

Advancing Cancer Research

An Interview with Julian Adams, PhD, President and Chief Executive Officer, Stand Up To Cancer

EDITORS' NOTE Julian Adams is President and Chief Executive Officer of Stand Up To Cancer, and among the world's foremost oncology researchers. Adams joined Stand Up To Cancer in July 2023 as its first Chief Science Officer responsible for setting strategic priorities that enhance SU2C's research portfolio. He previously served as chief executive officer of Gamida Cell, a commercial-stage biopharmaceutical company working to develop cell therapies for blood cancers and rare,



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serious blood diseases. Prior to joining Gamida Cell, Adams was President of R&D at Infinity Pharmaceuticals, Inc., where he oversaw development of small molecule drugs to treat cancer. He earlier served in senior research leadership roles at Millennium Pharmaceuticals, Boehringer Ingelheim, LeukoSite, Inc., and ProScript. He is also a former member of SU2C's Scientific Advisory Committee. Adams has received numerous awards and recognitions, including the 2012 Warren Alpert Foundation Prize for his role in the discovery and development of Bortezomib; the 2012 C. Chester Stock Award Lectureship from Memorial Sloan-Kettering Cancer Center; and the 2001 Ribbon of Hope Award for Velcade from the International Myeloma Foundation. He holds more than 40 patents and has authored more than 130 papers and book chapters in peer-reviewed journals. Adams received his BS degree from McGill University and his PhD from the Massachusetts Institute of Technology in the field of synthetic organic chemistry. He also received the degree of Doctor of Science, honoris causa, from McGill University in 2012.

ORGANIZATION BRIEF Stand Up To Cancer (SU2C) raises funds to accelerate the pace of research to get new therapies to patients quickly and save lives now. SU2C is a 501(c)(3) charitable organization and was initially launched as a division of the Entertainment Industry Foundation. Established in 2008 by media and entertainment leaders, SU2C (standuptocancer.org) utilizes these communities' resources to engage the public in supporting a new, collaborative model of cancer research, to increase awareness about cancer prevention, and to highlight progress being made in the fight against the disease. As of April 2023, more than 3,000 scientists representing more than 210 institutions are involved in SU2C-funded research projects.

What excited you about the opportunity to lead Stand Up To Cancer and made you feel it was the right fit?

I've worked with Stand Up To Cancer since its inception as a member of the Scientific Advisory Committee (SAC), so my familiarity with the organization is extensive. During my roughly 15 years on the SAC, I had the opportunity to work closely with some of the most brilliant minds in cancer research, which I found enormously satisfying. In many ways, it was a valuable complement to my private sector work as both a cancer researcher and senior executive.

In July 2023, I had recently retired from my position as CEO of an innovative pharmaceutical company when I was asked to become SU2C's first chief science officer. The opportunity to define this newly created position, lead the extraordinary SU2C science staff, and continue my association with my colleagues on the SAC was more than enough to lure me out of retirement. When the opportunity arose in early 2024 to fill the CEO role – and to implement my strategic vision across the entire organization – I accepted unreservedly. Turns out retirement is way overrated.

Will you highlight the history of Stand Up To Cancer and how the organization has evolved?

SU2C was the brainchild of nine dynamic women, all of whom were involved in the media and entertainment industry. Like almost everyone, each of them had, either directly or through a loved one, contended with cancer.

In 2008, these women established SU2C with the goal to accelerate groundbreaking research and discover new therapies for patients quickly. Their strategy was to engage the entertainment community to raise public awareness and funding for innovative cancer research. With Major League Baseball on board as a founding donor, SU2C officially launched with the first-ever "roadblock" fundraising telecast, simultaneously broadcast on all three major television networks (ABC, CBS, NBC). The hour-long special featured numerous celebrities from Hollywood and beyond, paving the way for seven subsequent biennial programs available on dozens of broadcast and streaming outlets across the U.S. and Canada.

