The Memorial Sloan Kettering Innovation Powering A Pediatric Cancer Breakthrough

Memorial Sloan Kettering Cancer Center

Finalist for the 2026 Better World Project Award

Young children and early adolescents are among the most vulnerable of cancer patients. Their families suffer greatly. Danyelza®, a game-changing innovation from the Cheung Lab at Memorial Sloan Kettering Cancer Center (MSK) with significant support from MSK's Department of Pediatrics, is now providing hope for children with neuroblastoma.

Nai-Kong Cheung, MD, PhD, the Enid A. Haupt Chair in Pediatric Oncology at MSK, is a medical oncologist who has devoted his career to children with cancer. With a laser focus on widening the therapeutic window, the Cheung Lab made antibody discoveries in the mid-1990s which have continued to evolve, targeting some of the most lethal cancers in children. These tireless efforts led to FDA approval in 2020 of Danyelza® (aka naxitamab). Subsequent inventions, including novel antibody platforms to safely deliver radioisotopes, bispecific T-cell engagers, and antibody armed T-cells have either moved or are ready to move into the clinic at MSK and elsewhere.

Innovation guides everything at MSK, all in support of their mission of ending cancer for life. From research to patient care, teams throughout the institution are dedicated to fostering lasting innovation. medical oncologist who has devoted his career to children with cancer.

MSK expert teams and resources have played vital roles in helping to advance the Cheung team's novel immunotherapies through technology development, clinical trials, and industry partnering. As with other MSK innovations, Their goal is steadfast: To bring the fruits of MSK clinical and laboratory research to patients worldwide.

Over decades, more than 30 clinical trials at MSK tested the Cheung team's research concepts. Supported at MSK by dedicated pediatric physicians, nurses, other healthcare professionals, and veterans in product development, clinical grade production, data management, and regulatory affairs, each playing critical roles, hu3F8 (which came to be known as naxitamab) came of age.

While this team of experts collaborated on laboratory and clinical research, MSK's Office of Entrepreneurship & Commercialization (MSK's tech transfer office) developed and implemented a remarkably successful commercialization strategy, which included evaluating different business development options over the years. The result was a license to an MSK spinoff, Y-mAbs Therapeutics —founded by the parent of a young child treated at MSK. Our licensing and legal teams helped carry out a complex, sophisticated patenting strategy which expanded to include many dozens of patents worldwide.

Philanthropic funds provided through MSK's Development Office played an essential role in supporting the development of naxitamab, including a noteworthy donation from the Band of Parents, a nonprofit established by parents of children treated at MSK. Vital MSK financing also came from our Technology Development Investment Fund, a competitive gap-funding vehicle, the Geoffrey Beene Cancer Research Center, and our Experimental Therapeutics Center.

Within three years of licensing naxitamab, Y-mAbs Therapeutics went public with a highly successful IPO in 2018, an example of promising startup companies built upon a foundation of MSK innovation. Y-mAbs' current pipeline continues Danyelza's blueprint, including a number of products originating from MSK, nurtured by innovation teams throughout our institution. The company was acquired in late 2025 by SERB Pharmaceuticals.

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