

"Our diagnostic tests facilitate early identification of genetic mutations, allowing improved treatment outcomes"

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Founded in 2019, Hyderabad-based startup GenepowerRx has a core belief that "You are unique, and so should your medical treatment be." The startup's unique selling proposition (USP) lies in its focus on developing diagnostic tools and delivering clinically actionable personalized medicine recommendations that are effective and affordable. Founded by accomplished doctors, Dr Kalyan Uppaluri and Dr Hima Jyothi Challa, who are American Board Certified Internal Medicine physicians with over 17 years of experience and specialisation in Clinical Genomics from esteemed institutions such as Stanford University and Harvard Medical School, GenepowerRx is striving for excellence. In conversation with BioSpectrum, Dr Hima Jyothi Challa, Co-founder, GenepowerRx talks about the company's growth plans and challenges up ahead.

How is GenepowerRx transforming the healthcare industry in India? What are your unique initiatives?

Our groundbreaking approach allows for early disease diagnosis, prompt treatment, and a comprehensive understanding of individual risk factors.

We have introduced several distinctive initiatives that are revolutionising the healthcare industry in India:

1. Leveraging artificial intelligence and advanced technologies, we generate precise genome reports. Our software platform integrates data from renowned databases such as NCBI, MSK, and PharmaGKB.
2. Through collaboration with doctors and researchers in India, we develop customised genetic testing services specifically tailored to the Indian population. This collaboration enables earlier disease diagnosis, improved treatment outcomes, and a deeper understanding of individual risk factors.

3. One of our primary goals is to make genetic testing accessible to individuals from all socioeconomic backgrounds.
4. We are actively working on pioneering new applications of genetic testing to enhance the outcomes of cancer patients.
5. Our company produces clinically actionable reports for patients, covering disease risk stratification, pharmacogenomic analysis, nutrigenomics, fitness assessments, and immune system evaluations.

By employing innovative technologies and techniques, we target risk stratification, pharmacogenomic reporting, nutrigenomics, fitness assessments, and immune system evaluations. These efforts enable us to provide more precise and personalised treatments for our clients. Additionally, our diagnostic tests facilitate the early identification of genetic mutations, allowing for timely interventions and improved treatment outcomes.

With our genomic medicine solutions, we empower healthcare practitioners to embrace personalised medicine in their practice. Our integrated team, led by physician entrepreneurs, offers valuable support for clinical decision-making. Furthermore, we utilise a patented algorithm and artificial intelligence to accurately interpret genomic and molecular biology databases, providing insights into disease identification and planning patient treatment regimens.

What are the core objectives that you plan to achieve through your venture, and what challenges do you foresee in the process?

Our core objectives are clear and ambitious:

- **Make genetic testing accessible and affordable:** We believe everyone deserves affordable, high-quality genetic testing. Our aim is to develop innovative ways to deliver genetic testing services, leveraging mobile apps and online platforms for greater accessibility.
- **Develop new applications for genetic testing to enhance healthcare:** Genetic testing holds immense potential to improve healthcare outcomes. We envision achieving this through:
- **Early disease diagnosis and treatment:** Identifying individuals at risk and implementing timely interventions to prevent or delay disease onset.
- **Personalised treatment:** Tailoring treatment plans based on specific genetic mutations, ensuring individualised care.
- **Disease prevention:** Utilising genetic testing to identify risk factors and develop effective prevention strategies, including lifestyle modifications and targeted medications.
- **Educate the public and healthcare practitioners about the benefits of genetic testing:** We believe in the importance of spreading awareness and knowledge about the advantages of genetic testing. By educating both the public and healthcare professionals, we empower individuals to make informed decisions regarding their health.

While pursuing these objectives, we anticipate several challenges:

- **Regulatory complexities:** The landscape of genetic testing regulations is intricate and constantly evolving. We are committed to working closely with regulators to ensure full compliance with applicable regulations.
- **Technological advancements:** Genetic testing technology is continuously evolving. Staying up-to-date with the latest advancements and leveraging them to enhance the accuracy and affordability of genetic testing poses a technical challenge that we are prepared to tackle.
- **Effective marketing strategies:** As a relatively new and emerging field, genetic testing requires effective marketing strategies to educate the public and promote our services to a wide range of individuals.

Please share more details about your products & technologies.

