2022 Morse Fellow Yale University, USA

2024 International Science Council Fellow

2024 Skoll Fellow Oxford, UK

2025 TWAS Fellow, Trieste, Italy

Honors and Awards

2009 Synergos Award for Arab World Social Innovators

2010 Member, Clinton Global Initiative

2013 Library of Congress Literary Award for Best Practices

2014-2017 Ranked 13 in CEO Middle East Magazine's list of 100 Most Powerful Arab Women

2014 Genius category CEO Middle East Magazine's list of 100 Most Powerful Arabs

2014 Named one of the 20 most influential women scientists in the Muslim World

2015 Women in Science Hall of Fame, US Embassy Amman's Environment, Science, Technology, and Health Office for the Middle East

2015-2018 On the list of 500 most influential Muslims

2016 The inaugural IIE Global Changemaker Award in celebration of the 70th Anniversary of the Fulbright

2017 World HRD Congress Women Super Achiever Award 2017

2017 We Love Reading: Refugee-led Reading Circle, Promising Practices in Refugee Education initiative

2017 Pearson, UNHCR, and Save the Children

2017 UNESCO King Sejong International Literacy Prize

2017 Jordan Star of Science, Category Biology, His Majesty King Abdullah II of Jordan, World Science Forum

2017 UNHCR's Protecting Urban Refugee Children Innovation Challenge Winner

2018 UI Carver College of Medicine's Distinguished Alumni Award

2018 World Literacy Summit Award

2018 Jacob Klaus Social Entrepreneurship Award

2019 Arab Science and Technology Foundation Award in Service of the Advancement of Science and Technology

2019 Ashoka Fellow

2020 UNHCR Nansen Refugee Award

2021 women of influence in the Arab World 2021 Arabian Business magazine's list.

2022 Fair Saturday Award

2022 Schwab Social Entrepreneur Award

2023 Muslim 500 list for the past 5 years

D. Contributions to Science

- 1) **Trauma and biology** My research has focused on studying the impact of trauma across time on the human body from multiple perspectives including mental health, physiology and biomarkers and epigenetics among vulnerable communities across different ages. In my research I create teams across disciplines and geographies to ensure high quality science and most importantly I include scientists from the targeted communities to better serve and enrich the communities studied. I collaborate with INGOs such as Mercy

Corps and local NGOs such as We Love Reading to study the impact of their programs on vulnerable communities through randomized control research designs and longitudinal studies. I have data bases of these different cohorts and studies that we share and collaborate with other scientists across disciplines and globally. We also work with stakeholders such as governments, UN agencies and INGOs to influence policy makers to do better for humanity based on the rigorous scientific evidence we produce. Through my work I have challenged how we partner with local collaborators and stakeholders, how we design research projects, what measurement tools to we employ and how we analyze data collected to be more true to the people we serve. Our work has spanned multiple geographies. We are able to ask the difficult questions within hard to reach communities. Lately my work has focused primarily on epigenetic focusing on three questions: What is the impact of trauma over long time periods on DNA? Are there programs such as We Love Reading that can reverse those epigenetic changes? Do those epigenetic changes get transferred across generations?

