

THE **Healthcare** Insights

Your Guide to Healthcare



The significance of
Virtual Physiotherapy in
today's era

Modifying
Genes for
Health:
The **CRISPR**



JAY GOTH

BRANDON YOUNG

JOHN POWERS

Founders of

Cover Story

Murrieta  Genomics

**Helping Organizations
Unlock the True Potential
of Genomic Sequencing**

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Helping Organizations Unlock the True Potential of Genomic Sequencing

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Genomic sequencing has tremendous potential to deliver the next advance in healthcare solutions. The key information derived from genomic sequencing can drive new developments in human health leading to the ultimate goal of precision medicine. But despite having such potency, the key technology is still underutilized by healthcare providers due to the high cost of establishing and maintaining a sequencing facility.

Genomic sequencing startups often spend most of their time raising capital to build a lab, hire technicians, and develop data that can be used to prove a new scientific concept. This is a costly undertaking that exhausts their initial capital and they end up with no resources or busi-

ness plan to take their new company to market. Thus, to accelerate the growth of such companies through technology and domain knowledge, Murrieta Genomics came to the forefront. Being a true business incubator, Murrieta Genomics provides pre-eminent genomic sequencing services and expertise to fledgling companies and works with them to develop a viable business plan. The pioneering company offers them a dedicated bench space at zero cost, helps them define their business model and validate their science, and helps the companies that “graduate” the incubator obtain seed funding.

“Access to technology and know-how has been limited to specialized academic laboratories and large corpora-

tions until now. We want to provide young entrepreneurs and experienced academicians in this space the ability to develop and deliver new technologies without the red tape and expense traditionally associated with biotech startups,” elucidates Jay Goth, the co-founder of Murrieta Genomics.

The Genesis of Murrieta Genomics

It all started back in 2016 when the purpose of expanding precision medicine enkindled two industry veterans, Jay Goth and John Powers to create a meaningful venture. At that time, Jay was managing a venture fund focused on biotechnology while John was a veteran C-level executive in the medical industry. From their first conversation,



they felt an immediate kinship which propelled them to work together towards their common objective. John had a friend and former co-worker, Brandon Young, who was running a genomic sequencing lab in La Jolla California. The lab was in transition to focus primarily on the WIN Consortium for Innovation and worldwide deployment of precision oncology. The duo realized that there can be an opportunity to move the lab into the Innovation Center and thus they had a subsequent meeting with Brandon. They felt immediate chemistry and a shared sense of purpose after having a discussion with him. They came to an agreement to move all of the equipment to the Murrieta facility. Meanwhile, they also approached one of Jay's associates at Forentis Fund, Dr. Deepankar

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Roy, who had deep experience in science, chemistry, and drug development to join the venture.

Brandon had the knowledge and expertise in sequencing and genomics to aid with proof of concept. Deepankar had the scientific expertise to analyze and evaluate the scientific model in a consultative role, and John and Jay had the business expertise to help with the business plan development. Amalgamating their extensive experience and expertise, they formed Murrieta Genomics in June 2017 to provide genomic sequencing services and expertise to life science entrepreneurs.

Focusing on Next Generation Sequencing

Murrieta Genomics is 100% focused on Next Generation Se-

quencing (NGS). The company believes this is particularly important in the healthcare sector because of the “future proof” aspect of NGS.

“We are still in the infancy of understanding the complete interactions of specific genomic markets roles in human health so by using NGS we are sure to capture all the adjacent data as well and allow future research to retrospectively go back to the data without starting a new study and collecting new samples,” explains John.

To simplify the sample preparation process for labs and to preserve the original DNA and RNA in the samples, the company has also formed a wholly-owned new internal incubator company, SimplSEQ in November 2019.

Sample preparation has become a bottleneck and expensive component of genomic sequencing due to its complexity. Traditional nucleic acid extraction, isolation and purification procedures are labor intensive, require multiple pieces of laboratory equipment and are not specific for nucleic acids. With SimplSeq’s process, NGS assays will not require ligation, multiple PCR stages or complicated targeted capture hybridization steps. What is currently a complex and time-consuming task that requires specially trained lab technicians can now be quickly and simply performed by general lab techs.

One major advantage of the new processing technology developed by SimplSeq is the preservation of original DNA or RNA material during the process. Us-

ing SimplSeq's process, labs will now be able to biobank the original material for multiple future tests.

SimplSeq has filed three patents around its technology and is planning to have a commercial product available in 2020.

Key Attributes of Success

Today, Murrieta Genomics has come a long way since its inception and it attributes its success to its astute advisory board. "We like to think that our advisory board is our secret sauce. We get ideas, introductions, and insights from our board that cannot be overvalued," says Brandon. Besides this, its unwavering commitment to propel new genomic sequencing companies towards growth also played a crucial role in its success story.

"Our mission is to launch new genomic sequencing companies that can bring better health to the world through precision medicine and genomic innovation," states Brandon.

Recently, the company has joined the University of California Riverside's Wet Lab Incubator to showcase new developments in the genomics field to the professors, students, and entrepreneurs through its monthly "Lunch and Learn" workshops.

Aims To Facilitate New Discoveries and Technologies

As the Coronavirus pandemic is intensifying across the world, it is underscoring the need for more development and applications of genomic sequencing for future health. Thus, Murrieta Genomics is bringing its best



effort to leverage the potential of genomic sequencing to battle against the global crisis. Currently, the company has been working on several applications of genomic applications for testing and has been collaborating with scientists and regulators on out of the box ideas for massively scaling testing for the virus through www.ruleout.org. It is also working with companies and healthcare organizations to implement testing to protect workers and customers.

Moving ahead, Murrieta Genomics plans to come up with more advanced technologies and discoveries to democratize precision medicine and expand into all areas of medicine. The company aims to expand the adoption of precision medicine by enabling more sequencing at the point of care through the simplification of genomic sequencing. It is also looking to expand its universe of clients in the lab by lowering the barriers to entry for new companies coming in.