Our company offers a range of advanced products and technologies. One notable product is GenepowerRx Total, which features a highly accurate whole exome sequencing test with predictive, prognostic, and preventive capabilities. We take pride in our best-in-class accuracy achieved through our in-house analytics pipeline. To ensure compliance with regulatory guidelines from the American College of Medical Genetics, we validate open-source databases like ClinVar, dbSNP, and Ensembl. Our proprietary database, known as the 'GenC' database, is registered with the Central Drugs Standard Control Organisation (CDSCO).

In addition, we offer several other germline testing products, including the GenepowerRx Pharmacogenomics test, Diabetes Care test, Nephro Care test, Wellness test, Test for Epilepsy health, Pedia Health test, Cardiac Care test, Neuromuscular Health test, Test for Reproductive Health, Ortho Health test, Derma Care, and Anti-ageing test.

For somatic testing focused on targeted and immunotherapies, we have OncoRx. This product utilises the Memorial Sloan Kettering Knowledge database, which is the only FDA-recognised database available globally, for annotating and reporting findings. OncoRx has been developed in direct comparison with Foundation One and analyses approximately 351 biomarkers.

How big is your team? Are you hiring more talent, and under what expertise?

Our team at GenepowerRx is composed of highly skilled professionals with diverse backgrounds and expertise. Currently, our team consists of approximately 50 individuals with expertise in various fields. Our team members come from backgrounds such as Genetics, Biotechnology, Pharmacy, Molecular Biology, Biomedical Genetics, Bioinformatics, Engineering, and Data Science. We have also assembled a team of experienced Genetic Counselors who play a vital role in providing guidance and support to our clients.

As we continue to grow and expand our operations, we are actively seeking to add more talented individuals to our team. We are particularly interested in hiring professionals with expertise in business analytics, marketing, and other relevant areas. By bringing together individuals from diverse backgrounds, we foster a collaborative and innovative environment that drives our mission to transform the healthcare industry through genetic testing.

Are you exploring new collaborations or partnerships?

Absolutely! We are focused on establishing strategic collaborations to drive innovation, expand our impact, and create value for our investors.

We have already formed numerous partnerships and collaborations with renowned healthcare organisations, leading diagnostic chains, and wellness centers, both domestically and internationally. These collaborations are instrumental in advancing genetic testing for wellness, preventive diagnostics, and oncology, harnessing genomic insights to enable personalised medicine.

Our partners are confident in our proactive approach to drive precision in healthcare. These collaborations not only enhance our expertise but also position us at the forefront of cutting-edge personalised medicine solutions.

What are the current challenges facing the startup sector in our country, especially the ones that are exploring emerging technologies such as genomics, precision medicine etc.? How do you plan to address those challenges?

The startup sector in our country, especially those delving into emerging technologies like genomics and precision medicine, faces several challenges. These include:

- Limited funding: The startup ecosystem in India is relatively young, resulting in a scarcity of funding opportunities for early-stage companies. This can impede their growth and scaling prospects.
- Regulatory complexities: Navigating the intricate and time-consuming regulatory landscape in India poses a challenge for startups developing novel products or services falling under specific regulatory domains.
- Talent scarcity: The technology sector, in particular, faces a shortage of skilled professionals, making it challenging for startups to attract and retain the talent required to build and expand their businesses.
- Intense competition: With the startup sector becoming increasingly competitive, differentiation is crucial for success. Startups must find unique ways to stand out and offer value beyond their competitors.

To address these challenges, we have devised strategic approaches:

- Cultivating investor relationships: We prioritise building robust relationships with investors to secure the necessary funding for our business growth.
- Navigating regulations: We invest time and effort in understanding the complex regulatory environment, ensuring

compliance with relevant regulations.

- Talent acquisition and retention: We develop comprehensive strategies to attract and retain skilled professionals, ensuring a strong team that drives our success.
- Differentiation: We focus on creating a distinctive value proposition to set ourselves apart from competitors, providing unique offerings and solutions.
- Staying at the forefront of emerging technologies: We remain updated with the latest advancements in genomics, precision medicine, and other emerging fields, enabling us to offer cutting-edge and in-demand products and services.
- Building partnerships: We actively seek collaborations with other companies and organisations in our field, fostering resource-sharing, expertise exchange, and expanding our reach.
- Embracing failure: We understand that failure is an integral part of the entrepreneurial journey. By embracing failures, we learn, grow, and continuously improve our approach.

By addressing these challenges head-on, we are confident in our ability to thrive in the startup sector and shape the future of genomics and precision medicine in our country.

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