- Mulligan C, Quinn E, Hamadmad D, Dutton C, Nevell L, Binder A, Panter-Brick C and Dajani R. (2024) Epigenetic signatures of intergenerational exposure to violence in three generations of Syrian refugees (SREP-24-01025) under review for the special collection on Epigenetic Inheritance in Scientific Reports
- Merrill S, Konwar C, Fraihat Z, Parent J, Dajani R Molecular Insights into Trauma: A Framework of Epigenetic Pathways to Resilience through Intervention Accepted in Cell Med MED-D-24-00316R3
- Catherine Panter-Brick, J. Eggerman , Philip Jefferies, Lina Qtaishat, Rana Dajani, Praveen Kumar Does volunteering impact refugee women's life satisfaction, empowerment, and wellbeing? Experimental evidence, local knowledge, and causal reasoning March 2024 Social Science & Medicine DOI:[10.1016/j.socscimed.2024.116735](https://doi.org/10.1016/j.socscimed.2024.116735)
- Mulligan CJ, Clukay CJ, Matarazzo A, Hadfield K, Nevell L, Dajani R, Panter-Brick C. Novel GxE effects and resilience: A case:control longitudinal study of psychosocial stress with war-affected youth. PLoS One. 2022 Apr 4;17(4):e0266509. doi: 10.1371/journal.pone.0266509. PMID: 35377919; PMCID: PMC8979449.
- Chris Clukay, Rana Dajani et al. Effect of MAOA genetic variants and resilience on perceived stress in Syrian refugee youth. PLoS One. 2019 Jul 17;14(7):e0219385. doi: 10.1371/journal.pone.0219385. eCollection 2019
- Panter-Brick C, Wiley K, Sancilio A, Dajani R, Hadfield K. (2019). C-reactive protein, Epstein-Barr virus, and cortisol trajectories in refugee and non-refugee youth: Links with stress, mental health, and cognitive function during a randomized controlled trial. Brain Behav Immun, pii: S0889-1591(18):30341-6. doi: 10.1016/j.bbi.2019.02.015. [Epub ahead of print]
- Dajani R, Hadfield, K, van Uum S, Greff M, Panter-Brick C. (2017). Hair cortisol concentrations in war-affected adolescents: A prospective intervention trial. Psychoneuroendocrinology, 89:138-146. doi: 10.1016/j.psyneuen.2017.12.012
- Panter-Brick C, Dajani R, et al. (2017). Insecurity, distress and mental health: experimental and randomized controlled trials of a psychosocial intervention for youth affected by the Syrian crisis. J Child Psychol Psychiatry, 59(5):523-541. PMCID: PMC5972454 doi: 10.1111/jcpp.12832
- Panter-Brick C, Hadfield K, Dajani R, et al. (2017). Resilience in context: A brief and culturally grounded measure for Syrian refugee and Jordanian host-community adolescents. Child Dev, 89(5):1803-1820. PMCID: PMC6208286 doi: 10.1111/cdev.12868

- 2) **Genetics of ethnic populations:** I am a world expert on the genetics of Circassian and Chechan populations in Jordan focusing on diabetes and cancer. My focus on diabetes has been driven by the rise in type II diabetes in Jordan surpassing other developing countries and a major health priority. Increasing incidence of cancer and its economic impact worldwide imposes the search for methods of early detection in order to lessen the crisis. In cancers where there is a clear genetic component this becomes very relevant. The presence of genetically isolated populations to study these particular types of cancer is rare and becoming even more rare with globalization and loss of cultural barriers among the young. Thus it is imperative to study these populations to try to identify genetic trends. In addition the majority of studies

that have been conducted worldwide in studying the genetic components of cancer have been performed on European populations. There is a need to conduct studies on other world populations to discover novel risk factors from populations of different lineages that may shed new light on the genetic basis of diseases especially if we are to apply the discoveries on other populations. I have studied two genetically isolated populations in Jordan; the Circassians and Chechens. These populations have been isolated geographically and culturally for more than 1000 years in their respective countries and for the past 140 years in Jordan. It is worth mentioning that these populations are unique but fragile in the sense that the older members are dying and the younger ones are marrying outside the population losing the uniqueness of its gene pool. My contribution to the genome database by documenting the Circassians and Chechens DNA is a goldmine. Thereby preserving the heritage and genetics for generations to come. My group and I have built a data base of the ethnic populations in terms of medical and anthropological records as well as DNA. These databases can be used for future studies that aim to understand other diseases in the populations such as cardiovascular disease and cancer as well as using the databases for HLA typing for blood transfusion and transplants. The data base will also aid in development of pharmacogenomics in these populations.

