



Targeted Assaults on Iran's Scientific Capacities: A Legacy for Global Science

Mostafa Akbariqomi ¹, Hassan Abolghasemi ², Gholamreza Farnoosh ^{3*}

¹ Tissue Engineering and Regenerative Medicine Research Center, New Health Technologies Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran

² Department of Pediatrics, Faculty of Medicine, Baqiyatallah University of Medical Sciences, Tehran, Iran

³ Applied Biotechnology Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran

***Corresponding Author:** Gholamreza Farnoosh, Ph.D., Applied Biotechnology Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran. P.O. Box 19395-5487. Email: rzfarnoosh@yahoo.com

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Dear Editor,

The recent attacks by Israel on Iran's scientific infrastructure and capacities do not remain confined to a military conflict and geopolitical crisis; rather, they have far-reaching implications for scientific justice, research ethics, and the future of global science ^{1,2}. Such events demonstrate that science, contrary to claims of universality, can become a realm of discrimination and monopoly. What we are witnessing today is a direct manifestation of scientific apartheid, which begins with targeted attacks on scientists and scientific infrastructure, leading to the paralysis of the scientific cycle of the targeted nation, while imposing a tethered technological servitude (Figure 1). These attacks are not merely aimed at halting technological advancement; rather, they seek to establish a discriminatory system in global science where only certain countries have the right to independent scientific development, while others must remain on the sidelines.

Today, science and technology are recognized as the main pillars of national development, and their accomplishments are crucial for upholding nations' economic, social, and political power ³. Over the past two decades, Iran has achieved a prominent position in fields such as nanotechnology, regenerative

medicine, nuclear technologies, and aerospace, despite facing extensive international sanctions ^{4,6}. The recent 12-day attack by the Israeli regime on Iran signifies not only structural discrimination but also a form of organized violence against knowledge and scholars. This is manifested through targeted assassinations, destruction of scientific and technological infrastructure, instilling fear and insecurity in academic environments, forced migration of elites, and technological backwardness in strategic areas, which can be referred to as scientific terrorism. During the recent terrorist attacks, 27 young elite students and prominent scientists, especially in the fields of nuclear science, artificial intelligence, engineering sciences, and advanced technologies, were directly targeted.

Scientific sanctions of some international publishers are complementary links in this chain, resulting in deprivation of research equipment and software, limited access to global scientific databases, and the rejection of Iranian research articles for non-academic reasons. International organizations, including UNESCO, have pointed out the peaceful nature of science with the slogan "Science for Peace and Development," ⁷ and the Committee on Publication Ethics (COPE) states that "editorial

decisions should not be influenced by the origin or country of the article owner, based on nationality, ethnicity, political beliefs, race, or religion. Decisions regarding editing and publication should not be influenced by the policies of governments or other organizations " 8.

Human rights violations and humanitarian laws in the Middle East have gotten out of hand. This issue sends a dangerous message to the global community: science can become a tool for domination and monopoly, and it can be politicized.

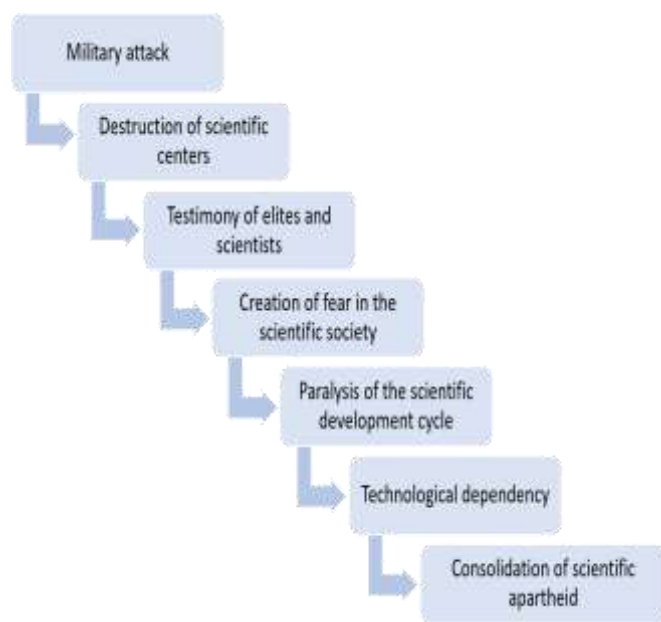


Figure 1: The Chain Process of Scientific Apartheid: A multi-stage approach for suppressing national scientific capacities.

Recent attacks on Iran are not just a national issue; they are a test for the entire global scientific community. Attacking scientific infrastructure means accepting the legitimacy of violence in the regard. The international scientific community must take a stand against these actions.

Researchers and members of the global scientific community must express their opposition to scientific terrorism and scientific apartheid through scientific campaigns and by taking a clear stance and preclude any discrimination against researchers based on nationality or politic. International scientific organizations must establish supportive frameworks to recognize and condemn attacks on scientists and

scientific institutions. International scientific community IS obligated to defend scientific and should not be sacrificed to geopolitical and political rivalries.

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Authors' Contributions

The authors contributed equally to this work.

Declaration of Generative AI and AI-assisted technologies

None.

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