

The power and promise of drug repurposing

How Emory researchers are shaping the future of accessible health care



Above: David Fajgenbaum speaks during the 2023 Morningside Research Symposium.

The road to drug discovery is marked with high attrition rates, astronomical cost, and other barriers that slow the pace of innovation to a crawl. Bringing a new drug to market costs millions of dollars and involves years to accomplish.

That's why repurposing drugs — alternative uses for FDA-approved pharmaceutical ingredients — is a promising avenue for patient care.

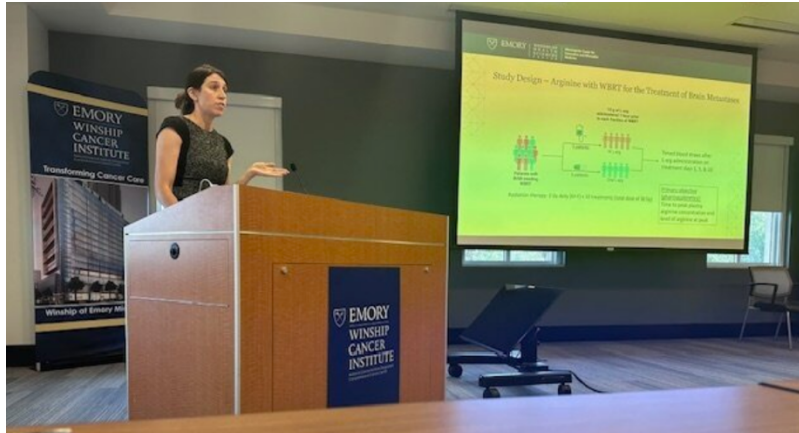
Finding alternative purposes for existing drugs benefits physicians and patients equally, resulting in reduced development timelines leading to quicker, more cost-effective therapies.

Exploring the frontier of drug repurposing at the Morningside Research Symposium

Emory University's [Morningside Center for Innovative and Affordable Medicine](#) is the forefront of drug repurposing. With [five active clinical trials and eight active Morningside research awards](#), the center has dedicated itself to exploring alternative paths, focusing on repurposing existing drugs.

This fall, Emory hosted the Morningside Research Symposium, celebrating the center's impact. The event showcased research findings on repurposed drugs and nutraceuticals, emphasizing cancer research. Over 80 participants attended the symposium, eager to learn about clinical and pre-clinical projects supported by the Morningside Center.

“The current biomedical discovery ecosystem often uses financial considerations as a driver for innovation,” remarks Vikas P. Sukhatme, MD, ScD., Morningside Center director and co-founder, Robert W. Woodruff Professor of Medicine, former dean of Emory School of Medicine. “Many affordable, life-saving treatments remain undiscovered or underdeveloped due to a lack of financial incentive, resulting in missed opportunities. The Morningside Center for Innovative and Affordable Medicine is committed to finding the most promising of such possibilities.”



Above: Lisa Sudmeier, MD, MPH, assistant professor, Department of Radiation Oncology, presents an exciting talk on Treatment of Brain Metastases with Arginine Supplementation. m

The symposium featured the [ReMedy-Cancer Research Database](#), a compilation of the most promising drug repurposing opportunities for cancer treatment. This list of drug repurposing opportunities for cancer treatment is being utilized to design and fund some clinical studies at Emory. Organized by disease and drug, the user-friendly interface allows quick searches through PubMed and related resources. Recently, the staff at Morningside have collaborated with Cassie Mitchell, PhD, assistant professor at Georgia Tech to leverage AI for the ReMedy database.

The ReMedy-Cancer Research Database is a groundbreaking new tool for patients, physicians and curious investigators to find readily accessible repurposed drug data. Investigators can use the ReMedy-Cancer Research Database to quickly set up a clinical trial and patients can access it to learn more about alternative options for combatting disease.

How drug repurposing research changed one doctor's life

The event's distinguished guest was David Fajgenbaum, MD, MBA, MSc, author of the bestselling book *Chasing My Cure: A Doctor's Race to Turn Hope into Action*. Fajgenbaum knows firsthand the power of repurposed drugs. Diagnosed with life-threatening idiopathic multicentric Castleman disease in medical school, Fajgenbaum conducted research that led to the identification of repurposing mTOR inhibitors to improve his condition.

Fajgenbaum's remarkable journey underscores the critical need to unlock the full potential of approved medicines to treat a spectrum of life-threatening conditions. Last year, he launched the nonprofit Every Cure at the Clinton Global Initiative, dedicated to repurposing existing drugs.



Above: David Fajgenbaum and members of the Morningside team pose in the iconic “Castleman flex.” Pictured L-R: Greeshma Kombara, MPH, Selvi Ramalingam, MS, Krista Charen, MPH, Vidula Sukhatme MS, David Fajgenbaum, MD, MBA, MSc, Michael Lowe MD, MA, and Vikas Sukhatme, MD, ScD

In addition to moderating the symposium's first session, Fajgenbaum delivered Winship Grand Rounds, breaking a post-COVID attendance record and highlighting the urgency of his mission. His excitement for the symposium even inspired him to 'Castleman flex' with the Morningside team.

Transforming research into powerful health outcomes

Drug repurposing is an exciting platform for innovation that allows for less risky, faster and more-efficient drug development. Using pre-approved FDA medications for new uses helps make good on the original investment made by researchers and provides a better experience for patients.

Reflecting on the event, Sukhatme says, “the success of this year’s symposium highlights the significant impact of drug repurposing in medical innovation. We’re so excited to see how Morningside funded studies will result in cost-effective, new treatment options for unmet medical needs, thereby shaping the future of accessible healthcare.”