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## **Ben-Gurion University and Cincinnati Children's Hospital Medical Center to Develop Pediatric-Specific Medical Technologies**

A collaboration to address the lack of medical devices designed specifically for children is being launched by Cincinnati Children's Hospital Medical Center (CCH), Ben-Gurion University of the Negev (BGU) and BGN Technologies, Ltd. (BGN.)

The project combines the medical expertise of physicians at Cincinnati Children's with the extensive technical and engineering capabilities of faculty at BGU, said Netta Cohen, chief executive officer of BGN, the technology commercialization company of BGU.

The goal is to improve health outcomes for children by ensuring device design is customized to meet the unique physiological differences and medical needs of children.

"The pediatric sector of medical device development has been neglected throughout the years," Cohen said. "Only a small fraction of medical research and development funding has been devoted to pediatric medicine".

According to the U.S. Department of Health and Human Services and the Food and Drug Administration (FDA), the development of pediatric devices lags years behind the development of adult devices.

In reports to the U.S. Congress, FDA has cited prohibitive development costs for pediatric devices as a significant barrier. Factoring into this is the limited size of the pediatric market and related economic factors.

Children represent only ten percent of the total medical market. As a result, insufficient resources have been channeled to the invention of dedicated surgical and medical devices for the pediatric population. When devices cannot be adapted, physicians often must resort to more invasive treatments or less effective therapies.

"Many devices used today to treat children are actually miniaturized adult devices that do not sufficiently address the clinical needs of children. Pediatric patients vary greatly due to a range of differences in size, anatomy, activity levels, and physiology," said Dr. Richard Azizkhan, Surgeon-in-Chief; Lester W. Martin Chair of Pediatric Surgery.

“The challenge with adapted devices is they frequently are not the ideal solution, especially for very small and fragile infants. This collaboration is an opportunity to target new solutions and improve medical outcomes for children”.

Under the BGU-Cincinnati Children’s collaborative structure, medical center physicians will provide detailed insight on specific medical device challenges and development opportunities. This information will be provided to BGU engineers and technology researchers who can match development opportunities with technical solutions.

Assisting with the evaluation of new device concepts for their market potential will be CincyTech, a Cincinnati-based public-private seed-stage investor that collaborates with Cincinnati Children’s on technology commercialization efforts.

Cincinnati Children's is a leading pediatric hospital and research center and one of the top two recipients of pediatric research grants from the National Institutes of Health. Located in Cincinnati, Ohio, it is known for pioneering breakthrough treatments and providing outstanding family-centered patient care.

The BGU collaboration is being coordinated through the Center for Technology Commercialization at Cincinnati Children’s. The center identifies promising new medical technologies discovered by medical center researchers and facilitates their commercial transition to clinical use and patient benefit .

Ben-Gurion University is the third largest, fastest growing university in Israel. BGU’s growth has tripled over the past 15 years, and presently numbers 20,000 students. Thirty-two percent of the engineering researchers of Israeli universities are located at BGU, which has 850 senior researchers engaged in basic and applied research in multi-disciplinary areas of excellence that include relevant areas such as advanced materials, nanotech, sensors, electronics, optics, drug delivery and biotechnology.

BGN Technologies, BGU’s technology transfer company has a proven and growing track record of commercialization success. During the past few years it has signed agreements with biomedical industry leaders including Teva Pharmaceuticals, GlaxoSmithKline and Johnson & Johnson.

BGU and BGN are located in the heart of the Bio-Negev Cluster, a program of national priority aimed at dramatically transforming the economic basis of the Negev desert. At the center of this biomedical cluster adjacent to Ben-Gurion University are the Soroka Medical Center, the Israeli National Institute for Biotechnology, Advanced Technologies Park and four technology incubators.