

DNA TESTING SPECIAL

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HEALTHCARE



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LILAC INSIGHTS

INDIA'S FIRST OF ITS KIND GENETIC HEALTH
ASSESSMENT & DIAGNOSTIC CENTER



COVER
STORY



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By Sujith Vasudevan

Life often changes faster than we think. Rohan Malhotra, an industrious and talented individual working for a large MNC in Bangalore was doing fairly well for himself and the family. With his wife recently giving birth to their first child, their life was finally complete with utmost happiness and colorful dreams about the baby. It took no time for their happiness to take a U-turn, shattering all their expectations, as the newborn was diagnosed with Down's Syndrome on birth. They were told that the baby will lead a life of developmental abnormalities with significant mental & physical retardation.

Rewinding few months, if they had performed a pre-natal genetic screening test, this predicament could have been averted. It in fact was too late when they came to know that the genetic screening for Down's Syndrome is globally recommended by doctors to every pregnant woman, irrespective of age. Rohan's family however is not an exception. In India, about one in every 500 babies is born with Down's Syndrome, and 80 percent of them are from young mothers. Causing complex health conditions including even childhood leukemia, Down's Syndrome, in other words Trisomy-21, is the most probable chromosomal abnormality amidst other forms of common Trisomy (presence of an extra copy of chromosome) like Edward's Syndrome (Trisomy-18) and Patau's Syndrome (Trisomy-13). Similarly, there are other common genetic disorders like Thalassemia and Muscular Dystrophy which can be detected before birth.

In India, genetic screening is often not recommended to all women, apparently owing to the lack of international



GULSHAN BAKHTIANI,
CO-FOUNDER & DIRECTOR

protocols followed and a focused approach in the segment. This is precisely where Lilac Insights - India's first of its kind dedicated Genetic Health Assessment & Diagnostic Center pitches-in and turns people's fate into choices. Popularizing these tests by driving Awareness Programs and bringing-in international guideline based testing in India, Lilac Insights shreds the fetters of genetic diagnostics into pieces and helps families & clinicians gain deeper insights to a wide range of genetic disorders backed by international protocols, best in class practices, expert interpretations and high-end clinical guidance.

Boasting International Quality

While encrusting nearly the entire spectrum of genetics ranging from Prenatal Biochemistry to Newborn Screening, Clinical Cytogenetics, Molecular Genetics, Cancer Genetics, and Genetic Counselling, Lilac Insights breathes quality well beyond its NABL certification. Being one of the few laboratories in the country that are enrolled with UK NEQAS for external assessment samples, Lilac Insights outshines even those handful of centers by strictly adhering to the guidelines of Fetal Medicine Foundation (FMF), UK. On the other hand, when it comes to Cancer Genetics, it follows both ISCN 2016 guideline for nomenclature, WHO 2016 guideline for classification, and ACMG guideline for solid tumor.

"We are motivated by the fact that we are making a positive impact to the lives of thousands by offering no compromise high-quality genetic tests; evidence of which can be found in our high-quality test reports," asserts Subhamoy Dastidar, Co-Founder & Director, Lilac Insights. Well, there is no convenient shortcut to attain trust other than delivering precision day in and day out. Lilac Insights has planted this undeniable notion at its helm – the case of Prenatal Screening being a perfect example. While the newborn labs customarily contrast Indian mother's blood sample against Caucasian-based data (often embedded with the diagnostic equipment) leading to greater error probabilities, Lilac compares it against the blood sample taken from an Indian woman belonging to similar ethnic group and profile. In the process, it also ensures that the sample is taken within the same week. In addition, the way Lilac Insights leverages IT advantage to churn-out impeccably precise reports has been exemplary. For instance, it facilitates Aneuploidy risk assessment through the most trusted Astraia Software (including FMF first trimester risk calculator) for FMF certified clinicians and Life Cycle & Alfa Software for non FMF certified operators.

Nevertheless, atop all the technological advancements and unlike the automated pathological tests, genetic tests which are closely tethered to present & future life of parents, take expert eyes to read between complexities and decipher the reports into reliable & actionable information. Amidst

Gulshan Bakhtiani, Co-Founder & Director

A business development wizard with more than three decades of experience in the industry, Gulshan plays a crucial role in Lilac Insights thriving by leaps & bounds.

Rakesh Sharma, Co-Founder & Director

Rakesh's matchless experience in pharmaceuticals, medical-technologies & IVD has been a pillar in Lilac Insights' journey. He excels in brand building across the country.

Subhamoy Dastidar, Co-Founder & Director

With more than 25 years of experience in healthcare and wellness industry, Subhamoy brings-in immense knowhow of the healthcare markets across the world, which has played a vital role in Lilac Insights' rapid growth.

Location: Mumbai (headquarter), Delhi, Kolkata, Chennai & Hyderabad, and satellite facilities in Ludhiana, Chandigarh & Bangalore

Offerings:

- Prenatal Biochemistry
- Newborn Screening
- Clinical Cytogenetics
- Molecular Genetics
- Cancer Genetics
- Genetic Counselling

the largest diagnostics networks in the country that merely repeat the general approach and binary of samples & results without any expert interpretation, Lilac Insights excels in delivering the most valuable 'Lilac Insights' by on-boarding the best & internationally recognized genetics experts in the country.

