

**Qatar University Research 2020-2024:**

# **Powering National Vision through Scholarly Excellence**

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## I. Introduction

Over the last decades, Qatar University (QU) has firmly established itself as a cornerstone of research excellence and innovation in the State of Qatar. Guided by the Qatar National Vision (QNV) 2030 and the University's mission of advancing knowledge and serving society, QU has made remarkable strides in enhancing scholarly output, fostering international collaborations, improving research quality, and contributing to societal development.

According to Scopus/SciVal data, QU's cumulative scholarly output has steadily increased over the past decade, reflecting a strategic focus on emerging research areas aligned with national and global priorities. Significant increases in publication activity were observed in 2018 and again in 2023, highlighting sustained momentum and growing research capacity. This upward trajectory makes it timely to assess QU's recent progress in research performance.

This article provides a comprehensive overview of QU's research achievements during the 2020–2024 period, based on Scopus/SciVal data compiled as of March 2025. It highlights major institutional accomplishments, evolving scholarly trends, and strategic developments that have positioned QU at the forefront of academic research both nationally and regionally.

## II. Scholarly Output: Enhancing Research Quality and Impact

The COVID-19 pandemic posed unprecedented challenges to the global academic and research landscape in 2020. Yet, amidst these disruptions, QU demonstrated remarkable resilience and a sustained commitment to scholarly excellence. Notable increases in research productivity were observed particularly in 2018 and 2023, driven by several factors, including intensified research on COVID-19, alignment with national strategic research priorities, enhanced international collaboration, capacity building, improved research infrastructure, the launch of new graduate programs, and the growing influence of open access publishing—especially through initiatives supported by the Qatar National Library.

Reflecting this momentum, the CAGR of scholarly output was 23.49% during the 2018-2021 period, with a projected CAGR of 29.18% from 2023 to 2026.

### ***Sustained Growth in Research Productivity:***

Annual scholarly output rose steadily from over 2,500 publications in 2020 to more than 3,200 by 2024, averaging around 2,950 publications per year. Between 2020 and 2024, QU researchers produced approximately 14,800 peer-reviewed documents indexed in Scopus, with an annual growth rate of 4.83%.

The majority of scholarly outputs during this period were peer-reviewed journal articles (71.6%), followed by review articles (12.3%), conference papers (8.3%), and book chapters (3.8%). Editorials accounted for 1.5%, while other formats represented less than 2.5% of the total output. This diverse and expanding output reflects a deepening research culture across QU's colleges, research centers, and graduate programs.

### ***Advancing Research Quality and Impact:***

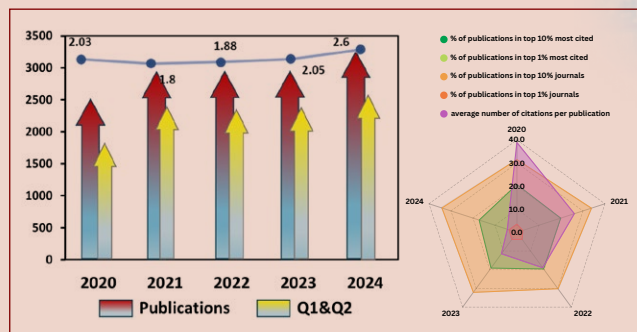
While the volume of research output is significant, QU has strategically prioritized enhancing the quality and impact of its scholarly contributions. A clear shift towards publishing in high-impact journals has defined QU's recent research trajectory. Between 2020 and 2024, 64.6% of QU's publications appeared in Q1 journals (top 25% globally), and 23.0% in Q2 journals (26–50%), reflecting a strong commitment to scholarly excellence, which is represented in Figure 1. Only 12.5% of publications fell within Q3 and Q4 categories, underscoring the institution's deliberate focus on quality.

Further affirming this strategic direction, 32.4% of QU's scholarly output during this period was published in the top 10% of journals globally by CiteScore, while 19.2% of the publications ranked among the top 10% most cited worldwide, highlighting the University's growing international reputation for impactful research.

During 2020-2024, publications from QU significantly exceeded global citation benchmarks, with more than 281,000 citations as of March 2025—an average of 56,000 citations per year and 19.1 citations per publication. These figures underscore both the relevance and influence of QU's research output to the global needs. Open access publishing played a pivotal role in enhancing this visibility. During the same period, 57.8% of QU's publications were openly accessible, contributing to 66.6% of the total citations received. This demonstrates the

University's commitment to making its research widely available and internationally recognized, supporting both knowledge dissemination and community engagement.

A key indicator of QU's research impact is the Field-Weighted Citation Impact (FWCI), which compares citation performance against global standards. QU achieved an average FWCI of 2.08 over the five years, with a notable increase from 1.8 in 2021 to 2.6 in 2024, representing a 44.4% improvement. This substantial rise illustrates the growing relevance, influence, and recognition of QU's research at both the national and international levels.



**Figure 1:** Bar chart showing total publications with Q1 and Q2 journal counts; Radar chart displaying the percentage of publications in the top 1%, top 10% most cited globally, and those published in top-tier journals.

**Regional and Global Standing:** When benchmarked against leading Arab and global institutions (listed in the QS ranking), QU has demonstrated outstanding performance, particularly within the region. QU achieved the highest share of publications in Q1 & Q2 journals (87.6%) among the top five Arab universities, reflecting a strategic focus on publishing in high-impact journals. In addition, the FWCI of QU publications exceeded the average FWCI of the world's top 10 universities. While the broader Arab region has shown steady improvements in research output and impact, QU's trajectory has distinctly outpaced many of its regional peers, establishing its leadership in the regional research landscape.

