

ADVANCING THE RESEARCH ENTERPRISE

Research Sustainability in an Academic Health Center: The AUB Experience

AMERICAN UNIVERSITY OF BEIRUT

KEY POINTS

Make the research enterprise a defining attribute of the academic health center such that it becomes a recognized leader, such as by:

- ✓ Serving as a research hub
- ✓ Serving as a point of reference for others
- ✓ Being the partner of choice for research supporting bodies
- ✓ Aligning research priorities with regional needs
- ✓ Focusing on high impact research that changes the face of diseases
- ✓ Emphasizing training the future leaders in research
- ✓ Recruiting and retaining the best research faculty

It is critical for academic health centers to commit to supporting the growth of the research enterprise by:

- ✓ Prioritizing research as a key component of the institution's strategy
- ✓ Investing significantly in research through equipment, research funding, and recruitment
- ✓ Supporting the creation of Research Centers of Excellence to take basic and clinical research to higher standards
- ✓ Attracting significant extramural funding from both competitive and non-competitive sources
- ✓ Supplementing with significant intramural funding to support research productivity in a time of limited extramural funding

ISSUES AND CHALLENGES

Finding means to advance the research enterprise in an era of unreliable funding sources and increasing healthcare costs

Research advancement and sustainability at academic health centers and at the American University of Beirut face very similar challenges and obstacles including:

- Facing unstable funding for biomedical research that reduces the ability to improve healthcare, threatens high-risk investigators, and discourages early career investigators
- Controlling increasing healthcare costs that lend toward reductions in clinical revenue, which is critical to support research

- Providing high-quality patient care while using limited resources effectively and efficiently
- Addressing a growing dependence on philanthropy and institutional support (tuitions, intramural grants, and clinical income)
- Dealing with pressures on research faculty to cover substantial parts of salary with grant funding
- Managing limited resources or weak research infrastructures such as department support staff, dedicated research time, and other needed resources

THE AUB APPROACH

A dual focus on building a solid research infrastructure that leverages resources while also shaping our research reputational and capability prominence

At the American University of Beirut, and as part of our 2020 Vision, we were cognizant of the general challenges of research in academic health centers. We also faced our own specific challenges related to premature and incomplete infrastructure, weak culture, limited funding, necessary recruitment of researchers, etc. We made a determined decision to focus on catapulting our research enterprise forward to “advance and sustain research excellence.”

Develop a Strong Infrastructure

A first step was to establish a foundational infrastructure by creating a Clinical Research Institute (CRI), and instating the Human Research Protection Program. The CRI comprises a Biostatistics Unit (BSU), a Clinical Epidemiology Unit (CEU), a Clinical Research Unit (CRU), a Research Education Unit (REU), and several programs that aim to train junior faculty (faculty advancement program) and nurses in clinical research (nursing advancement program). Through a focused recruitment program, the number of primary basic science faculty appointments increased from 18 to 29, and staff at the core facilities increased from seven to 13.

We leveraged our resources by consolidating the basic science departments to create modern departments with a critical mass of researchers. By committing to a major investment of over \$5M,



we restructured and renovated the research space and facilities at the DTS building. The process included upgrading equipment and staff training, as well as renovation of the Animal Care Facility.

To enhance the prominence and capabilities of the research enterprise, we established Centers of Excellence in basic and translational medical research, including: Cancer and Stem Cells, Cardiovascular, Renal, and Metabolic Diseases, Calcium Metabolism and Osteoporosis Program, Immunity and Infection, Neuroscience, Genetics, Center for Infectious Diseases Research (CIDR), and the Pillar Genomics Institute of Precision Medicine.

Establish Sustainable Funding Sources and Research Promotion

To build sustainable research funding sources, we focused on increasing intramural funding to promote research and publication. This included establishing a seed startup fund by the administration of the Faculty of Medicine to allow faculty to initiate their research work in preparation for applying to the next cycle of available and existing AUB research funds or potential extramural funds. Other funding programs included establishing competitive intramural funding from the medical practice plan overhead as well as several intramural funding initiatives that foster inter-faculty collaborations.

We also engaged in robust promotion of research in medical education. The Program for Research and Innovation in Medical Education was created; and we established a Fellowship and Residency Research Program and the Medical Research Volunteer Program.

RESULTS/OUTCOMES

- We saw a significant increase in research funding and support for interdisciplinary research.
- There was a considerable increase in research productivity and citations per paper as well as the number of research publications in peer-reviewed journals.
- The AUB Faculty of Medicine have been named among the World's Elite Medical Schools four years in a row (QS Rankings Report by Subject 2015 -2018).

FOR MORE INFORMATION AND RELATED MATERIALS ON THE AUB RESEARCH ENTERPRISE:

<https://website.aub.edu.lb/fm/medicalresearch/Pages/index.aspx>

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