

Soroka Ben-Gurion Research Institute

A joint venture of Soroka Medical Center and Ben-Gurion University of the Negev





The Vision

The new Soroka University Medical Center-Ben-Gurion University of the Negev Joint Research Center will achieve significant diagnostic and therapeutic breakthroughs by combining excellent scientific research with bedside experience and insights that will have substantial positive impact on local and international health and wellbeing. The center will attract top physicians and medical researchers to the Negev, ensuring Soroka and Ben-Gurion University's place among the leading medical research institutions in the world.

The Mission

- To create an extensive, up-to-date, leading research platform based on the proven scientific capabilities of Ben-Gurion University (BGU) researchers and Soroka clinicians
- To enable research during residency in various medical professions and thereby encourage outstanding MD graduates of BGU's Goldman Medical School to remain in the Negev
- To serve as a magnet for physician-researchers from outside the Negev
- To encourage excellent clinicians, physician-researchers, and leading researchers to remain in the Negev



What Has Already Been Achieved

In 2010, Soroka established its Clinical Research Institute to create an infrastructure for clinicians performing clinical research and to foster collaboration with academia and industry. Since its opening, the Clinical Research Institute has been involved in over 200 research projects with the participation of more than 120 clinicians and BGU staff, resulting thus far in some 80 scientific publications. The Institute works in three main areas:

- Actively supporting clinical and translational research, allowing access to state-of-the-art trial planning and management
- Conducting educational activities specifically tailored to enabling practicing physicians to achieve a level of knowledge adequate for conducting clinical research
- Establishing an infrastructure for the transfer of clinical/scientific findings into day-to-day medical practice

The Clinical Research Institute has been successful in obtaining competitive research grants, further advancing its ability to perform meaningful clinical research. It has developed scientific cooperation with research groups from Harvard University in the fields of intensive care, environmental medicine, and cardiology. These significant achievements, attained in such a short time, demonstrate the tremendous potential of providing the required resources to clinicians eager to participate in research.

Physicians who travel abroad for postdoctoral training consistently state that the inability to perform significant research is a major barrier to their return to Israel in general and to Soroka/BGU in particular. We believe that recruiting leading physicians to Soroka and researchers in biomedical sciences to BGU is of great strategic importance to both institutions and to the health of the region's population.



Looking Toward the Future

In designing the future joint research center, we have emphasized the creation of an infrastructure that will support the major types of research in which our clinicians and researchers can collaborate at Soroka and BGU in a way not currently possible. The availability of a world-class research center will radically change the decision-making process of potential recruits to Soroka and BGU for combined clinical and research leadership positions and thus has the potential to transform healthcare in the region.

The Partners

The Advanced Technologies Park (ATP) was recently inaugurated in the immediate vicinity of Soroka and BGU and is currently being populated with leading hi-tech and biotechnology companies from Israel and abroad. This unique project creates additional venues for innovative research involving Soroka and BGU researchers as well as biotechnology and biopharmaceutical companies, from start-up companies that arise from translational research performed at Soroka and BGU to existing companies that will bring additional expertise and capabilities to the area.

The collaboration of a leading tertiary hospital, a major research university, and the newly founded technology park will create a unique opportunity for the Soroka-BGU Joint Research Center. The new center will build on the success of the Clinical Research Institute and leading biomedical research groups at BGU, providing an outstanding platform for translational biomedical research. Research projects with applicative potential will be able to simply cross the street to BGU for additional research and refinement, to Soroka for bedside trials, and finally to the industrial biotech park for development.



Project Components

We plan to build the Soroka-BGU Joint Research Center on the northeastern side of the Soroka campus, facing BGU's faculties of Health Sciences and Natural Sciences and within walking distance of the ATP. The new research center will become the central location for translational biomedical research in Israel's South. In order to achieve these goals, the center will focus on facilities not currently available to clinician-researchers at BGU or elsewhere in the Negev. The Soroka-BGU Joint Research Center will include facilities for three major areas of research:

- **Translational research:** Laboratory space and facilities will be made available to clinicians initiating or cooperating on advanced basic research with applicative possibilities. We see great potential in areas such as the brain and neurology, cancer, surgery, and infectious diseases.
- **Clinical research, expanding the currently active Clinical Research Institute:** We will focus on creating state-of-the-art infrastructure, including the employment of skilled manpower in clinical research programs.
- **Population-based studies aimed at promoting the health of the Negev's population:** These efforts will require data management facilities and the ability to store and analyze serums and tissues on a large scale.

