





IMPACT REPORT 2023

Scholarship and Mentorship Programme for Women in STEM Education and Careers

By Research and Innovation Circle of Hyderabad (RICH)



TABLE OF CONTENTS

- **01** Introduction
- 02 Message from our CEO
- 03 Summary of Cohort 1
- **04** Measuring Impact
- 05 Limitations and Learnings
- 06 Next Steps
- 07 Acknowledgements

INTRODUCTION

In the pursuit of fostering greater inclusivity and opportunity in the realm of STEM education and careers, Research and Innovation Circle of Hyderabad (RICH) in collaboration with Syngene and Biocon Foundation, has initiated a transformative Scholarship and Mentorship Programme for Women in STEM.

Between 2011 and 2016, a notable shift was observed in STEM education enrollment, with a growing percentage of female students. However, this seemingly encouraging trend was clouded by a persistent issue: a significant dropout rate among female students before completing their programmes. While female enrolment in higher education reached 43%, only 14% found their way into STEM careers. Compounding the issue, women from rural and semi-urban areas of India faced a lack of exposure to premier institutions and industries. For female students residing in tier 2 and 3 cities, securing valuable internships remained a difficult goal to achieve.

This programme places a distinct emphasis on promoting STEM education and skill development among marginalised female students from tier 2 and 3 institutions. The core of the programme lies in providing experiential learning opportunities through internships within the laboratories of renowned research and development institutions and industries in Hyderabad. Additionally, the programme offers scholarships and mentorship from subject matter experts, creating a comprehensive support system for students. The overarching objective is to raise awareness of higher education and career prospects in STEM fields, inspiring a new generation of female students to embark on enriching careers in these domains.

In this impact report, we delve into the important role this programme plays in addressing the unique challenges faced by women in STEM and highlight profound transformations and achievements brought about by this initiative.

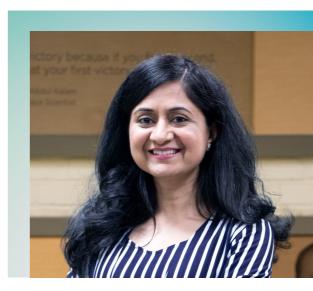
MESSAGE FROM OUR CEO

I am delighted to share with you my thoughts on the Scholarship and Mentorship Programme for Women in STEM, an initiative close to my heart. This programme, led by Research and Innovation Circle of Hyderabad (RICH) in partnership with Syngene and Biocon Foundation, is our commitment to fostering STEM education among young women students, and I am excited to reflect on the impact we have achieved together.

Beyond financial assistance, our aim was to provide marginalised female students with invaluable hands-on learning opportunities in the esteemed research and development institutions and industries located in Hyderabad. We believe this exposure acts as a bridge between academia and industry, igniting a passion for STEM among young women.

As we reflect on our journey, we are happy to share the stories of achievement and learnings. I extend my deepest gratitude to our partners, supporters, mentors, and the dedicated RICH team for their unwavering commitment and passion. We have a long way to go but together we have embarked on a journey of making a significant impact in the lives of countless young women and shaping a brighter and more equitable future.

"Our Scholarship and Mentorship Programme for Women in STEM focuses on igniting a passion for STEM among young talented women."



Ms. Rashmi Pimpale CEO, RICH

SUMMARY OF COHORT 1

The RICH Women in STEM Scholarship Programme thrives on unwavering commitment, extensive outreach, collaboration with key stakeholders, and a rigorous screening process. Here is a summary of the key activities involved in the programme.



Outreach and Publicity

We conducted extensive outreach and publicity campaigns, leveraging social media, emailers and in-person meetings with Heads of educational institutions to reach student communities. A dedicated point of contact (PoC) was assigned to address inquiries. We secured support from stakeholders like EdVenture Park, Telangana Academy for Skill and Knowledge (TASK), TRICOR Team, and Osmania University to reach out to students. Visits to partner institutions and industries enriched our programme understanding.



Application and Screening

Out of 245 applications, we shortlisted 84 based on academic merit, socio-economic background, and STEM focus. With one-on-one interviews with 62 students, we evaluated research interest, achievements, and enthusiasm. The top 50 applications were sent forward to the Selection Committee for final selection. The Selection Committee consisted of expert individuals from industry and academia.