At the global level, QU researchers have garnered increasing recognition for their scholarly contributions. These recognitions affirm QU's commitment to fostering a competitive and globally visible academic community.

That said, comparisons with the world's top 10

universities highlight areas for continued growth. In particular, citations per faculty and the percentage of publications in the top 10% most cited journals remain key metrics for strategic enhancement. These insights will serve as a foundation for targeted initiatives aimed at elevating QU's international research profile and advancing its position in global academic rankings.

### III. Alignment with Research Pillars and Priorities

QU's scholarly output from 2020 to 2024 exhibits a broad distribution across diverse disciplines, with a strong concentration in STEM and health-related fields. Based on Scopus-indexed publications, the most prominent subject areas include, Engineering (17%), Energy and Environmental Science (12%), Medicine (11%), Computer Science (11%), Chemistry and Materials Science (11%), Social Sciences and humanities (7%), and Biochemistry, Genetics, and Molecular Biology (6%). This disciplinary distribution reflects QU's alignment with national priorities such as healthcare innovation, sustainable development, and energy transformation, while also contributing to global scientific discourse.

QU has contributed significantly to the top 10% worldwide topic clusters by scholarly output, showing strength in applied and interdisciplinary domains. Several research areas at QU were also represented within the top 5% and 1% of worldwide topic clusters based on prominence percentile metric reflecting momentum, visibility, and relevance of research topics globally. These topic clusters include: nanomaterials for energy

storage and sensors, AI in healthcare and security, climate modeling and marine ecosystems, and COVID-19 diagnostics and public health policy. The research also demonstrates robust alignment with the United Nations Sustainable Development Goals (SDGs), particularly: SDG 3: Good Health and Well-Being (29.4%), SDG 7: Affordable and Clean Energy (15.6%), SDG 9: Industry, Innovation, and Infrastructure (8.7%), SDG 6: Clean Water and Sanitation (7.0%), SDG 13: Climate Action (6.4%), and SDG 11: Sustainable Cities and Communities (6.0%).

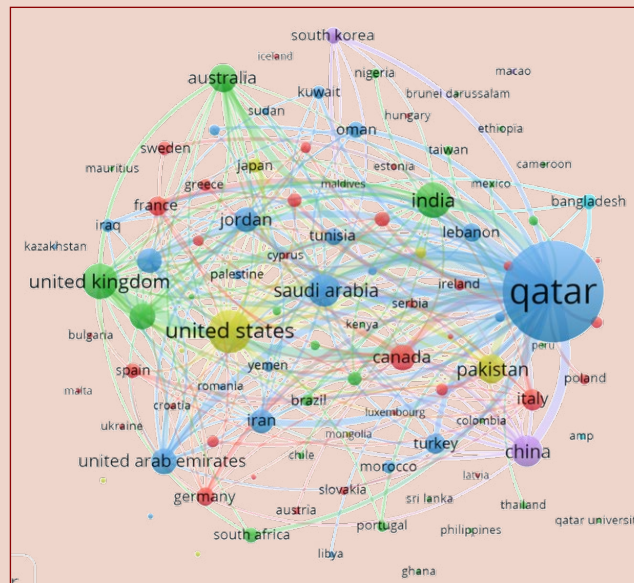
It is also worth noting that the overall research achievements were significantly supported by a diverse and robust network of funding bodies, both national and institutional. These funding sources played a pivotal role in facilitating high-impact projects across critical sectors aligned with QNV 2030 and global research priorities. The key funding source, Qatar Foundation, supports research through Qatar Research, Development, and Innovation Council's competitive research grants, innovation opportunities, and capacity-building programs. QU also has internal funding mechanisms to support the research and development. This integrated support structure has played a pivotal role in enhancing scholarly output, increasing citation impact, and ensuring alignment with the national development strategies.

#### IV. Research Collaboration and Partnerships

A defining trend in QU's research landscape from 2020 to 2024 has been the substantial growth in international research collaboration. During this period, 73.9% of QU's scholarly output was co-authored with researchers from global institutions, an indicator of the University's strong international research footprint and commitment to fostering diverse, cross-border academic engagement.

Key partnerships have been formed with 314 institutions across 99 countries, as well as collaborations with industry and government agencies within Qatar (Figure 2). These collaborations have not only enriched the scope and depth of research but also significantly enhanced the visibility, quality, and citation impact of QU's output. Notably, the University's international collaboration rate is significantly higher than that of many top global universities,

highlighting QU's robust and expansive global research network.



**Figure 2:** Research collaboration map generated using VOSviewer.

QU has also secured 78 patents from 2020 to 2024, demonstrating its commitment to translating research into real-world innovations. These patents reflect the University's strong focus on applied research and its contribution to Qatar's knowledge-based economy.

#### V. Conclusions: Advancing Research Excellence at Qatar University

QU is steadily advancing towards its goal of becoming a global leader in research excellence. Through a strategic focus on high-impact, high-quality publications and sustained growth in international collaboration, QU is positioning itself at the forefront of scientific discovery. The University's research output has demonstrated remarkable quality, with a significant percentage of publications appearing in top-tier journals. By fostering interdisciplinary collaboration across its research entities and leveraging its strong global research network, QU is not only contributing to national priorities but also shaping global scientific discourse. As QU continues to build on these foundations, the future of research at the University looks promising. With sustained investments in research infrastructure and capacity building, QU is poised to drive further innovation, contributing to the advancement of knowledge and societal progress.