In addition, building a biobank of the region's population (overseen by the Ethics Committee) will facilitate genomic and other correlations for clinical studies and the provision of personalized medicine tools for the region's population.

Clinical Research Institute Perspective view



Soroka University Medical Center

Soroka University Medical Center offers exceptional opportunities for investigating the effect of incorporating new scientific findings into routine medical practice. It is one of the largest hospitals in Israel, and the only tertiary hospital serving the Negev, where over one million people live in an area that comprises 60% of the country. The Negev's ethnically diverse population has unique health characteristics and a lower socioeconomic status than the national average.

Soroka is developing with great momentum. In 2014, the government of Israel made the decision to strengthen the medical center and to add 118 beds to its wards. One of the central motifs of Soroka's strategic plan is leadership, in which research plays an important part.

Soroka has taken upon itself two national goals:

- To take a leading part in resolving the issue of health gaps that exist between the center of the country and its periphery period.
- To play a central role in preparing the Negev for the great opportunity represented by the transfer of IDF bases to the region and the expected population growth that will ensue.

Soroka is affiliated with Ben-Gurion University of the Negev and is the primary teaching hospital for all programs in BGU's Faculty of Health Sciences. The physical and organizational connections between Soroka and BGU foster fruitful scientific cooperation between researchers at both institutions, and there are myriad collaborations between them in fields ranging from biology and medical sciences to behavioral sciences and engineering. These close connections facilitate the seamless development of research programs that cover the bench-to-bedside continuum, translating basic scientific findings into therapeutic interventions and increasing our understanding of important disease processes.



Ben-Gurion University of the Negev

Ben-Gurion University of the Negev is one of Israel's leading research universities, with nearly 20,000 students and 4,000 faculty members in the Faculties of Engineering Sciences, Health Sciences, Natural Sciences, the Pinchas Sapir Faculty of Humanities and Social Sciences, the Guilford Glazer Faculty of Business and Management, the Joyce and Irving Goldman School of Medicine, the Kreitman School of Advanced Graduate Studies, and the Albert Katz International School for Desert Studies. The University has three main campuses: the Marcus Family Campus in Beer-Sheva, the research campus at Sede Boqer, and the Eilat Campus. BGU is home to national and multi-disciplinary research institutes: the National Institute for Biotechnology in the Negev, the National Institute of Solar Energy, the Ilse Katz Institute for Nanoscale Science and Technology, the Jacob Blaustein Institutes for Desert Research, the Ben-Gurion Research Institute for the Study of Israel and Zionism, and Heksherim - The Research Institute for Jewish and Israeli Literature and Culture. Ben-Gurion University is known for its research and academic excellence as well as its pluralistic and inter-disciplinary approach and emphasis on community action. In the health sciences, BGU is home to a strong and growing scientific community of renowned scientists with expertise in areas such as brain, diabetes, cancer, and infectious disease research as well as cutting-edge research projects, state-of-the-art research laboratories, and a world-recognized medical school that has become a center for community-oriented medicine and global health.



Soroka-BGU Clinical Research Center Building

Total space: approximately 3,800 square meters

Projected cost: US \$18 million

Components:

1. Research laboratories
2. Site for clinical and epidemiological research
3. Biological samples bank
4. Auditorium and seminar rooms
5. Ethics Committee office

Estimated Timeframe

We expect the project to be completed within two years of the completion and authorization of the building plans.

Donor Recognition

Plaques recognizing the donors' generosity will be prominently displayed at the center.

Soroka - Ben-Gurion University Clinical Research Institute

Soroka Medical Center is one of the largest hospitals in Israel, and the only tertiary hospital that serves the Negev region, in which over one million people live in an area comprising 60% of the country. The Negev is characterized by an ethnically diverse population with unique health characteristics and lower-than-average socioeconomic status. Soroka is the only hospital in Israel that is operated jointly with the community primary care system as part of the southern region of Clalit Health Services. Clalit operates over 190 community clinics that provide care to approximately 60% of the region's population. This unique setting offers an opportunity to investigate the effect of incorporating new scientific findings into medical practice.

The Soroka - BGU Clinical Research Institute, to be built on the Soroka campus, will face Ben-Gurion University's faculties of Health Sciences and Natural Sciences and be within walking distance of the Advanced Technology Park. The Research Institute will become the central location for translational biomedical research in the southern half of Israel.