Selection and Pairing:

Based on the cumulative scores given by the Selection Committee, the final 25 students were selected for the first cohort. The students were paired with premier research and development institutions and industries like CSIR-CCMB, DRILS, DRL, Bharat Biotech, Aurigene Pharmaceutical Services and Appidi Healthcare based on the profile and the interest area of the student and the requirement of the partner entity.



Launch of the Programme

On November 9, 2022, RICH, in collaboration with Syngene International Limited and the Biocon Foundation, launched the Scholarship and Mentorship Programme for Women in STEM Education and Careers at T-Hub 2.0, Hyderabad.

Dr. Parvinder Maini, Scientific Secretary, Office of the Principal Scientific Adviser to the Government of India, was the keynote speaker at the event. Other notable speakers included Mr. Jayesh Ranjan IAS, Principal Secretary, Industries & Commerce (I&C) and Information Technology (IT) Departments of the Telangana Government; Dr. Mahesh Bhalgat, COO, Syngene International; Dr. Anupama Shetty, Mission Director, Biocon Foundation; and Ms. Rashmi Pimpale, CEO, RICH.



During the launch of the programme, a panel discussion was organised on essential steps required to promote more participation of women students in STEM educations and careers for the students. Through which we aimed at providing an unique perspective and insights about STEM educations and careers to the students.





Scholarships and internships

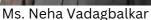
Under the programme, undergraduate (UG) students were granted Rs. 10,000 for a period of 2-3 months, whereas postgraduate (PG) students received Rs. 15,000 for a duration of 6 months.

A total of twenty one (21) students, with ten (10) representing postgraduate (PG) students and eleven (11) being undergraduate (UG) students were paired with relevant institutions and industries in Hyderabad. Four UG students dropped out of the programme because of long working and transportation hours. The PG students were from diverse states, including Telangana, Andhra Pradesh, Tamil Nadu, Odisha, Rajasthan, West Bengal, and Maharashtra, while all the UG students were from Telangana.

Dr. Reddy's Institute of Life Sciences

PG Students







Ms. Sowmya S.



Ms. Himani Reddy

UG Students



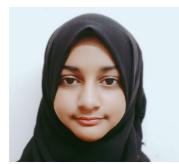
Ms. Sumaiya Abdul Bari



Ms. Vadla Pranavi



Ms. Hafsa Anam



Ms. Amena Mohammadi



Ms. Anupama Gambo



Ms. Ayesha Sania

CSIR- Centre for Cellular and Molecular Biology (CCMB)

PG Students







Ms. Adishree M.

Ms. Clemency Anu

Ms. Akshita Kulshrestha

Dr. Reddy's Laboratories (DRL)

PG Students







Ms. Jayalalitha Kondapalli Ms. Shraddha Mante

Ms. Sakshi Nirankari

Aurigene Oncology

PG Student



Ms. Sreejani Sen

Appidi Healthcare

UG Students



Ms. Shravanthi Kandanelly



Ms. Jothirlatha Kakumanu



Ms. Paketi Ravali

Bharat Biotech

UG Students



Ms. Nausheen Fatima

Ms. Aparna G.

Mentoring and Trainings

The programme aims to facilitate the overall development of the students by providing them with regular training and mentoring sessions, in addition to their internships. These sessions were planned to be conducted in two ways: 1) Virtual mentoring with the help of Syngene subject matter experts, and 2) Physical/Virtual group discussions and seminars for the students.

Mentors from Syngene were assigned to every student to provide them with academic and professional support as well as essential skills like networking, research, and career development opportunities.



Names of the mentors from Syngene International Ltd.

