

BHARAT KI BETI

From Lab to Corner office

Enterprising Stories of Women
Entrepreneurs in STEM

DR. MANISHA ACHARYA



BlueRoseONE^{.com}
S t o r i e s M a t t e r

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Foreword

Today, India stands at a remarkable crossroads of innovation, ambition, and transformation. As a nation with one of the world's largest pools of scientific and technical talent, its future is being shaped not only by ideas and institutions, but by individuals who dare to imagine differently and act decisively. Among them are the women in STEM who have chosen the path of entrepreneurship, often the road less travelled and rarely the easier one.

This book is a very good effort which brings together the stories of sixteen successful women from STEM who chose to take the less travelled path of entrepreneurship. Their journey reflects not only the professional ambition, but also the courage, persistence and the ability to navigate uncertainty. These are not just success stories; they are honest accounts of the challenges, learning, and growth that make them deeply inspiring and easy to relate with. These women are scientists, engineers, technologists, and innovators who have transformed knowledge into impact, research into enterprise, and challenges into opportunities. Their journeys are not merely about building successful ventures; they are about resilience, courage, and the quiet determination to persist in spaces where women have historically been underrepresented. What makes this collection especially meaningful is its focus on lived experiences. Each narrative demonstrates that science-based entrepreneurship is achievable, impactful, and aligned with India's broader innovation and development goals. Many of the women featured here have translated knowledge into solutions, created enterprise and contributed to economic and social value.

I am confident that this book will resonate strongly with the young women studying science and technology and ignite the spark of innovation in them. It is also an important information for education and research institutes and ecosystem builders who are working to

create more inclusive innovation pathways. It reinforces an important message. that entrepreneurship in STEM is not an exception for women; it is a legitimate and powerful choice.

I am so pleased that such an effort to document and share these extraordinary journeys has been attempted. I compliment the team which has put this together. By bringing these voices together, the author has created a valuable resource that can encourage many more women to believe in their potential as innovators and entrepreneurs. I hope this book inspires readers to take informed risks, pursue purpose driven innovation and contribute meaningfully to India's future.



[Dr Renu Swarup]

Former Secretary to Government of India,
Department of Biotechnology, Ministry of Science & Technology

FOREWARD

India's aspiration to emerge as a global innovation leader depends on its ability to translate science and technology into entrepreneurial solutions that address societal and economic challenges. Entrepreneurship in STEM is central to this transformation, and the participation of women in this space is both essential and transformative.

The Department of Science and Technology (DST), through the National Science & Technology Entrepreneurship Development Board (NSTEDB) and flagship initiatives such as the National Initiative for Developing and Harnessing Innovations (NIDHI), has been actively strengthening India's technology entrepreneurship and innovation ecosystem. The NIDHI programme has played a significant role in nurturing innovation-driven enterprises by supporting ideation, incubation, seed funding, and scale-up pathways, while also encouraging greater participation of women innovators and entrepreneurs.

Despite encouraging progress, women remain underrepresented in STEM entrepreneurship and require sustained support, enabling ecosystems, and strong role models. This book is a valuable contribution in that direction.

It presents the journeys of sixteen women entrepreneurs from STEM backgrounds who have built enterprises grounded in science, technology, and innovation. Their stories reflect resilience, determination, and the ability to navigate complex technical, institutional, and social challenges. Operating at the intersection of technological demands and societal expectations, these women have not only overcome barriers but have also redefined leadership and innovation. Their enterprises span diverse sectors, united by a shared commitment to excellence and meaningful societal impact.

Beyond celebrating success, these narratives offer important insights into the realities of entrepreneurship and demonstrate how innovation can be translated into sustainable impact. This collection will inspire young women in science and technology to view entrepreneurship as a viable and rewarding career pathway. It will also serve as a valuable reference for educators, policymakers, and ecosystem stakeholders working to promote inclusive innovation.

What makes this compilation particularly compelling is its authenticity. It captures the failures, doubts, pivots, and breakthroughs that shape entrepreneurial journeys, reinforcing that perseverance, learning, and adaptability are integral to innovation.

I commend the author for bringing together these inspiring stories and contributing to the national effort to strengthen women's participation in India's innovation and entrepreneurship ecosystem.



Dr. Anita Gupta
Head of Scientific Division
Climate, Energy & Sustainable Technology (CEST)
Department of Science & Technology
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Preface

Most of my life has been spent in rooms where women were either missing or expected to just nod their heads to whatever the men decided when they were present. It is not very shocking, is it? We have all seen it or been part of that crowd at some point of our lives. I have been to several conferences where you can literally feel the innovations humming in the air, but the voices shaping it were almost all men, if not all. Laboratories where brilliance was unquestionable, yet recognition was uneven. Even in boardrooms, the decisions were often made quickly, confidently and without bothering to acknowledge the women sitting at the table. And yet, across these same spaces, I have quietly witnessed something very extraordinary, women building, breaking, re-building and rising; sometimes without applause, often without the appreciation they deserved.

This book exists because of those women.

The sixteen stories you are about to read in this book are not tales of overnight success or convenient privilege and definitely not stories I have made up in my head. They are real stories of persistence stitched together by late nights, a lot of self-doubt, financial uncertainty, social resistance, and moments when giving up would have been the easiest choice. These women did not begin their journeys knowing they would one day be called “entrepreneurs” or “leaders.” Many began simply trying to survive, to prove themselves, to keep going when the world repeatedly told them they did not belong in spaces like science labs, in technology startups, in engineering spaces or in decision-making roles.

And honestly, I recognise pieces of myself in each of them.

I see it in the woman who was told her curiosity was a mere distraction, not something she should be focusing on and definitely not a strength. I see it in the one who balanced equations by day and family expectations by night. In the founder who bootstrapped her

company when funding doors stayed stubbornly closed. In the scientist who returned to her work after personal loss, carrying grief quietly while still showing up with precision and purpose. Their achievements are impressive, no doubt about it but what moved me deeply while I talked with each one of them personally was the invisible labour they have put behind them to make those achievements count, the emotional resilience, the courage to stand alone, and the refusal to shrink; hats off to them.

STEM, for all its sparkling promise of progress, has not always been kind to women, has it? Especially in a country like India, where gender roles still often arrive pre-written and ambitions must fight for space. Yet, you see, these women did not wait for the system to change for them before stepping forward. *They became the change.* They built organisations that solve real problems, created technologies that truly matter instead of letting those ideas stay on paper in some forgotten shelf and pursued research that pushes boundaries; not despite who they are, but because of it.

But don't be mistaken. This book is not meant to place anyone on a pedestal. It is merely meant to make the path visible for other such women who are still fighting the '*what-ifs*' in their heads.

If you are a young woman wondering whether your ideas are "good enough," let this book answer you. If you are navigating failure, rejection or exhaustion, let these stories sit beside you. If you have ever felt alone in your ambition, know this - you are not. You might not know it but there is a quiet feeling of sisterhood among women in STEM, among those who have walked ahead of you, stumbled, stood back up and kept going and now they are reaching back to you through these pages.

To the wonderful women who shared their stories with me candidly and with courage, thank you for trusting the world with your truth. Thank you for trusting me. To the women reading this who are still hesitating at the edge of their dreams - I urge you to step forward. The

road will not be easy, but it will be yours and it will be worth it, I promise.

This book is an invitation to you. To believe. To build. And to begin.

With Love,

Dr Manisha Acharya

Contents

How a childhood pain metamorphoses into a Climate Tech Movement: The Story of Akanksha Priyadarshini	1
The Chemistry of Courage: Dr Anasuya Roy and the Making of Nanosafe.....	7
A Journey of Scientific Curiosity and Climate Innovation: Dr Anshu Dandia.....	10
Turning Green Dreams into Living Soil: Dr Asem Sundari Devi	14
If Life is a Dataset, She's Finding Its Hidden Variables... The Data Scientist exploring Genomics: Dr Asha Subramanian	20
When Light Met Biology: The Story of Prof. Asima Pradhan	25
The Woman Who Turned Science into Hope: The Story of Prof. Geeta Rai.....	29
The Torchbearer of Manipur: The Story of Hanjabam Shubhra Devi	33
A Blessing in Disguise: The story of Dr Hiresha Verma and HAN Agrocare	38
The Woman Rebuilding Bones and Dreams with PolyOrbit: Dr Mamoni Dash	45
The Girl Who Carried Many Names: The Story of Dr Nusrat Sanghamitra.....	49
Breathing Life into Science: The Journey of Dr Pooja Goswami	54
When Research Met Reality: The Story of Dr Rajul Patkar	60
Sahayatha: More Than a Wheelchair: The Story of Sruthi Babu	65
Between the Lab and the Lullaby: The Story of Dr Sumona Karjee Mishra.....	70
Where Waste Finds a Second Life: Story of Dr Vanita Prasad	77
About the Author.....	82

How a childhood pain metamorphoses into a Climate Tech Movement: The Story of Akanksha Priyadarshini

“Entrepreneurship isn’t about chasing the perfect idea – it’s about being driven by a passion to solve a real problem, building imperfectly, learning relentlessly, and delivering consistently.”

- Akanksha Priyadarshini



Natural Calamities are something that are unpredictable. Chennai being one of those cities in India that faces the brunt of it every year, especially floods. Likewise in December 2021, the people of Chennai were preparing to be hit with yet another devastating flood. The skies were starting to turn grey, the climate moist. The indications were clear. Many were convinced their lives would be out of gear for a few days again.

Except what they didn’t realize was that there was something different in the air this time.

A new early warning system, developed by a small climate tech startup named **Aurassure**, had already been rolled out in key areas of the city. What is different about this is that the system goes beyond just predicting rain; it integrates hyperlocal sensors, predictive modelling, and real-time data to inform city officials about where

flooding is likely to happen, how soon it might occur, and the potential severity of the situation.

As the rain started pouring, immediately alerts started buzzing. Pumps kicked into gear, teams sprang into action, and the communities most at risk received early warnings. Even though the storm was relentless, the response was quicker. This time, the damage wasn't catastrophic — and **Aurassure** showed just how effective it could be.

However, what people don't know is that behind that moment was a young woman — someone who didn't have family legacy in the business world and no real reason to think she could create a tech company from the ground up. But she did something that in plain simple terms was just courageous.

Akanksha Priyadarshini is the inspiring woman who transformed her childhood nightmare into one of India's most exciting climate intelligence companies.

Akanksha grew up in the lap of nature, enveloped by order, greenery, and skies that seemed to stretch on forever. Everything around her felt pristine and serene. As a child, you might not think much of it, but for her, that became the gold standard of what “*normal*” should be — fresh air, tranquil surroundings, and a deep sense of security. She used to think the entire world was like that. So orderly. So peaceful. So safe.

But everything took a turn when her father retired, and they relocated to Rourkela—an industrial town in western Odisha, shrouded in smoke and grime.

In just a few months, her mother, a woman who had always been the picture of health, started to have breathing problems. The doctors diagnosed her with asthma. What was to blame? The air around them.

That moment was stuck with her. She couldn't just shake it off. The environment transformed from being just a distant global concern to something deeply personal. It was about them. It was about her. It was about her home.

The world around her continued to change, but deep down, she couldn't let that instance go. At the back of her mind, there were always ideas and thoughts about how she could make her surroundings and in extension, the world better.

But being an entrepreneur was never among Akanksha's goals in life. Since childhood, she had heard her mother talking about her own dreams of becoming a doctor and adding to the mix, her best friend's ambition of wanting the same, all of it swayed her judgement. But after gaining a little independence from her family during her college years, Akanksha discovered that her interests lay in science. It was Madame Curie's works that she began to see entrepreneurship as a natural extension of her scientific interests. Time and again she emphasized the importance of curiosity and the need to challenge already established norms in both science and entrepreneurship.

She was just a curious student at NIT Rourkela, who joined the robotics club "Cyborg" to play around with sensors and create solutions to real-world problems. Working tirelessly on projects after projects, she created a prototype which eventually ignited a spark of inspiration.

In her third year, she began developing what would eventually turn into Aurassure — a platform designed to deliver real-time, hyperlocal environmental insights, empowering cities and industries to take action before disasters occur.

Still, she kept the idea to herself. Because her parents had different plans for her and those definitely didn't include building a startup. Like every parent, they wanted her to have a stable career. At first, she would casually bring it up at home, sharing stories about all the exciting projects she was working on at college, trying to plant little seeds here and there about how meaningful this work could be. But whenever the conversation turned serious, their main concern always circled back to job placements and whether she was preparing adequately.

Akanksha would smile and tell them she was because working on the startup was truly helping her grow in ways she couldn't have imagined.

She did what a lot of young Indians do—she juggled her dreams. While quietly working on her startup, she was also gearing up for job placements. When she landed an offer from Deloitte, she brought it home as proof of her hard work. With that safety net in place, she sat her parents down and asked them to give her two years. Let her take a shot at this. If it doesn't pan out, she has got a backup plan.

Her parents, despite being hesitant about her uncertain future, eventually agreed albeit unwillingly. But what really helped in changing their mind was her co-founder, who also happened to be her better half. His unwavering support from the backend made a world of difference, not just in building the startup but also in convincing her parents. She explained that her co-founder, her life partner, was the main founder of their previous startup, **Phoenix Robotics**, and they decided to separate **Aurassure** from the mother company in 2022 for Akanksha to lead it.

He saw the potential in her that nobody else did. That man had faith in her in a way she hadn't yet learned to have in herself and has always been there for Akanksha through ups and downs, quietly supporting her and her dreams. And that's what made a lot of difference. Because without his support, all this wouldn't be possible.