- Abudahab S, Hakooz N, Al-Etian L, Shishani K, Bashqawi A, Connolly J, Glessner JT, Qu HQ, Qu J, Hakonarson H, Dajani R. The Circassians and the Chechens in Jordan: results of a decade of epidemiological and genetic studies. *J Community Genet.* 2023 Dec;14(6):505-517. doi: 10.1007/s12687-023-00668-6. Epub 2023 Sep 13. PMID: 37700208; PMCID: PMC10725377.
- Al-Eitan L, Saadeh H, Alnaamneh A, Darabseh S, Al-Sarhan N, Alzihlif M, Hakooz N, Ivanova E, Kelsey G, Dajani R. The genetic landscape of Arab Population, Chechens and Circassians subpopulations from Jordan through HV1 and HV2 regions of mtDNA. *Gene.* 2020 Mar 1;729:144314.
- Damgaard PB, Marchi N, et al. (2018). 137 ancient human genomes from across the Eurasian steppes. *Nature.* 557(7705):369-374 doi: 10.1038/s41586-018-0094-2
- Dajani R, Li J, et al. (2017). Genome-wide association study identifies novel type II diabetes risk loci in Jordan subpopulations. *Peer J.* 5:e3618 PMCID: PMC5563445 doi: 10.7717/peerj.3618
- Dajani R, Li J, et al (2015). CNV analysis associates AKNAD1 with type-2 diabetes in Jordan subpopulations. *Sci Rep.* 5:13391. PMCID: PMC4543987 doi: 10.1038/srep13391
- Dajani R, Khader YS, et al. (2012). Diabetes mellitus in genetically isolated populations in Jordan: prevalence, awareness, glycemic control, & associated factors. *J Diabetes Complications.* 26(3):175-80. doi: 10.1016/j.jdiacomp.2012.03.009
- 3) **Stem cell ethics:** After receiving training on stem cell research, in preparation for starting research on stem cells, I established a team to research the bioethics of using stem cells in research and therapy in Jordan and the Islamic world. For the first time in the Arab Islamic world a group of scholars from the fields of religion, science and medicine met to discuss these issues. I initiated a committee to study the ethics of stem cell research in Jordan since no regulations were in place which is very important to set the guidelines for researchers and physicians so that patients are not in jeopardy to be exploited as is happening in other parts of the world. Most recently I was appointed as a member of the National Committee for Stem Cell Research guidelines and law by the Ministry of Health in Jordan. Advisor for the World bioethics congress 2023.
- Dajani R, Jiwani B, Nanji A, Zoloth L, Ghaly M, İlkılıç İ, Raya Á, Patrão Neves M, de Melo H, Carvalho AS, Caulfield T, Carter R, Rendas A, Surani A, Rossant J, Kriegstein A, Lalani EN. Diversifying stem cell debates: Including Muslim contexts and perspectives. *Stem Cell Reports.* 2022 May 10;17(5):1019-1022. doi: 10.1016/j.stemcr.2022.03.008. Epub 2022 Apr 7. PMID: 35395176; PMCID: PMC9133579.
- Odeh M, Kharbat FF, Yousef R, Odeh Y, Tbaishat D, Hakooz N, Dajani R, Mansour A. iOntoBioethics: A Framework for the Agile Development of Bioethics Ontologies in Pandemics, Applied to COVID-19. *Front Med (Lausanne).* 2021 May 21;8:619978. doi: 10.3389/fmed.2021.619978. PMID: 34095160; PMCID: PMC8175792.

- Al-Tabba' A, Dajani R, Al-Hussaini M. Stem Cell Statute in Jordan: Leading the Way. *Front Genet.* 2020 Jul 17;11:657. doi: 10.3389/fgene.2020.00657. PMID: 32765577; PMCID: PMC7379862.
- Al-Balas QAE, Dajani R, Al-Delaimy WK. The Ethics of Gene Editing from an Islamic Perspective: A Focus on the Recent Gene Editing of the Chinese Twins. *Sci Eng Ethics.* 2020;26(3):1851-1860. doi:10.1007/s11948-020-00205-5
- Al-Balas QA, Dajani R, Al-Delaimy WK. Traditional Islamic approach can enrich CRISPR twins debate. *Nature.* 2019 Feb;566(7745):455. doi: 10.1038/d41586-019-00665-1
- Matsumoto MM, Dajani R, Matthews KRW. Public-private divide: cultural and social factors in women's attitudes toward cord blood banking in Jordan. *Transfusion.* 2018 Aug;58(8):1958-1963. doi: 10.1111/trf.14787. Epub 2018 Sep 1. PMID: 30171824.
- Dajani R. Jordan's stem-cell law can guide the Middle East. *Nature.* 2014 Jun 12;510(7504):189. doi: 10.1038/510189a. PMID: 24919888.

