

Crystallizing Success: Dr. Daniel Catlin and the Gryphon from ARI (Art Robbins Instruments)

A Journey Through Protein Crystallography

Dr. Daniel Catlin is a highly accomplished protein crystallographer and biochemist whose career has spanned from graduate school to his current position at Bio-Techne. With an extensive background in protein crystallography, Dr. Catlin has seen the field evolve over the years, and one instrument has consistently played a significant role in his research: the Gryphon from ARI.

The Gryphon Instrument: A Game Changer

At its core, the Gryphon is an instrument that transfers protein crystallizing matrix solutions and proteins in buffer solution into 96-well crystallization plates. It dispenses the reagents in programmable ratios and is compatible with the range of crystallization plates in use today. This powerful tool has been invaluable in high-throughput screening of protein crystallization conditions. Despite its sophisticated capabilities, the Gryphon boasts a simple, user-friendly design, making it an ideal tool for researchers at all levels of expertise.

Dr. Catlin's Experience with the Gryphon: From Graduate School to Industry

For Dr. Catlin, the Gryphon has been an essential part of his laboratory experience since his graduate school days. He fondly recalls using the Gryphon throughout his career, in every lab in which he served. While at Loyola University Chicago, he was part of a group that solved the novel crystal X-ray structure of chlorothalonil dehydrogenase, a protein involved in the degradation of toxic waste. He was also part of a group that identified the structure of potent hOAT inhibitors using X-ray crystallography. This is significant because the hOAT protein plays an important role in the

progression of hepatocellular carcinoma. In these studies, the Gryphon instrument ensured crystallization consistency while screening for conditions that were suitable to trap intermediates and crystallize protein-ligand complexes. .

“With ARI, you not only get great machines that expedite your research with precision, but also top-notch customer care,” Dr. Catlin says. “Throughout my entire career as a protein crystallographer and biochemist, I have been using the Gryphon from ARI. From graduate school to industry, the Gryphon has had its place in every single lab in which I have served.”



Daniel Catlin, PhD, is a Senior Scientist at Bio-Techne.

User-Friendly Design: Empowering Scientists at All Levels

The Gryphon's design is one of its most appealing features. It is simple and easy to use, yet it's robust enough to handle the demands of high-throughput protein crystallography research. Its intuitive design means that even young scientists, like undergraduates, can quickly learn how to use the Gryphon independently with some training and guidance.

Dr. Catlin explains, "The Gryphon, while simple and easy to use, is a robust machine. It is designed in such a way that it only takes a couple of steps to set up a screening experiment with very little hands-on time. It definitely beats setting up screening experiments by hand. Additionally, the learning curve for using the Gryphon is pretty quick."

Depending on one's experience, the Gryphon can be tailored to accommodate a variety of experiments, ranging from simple setups for general users to more complex arrangements for advanced users.

Support: ARI's Exceptional Customer Service

Dr. Catlin is quick to point out that one of the most outstanding aspects of working with ARI is their exceptional customer service and engineering teams. Throughout his career, he has always found the people at ARI to be knowledgeable, responsive, and dedicated to ensuring their customers' success.

"The engineers are all highly knowledgeable regarding the Gryphon and its capabilities," Dr. Catlin says. "Most importantly, as customers, we are always a priority, no matter how small or how large an issue may be."

The Gryphon's Lasting Impact on Protein Crystallography Research

Despite advances in technology and methodology over the years, the Gryphon has remained a reliable and consistent tool for protein crystallography researchers. Its ability to save time and resources compared to traditional manual methods has made it a favorite among scientists in the field.

The Gryphon's continued success in the world of protein crystallography is a testament to its robust design and the support provided by ARI. As the field continues to evolve and grow, it's clear that the Gryphon will remain a trusted companion for researchers like Dr. Catlin.



The Gryphon instrument from ARI.



Dr. Catlin has used an X-ray beamline at Argonne National Laboratory in Lemont, Illinois to produce Fourier transform images of protein crystals, from which protein structure can be deduced.

Cultivating the Next Generation of Protein Crystallographers

Dr. Catlin's experience with the Gryphon highlights the importance of having reliable, user-friendly tools in the world of protein crystallography. By making the process more accessible to scientists at all levels, the Gryphon helps cultivate the next generation of protein crystallographers and biochemists.

As an experienced researcher, Dr. Catlin understands the importance of training young scientists and fostering their growth within the field. He is confident that the Gryphon will continue to play a crucial role in the development of new researchers, as well as the advancement of protein crystallography as a whole.

The Future of Protein Crystallography: New Possibilities with ARI Instrumentation.

As protein crystallography continues to evolve, so too will the instrumentation from ARI. Researchers like Dr. Catlin will undoubtedly continue to rely on these powerful instruments to unlock new discoveries and push the boundaries of what's possible in the field of protein research.

With the Gryphon at their side, researchers can explore novel protein structures, interactions, and functions, paving the way for a deeper understanding of the molecular world and the development of groundbreaking therapies and treatments.

In Conclusion: A Lasting Legacy

Dr. Daniel Catlin's career serves as a testament to the power of the Gryphon and its lasting impact on the world of protein crystallography. From his graduate school days to his current position at Bio-Techne, the Gryphon has played a vital role in his research and the research of countless others in the field.

Together with the unwavering support of ARI, the Gryphon will continue to shape the future of protein crystallography for years to come. As Dr. Catlin's story demonstrates, it's not just about having the right tools; it's about the support, dedication, and passion of the people behind those tools that truly make a difference in scientific research.