

Recombinant Antibody Network Partners with Bristol Myers Squibb to Develop Novel Therapies

The Recombinant Antibody Network (RAN), a consortium comprising research groups from UC San Francisco (UCSF), the University of Chicago and the University of Toronto have announced that they have entered into a second research collaboration with Bristol Myers Squibb, aimed to create and develop high-performance recombinant antibodies against diverse targets in human cells. The first collaboration was launched in 2015 with Celgene, later acquired by Bristol Myers Squibb in 2019.

Under the new agreement pioneered by **James Wells** of UCSF with Bristol Myers Squibb, Bristol Myers Squibb will further invest in the RAN's state-of-the-art antibody engineering program to expand target discovery to oncology, immunology, and neurology. "Our partnership with Bristol Myers Squibb is a testament to the RAN's ability to produce antibody molecules with a strong therapeutic potential," says **Sachdev Sidhu**, one of the founding members of the RAN and a co-founder of the Toronto Recombinant Antibody Centre (TRAC) at U of T's Donnelly Centre where he is also a professor of molecular genetics.

As one of the largest academic-industry partnerships, the collaboration also offers unique opportunities for trainees to be involved in cutting-edge research with clinical application. Additionally, the collaboration provides an opportunity for potential sharing of research performed by both RAN scientists and Bristol Myers Squibb scientists. RAN has published dozens of publications resulting from their new innovative science and discovery at all four institutions.

"This is a spectacular example of how industry and academics can work hand-in-hand to discover new medicines," says Wells, a co-founder of RAN and a professor of pharmaceutical chemistry in the UCSF School of Pharmacy. "RAN project teams include scientists, students, post-docs and staff at university collaborating with Bristol Myers Squibb scientists to consult on projects and discuss progress on a monthly basis."

Antibodies as therapeutics

Antibodies are naturally produced by the body to fight infections. Thanks to advances in protein engineering, scientists can now create tailored synthetic antibodies to inhibit disease processes or mark cancer cells for destruction by the immune system.

Over the past two decades, antibodies have emerged as the fastest-growing class of therapeutic molecules with more than 50 approved so far. Unfortunately, antibody development remains an imprecise science, conducted on a case-by-case basis. As veterans of the former Protein Engineering Department at Genentech Inc., Sidhu, Wells and **Anthony Kossiakoff**, a professor of biochemistry and molecular biology at the University of Chicago, founded RAN in 2012 to make antibody design and production more efficient.

The consortium has developed a fully automated, high-throughput antibody engineering platform and has generated thousands of antibodies against hundreds of cell surface proteins. The RAN generates recombinant antibodies from cloned synthetic genes using phage display technology that are selected for high performance. The ongoing partnership with Bristol Myers Squibb will enable the RAN to continue to develop and apply cutting-edge

technologies for the discovery of new cell surface targets and selection of clinically promising antibodies, as well as to expand research collaboration with the disease biology communities at the three universities.

“We created the RAN to address a large, unmet need in both research tools and therapeutic antibody development,” said Kossiakoff, from UChicago. “The RAN will continue to solve the problems that are inherent in traditional antibody approaches, and help to expand treatments for a variety of diseases, including cancer.”

About University of California, San Francisco

The University of California, San Francisco (UCSF) is exclusively focused on the health sciences and is dedicated to promoting health worldwide through advanced biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care. [UCSF Health](#), which serves as UCSF's primary academic medical center, includes [top-ranked specialty hospitals](#) and other clinical programs, and has affiliations throughout the Bay Area. Learn more at <https://www.ucsf.edu>, or see our [Fact Sheet](#).

The UCSF Offices of Technology Management and Strategic Alliances, a part of UCSF Innovation Ventures, led the negotiation of the agreement with BMS. The Office of Technology Management will manage licensing activity resulting from the collaboration and the Office of Strategic Alliances will manage the collaboration activities. Please visit <https://innovation.ucsf.edu/>

About the University of Chicago Polsky Center for Entrepreneurship and Innovation

The Polsky Center for Entrepreneurship and Innovation at the University of Chicago brings the power of ideas in the laboratory, classroom and community to the world by providing resources to commercialize discoveries, partner with companies, and attract venture capital. The mission of the Polsky Center is to bridge the gap between knowledge and practice, idea and action, and research and impact.

As one of the world's premier research universities, UChicago empowers students and scholars through its commitment to free and open inquiry. Across numerous departments and disciplines, as well as more than 140 institutes and centers, the UChicago community advances ideas and innovations that enrich human life. Please visit <https://polsky.uchicago.edu/>.

About the University of Toronto

Founded in 1827, the [University of Toronto](#) is Canada's leading institution of learning, discovery and knowledge creation. U of T is one of the world's top research-intensive universities, driven to invent and innovate. Consistently ranked among the top 10 public universities worldwide, U of T has remarkable strengths in disciplines that span the life sciences, engineering, humanities, social sciences, sciences and the professions. U of T's commitment to applied research, knowledge translation, innovation and entrepreneurship drives continuous economic transformation of the Toronto region, and creates prosperity in Canada and beyond.

Located at U of T, the Donnelly Centre is a research institute where scientists from diverse fields make discoveries to improve health. The [Accelerator for Donnelly Collaboration](#) (AcDC) is a biotechnology innovation hub dedicated to translating discoveries made by the Donnelly Centre investigators into patient therapies. It houses the Toronto Recombinant Antibody Centre (TRAC). TRAC produces many of the antibodies for RAN. U of T's Innovations & Partnership Office (IPO), is responsible for the negotiation and licensing of biologics from the university and represents U of T in its commercial transactions with the RAN. For more information about the Donnelly Centre, visit us at thedonnellycentre.utoronto.ca or follow us on [LinkedIn](#) and [Twitter](#).

About the Recombinant Antibody Network

The Recombinant Antibody Network (RAN) is a consortium of highly integrated technology centers at University of California, San Francisco, the University of Chicago, and the University of Toronto, unified under a common goal to generate reliable high-quality recombinant antibody (rAb) reagents at a proteome wide scale for biology and biomedicine. Please visit: recombinant-antibodies.org.

About Bristol Myers Squibb

Bristol Myers Squibb is a global biopharmaceutical company whose mission is to discover, develop and deliver innovative medicines that help patients prevail over serious diseases. For more information about Bristol Myers Squibb, visit us at BMS.com or follow us on [LinkedIn](#), [Twitter](#), [YouTube](#), [Facebook](#) and [Instagram](#).

Contact

Donnelly Centre, University of Toronto
Jovana Drinjakovic
Jovana.drinjakovic@gmail.com