From the start, SU2C's approach to cancer research focused on collaborative team science: assembling top talent from across disciplines and institutions into "Dream Teams" united by a common purpose to quickly move innovative treatments from laboratory to bedside. To identify the most promising approaches and provide rigorous oversight, SU2C enlisted the American Association for Cancer Research (AACR) as scientific partner and organized the SAC composed of leading researchers, including three Nobel laureates. To date, SU2C has funded almost 250 team science grants and awards, including over two dozen Dream Teams, engaging more than 3,100 researchers from 210 institutions in 13 countries. Not only has team science emerged as a standard research model, but numerous novel treatments developed with SU2C funding have dramatically transformed the standard of care for various cancer types. Over the past 16 years, SU2C has raised nearly \$800 million in pledges to advance life-saving new treatments.

Today, SU2C is working to cut cancer mortality by 25 percent in the next five years and by half in the next decade by sharpening its focus on the most promising new strategies, including vaccines that can prevent cancer, detection and interception of early-stage cancers, immunotherapies that can wipe out cancer before it spreads, and harnessing artificial intelligence to enhance and speed discovery in all of these areas.

How do you define Stand Up To Cancer's mission?

The mission of Stand Up To Cancer is to raise funds to drive groundbreaking, collaborative cancer research that gets new treatments to cancer patients quickly. That has been our singular mission for 16 years.

While we are not stepping away from this mission, a strategic pivot we are emphasizing is the detection, interception, and treatment of cancers early, before they can take hold and become lethal. At present, only 10 percent of funding from the National Cancer Institute supports research in cancer prevention, detection, and diagnosis. It is an underfunded area of research, and we believe it is critical to ending this disease. With this approach, we can realistically aspire to cure most, if not all, cancer patients and reduce cancer mortality by 25 percent in five years and by 50 percent in 10 years.

Will you provide an overview of the work of Stand Up To Cancer?

Over the past 16 years, SU2C-funded research has contributed to more than ten significant breakthroughs that have changed the standard of care for many cancer types. For example, SU2C-funded clinical trials for children and young adults with blood cancer led to the first CAR-T therapy approved by the U.S. Food and Drug Administration (FDA). CAR-T therapies – which are less toxic than standard treatments – are now used widely for a number of cancers; clinical trials funded in part by SU2C contributed to the FDA approving a targeted therapy, used in combination with a hormone therapy drug, as an initial treatment for a type of advanced breast cancer; research funded by SU2C found a vulnerability in the DNA of aggressive prostate cancer, leading to clinical trials that laid the groundwork for a new treatment for advanced prostate cancer; a two-drug combination discovered by a SU2C-funded team was approved by the FDA, providing a new treatment option for patients with an advanced form of colorectal cancer; a drug combination tested in a SU2C-funded clinical trial led to the first FDA approval for a difficult-to-treat form of metastatic breast cancer; demonstrating the value of cross-disciplinary collaborations, a SU2C Dream Team pioneered a new treatment for advanced lung cancer by utilizing an immunotherapy combination originally developed to treat melanoma and prostate cancers; FDA approval for an immunotherapy drug as an initial treatment for difficult-to-treat colorectal cancer has allowed

patients to bypass more toxic cancer treatments, based in part on SU2C-funded research; a SU2C-funded team conducted a clinical trial resulting in the combination of an immunotherapy drug, plus a cell-based immunotherapy called TIL therapy, becoming a new treatment for late-stage lung cancer; a clinical trial for difficult-to-treat rectal cancer – funded in part by SU2C – utilized an immunotherapy drug, resulting in cancer disappearing for every trial participant without the need for surgery; and demonstrating the promise of artificial intelligence and machine learning to detect and treat cancer, a team of SU2C-funded researchers used machine learning to identify pancreatic cancer proteins specific to individual clinical trial participants. With that information, they customized Messenger RNA (mRNA) vaccines to produce a strong immune response, enabling the patients' own immune system to identify, target, and attack cancer cells.