Eventually, they tied the knot. But before that, they created something truly remarkable together. They created **Aurassure**.



The Aurassure Team with Founder Akanksha (2nd from left)

One of the biggest challenges she faced was adapting their product for the real world — not just building something that worked in a lab, but something that could withstand unpredictable outdoor conditions and be manufactured at scale.

Funding was yet another tough nut to crack. In the early days, government seed fund support grants were a lifeline — Startup India, MeitY's TIDE program, and the incubation center at NIT Rourkela provided just enough support for them to stay afloat and experiment. However, to really grow, they needed substantial capital.

That's when they crossed paths with Unicorn India Ventures — and more importantly, Mr. Anil Joshi and Mr. Bhaskar Majumdar, who didn't just look at a business plan; they saw her potential. With ₹4 crore in seed funding, they took off quickly. Just a few months later, they reached ₹5.45 crore in revenue and to everyone's surprise they were actually making a profit. For a climate tech startup, that was pretty much a miracle.

Today, Aurassure is teaming up with construction companies, real estate developers, city planners, and even Google. Their mission? To make the invisible visible, whether it's rising temperatures, polluted air, or the threat of flooding.

In cities like Chennai, their real-time systems are already making a difference and saving lives. Down in Brazil, they're starting to expand their efforts to monitor the Amazonian regions. Their ultimate goal is to become the go-to climate platform for the Global South — the areas that are most at risk and often overlooked.

They aren't just selling devices. They are helping people get ready for what's to come and safeguard what's important.

Akanksha won't deny that being a woman didn't affect her work. It absolutely did. There were times when people stepped forward to support her and then there were times when they questioned how she would tackle marriage, kids, while simultaneously running a startup. She found herself in situations where she had to prove her worth not just once, but many times over.

Yet, she doesn't hold onto any resentment. Instead, she embraces it with a sense of clarity. Akanksha doesn't let it get to her. She keeps her response straightforward. She believes it's part of her responsibility to help clear such doubts when they arise — not defensively, but with clarity — because investors and customers are often thinking from a risk management perspective.

Akanksha's journey sends a powerful message to other women that *"you don't need to wait for everything to be just right. Just take that first step. If you truly believe in what you're creating and are eager to learn and listen, you're already on the right path"*.

Akanksha Priyadarshini never set out to launch a business. Her only goal was to help her mother breathe easier. That heartfelt intention, so simple yet so profound, blossomed into a startup. It evolved into a mission, and now, it has become a movement.

As the skies darken and the floods rise, Aurassure is quietly, tenaciously, and beautifully doing what few others have dared to attempt viz. making the climate crisis *actionable* — one data point, one alert, and one city at a time.

The Chemistry of Courage: Dr Anasuya Roy and the Making of Nanosafe

“Entrepreneurship is not about having it all figured out – it is about stepping into the unknown with conviction, building brick by brick, and staying unreasonable enough to believe that science can move the world. It is less about comfort and more about clarity. You do not chase trends – you solve problems that matter.” - Dr Anasuya Roy



The year 2020 is one for the history books. The entire world cooped up in their homes trying to make sense of a sudden virus that spread in the blink of an eye and turned breath into fear. Everyone was struggling to adapt to the changes around them. But there were also people like Dr Anasuya Roy, who sat in her home lab surrounded by polymer sheets, experimental materials, and the kind of silence that only lockdowns could create.

The world outside was masked. The mask became part of daily wear – something no one could go out without. So, Anasuya decided to make hers different – one that didn't just shield but protected with

science. What she built in a mere fifteen days was more than a mask. It was a statement: that speed and science could coexist with empathy. That innovation didn't always begin with funding, but sometimes, with urgency.

That small act of creation became what today we call **Nanosafe Solutions**, a startup born not from boardroom pitches but from courage, conviction, and the belief that material science can quietly transform the everyday world.

Nanosafe began as a young venture built on optimisation, experimentation, and relentless problem-solving. The Biotechnology Ignition Grant became the first validation that this path was worth walking. By 2024, Nanosafe had raised INR 3.13 crore from the Indian Angel Network and IIM Lucknow. For Anasuya, however, the win wasn't the funding — it was the opportunity to expand Nanosafe's material science technologies into real-world sectors: plastics, coatings, textiles, foams, and construction materials that touch lives in invisible ways.

What began as a one-woman lab has now grown into a small but fierce team of scientists, engineers, and thinkers who see materials not as static entities but as dynamic systems capable of performance, protection, and purpose. Together, they are building technologies that make surfaces more functional, packaging more durable, and materials more responsive to human and environmental needs.

Anasuya often describes her work as “quiet innovation” — “It's the layer you don't see, but the one that makes everything stronger, safer, and more enduring.”

Beneath her calm scientific demeanour lives a streak of adventure. She talks about risk the way poets talk about rhythm. She finds growth in discomfort and means it literally — skydiving sits high on her to-do list, somewhere between scaling up global operations and making Archie, her six-year-old son, eat his vegetables. Archie keeps her grounded and curious. Her husband is her quiet partner in the climb

— the one who never asks her to choose between ambition and affection.

Anasuya knows what bias looks like — the side glances in investor meetings, the subtle underestimations wrapped in politeness. But she’s learned to wear them lightly. People may see the scientist now, but her resilience comes from the dancer within — a trained classical dancer in Kathak, Bharatnatyam, and Rabindrik. The discipline of the stage and the precision of movement all somehow fold into her science.

The awards — from the National Startup Award 2023 to being among the Top 75 Biotech Women Entrepreneurs of India, the She Loves Tech Singapore South Asia Winner 2024, and the Draper University Silicon Valley Hero Training Program 2025 — are framed neatly in her office, but they aren’t what drive her. Ask her what success feels like, and she’ll say:

“It’s when our technology becomes invisible. When innovation quietly becomes part of everyday life.”

She doesn’t want Nanosafe to be loud. She wants it to be everywhere — in your water bottle, your walls, your packaging, your car interiors. Quietly improving, quietly enabling, quietly redefining what materials can do. For Dr Anasuya Roy and her team, science isn’t sterile — it’s human. It connects the pulse of the lab with the pulse of life itself, both beating for a world that deserves to be smarter, stronger, and a little more human.

A Journey of Scientific Curiosity and Climate Innovation: Dr Anshu Dandia

“Research can light the path, but entrepreneurship carries that light into the world. As women in science, we don’t just belong in labs – we belong at the helm of innovation” - Dr (Mrs.) Anshu Dandia



Dr Anshu Dandia’s journey doesn’t begin in a laboratory or a boardroom like most would think. It begins in a small kitchen in Rajasthan. As a little girl, she would stand by her mother’s side while she cooked, watching the spices hiss in hot oil, learning how grease moved, how the flavours blended. It was fascinating to her. To everyone else, it was cooking. To little Anshu, it was magic—tiny experiments unfolding in every pan in her mother's kitchen. She didn’t know it then, but those lessons would become the roots of her love for science.

Her story is one of profound scientific curiosity and unwavering determination. From a young age, she was captivated by the world around her, eager to understand how things worked. This innate passion fuelled her academic pursuits and set the stage for her future career, marked by challenges, triumphs, and a deep commitment to making a real-world impact through her innovations.

Anshu excelled in school, a stalwart since childhood, she earned a silver medal in her MSc and went on to complete her PhD in organic chemistry under the guidance of Prof. K.C. Joshi, a renowned fluorine chemist. However, life didn't hit the pause button for her education, it went on. She was married off while she was still doing her master's but instead of pulling her away from her dreams, her husband and father-in-law became her strongest cheerleaders quite like her own father and grandfather. Encouraged by them, she established a prominent career as an Academician and Researcher at the University of Rajasthan. She retired as Professor and Head of the Chemistry Department, having guided over 50 PhD students to success and published widely in high-impact factor journals.

However, her path wasn't without its challenges. Anshu faced uncertainty when an accident led to significant health issues. This setback constantly drew her to withdraw from pursuing her passionate future. The recovering period was challenging, but her daughter Gazal provided unwavering moral and emotional support, helping her keep pushing the limits to achieve her goals.

Science has always been more than a subject for Anshu; it was her way of giving back. Today, she is the co-founder and research director of **TriNano Technologies Private Limited**, a climate-tech spin-off focused on enhancing the efficiency and affordability of solar energy through patented nano coating technology. Incubated by SINE - IIT Bombay, TriNano Technologies' technology is tested and validated at the National Centre for Photovoltaic Research and Education, IIT Bombay and the National Institute of Solar Energy, Delhi. Its exceptional impact since its establishment has peaked into recognition by the Ministry of New and Renewable Energy of India as an Indian

Innovation & Start-up providing an eco-friendly and long-lasting solution improving the performance of solar panels. Her story serves as an inspiration, particularly for women in science, demonstrating that with passion, perseverance, and a strong support system, they can achieve remarkable success and contribute to a more sustainable future. Dr (Mrs.) Anshu Dandia is also listed on UN Women in ClimateTech page link:

<https://asiapacific.unwomen.org/en/stories/feature-story/2024/06/seven-asian-women-led-climate-tech-startups-making-a-positive-environmental-impact>



Dr Anshu Dandia in her lab

TriNano Technologies has also won numerous national and international awards, notably Maharathi Award, MSINS competition, AIMA award, World decarbonization competition at Paris, & many more. The company was also listed in the Top 100 Indian Startups by Forbes India Magazine in 2024. Recently, her company secured INR 3.1 crore in seed funding from Spectrum Impact, the climate-tech VC arm of Aarti Industries PLC. This funding is helping her team build automated robotic coating machines that slash solar panel coating

times from twelve hours to just over one, while also supporting an in-house R&D facility.

But what motivates her to continue moving forward isn't just the numbers she's making or the technology; it's the impact her innovation is creating in the real world. She dreams of taking TriNano's innovations across India, Southeast Asia, and eventually to the world, especially to regions where solar energy can transform lives.

As a woman in a predominantly male field, Dr Dandia has faced her share of challenges. She encountered instances where her expertise was questioned more rigorously than that of her male counterparts, and investor meetings often felt like navigating a closed circle. Despite these obstacles, she refused to be defined by them. Instead, she sought guidance from mentors, role models, and women-led networks, drawing strength from their experiences and support. Crucially, she continued to rely on the unwavering belief of her family who consistently championed her potential.

When she speaks to young women in research, her advice is simple and real: "Don't wait for the perfect timing. Start where you are. Once you have started, know that you have already overcome the biggest obstacle in life. Then Test, learn, and grow. Believe that your work can change the world, even beyond academic papers. And always surround yourself with people who believe in your vision." This is the mantra she applies in her own life.

Reflecting on her journey, Dr Anshu Dandia recognizes the collective effort that has contributed to her success. Her story is a powerful reminder that dreams can take root in the most unexpected places, and with courage and determination, they can blossom into something capable of changing the world.

Turning Green Dreams into Living Soil: Dr Asem Sundari Devi

"Entrepreneurship is about turning passion into impact – believing in your ideas and working tirelessly to create a sustainable future for your community." - Dr Asem Sundari Devi



In Imphal, the capital city of Manipur, the air smells of rain-soaked earth and green hills. Life moves at its own pace here unlike the bustling metropolitan cities. Slow, deliberate, like the rhythm of a river that knows where it's going even when no one else does. And somewhere amid these emerald landscapes, a woman once stood at a crossroads between two callings — medicine and the earth.

Her name is Dr Asem Sundari Devi, a homeopathic doctor by training, a fighter by heart, and a dreamer by destiny. She grew up in a middle-class family, one of five siblings, in a home where simplicity met determination. As a child, she was curious about everything and nothing. About life, about healing, about what it meant to make a

difference. Her discipline was not born from privilege, but from practice. She trained in taekwondo, being sporty by nature from childhood, winning gold medals, learning to fall and rise again – lessons that would later define her entrepreneurial journey more than she knew.

After years of study, she became a homeopathic doctor, and eventually, a government medical officer, just like her parents had envisioned. The white coat, the title, the respect – she had it all. Yet there was an ache in her heart that medicine couldn't cure. She could heal people, yes, but not the land that fed them, not the soil that was slowly dying under the weight of chemicals and neglect.

"I wanted to heal more than just the body," she says softly. "I wanted to heal the earth that sustains us."

That thought, small and fragile at first, grew into something powerful – a movement. In 2016, she co-founded **Green Biotech EcoSolutions Pvt. Ltd.** with her friend Smt. Geetashori Yumnam, another woman of quiet strength and fierce conviction. Together, they dreamed of turning Manipur into an organic state; a place where farmers could work in harmony with nature, and where food could nourish both the body and the soul.

Their company, Green Biotech, started as a modest experiment in a small lab, tucked away from the noise of the city. They mixed, tested, failed, and tried again – creating bio-fertilizers and bio-pesticides that promised life instead of destruction. Supported by institutions like Assam Agricultural University, Central Agricultural University, and ICAR, they trained under scientists, conducted research, and ran countless field trials until their products met the land's demands.

And when the first crops began to thrive under their organic touch, something inside Asem bloomed too. "It felt like watching a wound heal," she recalls, "slowly, gently, beautifully."

From those humble beginnings, Green Biotech grew into a pioneering venture with over thirty agricultural products, extending its reach into animal husbandry, aquaculture, and environmental management. But

perhaps the company's most heartwarming innovation is something simple — a household composting system called the 'Green Bucket.' It turns everyday kitchen waste into organic compost, using micro-composting technology — the first of its kind in Manipur. A small green bucket, transforming leftovers into life — the perfect metaphor for Asem's journey.