- 1. Narsimha Reddy Dondeti, Associate Scientist
- 2. Meena Bisht, Senior Associate Scientist
- 3. Karthik Babu Chintha, Senior Associate Scientist
- 4. Bandreddy Sandeep, Senior Research Associate
- 5. Srikanth Mannem, Research Scientist
- 6. Tirupathireddy Tadaveni, Senior Associate Scientist
- 7.Md Merajuddin, Senior Research Investigator
- 8. Abhijnan Ray Choudhury, Senior Research Investigator
- 9. Suryachandrarao Pitka, Senior Research Investigator
- 10. Dangeti Balaji Chandra Sekhar, Research Investigator
- 11. Suneelshekhar Yapara, Principal Investigator
- 12. Vimalathithan Devaraj, Senior Research Investigator
- 13. Amol Date, Senior Principal Investigator
- 14. Shahe Shaik, Senior Research Associate
- 15. Mahesh Kumar, Senior Principal Scientist
- 16. Bandapalli Obul, Senior Research Investigator
- 17. Varun Ahuja, Lead Toxicologist
- 18. Sunil Kumar C. R., Senior Research Investigator
- 19.Dr. Subha Shankar T. G, Senior Research Investigator
- 20. Raghvendra Singh, Principal Scientist
- 21. Aruna Srinivasan, Research Scientist

In-person discussions with the students



Showcase on social media

RICH leveraged social media platforms to showcase and promote selected students, ensuring their profiles and stories gain broader visibility, enhancing programme recognition and impact.



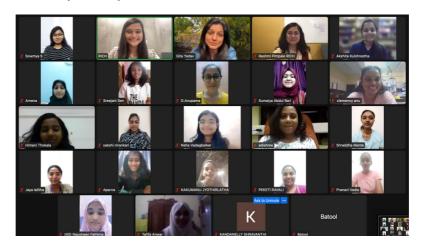
RICH also leveraged the social media platforms to showcase the invaluable contributions the mentors make to our cause.



Seminars for the students

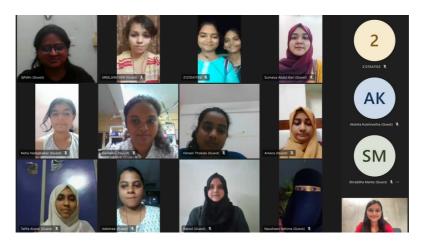
Seminar 1- 27th February 2023

Breaking Barriers and Building Careers: Insights from the Professional Journey of Dr. Gitanjali Yadav, Scientist at National Institute of Plant Genome Research (NIPGR), India



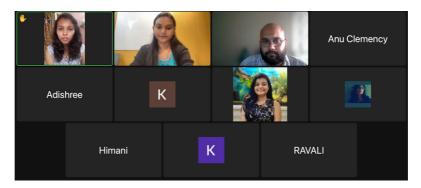
Seminar 2-27th April 2023

Unleashing the Power of a PhD: Opportunities and Advancements in Biology, Chemistry, and Pharma by Ms. Zeenat Khakerwala, PhD Scholar, Home Bhabha National Institute (HBNI), Raja Ramana Centre for Advanced Technology (RRCAT), Indore, India.



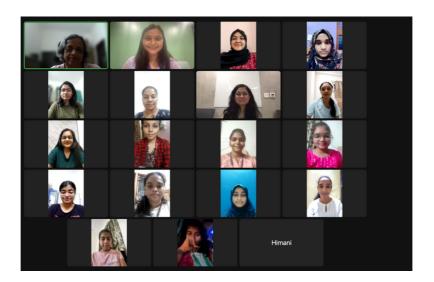
Seminar 3- 29th May 2023

Navigating the Path to Impact: Effective Scientific Communications and Publication by Shane Rydquist, Head of Content and Operations at Cactus Communications, India.

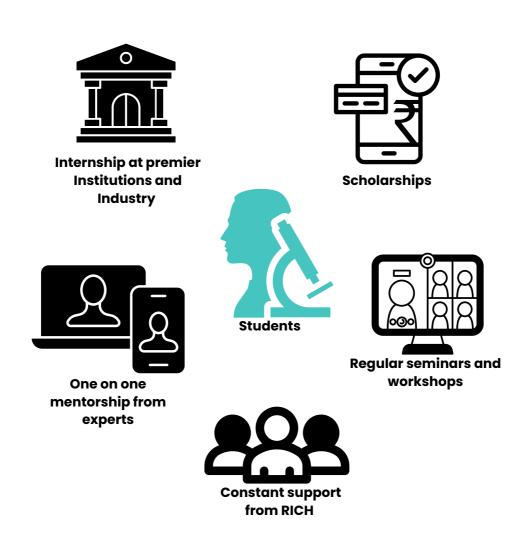


Seminar 4- 12th July 2023

Identify Your Potential: Empowering Personalities and Building Careers by Ms. Gowri Ramani, Executive and Leadership Coach, India