4) Science and Society: I have worked on science diplomacy and science communication as well as fostering partnerships among multiple stakeholders. As a result I have written in *Nature* multiple commentaries as well as other journals about science and global south, ethics of science, religion and science, education and science, partnerships across disciplines. I am president of the Society for the Advancement of Science and Technology in the Arab world and organized the first global conference for Diaspora networks in science 2022. I am also a speaker at the UN, World Bank, IMF and World Economic Forum.

- Dajani R, Coetsee M, Al-Tabba A, Al-Hussaini M. Correction: Religion, Islam, and Compliance with COVID-19 Best Practices. *J Relig Health.* 2023 Mar 17:1–2. doi: 10.1007/s10943-023-01769-9. Epub ahead of print. Erratum for: *J Relig Health.* 2022 Oct;61(5):4155-4168. PMID: 36932226; PMCID: PMC10022933.
- Dajani R, Mbarek H, Ismail SI, Mohammad A, Somai M. Overcoming Eurocentric bias makes for better science. *Med.* 2022 Dec 9;3(12):813-814. doi: 10.1016/j.medj.2022.11.007. PMID: 36495859.
- Dajani R. Subsidize low-income scientists' travel and fees. *Nature.* 2022 Sep;609(7928):676. doi: 10.1038/d41586-022-02980-6. PMID: 36127441.
- Dajani R. Exploring the epigenetics of resilience. *Nat Genet.* 2022 Apr;54(4):363. doi: 10.1038/s41588-022-01050-x. PMID: 35379993.
- Dajani R (2021) Science and Diplomacy: A Practical Path. *Science Diplomacy*, 4(4): 11–12. <http://www.niscair.res.in/includes/images/sciencediplomacy/Science-Diplomacy-April-June-2021.pdf>
- Dajani, R Hamadmad, D, Abudeyyah, G Terror and Hope: The Science of Resilience. *Publications and films Reports Anthropology of the middle east Volume 16, Issue 1 Pages: 111–120*
- Dajani R. Jordan: where junior and senior scientists meet as equals. *Nature.* 2019 Nov;575(7784):596. doi: 10.1038/d41586-019-03663-5. PMID: 31772368.
- C. Panter-Brick, J. Kurtz, R. Dajani (2018) What strong partnerships achieve: innovations in research and practice (2018) ‘What strong partnerships achieve: innovations in research and practice’ in *Humanitarian Exchange No 72 July 2018, p15-19.* London: Humanitarian Practice Network (HPN) Overseas Development Institute
- Dajani R Why the right questions make the biggest impact *Nature Middle east July 31, 2018* doi:10.1038/nmiddleeast.2018.88
- Dajani R. Developing nations need more than just money. *Nature.* 2017 Oct 10;550(7675):159. doi: 10.1038/550159a. PMID: 29022939.
- Dajani R. Waste not, want not: Recycled science art. *Science.* 2015 Nov 27;350(6264):1043. doi: 10.1126/science.350.6264.1043-b. PMID: 26612944.
- Dajani R. Why I teach evolution to Muslim students. *Nature.* 2015 Apr 23;520(7548):409. doi: 10.1038/520409a. PMID: 25903591
- Dajani R: “Evolution and Islam’s Quantum Question.” *Zygon®* 2012 47, no. 2 (June 2012): 343–53. <https://doi.org/10.1111/j.1467-9744.2012.01259.x>

Book chapters

- Issues in Science and Theology: Creative Pluralism? - Images and models in science and religion (Springer, 2022). edited by: Michael Fuller, Dirk Evers and Anne Runehov, Chapter 3: Science and religion complement each other, not compete with one another. By Rana Dajani.
- Divine Action and Emergence,” Abrahamic Reflections on Randomness and Providence, edited by: Kelly James Clark and Jeffrey Koperski, Palgrave, forthcoming. Chapter Divine Action and the Emergence of Four Kinds of Randomness by Robert C. Koons, Rana Dajani
- Science Museums in Transition: Unheard Voices. Eds Hooley McLaughlin and Judy Diamond. London and New York. Routledge. Edited By Hooley McLaughlin, Judy Diamond. Chapter: "Science, Islam and Critical Thinking: Lessons for Museums" By Rana Dajani .in p 19-27.