But even the best ideas struggle to take root. In 2016, entrepreneurship in Manipur was still a new terrain, especially for women. When Asem announced she was leaving her secure government job to start a company, many questioned her sanity. But for her, it was not rebellion but a calling.

Convincing her family was one of her first tests because no parent would want their children to leave a secure life for something that is filled with uncertainty. So, she spoke to them not in numbers or projections, but in dreams of cleaner soil, healthier food, and communities that could sustain themselves. Slowly, her conviction became contagious, and her family began to see what she saw. Yes, it was a risk, but it was also a renewal.

Funding was another battle. Banks asked for land deeds and collateral, things many women in Manipur didn't own in their names. Asem remembers how authorities didn't just doubt their business, but they also doubted that women could lead one. She smiled through countless rejections, but kept her faith, and built trust one meeting at a time. Eventually, she secured a loan of ₹1 crore and a subsidy of ₹30 lakhs under startup schemes, proving that courage, when persistent, can open even the most bureaucratic doors.



Green Biotech EcoSolutions Pvt. Ltd. lab

Yet the hardest challenge was not paperwork or funding; it was changing mindsets. Farmers, long accustomed to chemical fertilizers, were hesitant to trust these “bio” products. So, Asem did what she always did best: she went to them personally. Through awareness campaigns, field demonstrations, and her own gentle persistence, she began to win their trust. Slowly, fields turned greener, yields improved, and word spread.

There were times when things almost fell apart. Economic blockades cut supply lines and wiped-out investments. Machines got stuck enroute, and vendors were often dismissive of a woman-led business. But Asem’s resilience was stronger than the obstacles. Every time something went wrong, she reminded herself that she has fought tougher battles in taekwondo.

Her entrepreneurial journey also became a personal awakening, a testament to what women in Manipur, and across India, could achieve with determination and heart. She didn’t just build a business; she built opportunities for others. Today, her company supports over 20 families, empowering them through stable livelihoods and meaningful work.

With her co-founder Geetashori by her side, Asem continues to dream bigger. Their next goal is to expand across Northeast India, starting with a new factory in Assam, and eventually reach national and global markets. But at the core of all this ambition lies a simple, deeply human motivation — to bring health back to the soil, and dignity back to the farmer.

Today, Green Biotech EcoSolutions stands tall — not as a money-hungry corporate giant, but as a symbol of what integrity, science, and faith can build together. She dreams of a day when Manipur is known not for its insurgencies or unrest, but for its fertile soil and thriving organic movement.



Dr Asem Sundari Devi with her co-founder Smt. Geetashori Yumnam

She often reflects on her days as a doctor, watching patients suffer from diseases linked to diet and environment like diabetes, liver cirrhosis, kidney failure. She says it's all connected. When we poison the soil, we poison ourselves. Healing must begin from the ground up.

And perhaps that's what makes her story so deeply human because her work is not just about entrepreneurship; it's about empathy. It's about turning grief into growth, science into service, and dreams into

living, breathing proof that one woman's conviction can indeed change a landscape.

When asked if she misses her old life as a doctor, she smiles — that serene, knowing smile of someone who has found her truth.

"I'm still healing," she says. "Only now, I heal differently through the soil, through the seeds, through every hand that tills the earth with hope."

In the green fields of Manipur, where sunlight drips like honey over paddy leaves, her dream continues to grow. Quietly and patiently like the earth itself.

If Life is a Dataset, She's Finding Its Hidden Variables... the Data Scientist exploring Genomics: Dr Asha Subramanian

*"Start before you're ready. Listen before you're certain. And keep going,
especially when the world tells you to stop."*

- Dr Asha Subramanian



Before she went on to lead teams, Asha learnt to collaborate with people. Not with any mystical gift, but through quiet observation. Not in any grand, psychic way but in the gentle art of watching, listening, remembering. Her childhood was spent watching her mother juggle through numerous chores and manage the household effortlessly with her father travelling very frequently on work. In her childhood home in Delhi, it was always filled with people thanks to her parent's extremely social life, yet there was an always unflinching focus on academics.

Asha was barely three when her family moved to Delhi, a traditional south Indian family who made the dynamic city of Delhi with its smoggy winters, beautiful spring and harsh summers, their home for the next 3 decades. In their orderly home, with the rhythm of mealtimes and the focus on academics, the south Indian traditions thrived; at the same time, imbibing the vibrant culture of the north. Her father, a mechanical engineer by education, worked in BHEL's Corporate Quality Assurance group, and her mother, a double major in Mathematics and Physics, taught science and maths at private schools before giving it up to become a full-time home maker and actively assisting her daughters in studies.

She is the eldest of three daughters in a traditional Tamil household transplanted into the heart of North India, and from an early age, her life was a balance between inherited values and the expectations of a city that never stopped asking for more.

Education was never a question; it was a current that pulled everyone in her family forward. Her father, part of the leadership team of Corporate Quality Assurance at BHEL, brought home process and compliance values; her mother, once a passionate teacher of science and maths, brought in the rigor and value of relentless hard work. For Asha, learning was never about marks or milestones, it was about intimacy. The closeness one could feel with an abstract concept, the soft click of understanding, the satisfaction of symmetry.

Like many others of her generation, she was expected to pursue engineering. It was, after all, the golden ticket to success during the 90s as many liked to believe. She sat for the exams, waited for results, and when the letter didn't come, she didn't let the despair and dejection overwhelm her. Instead, she turned her path and chose Mathematics, a subject that didn't just tolerate uncertainty—it welcomed it, shaped it, turned it into meaning.

At Miranda House, she bloomed. In the clean lines of proofs and the elegance of logic, she found a language that spoke to the deepest part of her mind, and her heart. She didn't just study math—she enjoyed it. When she graduated as the university topper, there was no

applause, no parade, just a quiet sense that this was exactly what she was meant to do.

Opportunity followed achievement, but not always in obvious forms. She was offered an MCA at Delhi University, a safe and popular route. But then came another offer, one that would pull her across the country to the Indian Statistical Institute in Kolkata. It was far, unfamiliar, and perhaps too ambitious for a girl from a protective household. But Asha already knew her calling and love for the subject, and she chose the harder road. Her father, himself working with ISI alumni in his role at BHEL, must have sensed something familiar in her conviction. So, he let her go.

Those two years at Indian Statistical Institute (ISI) were transformative. By the time she returned to Delhi and stepped into the world of work, the early '90s tech scene was still in its infancy, especially for women. She joined NIIT, one of the few women in the room, and made her mark—not with noise, but with undeniable competence. Her mentors taught her how to navigate complex clients and lead without ego. The work was demanding, often unglamorous, but Asha flourished.

In 1996, NIIT sent her to Singapore and then to the UK. She spent five years in Singapore and UK learning, leading, and building. By the time she returned, she had become the kind of professional who could take on any corner of tech: full-stack applications, delivery pipelines, team building. Between 1993 and 2013, she saw every layer of technology—and every side of the IT business.

At NIIT, she also met Vijay, not a grand romance with violins and chaos, but something steadier. A fellow traveller, a mirror. They built a home together in Bangalore, where the coffee tasted like memory and the rain softened the city's edges. They became parents soon after and as many working women know, the birth of a child often births a thousand compromises. But Asha was not one for quiet sacrifices. When she birthed her first baby, remote work was unheard of, but Asha was not one to ask permission timidly. She proposed a pilot—what if she could work from home? To her surprise, NIIT agreed, and

so, a desktop arrived at her house. She worked from her home, typing lines of code in between bottle feeds and lullabies. Three months later, she returned not because anyone told her to, but because she wanted to.

Her husband understood, he always had. It was never just ambition; it was an identity and Vijay understood that. He did not walk ahead of her, he walked beside. In Bangalore, where the air smelled of rain and roasted coffee beans, she and Vijay, her better half, colleague, and intellectual equal, began to imagine a different kind of future.

Their relationship wasn't cinematic like Bollywood movies. It was steady, thoughtful, like a well-balanced equation. Where she accelerated, he stabilized. Where she doubted, he reminded her. They made a team, not just in the company they would later build, but in the life, they constructed every day over quiet breakfasts and endless conversations.

By the time most careers plateau, Asha was only just beginning to listen to the deeper call. In her forties, with two children and two decades of experience behind her, she walked away from corporate comfort and into the uncharted wilderness of a PhD. Her eldest was preparing for board exams. Friends and bosses raised eyebrows, an MBA would be safer, a promotion. more sensible, but Asha had spent two decades following the structure. Now she wanted to build her own. She joined IIIT Bangalore, where her world narrowed into research papers, data sets, and ideas that made her pulse quicken. For five years, she wrote, read, and thought, not for a promotion or a title—but for clarity. To understand how machines could make sense of data and context, how fragmented bits of data could be stitched into stories that positively impacted lives.

And then, just as academia began to settle into her bones, her mind reeled again.

In 2019, surrounded by whiteboards scribbled with half-formed ideas, Asha and Vijay co-founded **Semantic Web Tech Pvt. Ltd.** The idea wasn't glamorous. It didn't sparkle, but it was grounded, elegant, and

deeply needed. They would build a platform to make biological data not just readable, but usable—for clinicians, researchers, diagnostics labs, and pharmaceutical companies. It wasn't an innovation for the sake of novelty. It was engineering in service of meaning.

The startup world wasn't kind. It was unforgiving. Funding was erratic. Hype was everywhere. Precision was rare. But Asha didn't build with noise, she built with clarity.

Support came in slivers. International Institute of Information Technology, Bangalore (IIITB) gave her roots. Atal Incubation Centre - Centre for Cellular & Molecular Biology (AIC-CCMB) welcomed her into the fascinating world of biology and encouraged her to pursue her grand idea at the intersection of technology and biology. AIC-CCMB, DERBI Foundation, PadUp Ventures nurtured their sapling. Startup India, Meity, DST and Elevate Karnataka handed them the tools. Support also came in unexpected forms: advisors, mentors and well-wishers who asked the right questions, provided constructive feedback, and supported unflinchingly.

Still, no voice echoed louder than the two she carried within—her mother's, reminding her that everything begins with belief, and her husband's, reminding her that nothing truly ends unless you give up.

There were gendered hurdles, of course. In investor rooms, she had to work harder to be taken seriously. Deep-tech startups led by women are still rare. But she pushed through. She listened. She adapted. And slowly, the doors began to open. Today, the company, she founded is making an impact, into genomic data analysis and precision medicine, into spaces where science meets impact and where data heals and where technology whispers instead of shouting.

Dr Asha Subramanian didn't arrive with fanfare. She is slowly building in silence, in persistence, in unglamorous moments of decision and doubt - and she is doing it not by fighting the system with fire, but by mastering it with elegance.

When Light Met Biology: The Story of Prof. Asima Pradhan

"Tread the unknown, make a difference!"
- Prof. Asima Pradhan



On some evenings, long after the corridors at IIT Kanpur had fallen silent and most of the students had retired to their rooms, often a soft glow would still be visible from one of the corners of the building. Inside, surrounded by a variety of lenses, tangled wires, and the quiet hum of machines, Asima would sometimes linger. Over the years, she had made light her companion, something she felt comfortable with. She liked the way it behaved, the way it revealed what the eye could not see, the way it carried the body's secrets in tiny, scattered reflections.

But don't be mistaken. **PhotoSpiMedx** wasn't born in one of those late-night sessions. It emerged from between all the questions that keep roaming in her mind during ordinary moments: *What good is research if it stays inside a lab?* After decades in academia – first in New

York during her PhD at the City University of New York (CUNY), then back in India — she had watched countless discoveries remain trapped in papers stashed in some forgotten shelf, gathering dust and other times remaining just as a topic of discussion in conferences. They were definitely helpful and important too. But they do not always reach the people who need them most.

Her childhood was spent moving across cities — Kolkata's school corridors, Cuttack's familiar neighbourhoods, the green calm of Bhubaneswar — yet she had seen enough of rural India to understand how fragile and borderline impossible it is to access healthcare. Her mother's side of the family was full of fierce, trailblazing women doctors who had once crossed oceans to study in London. And her father was also among her greatest inspirations. He was a renowned physicist who did his doctoral studies from the University of Chicago in the 1950s. So, the saying that, "*the apple doesn't fall far from the tree,*" turned out to be true for her. Maybe that spirit lived quietly in her too.

The idea that light could diagnose disease wasn't anything new to her. It was her entire field of study after all, Biophotonics. But one day, while adjusting the settings on yet another experimental setup, the thought formed with unusual clarity: *If light can detect cancer this early, why isn't every healthcare professional in every rural health centre benefiting from it?*

That thought refused to stay politely in the background, nudging her, keeping her up day and night. And soon, when she shared her idea with some of her colleagues, they pushed her forward and asked her to act on her idea. They told Asima there are government schemes like DBT's BIG program that support researchers like her who are willing to leap.

By 2019, **PhotoSpiMedx Pvt. Ltd.** was no longer just an idea fluttering in her mind but a registered startup. Although it was small, Asima was determined, and centred around one mission: to bring early, accessible diagnosis to those who were usually forgotten by the people who are responsible for them. The device they began developing — a portable, smartphone-based spectroscopic tool — felt almost poetic to

her. Light, something so ordinary and everywhere, that we don't even mind its presence, was being shaped into something lifesaving.