A Team of National Experts Providing 'Lilac Insights'

A trio of first generation entrepreneurs - Subhamoy (Co-Founder & Director), Rakesh Sharma (Co-Founder & Director), & Gulshan Bakhtiani (Co-Founder & Director) bootstrapped Lilac Insights' operations in 2011. Taking no time to carve an expert panel out of the Fetal Medicine specialists including Dr. Prathima Radhakrishnan & Dr. Anita Kaul, Lilac Insights pioneered and set benchmarks for Reproductive Genetics in India. "Dr. Prathima & Dr. Anita are the certified trainers in India for FMF. They are thought leaders in this field who often go for lecturing across the globe. Having them on board gives us an unassailable clinical edge while interpreting reports," asserts Rakesh.

Lilac Insights lately augmented its panel with Dr. Prati-bha Amare – the former HOD of Oncology Department in

Tata Memorial Centre. Subhamoy adds, “When we started our cancer program, the question was the same - how to avail the best advice in India? We can’t ask for more, since we have on boarded decades experienced advisor like Dr. Pratibha”. Needless to say, the valuable insights and clinical guidance (including Electronic Genetic Consultation) she churns-out is an undeniable proposition for both healthcare providers and end-receivers. Indeed, there are ample of cases that witnessed Lilac rectifying the flaws in results from other labs, when received for cross verification.

Proving this supreme case of reliability time and again through over 300,000 lakh pregnancy screening under FMF guidelines over the past seven years has resulted in a prestigious clientele for Lilac insights. Today, while having clientele in 90+ cities across India, its customer ecosystem comprises the most renowned doctors and over 1000 hospitals & nursing homes, including Apollo Group, Motherhood Hospitals, Max Hospital, Hiranandani Hospital, and most recent Pan India association with Indira IVF - India’s leading chain of fertility centers. As a complete one-stop provider, Lilac Insights recently has also marked its footprint on Oncology, providing state-of-the-art Cancer Genetics to almost all the oncologists in the city of Mumbai and prominent healthcare hubs like Sir Ganga Ram Hospital as clients. “Cancer causes basic codes of DNA to start functioning on its own. Some therapies are highly dependent on specific kind of mutations happening. We track these genes & mutations, and interpret what’s going wrong genetically to ensure a better prognosis. With the benefit of advisory from Dr. Jayarama S. Kadandale (former faculty member of Memorial Sloan-Kettering Cancer Centre - one of the world’s largest genetic institutes) as well, we receive an undeniable advantage,” elucidates Subhamoy.

Building the Future of Genetics in India

Started its journey from a 2000 sq. ft. lab in Mumbai with merely 13 people, Lilac Insights today boasts of a 14,000 sq. ft. spread, 40 people strong state-of-the-art facility with 100,000 clean room environment, which is all set to adapt into the most anticipated genomics era ahead - as a collective ecosystem. In the last six years, Lilac Insights has

worked with four handpicked global companies. It looks forward to maneuver the opportunities in sophisticated areas such as DNA-based personalized healthcare and predictive medicine. Having a well devised blueprint in terms of scalability, the company’s R&D is oiling its effort by leveraging the limitless scope of machine learning algorithms to strengthen the diagnostic results and automate the processes.

**LILAC INSIGHTS SHREDS
THE FETTERS OF GENETIC
DIAGNOSTICS INTO PIECES
AND HELPS FAMILIES &
CLINICIANS GAIN DEEPER
INSIGHTS TO A WIDE RANGE
OF GENETIC DISORDERS**

“Considering the huge impact of DNA-test-results in the lives of people, apart from our ‘double-eye-check’ system, we are introducing machine learning algorithms to automate the process and bestow a zero error condition,” adds Subhamoy. Coordinating with its panel of experts, Lilac is also coming-up with another set of machine learning algorithms which will decipher & interpret the complexities in the results without human (expert advisors) interventions. This high-end IT solution will be instrumental in solving the interpretation craters for outbound patients, especially from Middle East.

Serving precisely to the need of the hour, Lilac Insights has always been committed in doing justice to the burgeoning market demand, which not only reflects in its amazing growth trajectory since inception (50 percent year-after-year), but also has brought significant financial influx from IL&FS Equity and Tara India Fund IV. After having invested a huge chunk of money in expansion plans last financial year, the company is all set to bounce back with a whopping 70 percent growth this year. “Data from UNICEF-India shows that around 1,340,000 children under five years die every year due to congenital malformations. The story is no different in countries like Sri Lanka and Bangladesh. We want to mitigate this drastic condition,” concludes Gulshan. Recent leaps in the biosciences, combined with big data analysis show the lucid signs of genetic sequencing revolution, which in the long-run will curtain the pharmaceutical era. With a broad vision to command the global genetic health & diagnostics segment, Lilac Insights is highly poised to build a bright future for genetics in India by taking part in this global revolution. 