I have also written in the public sphere to reach the public audience. Select publications below:

- Doing better science by including local researchers and communities <https://www.al-fanarmedia.org/2024/02/doing-better-science-by-including-local-researchers-and-communities/>
- Treating displaced Gazan's Trauma will require Cultural respect <https://undark.org/2024/01/25/opinion-trauma-epigenetics-faith/>
- For scientists failure is a motivating force <https://www.al-fanarmedia.org/2021/02/for-scientists-failure-is-a-motivating-force/>
- Why the World Urgently Needs Interdisciplinary Research and Policy Making <https://www.al-fanarmedia.org/2021/02/why-the-world-urgently-needs-interdisciplinary-research-and-policy-making/?lbf=true&id=45676>
- Making Interdisciplinary Research Actually Happen <https://www.al-fanarmedia.org/2021/02/making-interdisciplinary-research-actually-happen/?lbf=true&id=45441>
- We can use COVID-19 as a catalyst for grassroots change. Here's how WEF Nov 14, 2020 <https://www.weforum.org/agenda/2020/11/social-entrepreneurs-and-scientists-system-change/>
- Dajani R “Valuing compassion why can't we redefine success” the Fletcher forum October 2016
- <http://www.fletcherforum.org/home/2016/11/4/valuing-compassion-why-cant-we-redefine-success>

5) Women and science: I have analyzed and been involved in understanding the challenges women face in science globally and have designed programs to address the challenges. The three circles of alemat PEER awardee program for female scientists mentoring, I am the president of the organization for women scientists in the Arab world in Jordan. Organized the first gender summit for the Arab world 2017. Member UN women Jordan advisory council. I have also advocated for women in science and am on multiple boards and juries for women awards in science eg falling walls, Nature etc. and a public speaker. I have also written a book Five scarves: doing the impossible that addresses these issues. It was reviewed in nature <https://www.nature.com/articles/d41586-018-05891-7> and nature middle east <https://www.natureasia.com/en/nmiddleeast/article/10.1038/nmiddleeast.2018.64>. It was also recommended by world economic forum as one of seven books every changemaker should read <https://www.weforum.org/agenda/2022/05/seven-books-that-will-inspire-change-social-innovators/>. This is the TED talk that is about the book https://www.ted.com/talks/rana_dajani_if_we_can_reverse_cell_fate_why_can_t_we_redefine_success?language=en

- de Vasconcellos JF, Abedalthagafi M, Calo S, Dajani R, Dlamini Z, Hidalgo B, Le Goff C, Vasanthakumar A. Editorial: Women in science: Genetics. Front Genet. 2022 Oct 3;13:1038317. doi: 10.3389/fgene.2022.1038317. PMID: 36263431; PMCID: PMC9574392.
- Dajani R, Tabbaa Z, Al-Rawashdeh A, Gretzel U, Bowser G. Peer mentoring women in STEM: an explanatory case study on reflections from a program in Jordan, Mentoring & Tutoring: Partnership in Learning. 2021 29:3, 284-304, doi: 10.1080/13611267.2021.1927429
- Dajani R, Dhawan S, Awad S. The Increasing Prevalence of Girls in stem Education in the Arab World: What Can We Learn? Sociology of Islam May 2020 Volume 8 issue 2 Page 159-174 DOI: 10.1163/22131418-00802002
- Leading women scientists to the global stage Dajani R Nature MiddleEast Oct 21, 2020 doi:10.1038/nmiddleeast.2020.110