Convincing her family wasn't very difficult. Because in a home full of scientists, technocrats, and bold women who had always prioritized their careers decades before it was fashionable, her decision felt like a continuation of the family conversation. More importantly, they understood that this wasn't entrepreneurship for glory, it was simply the most practical next step for a researcher who wanted her work to matter in the real world.

Funding came through government agencies like BIRAC, SBIRI, and later ICMR. Slowly, the device began taking shape. It could detect early cervical precancer and even oral precancers, using clever blends of elastic scattering, polarized fluorescence, and AI. It was small enough to fit in a healthcare worker's hand but powerful enough to save a life long before symptoms appeared.



Asima never imagined doing something miraculous. She just wanted a future where rural primary health centres use such tools routinely; a future where diagnosis isn't a privilege but a basic right. Her team is currently navigating clinical testing and regulatory clearances, and she hopes the same optical principles will soon expand to other diseases as well.

She tells other women researchers who are dreaming of taking their work beyond the lab, to begin with the need. Feel it. Think of the human being behind the technology, especially women, who are so often overlooked in healthcare. If the need is real, the courage will automatically follow.

And perhaps that is the essence of her journey—not a story of light alone, but of illumination. Of bringing something hidden into view. Of turning knowledge into access. And of reminding the scientific world that the brightest breakthroughs are the ones that finally reach the people waiting for them.

The Woman Who Turned Science into Hope: The Story of Prof. Geeta Rai

*"Entrepreneurship is the link between impact and innovation."
– Prof. Geeta Rai*



The Geeta Rai you know who became a professor of molecular genetics, a scientist at the NIH, or the founder of a health-tech startup that promises safer, accessible solutions for millions, wasn't always the strong-spirited woman she is today. She was a quiet little girl with an imagination that ran miles just like any other child at that age. She used to be the type of girl who didn't have many friends at school, but she had a mother who listened to her every dream, every fear, every fantastical story with patience that only mothers possess. A girl who moved from city to city with her father's transferable government job, collecting school uniforms like souvenirs and learning, without realizing it, how to swim through unfamiliar waters.

Her father, who was a retired PCS officer, lived his life with discipline and dignity. He was the strong force echoing women empowerment for his girls, the architect of Geeta's professional career and ensuring her social and financial independence. Her mother, a homemaker who

was very good at mathematics, could have explored it as a career, but instead she poured her passion into raising her children, reminding them every day that excellence was not an imposition—it was their inheritance.

In their home, education wasn't a choice; it was the pulse of everyday life. Conversations revolved around great scholars, thinkers, and people who earned respect through brilliance. Growing up in such an enriching atmosphere, it was only natural that Geeta and her siblings went on to have flourishing careers. Be it earning gold medals or pursuing academia and bureaucracy, they have engraved their names wherever they went. Her life was surrounded by achievers, yet the seeds of her ambition were planted not in competition, but in the quiet moments when she imagined herself standing on a stage, maybe being a “favourite student” or “distinguished achiever.” Her childhood world was a private, tender rehearsal for the life she would eventually go on to live.

But it wasn't always easy. Imagine changing eight schools as a child, each time thinking this will be the last only having to begin all over again. New teachers, new classmates, new syllabus, and always less time than everyone else had. She remembers entering classrooms mid-session, the weight of unfinished chapters pressing down on her little shoulders. It was frightening and overwhelming, but perhaps those very years built the steel she would one day lean on as an entrepreneur.

Her journey through academia was a steady rise: Biological Sciences at Banaras Hindu University. A postgraduate in Biochemistry and Biotechnology from Pantnagar. Followed by a PhD in Immunology from SGPGI Lucknow, where she focused on autoimmune disorders. And then, a leap that most only ever dream of – the National Institutes of Health (NIH), Bethesda, USA.

She spent four transformative years at NIH where she contributed to leading publications in immunology and even developed a new model for systemic lupus erythematosus using pedigreed, outbred rabbits. She was doing work that changed textbooks. But when she

returned to India in 2006 to join the Department of Molecular & Human Genetics at BHU, she carried home something far bigger than papers and accolades. She carried purpose and a desire to turn science into something more human, something that could touch people's lives outside academic journals.

That's when Genomica began to take shape. At first, she didn't think of it from the business perspective, but rather an idea that could bridge the gap between research and relief. Years of studying autoimmune diseases had led her to a safe, cell-free biological formulation that could help patients suffering from alopecia areata, a condition that affects millions yet often forces them into treatments with harsh side effects. She also developed a novel immune-support formulation for low-birth-weight newborns — a soft, life-shaping solution for the most fragile lives.

These innovations weren't born in a moment of inspiration. They were born from years of watching patients struggle, mothers worry, and doctors run out of safe options. **Genomica Research & Analytic Labs Pvt Ltd** was her way of offering something kinder to the world.



But transforming her research into entrepreneurship wasn't easy. Considering she was a first-generation founder, stepping into an industry she had never navigated was overwhelming. Funding

meetings often felt like walking into rooms where she didn't quite fit. Decisions were second-guessed. Networking events were dominated by voices louder than hers. The biases were subtle sometimes, sharp at other times.

Through all this, her husband, Dr Rajesh Kumar was her rock. He stood beside her as a partner who believed in her potential long before she did. His own journey as a scientist and later as Director of ICAR-IIVR gave their home a familiar rhythm: two researchers, two dreamers, building each other quietly. And then there was her mentor who changed the way she perceived everything—Prof. Pradeep Srivastava. His support didn't just open doors; it gave her the courage to walk through them without hesitation. And when asked what she would tell young women researchers dreaming of taking their work into the world, she advises with utmost sincerity, *“be resilient and find mentors who can guide you. Speak your ideas with confidence. Don't step back from asking for support. Women often underestimate their own voice, so, make sure you don't do that to yourself.”*

Her story is not loud or dramatic. It is steady, full, and deeply human. A story of a woman who carried science in her mind, compassion in her heart, and courage in her footsteps. A woman who quietly stitched together a life where knowledge becomes healing, and ambition becomes impact.

A woman who turned her gentleness into strength and her strength into hope.

The Torchbearer of Manipur: The Story of Hanjabam Shubhra Devi

"The women of Manipur are proving that a recipe born at home can become a taste for the world – turning tradition into enterprise, and food into a global story." – Hanjabam Shubhra Devi



On the chilly morning of 12th December 1969, when Manipur was in a state of unrest, a baby girl was born in the quiet lanes of Imphal. The date itself is one for the history books – *Nupi Lan Nummit*, literally meaning 'Women's War', the day Manipur saw the undeterred courage of its women who rose against colonial power and economic injustice of the British. Her father, who is the first person in Manipur to hold an M.A. in Hindi, a milestone in the state's academic history, believed it was no mere coincidence. He would often say that his daughter has the fire of *Nupi Lan* running in her veins, as he cradled the tiny baby. That baby was Hanjabam Shubhra Devi, the first-born child of the family, a daughter wrapped in love, pampering, and the ancestral pride of a land that called itself Manipur – the Land of Jewels.

Her childhood was filled with the warmth of a loving family yet shadowed by constant unrest.

Manipur in the 1970s and '80s was no stranger to *bandhs* and curfews. Oftentimes, schools closed without prior notice, and markets shut down without any warning. The silence of shut doors and the tension of underground movements became as much a part of her early life as the aroma of Eromba, a mashed vegetable and fish dish, cooked by her mother. Her father, serving then as a Deputy Director in the Education Department, refused to let instability hinder his daughter's dreams. With hope as his compass, he sent her far away—to Vanasthali Vidyapith in Rajasthan, a girls-only institution rooted in Gandhian values.

At Vanasthali, Shubhra Devi found both discipline and wings to fly towards her dreams. She outshined in academics, took active part in cultural programs, and played on the sports field with the determination her father always believed she carried. When she graduated with a B.Sc. and later an M.Sc. in Food Nutrition, she wasn't just carrying degrees, she was carrying back home a vision stitched together by resilience, culture, and purpose.

But her path wasn't filled with rose petals; it was marked with thorns. Before she became an entrepreneur, Shubhra Devi worked as a lecturer and development worker, pouring her enthusiasm and passion into a non-profit organization called Action for Community Transformation Manipur (ACT-M), that trained the local women from low-income households in food processing. For ten years, she trained over thirty women, teaching them necessary skills and nurturing their confidence. Yet it didn't bring her the satisfaction she thought it would. The results she longed for—the kind that could change not just individual lives but communities—remained elusive.

One day, she decided that she wanted more. With just one thousand rupees, three women she had previously trained, and the treasures of Manipur's wild fruits and vegetables, Shubhra Devi started a small venture from her little kitchen in Bamon Leikai, Imphal East.

In January 2004, Hanjabam Shubhra Devi started **Meira Foods**—its name echoing the spirit of the flaming torch that Manipuri women have carried for generations in their struggles.

Her vision was simple yet deeply meaningful. The goal was to take the organic abundance of Manipur like the wild gooseberries (*amla*), ginger, bamboo shoots, and other local herbs, and turn them into flavourful *achaar*, candies, and salted dry fruits, flavours bottled with love, tradition, and health. Long before Indian gooseberry candies filled shelves under the names of popular brands like Dabur or Patanjali, Shubhra and her dedicated little team were already making them by hand in Imphal.



The dedicated team of women at Meira Foods

From those modest beginnings, Meira Foods blossomed and has come a long way. Today, it employs more than 70 women directly and supports many others indirectly, producing 45 varieties of pickles or

commonly known as achaars, candies, and dry fruits. Their products aren't limited to just the markets of Manipur; they travel far beyond her state, carrying with them the taste of her homeland. When she was in college, Shubhra Devi would often ask her mother to send her home-made snacks, and it would make her wonder why other local women do not sell these delightful snacks in the market so that more people can taste them. It was that single thought that pushed her to start Meira Foods.

For local farmers and suppliers, too, the venture has created new lifelines—each batch of fruit bought, each jar sold, strengthening a chain of livelihoods in a land that has long battled economic fragility.

Yet Shubhra's eyes still long for something greater. She would tell her husband that this wasn't the end, her voice steady with the conviction of Nupi Lan. She dreams of a large processing unit that can not only multiply jobs but also carry a Manipuri product to the international market. Despite financial challenges, the shackles of patriarchy, and the reluctance of banks to fund small-scale entrepreneurs especially women, she reinvests every rupee of her profit back into the business, fuelled by her husband's support and her own unyielding belief.



In the frame: Hanjabam Shubhra Devi, Founder of Meira Foods

Through Meira Foods, Hanjabam Shubhra Devi has not only created a business, but she has also created a sense of dignity within the women. Now, at least a hundred people, mostly women, find a

blooming hope in her enterprise. What began in her modest kitchen is now one of Manipur's pioneering food-processing industries, showing a shining example of self-reliance and cultural pride.

Born on Nupi Lan Nummit, she has, indeed, carried forward the spirit of Manipuri women who once fought against injustice. Only this time, the battle is against unemployment, poverty, and the invisibility of small entrepreneurs. And in that battle, Shubhra Devi has lit her own Meira — a torch of resilience, taste, and hope.

A Blessing in Disguise: The story of Dr Hiresha Verma and HAN Agrocare

*"Nothing is impossible for a willing heart."
- Dr Hiresha Verma*



The first thing you notice about Dr Hiresha Verma is how calm she seems, as though life had taught her to weather every storm with quiet resilience. But long before she became the founder of HAN Agrocare, long before the mushrooms and the medals, Dr Hiresha Verma was just a girl running barefoot through army barracks, a child of the Border Security Force.

Her father, once an army captain and later a BSF commandant, raised her in a world of drills, discipline, and duty. From an early age, Hiresha didn't just excel—she soared. She has once been a national-level athlete, collecting certificates and medals left and right. Her report cards bore the ink of brilliance, always at the top of her class. She was an all-rounder, growing up in the echo of parades and morning roll calls.

She completed her B.Sc. from the prestigious Bosley Military College in Nasik. Life, as it often does, moved swiftly. Like so many other Indian women, she married soon after graduation. For ten years, she lived the life expected of her: a homemaker, her world revolving around her husband and two children. He worked abroad and she took care of the house. That was the unspoken contract.

And then, one day, everything unravelled like a house made of cards.

It was a phone call. Just a voice on the line, her husband, telling her he wouldn't be coming back. Giving no explanations whatsoever as if 10 years meant nothing to him. He left her on the crossroad of life with no support and no money. Their bank accounts emptied. Their home in Mumbai, repossessed by the bank. She was left on the streets with a seven-year-old son, a two-year-old daughter, and a heart that still hadn't caught up with the shock. She felt the betrayal crawling inside her like ivy on the walls of distant castles.

Hiresha had no exposure to the outside world. Maybe it was her fault for trusting her husband blindly, but was it really such a crime to trust one's own husband? For her, he was the sun her world revolved around.

She didn't tell her parents at first. Pride and fear kept her lips sealed. But one day, having had enough of seeing the once bright woman so miserable, the neighbours intervened. Her retired father came and took her and the children home to Gandhinagar. There, in the silence of her childhood home, she wept because what else could she do. Not just for the betrayal, but for the uncertainty of the future. She applied for jobs, but let's be honest, no one wants an inexperienced housewife with no recent qualifications. The best offers were ₹4,000–₹5,000 a month, barely enough to buy milk and schoolbooks.

Then, one morning, her father brought out a dusty box filled with memories long forgotten. Inside were all her certificates, medals, letters of recognition. He spread them across the dining table and said, *"This is who you were before him. This is still you."*

It was a moment that changed her life.

"You have entrepreneurial skills," he told her. "You can start something, beta. You're not old. You have two children and you have more fire than you know."