This is just a partial list of SU2C research milestones over the past 16 years.

Will you discuss Stand Up To Cancer's unique research models as well as its focus on addressing the inherent inequalities in healthcare?

There are three fundamental aspects that set SU2C's research model apart: first, our insistence on

collaborative team science. While we do provide smaller, individual research grants, the lion's share of our funding is earmarked for the collaborative approach we pioneered back in 2008, which unites the brightest minds from multiple disciplines and institutions in common purpose.

The second defining characteristic of SU2C's research model is our insistence on rigorous oversight. This derives both from our arrangement with AACR as our scientific partner, and from our independent SAC. All of our funding decisions and ongoing grant oversight involve these two consulting bodies.

Finally, SU2C research focuses on producing significant treatment breakthroughs quickly. We do not limit our research to any particular cancer type or treatment modality. We're interested in approaches that can move rapidly from laboratory to bedside and save lives now. This is often high-risk, high-reward research.



More recently, with the goal of reducing cancer mortality by 25 percent in the next five years, we are expanding our scientific strategy to direct more resources to prevention and early detection and treatment, when the opportunity to cure cancer is strongest. This includes utilizing AI, machine learning, and large language model computing to prevent cancer with vaccines, as well as more precisely find or target specific cancer cells once they appear while minimizing damage to surrounding tissue.

In addition to our primary Dream Team research model and the individual research grants mentioned previously, SU2C also utilizes three other approaches. SU2C Convergence brings together biological, physical, and computer scientists to better understand cancer biology in order to more quickly tailor treatments for individual cancer patients. SU2C Catalyst unites the pharma industry with academic scientists to rapidly accelerate clinical trials of new treatments and combination therapies. And SU2C Cancer Interception aims to find and treat cancer at the earliest possible point, perhaps even before a cancer cell has fully formed.

While we pioneered the Dream Team model, we aren't wedded to it. Rather, we are

open to exploring any approach that promises to accelerate the development of new techniques to prevent, identify, and eradicate cancer.

Advances in cancer research are not equitably distributed among all patient communities. SU2C addresses the inherent inequalities in healthcare in several ways: first, by conducting awareness campaigns focused on diverse communities to promote cancer screenings and clinical trial participation; and second, we believe it's critically important that clinical trials include diverse patient populations. We know that individuals from various racial, ethnic, and genetic backgrounds have distinct vulnerabilities to certain cancers, and different responses to new or standard treatments. That's why we insist on diversity in clinical trials to the extent possible.

How valuable is it in your role to have such an engaged group of founders and advisors?

Our founders are incredibly dynamic and engaged, with a deep commitment to this work. I rely on them for their wise counsel and vast networks of current and potential funders. Indeed, our basic fundraising model gives us access to the entertainment community to promote awareness and garner media support, and that would have been impossible without this passionate and well-connected group of leaders. As a nonprofit, donation-supported organization, we would not exist, nor would we have been nearly as successful, without the involvement of a dedicated, energetic, and visionary group like this.

When you are addressing the issue of cancer that requires a long-term focus and commitment, how important is it for you and your team to take moments to reflect and celebrate the wins along the way?

The worldwide cancer research community has made incredible strides in reducing mortality and extending and improving quality of life for cancer patients. Having been deeply and personally involved with this effort for most of my career, I am proud of the extraordinary progress my fellow scientists have enabled and the millions of lives that have been saved. But at the same time, I'm keenly aware of just how much remains to be done. We need everyone to join this effort as we continue to fund groundbreaking cancer research to end cancer once and for all.

Today we are seeing the pace of that progress accelerate. Advances that took decades to realize in the past now can take only a few years. That is progress worth celebrating. Now, with the advent of AI, machine learning, large language model computing, and other novel applications of innovative technologies, we can reasonably hope to cut cancer mortality in half over the next ten years. That's our goal, and I firmly believe that it is within reach. ●