- Dajani R. What do we mean when we talk about gender and science? An interview with Professor Emerita Evelyn Fox Keller (MIT), author of Reflections on gender and science, Interdisciplinary Science Reviews. 2019 44:2, 221-226, DOI: 10.1080/03080188.2019.1607048
- Dajani R. Five Scarves, Doing the Impossible: If we can reverse cell fate why cant we redefine success Nova Science 2018 ISBN ISBN: 978-1-53613-774-3 Categories: [Editor's Picks](#), [Social Issues](#), [Justice and Status](#), [Sociology](#)
- Dajani R “How being a Muslim Female Scientist helped me do better science” [Cultures](#) Disparities Issue American Society for Microbiology 2017 <http://asmcultures.org/3-4/10>
- Dajani R and Bani-hani K “Female education and workforce trends in health-related disciplines in Jordan” Nature Middle East Dec 22, 2014 <http://www.natureasia.com/en/nmiddleeast/article/10.1038/nmiddleeast.2014.285>
- Dajani R. How women scientists fare in the Arab world. Nature. 2012 Nov 1;491(74ex22):9. doi: 10.1038/491009a. PMID: 23128188.

6) Social Innovator/Entrepreneur: I have founded a community evidence based program “We Love Reading (WLR)” whose mission is changing mindsets through reading to nurture change makers. The program has spread to 71 countries around the world and established over 8000 WLR ambassadors reaching over half a million children and created 35 children books. Partnered with multiple organizations and universities. and won multiple awards: Synergos Arab world social innovators 2009, Clinton Global Initiative 2010, Library of Congress best practices 2013, World Innovation Summit in Education Award 2014, King Hussein Medal of Honor 2014, Star Award 2015, IDEO.org best refugee education program 2015, UNESCO International Literacy Prize 2017, World Literacy Council Award 2018 and the Jacobs social entrepreneurship award 2018, Science, Technology and Innovation Award UN 2019, Ashoka Fellow 2019, UNHCR Nansen Refugee awardee 2020, Schwab Social entrepreneur 2022. Fair Saturday Award 2022 Hundred education 2022 and Skoll fellow 2024. As a social entrepreneur I am chair of the MENA and Jordan chapters and on the governing councils of Catalyst2030. I represent the Social innovation sector at the UN, World Bank, World economic Forum and others. Established the first competition for scientists and social innovation in Jordan

Select Publications

- Dajani WEF: Why refugees need a better chance at professional development <https://www.weforum.org/agenda/2022/05/refugees-work-professional-development/>
- Dajani WEF: New model for funding Social enterprises <https://www.weforum.org/agenda/2022/05/new-model-for-funding-social-enterprise-think-local/>
- Dajani WEF: How investing in social impact networks can spur innovation and change <https://www.weforum.org/agenda/2022/01/how-investing-in-social-impact-networks-spurs-innovation-and-change/>
- Dajani WEF: Social entrepreneurs and scientists systems change <https://www.weforum.org/agenda/2020/11/social-entrepreneurs-and-scientists-system-change/>
- Dajani WEF: 6 steps to becoming a successful social entrepreneur. <https://www.weforum.org/agenda/2018/08/6-steps-to-become-a-successful-social-entrepreneur/>
- Dajani R, From Readers to Changemakers: Reading Aloud to Develop Learners Who Love to Read <https://ceinternational1892.org/article/from-readers-to-changemakers/>
- Bakhti, R., Mareschal, I., El Kharouf, A., Dajani, R., Qtaishat, L., von Stumm, S., & Hadfield, K. (2024). Exploring Factors Related to the Development and Implementation of a Local Intervention Program for Syrian Refugee Children. Journal of Immigrant & Refugee Studies, 1–14. <https://doi.org/10.1080/15562948.2024.2428305>
- Hadfield K, Al-Hamad M, Bakhti R, Dajani R, El Kharouf A, Michalek J, Mukunzi J, Qtaishat L, Sethi T, von Stumm S, Mareschal I. Predictors of Literacy and Attitudes Toward Reading Among Syrian Refugee Children in Jordan. Int J Early Child. 2022 Sep 9;1-21. doi: 10.1007/s13158-022-00334-x. Epub ahead of print. PMID: 36105520; PMCID: PMC9461418.

- Mahasneh, Randa & Suchodoletz, Antje & Larsen, Ross & Dajani, Rana. (2020). Reading for pleasure among Jordanian children: a community-based reading intervention. *Journal of Research in Reading*. 44. 10.1111/1467-9817.12342.