And so, with nothing but that fire and a willingness to begin again, she rebuilt herself where many would have collapsed under the weight of that kind of betrayal. But Hiresha, stubborn in the way only a mother can be, began again. Not in grand gestures, but in small, deliberate acts. She cooked, taught herself new skills, and cared for her children. She found strength in her father's quiet encouragement and leapt, taking a leap and starting English-speaking classes for local women like herself. Women who had stories too heavy to carry alone. Later, she completed her post-graduation in business management, sharpened her research instincts, and eventually took up a job at the call centre in the IT sector. Life steadied eventually. She built her life, brick by brick, and just when the walls seemed strong, the company she worked with collapsed into bankruptcy. Everything she had built vanished like fog in the sun.

But you learn things, even when you lose everything. She learnt to start again. So, Hiresha, along with her two children and mother, moved to Dehradun this time and began from the bottom up. But the defining moment came in 2013, when disaster once again stirred something in her – this time not in her home, but in her homeland.

That year, the Kedarnath floods swallowed villages and lives. Watching the devastation on television, her heart cracked open. She felt an ache inside her for those affected.

In the villages, she saw women like her. Women who had lost their husbands in the floods, whose grief was not loud, but deep. They had no income. No hope. And she remembered her own days of helplessness. She would not let them feel the same.

Something changed in her then.

She didn't want to give handouts. She wanted to give dignity. Purpose. A future.

She stumbled upon mushrooms — not in a conference room, but on the soil itself. Mushrooms that didn't need acres of land or vast resources. Mushrooms that women could grow in their backyards, that could be turned into functional foods and exported for their medicinal properties. She learned everything she could. Then she taught others.

In the beginning, it was modest. A few women. A few trays. But like all things rooted in truth and nurtured with love, it grew. From oyster mushrooms to reishi and cordyceps, from nutrition workshops to wellness products.

She enrolled for training at the Directorate of Mushroom Research in Himachal Pradesh. And that same year, she launched *Hanzen International*—a mushroom venture on 1.5 acres of land, ten huts, and 500 bags each.

It was small. But it was hers.

Over the next few years, the project blossomed into something more than she had imagined. Over 2,500 women joined her mission, growing mushrooms, processing them into value-added products, and selling them across northern India. Incomes rose. So did self-worth.

But Hiresha wasn't done. She noticed that while oyster and button mushrooms were popular, few in India were talking about the health potential of *medicinal mushrooms*—Shiitake, Ganoderma, Lion's Mane. These mushrooms could treat inflammation, improve immunity, and support mental health, especially post-COVID. So, she pivoted again.

She began importing the mushrooms from China, launched awareness campaigns, and partnered with colleges and universities for training programs. She conducted webinars, gave seminars, and started building a new narrative—one where fungi were not just food, but medicine.



Dr Hiresha Verma conducting a seminar

From research labs to functional food shelves, the journey was both scientific and deeply personal. She worked with food technologists and regulatory consultants to ensure her products met international standards. She became a familiar name in different startup incubators – AIC ISB, NSRCL IIM Bangalore, ICAR -, Pusa Krishi, Seed Spark program of Stanford – everywhere she went, she took her story with her. And everywhere she went, people listened.

Funding wasn't easy. As a woman entrepreneur in agriculture and biotech, she often faced scepticism. Investors questioned her technical know-how, sometimes addressing male colleagues instead of her. She didn't fight those moments with outrage. She fought them with outcomes. With revenue. With results. Her business, now named HAN Agrocare, grew to a turnover of ₹1.5 crore annually. She did it bootstrapped with ₹4 crore of her own investment and ₹60 lakhs in grants. Her children, both postgraduates from Canadian universities, came back to join her. Not out of obligation, but out of belief. Her daughter took up branding. Her son, digital marketing. The spores she once sowed alone now bloomed under a shared vision.



And more importantly, she did it her way.

Today, she dreams bigger. She wants to empower one lakh rural women in the next three years. She envisions a future where Himalayan herbs and mushrooms fuse into advanced nutraceuticals using nanotechnology. Where the power of nature meets the precision of science. Where no woman ever has to feel like she has nothing left.

Dr Hiresha Verma stands tall, not because she never fell but because she never stayed down.

Ask her what drives her, and she won't mention balance sheets or market shares. She'll talk about the look on a woman's face when she earns her first income. About daughters who no longer need dowries. About sons who grow up respecting their mothers.

She'll smile, quiet & steady, and walk into her farm. The air will smell of earth and rain. And somewhere in the silence, you'll understand: Dr Hiresha Verma didn't just grow mushrooms. She grew possibilities.

Maybe, years from now, a little girl in some far-off village will watch her mother carry home her first earnings from mushroom farming.

She won't know Dr Hiresha Verma's whole story, how she rebuilt her life from nothing, but she will know that dreams are worth planting. She will see in her mother's eyes the quiet pride of a woman who can stand on her own. And that is Dr Hiresha's true legacy – not just the business she built, but the lives she touched. A reminder to all of us that even the smallest act, like planting a spore, can change the world.

The Woman Rebuilding Bones and Dreams with PolyOrbit: Dr Mamoni Dash

"Entrepreneurship with equity and inclusion will shape the future with purpose and power." - Dr Mamoni Dash



In the bustling town of Rourkela, where the clang of steel met the hum of daily life, is a woman who dared to dream differently, to choose science over societal expectations. Maybe it was her grandfather's words, or maybe it was the environment she grew up in, but Mamoni learned early on that knowledge is not something to be feared; it should be explored.

Born in Baripada, a small town in Odisha and raised in Rourkela, the Steel City of Odisha, Mamoni grew up surrounded by books, language, and the kind of wisdom that only a close-knit family can nurture. Her paternal grandfather, who was a teacher by profession, taught her Sanskrit and grammar, instilling in her a love for learning and discipline from a very young age. Rourkela, with its steel plant

and cosmopolitan community, exposed her early to a world of diverse people and ideas. When most of her batchmates followed the well-worn paths of engineering and medicine, Mamoni took the road less travelled - pure science. There were a lot of people in the community she lived who thought her decision was unconventional, going as far as planting uncertainty and doubts in her mother, but her father stood by her, unwavering. He always encouraged her to follow her heart. And made sure she knew that if someday she falls, he'll be there to hold her before she hits the ground. The faith her parents and younger sister placed in her gave her the wings to soar, a belief now beautifully echoed by her twins. Isn't that the biggest support one could ask for?

After completing her master's in chemistry at NIT Rourkela, where students constantly talked about TOEFL, GREs and moving abroad, Mamoni's curiosity took her to Italy, where she pursued her PhD in Biomaterials at the University of Pisa. There, surrounded by historic architecture and endless espresso-fuelled lab work, she found her rhythm. Later, her postdoctoral work in Belgium introduced her to a world where research didn't just end in publications; it began in problems that needed solving. That was where she first saw how labs worked with industries to bring solutions to people. It made her want to do the same someday.

And that "someday" came sooner than she thought. What began as a PhD project of Dr Sasmita Samal, one of the first PhD graduates from her lab, at the Institute of Life Sciences, Bhubaneswar, evolved into something far bigger. Their research explored the regenerative ability of exosomes, tiny extracellular vesicles that could revolutionize how we heal bones. The results were so promising that Mamoni filed for a patent, and soon after, she knew that this couldn't remain just another academic paper. It's an innovation that could one day help patients recover from fractures and bone diseases faster, using the body's own biology.

That conviction led her to apply for the BIRAC-BIG grant, one of the most sought-after Biotech funding programs in India. She didn't expect to win, but to her delight, the proposal was selected in the first

attempt — a milestone that gave her the confidence to transform her research into a startup. That's how **PolyOrbit Private Limited** was born—a startup dedicated to harnessing the power of exosomes to regenerate bone tissue. The research, still in its advanced validation stages, focuses on how exosomes derived from osteoblasts (bone-forming cells) can stimulate osteogenesis, essentially, how bones grow and heal. It's cutting-edge work that could one day transform the way we treat fractures, bone loss, and orthopaedic injuries.



Dr Mamoni Dash with her team

But beneath all the technical brilliance lies a deeply human story; one of courage, belief, and family. Mamoni's father, with his strong financial background, joined her as a Director at PolyOrbit, handling the company's finances while she focused on science.

The entire team at PolyOrbit has transformed her entrepreneurial journey into one of continuous learning and meaningful experiences.

However, her journey wasn't a bed full of roses. Dr Mamoni thinks it's true that entrepreneurs of all genders face struggles but women, particularly, often have to work harder to be seen and heard. The reality is far worse. There are still biases, sometimes subtle, sometimes not so much. But things are changing. Albeit at a snail's pace but it's progressing.

She believes that more women in STEM need to take that leap into entrepreneurship. *“Don’t wait for the ‘right time,’” she advises. “Seek mentorship, join incubators, apply for funding. There are platforms today that are made for us like the WEneurs forum, which connects women daring to chase their dreams.”*

From a small-town girl in Rourkela who defied norms, to a global researcher shaping regenerative medicine, Dr Mamoni Dash represents a new kind of Indian entrepreneur — one who builds not just businesses, but a bridge between science, hope, and humanity.

The Girl Who Carried Many Names: The Story of Dr Nusrat Sanghamitra

"Believe in yourself. Dream bigger than your fears. Let excellence be your answer to prejudice. Build a support system – family, mentors, networks – those who cares less about your status and more about your work." - Dr Nusrat Sanghamitra



She was born into many names, as though her parents wished her life to carry multiple songs. Nusrat Jahan Mobassarrah Sanghamitra – it sounded like a prayer in motion, doesn't it? But each part of it meant something. Her mother had chosen the name Nusrat for victory, her Quran teacher had added Mobassarrah, meaning "bringer of good news," and her father, a scholar who loved to explore faith beyond boundaries, gave her the name Sanghamitra after Emperor Ashoka's daughter, who spread peace.

Growing up in Odisha, in a home that was more of a library than a living room, every faith felt close. Home, for young Nusrat, was filled with the hum of different prayers. The Quran rested next to the Bible, the Bhagavad Gita shared shelf space with the Vedas. Between all of

that, she grew up believing there wasn't one single way to seek truth — there were many, and all led to the same heart.

As a child, she had one clear dream: to serve humanity by becoming a doctor. But when she joined FM College in Balasore, Odisha, that dream stumbled early. There were no hostel facilities for Muslim girls who took coaching. She felt humiliated. And for a seventeen-year-old, she felt it deeply — not just as rejection, but as a quiet realization that the world doesn't always open doors easily, especially for girls like her.

But perhaps that moment was her turning point. She began to think that maybe healing doesn't have to happen only inside hospitals. Maybe it can begin in a lab, in a classroom, or inside ideas.

So, she turned to science. She studied Chemistry at Utkal University and was among the few who dreamed of research not for prestige but for purpose. She wanted to go further, to do something that mattered. In her first years of science, Nusrat's faith and curiosity entwined. She read a verse of the Quran — *"worship of God is incomplete if you do not serve His creation"* — and it struck her with the clarity of dawn. To her, the laboratory became a place of worship.

She started MTech in Environmental Engineering at IIT Bombay, but soon after, she received an offer from the Indian Institute of Science, it was the kind of opportunity that changes everything and doesn't come often. So, she didn't hesitate. She packed her bags and left for Bangalore. She believed that science, properly harnessed, could be her act of devotion to humanity.

But then came 2001, the year that would sharpen her purpose forever: her father, who has always been her anchor and guide, was diagnosed with cancer. The disease that she had watched from afar in textbooks came home. She saw, painfully, how medicine failed not in knowledge but in empathy — the toxicity, the side effects, the fear. The question shifted. No longer was she seeking to 'make a drug.' She yearned to make *safer* and *kinder* medicine.

During her PhD years, she synthesized novel molecules with anticancer potential. On paper, they gleamed with promise.

Everything seemed okay. But in mice, they wilted under toxicity. Each failure weighed heavily on Nusrat. She knew she could generate more molecules, but she refused to add to the arsenal of suffering. So, she reframed the problem from “Which molecule kills cancer best?” to “How can we deliver medicine gently, precisely, safely?”

She turned to biochemistry, to the language of proteins – because drug targets are proteins, and understanding their structure and dynamics would give her leverage. First at TIFR, then under a Marie Curie Fellowship in Leiden, she delved into protein biophysics. But the answers eluded her. Then, in a poster session, a professor from Kyoto saw her work and offered her a postdoctoral position. Though she was not trained in cell biology, the Japanese government encouraged cross-disciplinary exploration. In Japan, she discovered a curiously negative molecule that could traverse cell membranes – something unheard of. That unexpected breakthrough became her whisper of a breakthrough: a carrier system, a molecular Trojan horse that might ferry drugs safely into cells.



Dr Nusrat Sanghamitra with CyGenica Team

Yet her professor dismissed the hypothesis when she proposed it. So, she left. She walked away from tenured positions, from stability, from comfort – even from her permanent residency in Japan. She came back to India in 2014. Many thought it foolish. But she believed that if science does not translate to service, it loses its soul.

That year, she took a sabbatical of sorts. She lived loosely, learning Arabic in Jordan; she volunteered in Sikkim, teaching English on mountaintops; she worked in palliative care in Trivandrum; she wandered into a slum in Bhubaneswar and began teaching underprivileged children. She had no name for that venture, no pitch, no plan – only heart. And for the first time in years, she felt something settle in her bones.