OVERVIEW OF SUPPORT PROVIDED



MEASURING IMPACT

Measuring impact is indeed a crucial aspect of any programme, and it demonstrates a commitment to effectiveness and accountability. By employing a data-driven approach, our aim was to systematically assess the programme outcomes and make informed decisions for improvement. In this exercise, quantitative feedback helped us to have a constructive analysis and measurable outcome while qualitative feedback helped us to have contextual understanding and in-depth insights related to programme. By combining both types of feedback, we can have attempted to provide a comprehensive and compelling narrative about the impact.

Survey forms were distributed to capture feedback from both students and mentors, with the intention of assessing the programme's impact. Our goal is to enhance the programme by leveraging the feedback received from students and mentors. These forms focused on gathering data concerning the programme's strengths and weaknesses, the effectiveness of mentorship relationships, and the influence of the programme on students' academic and professional development. RICH conducted a thorough analysis of the data to illustrate the programme's impact.

Key Indicator	Data/ Outcome	
Number of applications received	245	
Number of colleges/universities participated	85	

Key Indicator	Data / Outcome
Number of institutions/industry partners onboarded for the programme	6
Number of students completing their internship successfully	21
Number of students to get an internship extension at paired institute/industry	4
Number of participants who get admission into higher programmes (Masters/PhD)	8
Number of seminars conducted	4
Number of mentors onboarded	21
Number of mentoring session conducted	An average of 2 sessions per UG student and 4 sessions per PG Student

Students Feedback

Key Indicator

Qualitative data / Outcome

Impact of the scholarship on the student's decision to pursue the internship. The responses from the students highlight the profound impact of the scholarship while pursing the internship. The students share how the scholarship eased financial burdens and boosted their confidence in their chosen fields. Overall, the scholarship played a important role in enabling these students to focus on their education and career development without the hindrance of financial constraints.

66

"Since I was still a student, I couldn't really afford to go to a different city and do my internship for half a year. I couldn't burden my family with all the financial help that I would need to do my internship in Hyderabad. So the scholarship was one of the important factor that helped me pursue this opportunity. I know if I'd get in, I'll be able to fend for myself without asking for financial aid from anyone."

Ms. Sowmya S., intern at DRILS

- 9

Impact of Mentorship Support on Academic and Career Growth Mentorship has been instrumental in our students 'journey, offering guidance on career choices, exposure to emerging STEM fields, and bridging theory with practice. It provided them with industry insights, enhanced project quality they were working on, and facilitated networking opportunities. Most importantly, mentorship boosted scholars' confidence, empowering them to excel in STEM and contribute significantly to their chosen fields.



"The mentorship support from Mr. Narasimha Reddy Dondeti and Mr. Suneelshekhar Yapara from Syngene International has been a cornerstone of my academic and career growth, offering invaluable guidance and insights that have shaped my journey in significant ways. They have enriched my academic journey by providing real-world context, skill development, networking opportunities, project guidance, career insights, and the confidence to pursue my aspirations in the STEM industry."

Ms. Akshita Kulshrestha, intern at CSIR-CCMB

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Students Feedback

Key Indicator

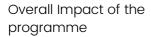
Qualitative data / Outcome

Impact of Seminars on STEM Career Aspirations The seminars played a vital role in shaping students' STEM career aspirations. They expanded horizons, provided role models, and imparted essential skills, with a strong emphasis on communication and personal growth. These seminars have effectively equipped students for impactful careers in STEM.



"The seminars were the direct one-to-one opportunities to interact with eminent dignitaries and professionals from diverse organizations. Their deep insights and profound experiences definitely guided me. They clarified my doubts in case I had one. They entertained all our doubts and it would otherwise be impossible to interact with such eminent person without this initiative of RICH."

