

JeffSolves with Student Innovation



The JeffSolves MedTech program teams industrial design and medical students to develop innovative solutions to specific healthcare problems. Having chosen particular, concrete challenges faced by medical patients, student teams collaborate to conduct in-depth user research and problem identification, develop potentially marketable solutions and create prototype products. “The solutions these teams create are consistently remarkable and effective,” says **Bon Ku, MD**, assistant dean for health and design at Sidney Kimmel Medical College.

In 2020, JeffSolves teams created three innovative, important products. *Callicore* is a car seat for pediatric patients immobilized in hip spica casts following surgery for hip dysplasia or femur fractures. *Conexo* is the first product providing barrier protection for IV connection sites, thereby preventing bacteria from entering the bloodstream. *Steam 'n Spin* is a low-cost, easy-to-use breast pump sanitizer designed for NICU-grade pathogen control and high-volume use.

JeffSolves’ immersive accelerator experience—just four years old—is already seeing its solutions move toward the marketplace. ALAFLEX is a JeffSolves 2017 spinout launched to market an ergonomically designed, three-dimensional,



ALAFLEX co-founders in the Health Design Laboratory (from left): Abhishek Umashankar, Victor Hsue, Haru Jang and Leena Ramani.

axillary bandaging system for individuals with *hidradenitis suppurativa* (HS), in which excessive leakage and extreme pain cause significant medical problems and impair quality of life.

“Although millions of people suffer with HS, there was no ideal dressing, but now the patent application for our product is pending,” explains ALAFLEX co-founder **Victor Hsue**, a 2020 graduate of Sidney Kimmel Medical College, who is now an otolaryngology resident. His co-founders are fellow graduates **Leena Ramani** and **Abhishek Umashankar**—now pursuing residencies in, respectively, internal medicine and emergency medicine —and **Haru Jang**, a 2018 MSID graduate, now an Industrial Designer and UX Researcher at DiveDesign. ■



The ALAFLEX bandaging system.