Then in 2015, the old spark returned. She saw a fellowship notice by BIRAC in KIIT TBI, Bhubaneswar for maternal and child health, applied, met Dr Mrutyunjay Suar, CEO of KIIT TBI, and was encouraged to pitch biotechnology ideas. That June, she was granted 50 lakhs through the BIG (Biotechnology Ignition Grant). Thus, **CyGenica Ltd.** was born – not as a company built on spreadsheets and market forecasts, but as a kind of faith made manifest.

Her technology is elegant: a molecule that behaves like a USB stick for living cells. It can carry molecular information – cancer drugs, RNA, DNA, even CRISPR tools – pierce the cell membrane gently and deliver these payloads without damage. In her dream, gene editing won't mean repeated hospitalisations, and cancer medicine may one day be as harmless as aspirin. The dream is audacious. But for Nusrat, audacity is a form of prayer.

Between 2018 and 2019, Nusrat's journey brimmed with triumphs and trials alike. She earned multiple accolades like the Gold Innovator by DST-AICTE-FICCI, BIRAC Star Innovator, Ireland's Most Innovative Product, the Telangana Cancer Innovation Challenge, and grants from DST-Lockheed Martin-Tata Trusts and BPCL's Ankur program. The crowning moment came when she received the National Award from the President of India – an affirmation that her technology held the power to change lives.

But building a biotech company from Odisha wasn't easy — not as a woman, not as someone wearing a headscarf, and definitely not in a field dominated by men. In meetings, people often ignored her, choosing to address her male colleagues instead, or questioned her expertise. Once, a foreign investor told her, "You're a woman, you wear a scarf, and you're from a third-world country. You'll always have to work ten times harder." She smiled politely, went back to her lab, and worked twenty times harder.

That night, the tears came. But they were not a sign of weakness, but rather a cleansing. So, she let them fall freely, then wiped them away with the same hands that would, the next morning, build again. For Nusrat, sorrow was never an endpoint, only a pause. She permitted herself to grieve, but never to give up. By the third sunrise, she always found her fire again.

She often says, "*Nothing worthwhile is easy.*" And perhaps that's why she walks through every storm with her head held high. Beneath her calm voice and gentle eyes lives a woman of unshakable resolve — a soul that refuses to bow to cynicism or fear. She sees herself not as a title, not even as a scientist or entrepreneur, but as a human being, one who feels deeply and dares greatly.

To her, strength and tenderness are not opposites. They are the twin wings of purpose. In her world, compassion is power. The Odia phrase *daradi manisha* — one whose heart aches for others — captures her perfectly. Her science, her company, her every decision grows from that ache, from the conviction that healing must never come at the cost of humanity.

Through CyGenica, she is not just building a biotechnology company; she is building hope — a vision of medicine that heals without harm. And when she reflects on the meaning behind her many names — *Nusrat* for victory, *Mobassarrah* for good news, *Sanghamitra* for peace — she smiles knowingly. It is as though life itself had whispered these promises into her name long before she was ready to fulfil them. Maybe her father was right all along. Maybe she is meant to carry all three — and share them with the world.

Breathing Life into Science: The Journey of Dr Pooja Goswami

“Believe in your mission – even when no one else does. Your story, your struggle – they are not distractions. They are your blueprint. Fail fast. Learn deeply. Protect your ideas. And above all, find your people. The ones who see you when you forget to see yourself.” – Dr Pooja Goswami



In a cozy little home in Fatehgarh (Farrukhabad district in Uttar Pradesh), a young girl in a frilly frock and pigtails sat quietly in the corner of a small room, with fascination and stars in her eyes, watched her mother teach other women basic life skills. The home was humble, its walls having seen years of giggles, laughter, grief, struggles, but something sacred lived there. A quiet revolution stitched into every thread, kneaded into every lesson. Her mother ran an NGO, not for recognition or wealth, but to offer dignity to those who had little. Girls

with nowhere to go, women with broken dreams—her mother gave them a skill, a purpose, a whisper of self-worth.

But for her daughter, she dreamed something different. No needles and thread. For her, she envisioned flasks and pipettes, equations and microscopes. Science, not stitching. Labs, not limits. That girl was Pooja. And in her mother's steady belief, she saw the first spark of what a very different life could be.

Her mother had been married young, like so many girls of her generation. But she had refused to let her learning end with marriage. Slowly but persistently, while raising children and fulfilling the duties of the household, she returned to school. First high school. Then a college degree. She didn't wear her achievement on her sleeve. But she carried it in the way she walked. In the way she taught her daughter to never apologize for wanting more.

And little Pooja, being her mother's shadow, always listened.

That daughter, who grew up fascinated by books and quietly drawn to the language of science, would one day become Dr Pooja Goswami—a molecular biologist, a healthcare innovator, and the founder of one of India's most promising biotech companies.

Pooja went on to study at AIIMS Delhi, earning her PhD in Molecular Biology from the Department of Gastroenterology and Human Nutrition. For over 14 years, she worked as a scientist in the corridors of one of India's most prestigious medical institutions. Her world was full of precision, data, and the kind of long hours that few outside research labs truly understand. She had no intention of leaving it. Research was where she felt most alive.

But life isn't fair. As it often does, it introduced a wildcard. Soon after giving birth to her first baby, in 2018, Pooja suffered an unforeseen health crisis. One day, her legs wouldn't respond. The diagnosis came with a word that felt like betrayal: partial paralysis.

For three months, she was confined to a bed. Helpless, aching, and uncertain. Her newborn needed her, but she could barely hold him.

And in those long, still hours, days where sunlight spilled in like a visitor she could barely greet, grief crept in. She had also lost her father in 2014. Not to the cancer he had been fighting, but to an infection that went unnoticed until it was too late.

That's what haunted her. Not just the loss, but the delay. The waiting. The not-knowing. In a super-speciality hospital as advanced as the one he was treated in, how had the infection crept past everyone until it was unstoppable?

And then came the question that changed everything: What if that wait could be erased?

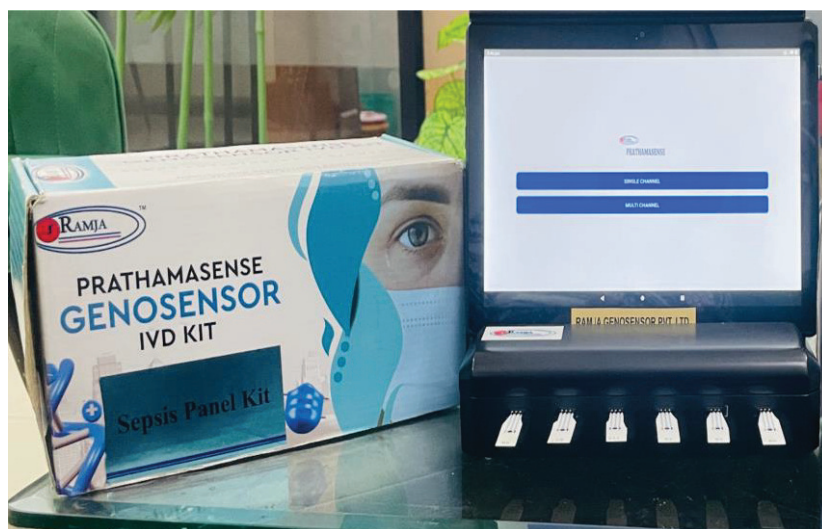
The idea gripped her before her body had fully healed. It was bold, bordering on impossible – but she knew science, and she knew pain. She could live with neither being wasted.

That same year in April 2018, **RAMJA Genosensor Pvt. Ltd.** was born.

At first, it was just a dream spoken aloud – between recovery sessions, during restless nights, while her baby napped. But it quickly began to take form. Pooja approached the Foundation for Innovation and Technology Transfer at IIT Delhi, seeking incubation for what would become a radical diagnostic tool: a paper-based electrochemical DNA biosensor that could detect sepsis, typhoid, UTI, TB, and antimicrobial resistance in under ninety minutes.

No complex lab setup. No three-day wait. A portable, and most importantly, cost-effective device that could bring rapid, accurate diagnosis to the most remote corners of India.

She named it *PRATHAMASENSE*.



Prathamasure Genosensor Kit

It marked the beginning of a journey that would not only change Pooja's life but also make a significant difference in the lives of numerous patients, doctors, and caregivers who were tired of the endless wait for test results.

However, as most people believe, this journey wasn't all smooth sailing and cheers.

In the world of venture capital and Biotech boardrooms, being a woman, especially a woman founder, meant beginning every conversation from a deficit. Her decisions were second-guessed. Her confidence mistaken for arrogance. Her science questioned more than her male peers'. Investors looked past her, expecting a man to lead. Doors didn't swing open; they had to be pushed, repeatedly.

And still, she rose.

If Pooja had one anchor in life, it was her mother—the woman who had turned domesticity into activism, who had chosen to be both nurturer and rebel. She was Pooja's first teacher, her relentless protector, and her greatest mentor. It was from her that Pooja learned that endurance wasn't loud, and strength didn't always look like what people expected.

But the second anchor arrived later, quietly and with deep steadiness: her husband.

He was a doctor too, and he knew what it meant to build something that served others. Without fanfare, he chose night shifts in the ICU for seven years so Pooja could work on **RAMJA** during the day. He became the rhythm beneath her ambition—the one who made sure there was a home to return to, a child looked after, and a quiet cup of chai waiting when the world felt too heavy.

And then there were the mentors who shaped the professional side of her journey. Dr Anil Bali from the BITS Biocon Foundation (former MD at FIIT, IIT Delhi) became her North Star, guiding her through the early maze of startup challenges and grant applications. Two others, both named Ashutosh, offered their wisdom in marketing and scientific strategy. Arjun Malhotra, a stalwart in India's tech ecosystem, lent her his voice and vision when hers began to shake under the weight of expectations of others. But above them all, Pooja always came back to this truth: her mother had prepared her for all of this, long before any of them had shown up.

In time, the world began to notice.

Government grants started coming in—first from BIRAC, then Pfizer, Facebook, SIDBI, and eventually the Rockefeller Foundation. She secured patents in India and the United States. She filed PCTs. Her company was awarded, celebrated, shortlisted across forums like BioAsia and Global BioIndia. But she didn't rest there. She kept showing up, hospital to hospital, lab to lab, talking to microbiologists, understanding what they needed, building relationships the old-fashioned way. Not as a CEO, but as a scientist who had seen death come too fast and answers come too late.

Today, **RAMJA Genosensor** is being used across India. And tomorrow, she dreams of taking it to the world—starting with the UK, the US, and Japan. She wants **PRATHAMASENSE** to be a part of every Indian medical curriculum. She wants to build new biosensor platforms for food safety, agriculture, and biotechnology. And—

because why not dream loud—she wants to help bring India’s Air Quality Index down to 10 in the next five years.

To every young researcher standing uncertainly in a lab, wondering if she’s even allowed to dream of being a startup woman, Dr Pooja offers just one piece of advice: *“File a patent before any collaboration.”*

It’s not just legal counsel—it’s a symbol of self-worth, of claiming your idea before the world reshapes it.

Dr Pooja knows this journey intimately. She carried within her a quiet conviction—that no matter how long the odds or how rough the road, a never-give-up spirit and a positive lens could change everything.

For her, persistence wasn’t just a habit; it was how she survived, how she built, how she rose. Honesty, hard work, and unwavering dedication didn’t always bring applause or instant reward. But in time, they did what they always do: They paid off.

And in that, she hopes other women will find the courage to dream as well and the strength to own those dreams out loud.

Because some revolutions begin not in boardrooms or headlines—but in small homes, on quiet afternoons, where one woman teaches another how to rise.

When Research Met Reality: The Story of Dr Rajul Patkar

"When the path demands it, I am a rock – resolute and grounded. When the challenge is too rigid to move, I become water – flexible and persistent. It is in this rhythm of stillness and flow that true leadership is born."

- Dr Rajul Patkar



Dr Rajul Patkar's story takes root in the bustling streets of Indore, Madhya Pradesh, where a little introverted girl once clung to the comforting presence of her grandparents. Until the fourth standard, their home was her world, a safe haven while her mother shuttled tirelessly between hospitals and home, caring for Rajul's sister who was two and half years younger than her, and whose fragile health consumed much of the family's energy. She grew up watching her little sister struggle to move around, and her mother devoting all her time and attention to take care of her. Childhood for Rajul wasn't the carefree laughter of playgrounds; it was long evenings of waiting, learning to be patient, and understanding, far too early, that life was complicated.

When her grandmother passed away, Rajul moved back in with her parents. However, that sudden shift revealed to be quite challenging for her. As an introvert and stubborn in a way only children are, she became one of the topics of discussion among the local community. People called her weird, her childlike amusement about everything and nothing, unlike other girls of her age, raised eyebrows. But Rajul never cared about those snide remarks. She was home now, a home full of love, yes, but also of worry. She could sense her parents' struggles, their financial strain, the constant weight of responsibility that illness brings into a family. Somewhere deep inside, Rajul made a quiet promise to herself: she would stand tall one day, not just for herself but for them.

School was not easy either. Starting with a Hindi-medium education in Indore, she often felt the world of books and knowledge was a step ahead of her. People in her new school spoke in English or Telugu so everything got lost in translation. But if Rajul was anything, it was determined. Soon, her teachers noticed something different in her, especially one class teacher who saw her potential before she did, entrusting her with responsibilities that slowly chipped away her hesitations. That gentle encouragement lit a spark.