- Dajani R, Promising Practices in Refugee Education: We love reading: Promoting literacy and education through reading aloud in community settings 2017 published by Pearson and Save the Children International

7) Pedagogy As a school teacher for 10 years and later teaching at the University in Jordan and in the US. I have led innovation in pedagogy and education both within higher education and the wider community. I established the first service learning center in the MENA region, Appointed higher education reform expert by the EU for Jordan, revamping the college of pharmacy curriculum to include industry for developing competencies according to the Bologna process, designing for the ministry of education community involvement for schools as part of a 48 million USAID grant to the Jordan government. Launched with ministry of culture a reading aloud national campaign though out Jordan and a National reading day. Contributed to multiple committees, juries and boards on education locally, regionally and globally sharing the vision for the UN next 50 years. Designed innovative courses including the online global civics course funded by the Fetzer instate and science, society and entrepreneurship for the Jepson school of leadership at Richmond University, USA. As well as novel online courses in cell biology and bioinformatics. Training faculty on how to use technology in pedagogy. Recently a Chen Yidan Global Fellow at Harvard Graduate school for education.

- Bakhti, R., Mareschal, I., El Kharouf, A., Dajani, R., Qtaishat, L., von Stumm, S., & Hadfield, K. (2024). Exploring Factors Related to the Development and Implementation of a Local Intervention Program for Syrian Refugee Children. *Journal of Immigrant & Refugee Studies*, 1–14. <https://doi.org/10.1080/15562948.2024.2428305>
- Hadfield, K., Al-Hamad, M., Dajani, R. *et al.* Effectiveness of a community-led shared book reading intervention in Syrian refugee children: a randomised controlled trial. *Sci Rep* **14**, 17822 (2024). <https://doi.org/10.1038/s41598-024-68903-9>
- Hadfield, K., Al-Soleiti, M., Dajani, R. *et al.* Father Involvement and Child Development: A Prospective Study of Syrian Refugee Families. *J Child Fam Stud* (2024). <https://doi.org/10.1007/s10826-024-02809-y>
- Jazlyn Nketia, Alya Al Sager, Rana Dajani, Diego Placido & Dima Amso (2023) Executive Functions in Jordanian Children: What Can the Hearts and Flowers Task Tell Us About Development in a Non-Western Context, *Journal of Cognition and Development*, DOI: [10.1080/15248372.2023.2248698](https://doi.org/10.1080/15248372.2023.2248698)
- Michalek JE, Lisi M, Awad D, Hadfield K, Mareschal I, Dajani R. The Effects of a Reading-Based Intervention on Emotion Processing in Children Who Have Suffered Early Adversity and War Related Trauma. *Front Psychol*. 2021 Mar 24;12:613754. doi: 10.3389/fpsyg.2021.613754. PMID: 33841247; PMCID: PMC8024483.
- Mahasneh R, Romanowski M, Dajani R. Reading social stories in the community: A promising intervention for promoting children's environmental knowledge and behavior in Jordan. *The Journal of Environmental Education*. 2018. 48:5, 334-346, DOI: 10.1080/00958964.2017.1319789

I have also written in the public sphere to reach the public audience. Select publications below:

- Leading Educational Change During a Pandemic. Reflections on Hope and Possibility edited by: Fernando M. Reimers Jan 2021 ISBN-13 : 979-8595951531. Chapter Education Resilience pp 105 By Rana Dajani.
- Dajani R “A science education that matters” *Nature Middle East* doi:10.1038/nmiddleeast.2014.26
- Dajani R. Universities must inspire students as well as teach. *Nature*. 2013 Oct 24;502(7472):411. doi: 10.1038/502411a. PMID: 24153256
- Mahasneh R, Tawalbeh A, Al-Smadi R, Ghaith S, Dajani R. “Integrating Service Learning in Jordanian Higher Education” *Innovations in Education and Teaching International*. 2012 49, no. 4 (October 12, 2012): 415–25 doi: 10.1080/14703297.2012.728874
- Dajani R. Undergraduate education in Jordan. *Science*. 2007 Aug 31;317(5842):1170-1. doi: 10.1126/science.317.5842.1170c. PMID: 17761866.

