



## **FOR IMMEDIATE RELEASE**

### **Cancer Researcher John Trent, PhD Joins Dataseam**

LOUISVILLE, Kentucky (January 28, 2025) Dataseam announced Dr. John Trent has joined as its Research Operations Director, advancing the organization’s research-based initiatives. Trent has been a key collaborator of Dataseam for over 20 years during his leadership at University of Louisville Brown Cancer Center. This new role at Dataseam continues to grow vital life-saving research efforts and the development of Kentucky-based innovation and commercialization.

Trent is a Professor Emeritus of Medicine at the University of Louisville School of Medicine in the Department of Medicine, former Professor of Medicine, and Biochemistry and Molecular Genetics, Deputy Director of the Brown Cancer Center for Basic and Translational Research, Brown Cancer Center Experimental Therapeutics Program Leader, Wendell Cherry Endowed Chair in Cancer Translational Research, Director of the Kosair Charities Pediatric Oncology Research Program, and Director of the University of Louisville Brown Cancer Center Molecular Modeling Facility. A New Zealand native, he was educated at the University of Canterbury, New Zealand, earning both a Bachelor of Science and a Ph.D. in Chemistry. Trent served postdoctoral fellowships at the University of Geneva, Switzerland and The Institute of Cancer Research, Sutton, Surrey, United Kingdom. Attracted by Kentucky’s “Bucks for Brains” initiative, Trent joined the University of Louisville Brown Cancer Center in 1999 as part of the team led by Dr. Donald Miller relocating from the University of Alabama, Birmingham.

Trent and his spouse, Dr. Paula Bates, also a cancer researcher, stepped down from their University of Louisville positions in 2023, returning to New Zealand to attend to family. Trent continued to work with the University and Dataseam until this opportunity to join the organization to continue the achievements of the past 20 years became available.

“While it was a difficult decision to leave our Louisville home, timing was optimal to add a new adventure in our life story,” Trent said. “We were a big part of the exponential growth at the Cancer Center, its research teams and discoveries. Joining Dataseam gives me an opportunity to continue to support and develop Kentucky-based drug discovery, building on the public-private partnership pioneered between Dataseam and its school and university partners.”

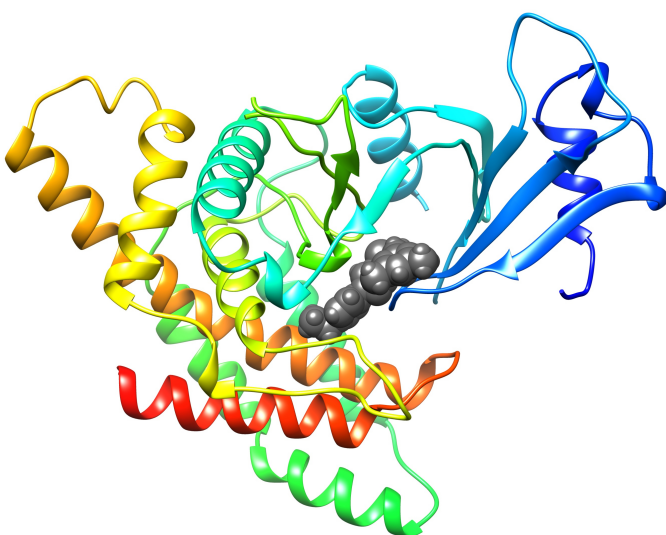
#### **Partnership with Dataseam**

Dataseam began its far-reaching collaboration with Trent in 2003. The organization was a private start-up in the University of Louisville’s incubator system initiated under Kentucky’s New Economy initiatives. The University facilitated a meeting between Dataseam and Dr. Jon Klein, who serves today as the University’s interim Executive Vice-President for Research and Innovation; Klein asked Trent to come along. “Dataseam had the basic idea to aggregate unused

computing horsepower of Kentucky K-12 student computers for higher education computational research needs as an opportunity to engage students, generating interest for science, engineering and other STEM workforce opportunities,” Trent reflects. “At the time, our research team had just formed Aptamera to commercialize one of our cancer-based innovations. The University’s Brown Cancer Center had identified 8 different cancer targets, but internal computing resources could only work on one at any given time, with each taking many months,” he continued. “There was a definite need for Dataseam.”

The DataseamGrid, designed and managed by Dataseam, allows computational-intensive research to be distributed across thousands of public K-12 student computers statewide. Unique to Kentucky, it provides significant additional value to student workstations otherwise untapped, currently bringing to bear nearly \$10 million of computing horsepower provided by the Kentucky General Assembly program appropriations and leveraged federal grants. John Soward, Dataseam's Research Infrastructure Manager, has worked with Dr. Trent since 2010 developing the frameworks and tools necessary for successful research implementation. "It has been interesting and rewarding to evolve the DataseamGrid supporting Dr. Trent's research collaborations over the years," shares Soward. "Having him join the Dataseam team will make a big difference to the future of the DataseamGrid."