Her path forward was anything but ordinary. While most girls in her community were nudged toward arts or commerce, with an impending marriage often shackling them to a life of household chores and nursing babies, Rajul chose the road less travelled. She made it clear to her father that she didn't envision a life like that for her. She wanted to stand on her feet and support her family. So, she decided to study technical subjects, took up a Diploma, and became the first girl from her community to leave home for further studies and stay in a hostel. For a young woman from a conservative background, this was radical. There were whispers, doubts, raised eyebrows, but Rajul walked into that hostel room carrying only her books, her fears, and her unshakable resolve.

There were days when loneliness pressed heavily on her. Language barriers made classrooms intimidating, and nights stretched long with

self-doubt. Yet, when she remembered her parents' faces, the struggles at home, her sister's fragile health, she steeled herself. This wasn't just her journey – it was theirs too.

Her persistence carried her to Andhra University for her B.Tech. There, the dream she had nursed since childhood, to be an engineer just like her father, took shape. She wanted more than a degree; she wanted to build, to create, to make a difference. After graduation, with her eyes set on bigger opportunities, she convinced her family to let her move to Mumbai. It wasn't easy initially; there were hesitations, fear of the unknown, but she pressed on, staying with her aunt, studying harder than ever, and soon clearing the GATE exam that took Rajul to her next stop: IIT Bombay.

Life at IIT felt like stepping into another universe. Surrounded by some of the brightest minds in the country, Rajul not only kept pace, but she also thrived. She poured herself into a project supported by the Ministry of HRD, designing an affordable FPGA Evaluation Board that made advanced technology accessible to engineering colleges with limited resources. For her, this wasn't just about circuits and boards; it was about giving back, about levelling the playing field for students like herself who had once lacked access.

When the project was transferred to a manufacturer and reached classrooms, Rajul felt something stir inside her. This was more than academic success – this was an impact.

Yet the journey took another pause. After completing her M. Tech in 1996, she didn't follow the traditional path into industry. Instead, she stayed quietly rooted in the research ecosystem of IIT Bombay, engaging in industry-linked projects and learning at her own pace. She calls it her "Cinderella phase" – working while her daughter was at school, returning home before the domestic clock chimed. For sixteen years, she walked this delicate tightrope between motherhood and curiosity. When her daughter blossomed into independence, she seized the moment to pursue her long-nurtured dream: a PhD that would become the foundation for something meaningful and impactful. She returned to IIT Bombay, enrolling in a PhD, and this

time, she made herself a promise: her research would not gather dust on a shelf. She told her professors so; she may not contribute to thesis papers or academic journals, but she promises to build something.

It was agriculture that called to her, unexpectedly, powerfully making her the first student in the electrical department at IIT Bombay to focus on agriculture. She had no background in it, but she had empathy which was her greatest tool. She had read of farmers' struggles, their suicides, their silent despair. And so, she began travelling – walking fields, meeting scientists, listening to farmers. At IARI, IRRI, PJTSAU, she absorbed knowledge like a sponge, determined to use her skills where they mattered most.

From these journeys, **Proximal SoilSens** was born. The company's first offerings – moisture sensors and IoT-based irrigation systems – were designed not for profit margins but for the hands that tilled the soil. When the United Nations Development Programme (UNDP) recognised their products as “farmer-friendly,” Rajul felt it wasn't an award, but a validation of every long night, every risk taken.

She was still balancing her PhD and entrepreneurship, writing research papers with one hand and sketching prototypes with the other. It was exhausting, yes – but also exhilarating. And soon came NutriSens, the device that would become SoilSens's star product, giving farmers a way to test their soil with ease.



Device: NutriSens

Looking back, Rajul doesn't see her journey as hers alone. She credits the ecosystem that supported her dream—the mentorship of IIT Bombay, the nurturing of AIC-ADT Baramati Foundation, NRC Grapes Atal Incubation Centre, IARI PUSA, Venture Centre Pune, Social Alpha, Krishi Mangal program, TIE Delhi-NCR, TIE Pune, STPI Next, The Buddha Institute, Maharashtra State Innovation Society, Wadhwani Foundation, and programs supported by DST and MeitY. Grants from BIRAC-SPARSH, Millennium Alliance, DST NIDHI PRAYAS, and AIM arrived like stepping stones at just the right time.

She believes when you do something good, the right people draw towards you like moths to flame, offering you guidance and support. But ask her what keeps her going, and her answer is simple: purpose. *"If even one percent of India's farmers benefits from our work, that is success,"* she says. Her advice to women entrepreneurs is equally heartfelt. She asks them to not walk this path alone. Rather build networks and ask for help when needed. Keep some financial stability while chasing your dream. And never chase money—chase impact. Money will follow when you're truly making a difference.

From the little girl in Indore waiting for her mother to return from the hospital, to the young woman breaking barriers in hostels and classrooms, to the entrepreneur whose devices now touch fields across India—Rajul's story is one of quiet courage, of resilience forged in family struggles, and of an unyielding belief that technology, when rooted in compassion, can change lives.

Sahayatha: More Than a Wheelchair: The Story of Sruthi Babu

"Whenever I feel stuck, I ask myself – what impact are we creating right now? That question truly defines my journey and reminds me of the purpose of why I'm here. And it's that purpose which keeps me moving forward." - Sruthi Babu



The smell of antiseptic clung to the air inside the hospital ward, a mix of sharp cleanliness and quiet despair wafting around. Sruthi watched as two young daughters with the help of a hospital staff struggled to lift their paralysed father from the bed to the toilet. Their movements were awkward, their faces heavy with exhaustion and a duty towards their father. But what pierced through the silence wasn't the sight – it was the man's voice, trembling and raw: "It's better to die than endure this and be a burden on my daughters."

Those words stayed with Sruthi like a scar etched into memory. She could not just turn around unhear them, could not pretend to unsee the shame in his eyes or the helplessness in theirs. That day, she made a silent promise to herself: no one should ever feel their existence is a burden on the ones they love.

The thought never left her, though her own life seemed to follow a different path. Fresh out of college with a degree in biomedical engineering, Sruthi was restless. She wanted to build something of her own, but her family told her to gain some experience of the practical world first before diving headfirst into entrepreneurship. And so, she took a job—not in her field, but in medical coding for a US-based multi-national company in Michigan.

On paper, it was a good job, a stable career choice. She was promoted quickly, and there was even the promise of flying to the US. For most people, it would have been a dream. But Sruthi felt trapped in her 9-5 job, it never resonated with her. For her, engineering and coding felt worlds apart. She knew she wanted more—something with purpose, something that mattered.

So, she decided to resign. That choice of hers met with a lot of conflict. Her family was hesitant, practically so, even upset. Leaving a stable career at the cusp of opportunity seemed reckless. It was reckless. For three months, during her notice period, she endured worried questions and sharp silences. Everyone kept questioning - What next? What will you do?

She spent her after-work hours searching Google for other opportunities and fellowships. Then the answer came unexpectedly, though in the form of a fellowship opportunity in Odisha. For a girl from Coimbatore, Odisha felt like another world—no direct flights, no familiar language, no clear path. She was hesitant. Yet, her father, Shri Sabari K K Babu, seeing the determination in her eyes, offered to travel with her.

Together, they reached Cuttack, where she presented her idea at KIIT-TBI. Sruthi remembers standing nervously in front of the jury, a screen

behind her showing her idea, her heart pounding, hands sweaty, her slides clumsy, her idea still unshaped but burning inside her. When she finished, the jury asked her father to step inside. They told him she had something rare, that she had the spark of a future entrepreneur. The room filled with applause.

Her father turned to her afterward, eyes glistening. “See, all these big people believe in you. From now on, I will stand by you as well. I’ll support you in whatever you do.”

That was the moment everything shifted. Doubt turned into faith. Hesitation became support. And father and daughter became partners in a dream that was going to change lives for the better.

Together, they started **Dhanvantri Biomedical Pvt. Ltd.** and built *Sahayatha*—a wheelchair that wasn’t just a chair, but a bed, a commode, and most importantly, a self-cleansing system that restored dignity to patients and relief to families. It took **118 prototypes**, and countless nights of testing and rejection before they got it right. But they did because hard work and the cause behind the motivation pushed them forward. And when *Sahayatha* launched in May 2022, it wasn’t just an invention—it was a promise kept to the man in that hospital ward, and to every family like his.

The S100 model could recline fully like a stretcher, perfect for post-operative patients, and with the press of a button, a gentle jet spray would clean the user. But the S200 was a simpler, non-reclining version. Both reduced the need for multiple caregivers, turning struggle into dignity. Where it required the assistance of 3-4 people, now required just 1.

Unfortunately, her father, Shri Sabari K K Babu, the man who stood beside her through everything, didn’t live to see just how far *Sahayatha* would go, but his fingerprints are on every part of it. Today, Sruthi carries forward both their dreams, now with her mother by her side. A homemaker once shy of business, her mother has grown into a strong partner in the company after the untimely passing of her husband, a transformation that fills Sruthi with pride.



Sruthi with Sahayatha—the wheelchair

Sruthi recalls mentors like Padma Shri awardee Krishna Kumarji and Dr Ram Kumar who guided her through the ups and downs, while grants and startup networks gave wings to her vision. But it wasn't always easy. Being a woman in a male dominated field comes with several drawbacks. People would question her position, hesitate doing business with her all because she is a woman. They would call for enquiries and when she picked up, she was asked to hand over the call to her boss, preferably a man. But despite all this, Sruthi and her mom never gave up. She was determined to prove everyone who doubted her potential, wrong. And when Sruthi stood on the stage of Shark Tank India Season 2, sharing her journey with all the notable entrepreneurs, with trembling hands and a steady voice, she walked away with a five-Shark deal worth ₹1 crore. The calls haven't stopped since.

From a hospital ward where despair once hung heavy, to homes across India where dignity is being restored one life at a time — Sruthi's journey is proof of what can happen when perseverance meets compassion. Her dream now is bold yet simple: to touch 10,000 lives in the next five years. She hopes to reduce the cost of Sahayatha in the future as more grants and investors come.

For her, Sahayatha is more than a business. It's a tribute to her father, a gift to families in need, and a reminder that even in the most ordinary of places—like a hospital ward—a moment can change everything.

Between the Lab and the Lullaby: The Story of Dr Sumona Karjee Mishra

“Pregnancy is one of the neglected healthcare aspects. The ANC test ensures the wellness of the foetus present in the womb. But there are only a few tests that tell you about the physical health of the mother. Because if the mother is having any problem, then eventually it is going to impact baby,”

– Dr Sumona Karjee Mishra



Sumona Karjee was just a year and a half old when life delivered its first and harshest blow. Her father passed away before she could form a single memory of him—no echo of his voice, no warmth of his embrace, no glimpse of the man who was meant to be there for her first steps, first words, first victories. What she did inherit, however, was the hollow space his absence carved into the family.

Her mother, suddenly a widow at a young age, didn't have the luxury of mourning. She couldn't linger in grief for the man who had promised her a lifetime together. With two small children tugging at her for survival—one of them still a toddler—she made the hardest decision of her life. Packing away both her pain and her belongings,

she left behind familiar ground and moved to Delhi. For her, it wasn't just a change of city; it was a desperate leap toward survival, resilience, and a future that refused to be consumed by sorrow.

It was in those years that Sumona learned what courage actually looked like and not just the textbook definition of it. For years, she watched her mother wake up when the world outside was still slumbering, getting dressed for a job that demanded her everything, yet she came home with enough tenderness to read her and her brother bedtime stories. There were no luxuries, but the moments spent talking about their day lying in bed, cuddling to the warmth of their mother, made up for it.

Her elder brother was four years older, always a few steps ahead. But Sumona carved her own path in the only way she knew – through curiosity. She was fascinated by science from a very young age. While other children shrank at the very sight of equations and chemical formulas, she leaned in a little closer, eager to understand. Her mother worried because coming from a middle-class family, they barely made ends meet and pursuing a career in science demanded a lot more than that. Commerce, she thought, would be more practical, more secure. She could go on to get a stable job somewhere. But when she saw the light in her daughter's eyes, she relented. It was a small act of faith that would change everything.

Science became Sumona's constant companion. It was Delhi University that nurtured her love, ICGB only deepened it further, and Jawaharlal Nehru University, popularly known as JNU, gave her wings to fly with a PhD. She imagined herself one day as a professor, or perhaps a scientist in a research institute – someone who lived quietly, surrounded by ideas and discoveries. That was the dream she carried in her heart.

And yet, life has a way of bending dreams into shapes we never expect. But isn't that what makes life so beautifully unpredictable?

During her PhD, she and a few batchmates entered a competition called the Young Entrepreneur Scheme organised by the Department

of Biotechnology. It was a whim, an adventure more than anything else. To their utter surprise, they won the Indian round and were sent to Scotland for the second round where their efforts and ideas shone again and they won. The final round was held in London. And they came out with flying colours this time as well. What started as a mere whimsical curiosity shaped their dreams. Investors came forward. Even the global head of L'Oréal asked if they would consider turning their idea into a company sometime shortly. But at that time, their hearts belonged to science. They brushed aside the offers, shaking their heads with a chuckle telling themselves the time would come later, after the PhD, after the postdoc.

In the quiet rhythm of those years, something else took root. Long nights of experiments and hushed conversations soon turned into companionship, igniting the sparks of love. By the time their PhDs ended, Sumona and her colleague Aseem Mishra realised their paths belonged together. They got married in 2009, carrying with them a shared love for science and a belief that the future would be full of discovery.