8) Global Leadership Visiting scholar at the Jepson school of leadership, Jury member for global leadership Tallberg foundation, Global thinker member, Alexandria Trust Board member, Hussein Technical University Board of Trustees, UN Women advisory board for Jordan, Women Lead board, the Fetzer Institute advisory board, Catalyst2030 governing board. Working on systems change both from the grassroots as a social entrepreneur and from the top down as a global thought leader representing proximate leaders at the UN, world bank, WEF helping realize the new UN resolution for social and solidarity economy to enable systems change while promoting science for the global good internationally by building bridges between science and social entrepreneurship and the SDGs.

- Dajani R, Bayoumi R, Flowe H, Rockowitz S, Stevens L and Awad A (2024) Neocolonialism and science diplomacy: lessons learned from the field and the way forward. *Front. Public Health.* 12:1472421. doi: 10.3389/fpubh.2024.1472421
- Panter-Brick C, Qtaishat L, Eggerman JJ, Thomas H, Kumar P and Dajani R (2024) Volunteer programs, empowerment, and life satisfaction in Jordan: mapping local knowledge and systems change to inform public policy and science diplomacy. *Front. Sociol.* 9:1371760. doi: 10.3389/fsoc.2024.13717604
- J. Eggerman, Rana Dajani, Praveen Kumar, Susannah Chui, Lina Qtaishat, Amal El Kharouf, Catherine Panter-Brick, Social networks, empowerment, and wellbeing among Syrian refugee and Jordanian women: Implications for development and social inclusion, *World Development*, Volume 170, 2023, 106324, ISSN 0305-750X, <https://doi.org/10.1016/j.worlddev.2023.106324>

E. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

- John Templeton World charity (PI Dajani). 2021-2024
Grant title: Istejarah a curriculum for refugee integration
Amount: \$250,000
- Bridge Korea UNESCO (PI Dajani) 2022-2024
Grant title: We Love Reading for children in Jordan
Amount:\$ 130,000
- AHRC AH/T008091/1 Flowe,.....Dajani) 04/2020 – 12/2024
Grant Title: GCRF Network+: Time for Rights/Rights for Time: Responding to the times of violence, conflict, and displacement
Amount: £1,177,228
- NSF BCS 1849379 (Muligan, Panter-Brick and Dajani senior Personel)8/01/19-7/31/24
Grant Title: Intergenerational impact of violence exposure during pregnancy on epigenetic change
Amount: \$348,333
- Hashemite University (PI, Dajani) 2015 – 2024
Grant Title: Epigenetic's of Transgenerational Trauma in Three Syrian Cohorts
- NIH UM1HG006504 (PI, Lifton Co investigator Dajani) 2013 – 2024
Grant Title: Identification of Genes of Complex Diseases in Contiguous Families using Genomics and Exome Sequencing

Select Completed Research Support

- UNICEF (PI Dajani) Sep 2022 -Sep 2023
Grant title: We Love Reading a virtual platform
Amount: \$200,000
- British Royal Society SDP2\100227 Shannek.... Dajani) 09/2018-12/2023
Grant Title: Negotiating Relationships and Redefining Traditions: Syrian and Iraqi Women Refugees in Jordan
Amount: £282,568.39

- British Academy P191104 (Hadfield, Mareschel, Kharouf, Von Stumm and Dajani consultant) 03/2020 – 12/2021

Grant title Developing and Implementing a Transformational Education Intervention in a Humanitarian Crisis Context

Amount: £359,490.00

- Wellcome Trust R2HC (PI, Panter Brick, co investigator Dajani) 2015 - 2017

Grant title: Measuring the Health and Well-being Impacts of a Scalable Program of Psychosocial Intervention for Refugee Youth

- NSF/USAID Project 3-47 (PI, Dajani) 9/1/2014 – 7/1/2017

Grant title: PEER Award: The Three Circles of Alemat

Amount: \$150,000

- UNICEF (PI, Dajani) 2016-2019

Grant Title: A Library in every neighborhood

Amount: \$1 million

- RTI/USAID. Co lead Dajani. 2016-2019

Grant Title: Community support for RAMP

Amount: \$ 2 million

- EU TEMPUS (PI, Dajani) 2009-2012

Grant title: Developing Service-Learning and Civic Engagement Partnerships across the Curriculum,

Amount: 880,000 EU