Ms. Sreejani Sen, intern at Aurigene Oncology



Skills acquired during the programme have significantly impacted scholars' academic studies and career prospects. Enhanced understanding, bridging theory and practice, improved analytical and problem-solving abilities, and boosted confidence in handling advanced laboratory techniques. These skills, like data analysis, project management, and effective communication, provide a strong foundation for successful STEM careers.



"Being a part of this programme has really shaped how I approach my academic studies and think about my future career. One big thing is the problem-solving skills I've picked up. I've learned how to break down complex issues into manageable parts, which has been a game-changer. The hands-on experience in this programme has given me a taste of what it's really like out there. I've realized that it's not just about knowing stuff; it's about applying what you know to real situations."

Ms. Hafsa Anam, intern at DRILS

Mentors Feedback

Key Indicator

Qualitative data / Outcome

Impact of the mentorship on students

The mentorship programme is perceived to have a positive impact on students' academic and professional development. Mentees benefited from the programme by gaining new ideas through discussions and sharing experiences. It has also helped them in areas like career opportunities, interview skills, and communication development. Overall, the mentorship programme is seen as a valuable resource for enhancing students' academic and professional growth.

"I think that mentorship programme had a powerful impact on the academic and professional development as they used to get new ideas during the course of discussion. It's incredible to see their passion and determination, and I'm happy to be a part of their journey."

Mr. Varun Ahuja, Head - Toxicology, Syngene

Important aspects of the mentorship programme on students' academic and professional development Aspects of the mentoring programme that have been most effective in supporting students' academic and professional growth include discussions on career opportunities, presentation skills, and career development. These discussions have provided valuable guidance and insights to help students excel in their academic and professional pursuits.

"The mentorship programme was good. We discussed on career development, presentation skill and future opportunities. It helps the mentees to know where and how to proceed in career. As a mentor, I was committed to nurturing their talents and guiding them towards success."

Mr. Md Merajuddin, Senior Research Investigator, Syngene

92%

Satisfaction level of students and mentors with the programme

Partners Feedback

Key Indicator

Qualitative data / Outcome

Thoughts of our programme partners

The programme has had a positive and significant impact, enabling partners to support and accommodate bright women in their scientific programmes, contributing to a more inclusive research environment.

"We were very happy to partner with RICH. I must say that our experience with the programme has been excellent. We were very happy with the students. Most of the facility members here expressed very good feedback about them and they have said that they would like to have such students back."

Dr. Kiranam Chatti, Head, Sr. Principal Research Scientist, DRILS

- 66-

"This programme supported by RICH, is an amazing programme. CSIR-CCMB is happy to be a part of this programme and accomodate bright women in our scientific programme and then train them for a period of six months. Such a training would enable them to persue science as a career beyound their Masters or Bachlors programme."

Dr. Vinay Nandicoori, Director, CSIR-CCMB

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"I really appreciate the programme, initiated by RICH, as they are encouraging women students. I instantly accepted to contribute to the programme and told them to send the students for training. We tried to give them a good learning experience."

A.V.S. Reddy, Managing Director, Appidi Healthcare

LIMITATIONS AND LEARNINGS

1. Outreach

Initially, we aimed to draw applications from rural and semi-urban areas of Telangana but we also received applications from urban regions across India. Since these students from other parts of India fit our criteria and we did not want to deprive any deserving candidate of the opportunity, we chose to onboard them. For the next cohort, we intend to implement a focused outreach strategy. Our goal is to ensure that at least 80% of applicants hail from Telangana's rural and urban areas, with the remaining 20% from other states.

2. Student academic calendar

During the first cohort, we observed that releasing applications in August posed challenges, as students were deeply engrossed in their academic studies and hesitant to commit to an internship. Additionally, undergraduate students expressed concerns, as they could only undertake internships during their summer break (May-June) after completing their 4th or 6th semester. To address this, we plan to release applications for the second cohort in December 2023 and finalise candidate selection and pairing by the end of April 2023. This way, undergraduate students can commence their internships in May-June in alignment with their academic schedule.

For PG students, the programme was originally designed to support them in conducting their dissertation projects as internships at partnered institutions or industries. However, we encountered limited interest from students currently pursuing master's degrees for such an arrangement. Furthermore, those PG students who did apply were often unable to undertake internships as their dissertation projects due to constraints imposed by their college or institution administrations.