Over the past two decades, collaboration between Dataseam and Trent has significantly propelled Kentucky-based innovation and commercialization. The DataseamGrid has supported as much as 80% of the Cancer Center’s research demand. This provided Trent the capacity to grow 38 university faculty teams in cancer drug discovery, clinical trials, eye, wound healing, vaccine, biology and Envirome Institute targets. The results have made a significant impact with 95 patent applications, 50 currently issued, including 28 in the United States, and 2 human clinical trials conducted.



#### **Speeding up drug discovery**

The DataseamGrid allows millions of potential drug molecules to be computationally screened against a cancer target, as in the protein shown in multicolor ribbon. The resulting small molecule “hits”, shown in grey, can progress into the drug development pipeline.

***Credit: UofL Health – Brown Cancer Center***

Trent’s work along with that of Dr. Bates at the University of Louisville were the leaders in generating intellectual

property at the University of Louisville. These efforts have been recognized with both researchers being separately inducted as Fellows into the National Academy of Inventors. The DataseamGrid has been cited as a critical infrastructure resource in the earning of over \$65

million in direct research funding at the University of Louisville with an estimated \$162.5 million economic impact for the Commonwealth.

Trent added, "Those eight initial targets became hundreds. We were able to examine them with a degree of specificity not imagined before. As the DataseamGrid grew, so did the research in numbers and complexity. It provides Kentucky the largest theoretical pipeline of cancer therapies in the United States."

### **Impact to Dataseam Schools**

Dataseam's mission extends beyond research support. One of its core tenets is the belief all Kentucky students can be a vital part of the state's next-generation workforce. "There was a time growing up in rural western Kentucky when seeing prospects for a future beyond the county line was limited," said Brian Gupton, Dataseam CEO and Co-Founder. "We believe when the resources are made available, any Kentucky student can succeed and exceed expectations to serve in-demand and growth workforce sectors," Gupton continues. "Home-growing and creating the talent pool gives rise to opportunity and attracts others. We are thankful to the Kentucky General Assembly for their support. That work continues."

To complement these efforts the University of Louisville created and funded the Dataseam Scholars program, funding separately 4-year scholarships to students from Dataseam schools, many first-generation university attendees, to pursue STEM and STEM education disciplines. Millions of dollars in awards and other access from the University have been awarded to these students currently enrolled as well graduating to participate in Kentucky's next-generation workforce.

This partnership has made a difference to many Kentucky communities and schools like Lawrence County Public Schools in Louisa, Kentucky. "Lawrence County joined Dataseam early. Once we started supporting cancer research on the computers we were earning, our students wanted to know what happened to the research once it left their computers. We took advantage of the offer to show our students and have them come back talking about the Center and Dr. Trent," reflects Thomas Burns, Chief Information Officer at Lawrence County Schools. "That visit inspired one of our students to become a Dataseam Scholar at the University of Louisville. She went on to serve our district as an excellent mathematics teacher and Guidance Counselor working with our students."

Burns' experience with Trent's work would eventually become even more personal. "I first met Dr. Trent in 2005 at our first gathering of schools at Dataseam's winter meeting in Louisville. He was talking about the possible cure of cancer with the "holy grail" protein," shared Burns. "I remember thinking how exciting that would be and how many lives could be saved! Several of my family members have passed from cancer but never thought it would happen to me. In September 2023, I was diagnosed with Non-Hodgkins Lymphoma. One of first people I reached out to was Brian Gupton to connect me with Dr. Trent. I discussed my diagnosis and treatment with him. It brought me a peacefulness I can't really explain. I knew I was going to be all right. Today, I completed my treatments and am almost 1 year into remission. I truly appreciate what Dr. Trent and his team have done for cancer research in Kentucky."

## Looking Ahead

"We're excited to have John join Dataseam, continuing our collective work since 2003 serving Kentucky-based innovation and commercialization through life-saving cancer research," said Gupton. "The Commonwealth made significant headway to attract and grow assets diversifying the state's economy. Retaining investments like John Trent, his work and expertise, is a critical strategic resource for Dataseam's mission and Kentucky's economic and more importantly, health outcomes."



Dr. Trent not only continues work with the University of Louisville research teams, but as Research Operations Director at Dataseam, expands his role to be a resource to other state universities to assist utilization of the DataseamGrid as part of fledgling and existing computational research needs.

"The research landscape has changed and grown across a variety of disciplines since the DataseamGrid became available for university computing demands," Trent relates. "Being able to support these efforts is also going to be a big part of my stewardship moving forward."

*Dr. John Trent*

*Photo courtesy of Brown Cancer Center.*

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## About Dataseam

Dataseam provides education and workforce development opportunities to participating Kentucky K-12 public school districts as part of advancing Kentucky-based innovation and commercialization. More information at [www.dataseam.org](http://www.dataseam.org)