The Institute will include facilities for four major research areas:

1. Translational research – laboratory space and facilities will be made available to clinicians initiating or cooperating in advanced basic research with applicative potential in areas such as brain and neurology, cancer, surgery, and infectious diseases.
2. Clinical research – expanding the existing Clinical Research Center. We will focus on creating state-of-the-art infrastructure and employing skilled personnel for running clinical research programs.
3. Population-based studies aimed to promote the health of the Negev's population – These efforts will require data management facilities and the ability to store and analyze serums and tissues on a large scale.
4. Building a biobank of the region's population (under the strict supervision of the ethics committee) – This will enable genomic and other correlations for clinical studies and facilitate the development of personalized medicine tools for the population.

Soroka - BGU Clinical Research Institute

Total space: 4,000 square meters (approx. 43,000 square feet)

Research Laboratories

The Institute will include six state-of-the-art basic science research laboratories. Each laboratory will host a Soroka - BGU research group for a period three years. Donor recognition will be provided via naming of the laboratory, prominently displayed at the facility and on all official publications. Research projects emanating from the laboratory will be presented at national and international conferences and published in the scientific literature, and will also feature the donor's name.

Naming Opportunity: \$100,000 for each laboratory

Clinical Research Center

In 2010, Soroka established its Clinical Research Center to create the infrastructure for clinicians performing clinical research and to foster collaboration with academia and industry. Since its opening, the Clinical Research Center has been involved in more than 200 research projects with the participation of more than 150 clinicians and BGU staff. These research projects have resulted thus far in more than 100 scientific publications.

The Center works in the following three main areas: 1) active support of clinical and translational research through access to state-of-the-art trials, planning, and management; 2) educational activities specifically tailored to enabling practicing physicians to achieve a level of knowledge that will allow them to successfully conduct clinical research; and 3) the establishment of the infrastructure necessary for the transfer of the clinical/scientific findings into day-to-day medical practice.

The Clinical Research Center has been successful in obtaining competitive research grants, further advancing its ability to perform significant clinical research. The significant achievements of the Clinical Research Center demonstrate the potential inherent in providing the required resources to clinicians eager to participate in research.

The new Clinical Research Center facility within the Soroka - BGU Clinical Research Institute will comprise several research units (Environmental Health, Population Research, Computational Medicine, and so on). Donor recognition will be provided via naming of the units of the Clinical Research Center and will be prominently displayed at the facility and on all official publications. Research projects emanating from the Clinical Research Center will be presented at national and international conferences, published in the scientific literature with the name of the donor of the relevant unit of the Center.

Naming Opportunity: \$500,000 for each Clinical Research Center unit



Negev Biobank

The use of human biological specimens in medicine is the focus of current public and professional interest worldwide. Yet the diagnosis of most medical disorders is severely hampered by the absence of reliable biomarkers that can be measured prior to the development of diseases. Furthermore, a gap exists between the advanced scientific methodology that allows for precise genetic mapping and our ability to apply in practice the knowledge it provides in a large population. The development of advanced genetics and biomarkers is limited by the lack of population-based analysis.

We propose to establish the Negev Biobank (NBB), a state-of-the-art repository for bio-specimens that will operate as the first large-scale, population-based biological archive in Israel. The NBB will take advantage of the unique organizational structure of the Negev's health care system, with Soroka Medical Center (SMC) serving as the only tertiary care referral hospital for a population of over 1,000,000. The NBB will collect, process and store tissues, blood samples, and other biological specimens from all patients admitted to SMC. The NBB will provide a unique platform for translational research that stems from collaborations between clinical investigators from SMC and basic science research from Ben-Gurion University of the Negev. This clinical-translational cooperation will yield new scientific paradigms tailored to the unique genetic profile and environmental exposures of the Negev population, and will foster the discovery of disease biomarkers and novel therapeutic modalities.

The NBB will enhance Soroka Medical Center's status as a leading center for personalized medicine that provides high-quality, timely medical services to all residents of the Negev. Donor recognition will take place via the naming of the Biobank, and will be prominently displayed on site and on all official Biobank publications. Research projects that emanate from the Biobank will be presented at national and international conferences and published in the scientific literature, including the donor's name.

Naming Opportunity: \$2,000,000

Auditoriums

The Soroka - BGU Research Institute will include two auditoriums that will be used for national and international conferences.

Naming Opportunity: \$150,000 for large auditorium, \$120,000 for smaller auditorium

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