Motherhood arrived soon after, but not as she had imagined. Pregnancy which is supposed to be a period of joy and weird cravings at odd hours, soon turned into a nightmare. At six and a half months, a sudden complication called preeclampsia, a pregnancy complication characterized by high blood pressure and signs of damage to other organ systems, most often the kidneys, after 20 weeks of pregnancy, forced her into early delivery. Her daughter came into this world weighing barely 860 grams—so small and fragile that Sumona's heart clenched every time she saw her tiny chest rise and fall inside the ICU. For forty-five days, she and her husband stood by incubators and monitors, praying to a God, someone, anyone, who would listen, willing her child to live. She was a scientist, but in those moments, she was only a mother, desperate for a miracle.

When the baby finally came home, fragile but alive, Sumona's world narrowed to her daughter's survival. She spent five years at home, holding, watching, and protecting her. And yet, science never left her.

Late at night, after diaper changes and bottle feeds, she would search, read, and wonder why her condition wasn't diagnosed earlier, why maternal and child health was so poorly supported, why women had so few tools in their hands, why fear had to be such a constant companion in pregnancy. The questions dug into her like overgrown roots.

By 2015, when her daughter was healthy enough to walk into school, Sumona decided to step into the world outside of the nursery again. The SIIP fellowship in maternal and child health gave her that purpose. She spent days talking to doctors, health practitioners, and stakeholders, to get an idea of the current healthcare scene. But what she saw on the ground startled her: mothers without help, infants without safety, promises on paper that dissolved in reality. She knew then that her life could no longer stay within the walls of academia. Science, she realized, had to step into people's homes, their fears, their hopes.

That year, she founded *Prantae Solutions*. At first, it was only an idea, fragile as her daughter once was. Her family, bound by the traditions of salaried jobs, looked at her with worry. Wasn't it safer to teach, to research, to remain secure? Sumona herself doubted. But Aseem stood by her, reminding her gently, "If you must walk away, do it because something greater calls you. Not because it is hard." But the very soul of Prantae has always been Shravya, her little girl who she fondly called Titli. At just five, she told Sumona that she should go out and work, maybe because she saw how her mother's entire focus and world revolved around her. Maybe her little heart understood beyond her age; she didn't want her mother to be confined when she was meant for great things.

Over the years, whenever Aseem and she felt hopeless, Shravya would remind them that if they could bring her back from the NICU, then they could surely bring Prantae back on track. She never complained about her parents' long hours or travels, and today at fourteen, she is an entrepreneur in her own right, already winning national awards and nurturing ideas of her own. She has won the

National Inspire Manak award 2024, and in 2025 she has been selected as a young entrepreneur of cohort 3 by STPI Bhubaneswar. Not only that, but she is also a part of the student founded farmer focused endeavour called SUCHAK. Truly, *Prantae Solutions* would not have been possible without her courage, her faith, and her instinct.

Step by step, *Prantae* began to grow. Tata Trusts gave her the first push when she approached them with her idea. Other grants followed soon after – BIRAC, DST, Millennium Alliance, Grand Challenges. Over the years, the little seed that Sumona planted back in 2015 has blossomed into a company that's making waves across India. *Prantae Solutions* proudly snagged the National Start-up Award in 2022 for its work in diagnostics, and its dedication to innovation has been recognized with the CII-IPR award for four straight years, from 2018 to 2021. But that's not all—their research prowess shines through in a remarkable intellectual property portfolio, boasting five granted patents, including one Indian and two international patents, along with 23 registered trademarks and five design registrations. In January 2025, the company secured a groundbreaking ₹5 crore equity investment from the Indian Angel Network, with backing from the SRI Fund, propelling its mission to make healthcare more accessible to the common mass. Today, *Prantae Solutions* even holds a CDSCO manufacturing license for three products, showcasing just how far Sumona's vision has come—from a simple idea born from a mother's quiet worries to a company that's shaping the future of diagnostics in India.

When the pandemic arrived, *Prantae* rose to the moment, developing three diagnostic solutions for COVID-19, two of which earned validation from ICMR. Today, her company builds affordable, self-monitoring devices for pregnancy and kidney health—tools that give women dignity and families peace of mind. A mother at home can monitor her pregnancy and share reliable reports with a doctor without fear, simple, affordable technologies that give mothers the power to know, to act, to protect. What once was only Sumona's private struggle has now become a shield for thousands of others. Her

team of engineers and scientists worked not only for survival but with the conviction that health should not be a privilege.



In the frame - Prantae Solutions Team with Founder Sumona Karjee Mishra

Today, Prantae Solutions stands as a testament to what happens when science is driven by both intellect and empathy. Looking back, Sumona often smiles at the irony. She once dreamt of being a professor counted among India's scientists. Instead, she has become something else—a bridge between the purity of research and the raw urgency of life. She is a scientist, yes. But also, a mother, an entrepreneur, and above all, a believer that science must serve people, not something that is supposed to stay hidden in journals and conferences.

Her journey is not a tale of sudden glory. It is quieter, steadier—the kind that begins with loss, survives fear, and blossoms into hope.

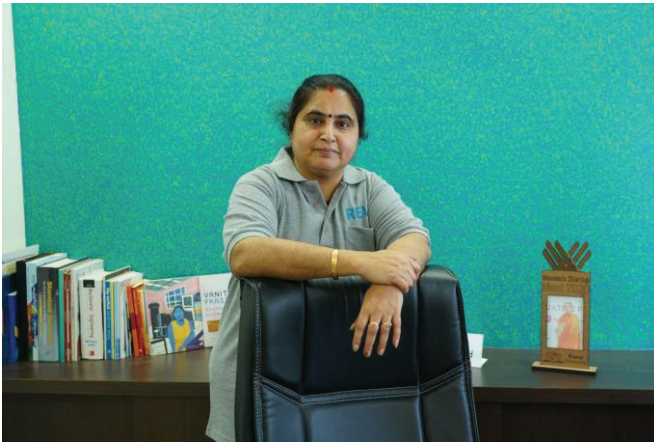
And perhaps that is what makes it extraordinary. Today, when Sumona walks through the halls of Prantae Solutions, she does so not as someone who abandoned her dream, but as someone who allowed it to grow into something larger than herself. What began as a girl's love for science and a mother's prayer for her fragile child has become a lifeline for countless families. Her journey is proof that sometimes life bends our paths not to break us, but to reveal a purpose we could never have imagined.

For Sumona, success is not measured in awards or recognition, but in the quiet relief of a mother who can finally breathe without fear, in the hope restored to families who once felt helpless. She believes the future belongs to those who dare to blend compassion with innovation, and that science, when guided by empathy, can change the very rhythm of life.

Her story is not just her own—it is an invitation. An invitation to believe that from loss can come strength, from fear can raise courage, and from love can bloom revolutions.

Where Waste Finds a Second Life: Story of Dr Vanita Prasad

*AS Founder, CTO, and Director at REVY, I believe that no matter the responsibilities one holds – whether as a daughter, sister, mother, or woman – it's crucial to continue working on your skillset. Especially as a woman, keeping your dreams alive and continuously polishing your skills will carve the path to success. I always emphasize that if you are truly committed to your goals, opportunities will come your way. It's not just about managing your skills, but also actively finding resources and mentorship along the journey. Success requires a dynamic mind-set, a commitment to self-reliance, and the sustainability to persist and thrive. -
Dr Vanita Prasad*



The first thing you notice when Dr Vanita Prasad talks about wastewater is the sparkle in her eyes. It's not the usual glamour of entrepreneurship, not the polished, rehearsed pitch. It's the unmistakable gleam of someone who truly believes that microbes, invisible to the naked eye, are tiny magicians capable of saving the world.

"Do you know," she says with a smile, "they even talk to each other while they work?"

It's a curious place to begin a story—standing beside a tank of wastewater, imagining microbes whispering to one another as they break down waste. But for Vanita, this is where life makes the most sense. Not in corporate offices, not even in laboratories, but in the messy, smelly, stubborn reality of sewage, where possibility hides in what others throw away.

This love for possibility has been her constant companion. As a young girl, she had already learned that dreams wouldn't be handed to her; they had to be earned. Her father made it clear: if she wanted to continue studying, she had to win scholarships. So, she did—one after another, all the way from sixth standard through her PhD in biotechnology. Each slip of paper wasn't just a scholarship; it was a declaration: *I belong here*.

Though her heart once leaned toward medicine, she found herself drawn to biotechnology. Human physiology fascinated her, but so did the bigger picture—the health of the environment. In time, that curiosity shifted her career from medical biotechnology to biofuels, and eventually, waste management.

By then, she had experienced the comfort of a steady industrial job in Gujarat, but comfort was never her destination. With her sons nudging her—“Mummy, you can do more than this”—and her husband offering steady, practical support, Vanita made the bold decision to resign. In 2015, **REVY Environmental Solutions** was born in Vadodara.

The mission was deceptively simple: clean water, renewable energy, sustainable living. But the numbers were staggering—62,000 million litres of sewage generated daily in India, and only a fraction is treated. Freshwater bodies are shrinking. Climate change is promising to worsen the scarcity. REVY became her answer to all of it, harnessing microbes to clean wastewater and recover energy in the form of biogas.

The early years were anything but easy. Investors questioned her commitment, sometimes more because she was a woman than because

of her business plan. She felt the sting of bias — of being asked to prove, twice over, that she understood her own science. But she also felt the thrill of small victories: the day Dr Vanita secured the BIRAC BIG Grant of ₹35 lakhs, the rush of seeing clean water flow out of a pilot plant, the pride in telling her sons, “See? We’re doing it.”

Support trickled in from SPARSH, Villgro’s YESSCALE, the Gujarat Biotech Policy, prize winnings, bootstrapped savings, and eventually, equity investment. Piece by piece, REVY climbed forward until it reached Technology Readiness Level 7.

At present, REVY has grown into a solution powerhouse capable of handling everything from everyday kitchen scraps to some of the toughest industrial effluents—those from paper mills, pharmaceuticals, fertilisers, dyes, distilleries, and petrochemical plants. By integrating pre-treatment with advanced anaerobic, aerobic, and tertiary processes, the startup delivers results that once seemed out of reach. Its expansive microbial library adds another layer of versatility, allowing the team to tailor solutions for research needs and to generate affordable, market-ready outputs such as fertilisers, biogas, Biohydrogen efficient waste treatment models.



Dr Vanita Prasad at REVY Lab with REVY products

Interest in REVY's approach has already crossed borders, with queries arriving from Africa, Pakistan, Bangladesh, and Nepal. Expansion across India and into the global arena is firmly on the roadmap. Looking ahead, Dr Prasad shares a glimpse of the next frontier: *"And now that the time is right, in a year or so, we will be focusing on BIO-hydrogen production and help crack methane."*



REVY Products

Through this pioneering biotechnological model, REVY is directly contributing to five of the United Nations' Sustainable Development Goals—ensuring clean water and sanitation (SDG 6), promoting affordable and clean energy (SDG 7), advancing industry and innovation (SDG 9), supporting sustainable cities (SDG 11), and driving climate action (SDG 13). Recognition has followed suit: the award-winning company joined the **Global Startup Service (GSS)** in November 2019 and was selected to showcase at the **ISC3 and Think Beyond™ Innovation Accelerator's Virtual Investor Forum 2020** in Germany. In 2023 REVY was recognized as the best O& M company by the World Biogas Association and this year Dr Vanita was selected as Finalist in Women in Biogas Award.

Yet Vanita doesn't tell her story in the language of funding and milestones. She tells it in the language of people—her mother, who despite her own limited education, stood firmly behind her; her father,

who challenged her to rise through scholarships; her husband, who stepped into the role of CEO so she could focus on science; her sons, who never let her forget her worth and are her biggest cheerleaders.

She tells it in the language of women's resilience, speaking openly about how women in STEM are often undermined, how many leave careers after childbirth because the system does not bend for them. She mentors younger women not with lectures but with empathy, remembering every room she walked into where she was underestimated.

And she tells it in the language of wonder. Beyond science, she is now drawn to spirituality and mental health, especially in the wake of COVID-19. She believes microbes have lessons to teach us about communication, healing, and resilience like tiny reminders that even in waste, there is wisdom.

When asked what keeps her going, she laughs softly. "Curiosity," she says. "I never stopped being curious."

REVV may be a company, but for Dr Vanita Prasad, it is a Gift from her husband, a love letter—to her children, to her parents, to every woman who has been told her dreams were too big, and to the world itself, which she insists can always be made a little cleaner, a little kinder, if we only dare to look differently at what we call waste.

About the Author

Dr Manisha Acharya is an innovation ecosystem leader with over two decades of experience in entrepreneurship development, incubation and institution building. She has worked extensively with startups, academic institutions, government bodies, financial institutions and international partners to strengthen innovation, market readiness, and inclusive entrepreneurship in India.



A British Chevening Fellow in Science and Innovation Leadership from the University of Oxford, Dr Acharya has led and contributed to several state and national level startup and innovation initiatives. She has served in leadership roles in various organisations including CEO of DST supported incubators, where she worked extensively with early stage and growth stage enterprises in technology commercialisation, ecosystem partnerships, and capacity building.

Dr Acharya is the Founder of WEneurs Forum, an organisation committed to building strong entrepreneurship ecosystems with a particular focus on women and youth in STEM. Through her work, she has supported startups, trained women entrepreneurs, mentored incubator teams and contributed to job creation and enterprise development across sectors.

Her professional interests lie at the intersection of innovation, entrepreneurship, policy linked ecosystems and market making. Through this book, she brings together real stories of women in STEM entrepreneurship to inspire more women to translate scientific knowledge into impactful enterprises and societal value creation.