In the next cohort, we ensure that PG students submit prior permission letters from their institutions to undertake internships as dissertation projects, facilitating better readiness for their final semester under the programme.

3. Retention after Selection

Some students from the first cohort declined internship opportunities because of long hours of work, transportation and in favour of better job offers. To address this challenge for the second cohort, we aim to provide internship opportunities at the right time, as per their academic calendar ensuring that students can fully commit. We will also sensitise the final applicants about the possibility of having to travel long distances and to work extra hours as per the partner entity's location and schedule, so that the students are fully aware of the programme rigour and their responsibilities well before accepting the internship offer.

4. Institution Fees and Charges

Institutions like CSIR-CCMB and IICT have established research and training programmes that involve fees for research, training, and accommodation. While these institutions are willing to support our programme, they had requested that students apply through their portals and cover the programme fees. For the first cohort, students were responsible for the fee payment. To address this, we plan to allocate funds for such situations, ensuring that there is no disparity in our support for students.

NEXT STEPS

As we look back on the inspiring journey of the Women in STEM Scholarship and Mentorship Programme, we recognise that our mission to empower women in STEM is an enduring commitment. The programme's impact has been profound, yet there is much more ground to cover. Building on the programme's successes, lessons learned, and the invaluable support of our partners and stakeholders, we are excited to outline our future plans for expanding and enriching the programme. Our vision is to foster gender equality, research ecosystem and excellence in STEM fields on an even broader scale.



01. Broadening geographic reach

Geographical Expansion: Expanding the programme's coverage nationwide to provide equal opportunities for young women from diverse backgrounds across India.

Regional Partnerships: Creating regional partnerships in underserved areas to enhance programme outreach, mentorship, and support for participants.



02. Scaling up participant numbers in the next cohorts

Expanding Scholarships: Our commitment includes increasing scholarship and mentorship availability, accommodating more female STEM students.



03. Enhancing Institution/Industry collaboration

Broadening Industry Network: We aim to expand our institution and industry partnerships, providing students with a wider range of internship projects to enhance their research and development exposure.



04. Enhanced mentorship structure

Diverse Expertise: We plan to expand our mentorship network by engaging experienced professionals, researchers, and STEM leaders from different domains to provide tailored guidance to programme participants.



05. Strategic Advocacy

Strategic Advocacy: We aim to actively engage in strategic advocacy to drive systemic change, influencing policies promoting STEM education.

CONCLUSION

The Women in STEM Scholarship and Mentorship Programme, guided by dedication and fortified by invaluable partnerships, has illuminated a path toward a future where gender equality in STEM is not an aspiration but an expectation.

As we reflect on the journey thus far, we are filled with gratitude for the efforts of our students, mentors, supporters, and collaborators. The expansion, inclusivity, and empowerment detailed in our future plans will become our reality. Together, we will empower more women to dream, aspire, and achieve in the world of STEM.

In closing, we extend our deepest gratitude to all who have made this journey possible. We invite you to join us in the continued pursuit of a brighter, more inclusive STEM landscape, where the contributions of women are celebrated and where innovation knows no boundaries.

The Women in STEM Scholarship and Mentorship Programme is not just a programme; it is a promise—a promise of progress, a promise of potential, and a promise of endless possibilities.



ACKNOWLEDGEMENTS

We express our gratitude to Biocon Foundation, our funding partner, for their invaluable support in achieving our mission.

We extend our heartfelt thanks to our esteemed programme partners: CSIR-CCMB, DRILS, DRL, Bharat Biotech, Aurigene Pharmaceutical Services and Appidi Health Care for their generous accommodation and provision of internships to our students.

Our appreciation goes to our outreach partners, including EdVenture Park, Telangana Academy for Skill and Knowledge (TASK), TRICOR Team of the Tribal Welfare Department, Telangana, and Osmania University, Telangana, for helping us reach our target audience.

Special thanks to Syngene and their mentors for their unwavering support and guidance to our students throughout their journey. Your contributions have been instrumental in our success.

Contact

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