Dhithi Reddy

Bengaluru, India | dhithireddy@gmail.com | +91 6366637373
linkedin.com/in/dhithi-reddy-1167b4430 | dhithireddy.com

Aspiring chemical and biomedical engineer with hands-on research in nanoparticle therapies, blood–brain barrier drug delivery and biomedical diagnostics, a patent application for an adaptive incubation system, and community health and sustainability initiatives.

EDUCATION

National Public School, Koramangala, Bengaluru, India *CBSE*

- Intended major: Chemical Engineering / Biomedical Engineering
- **SAT:** 1540 / 1600
- **AP Scholar (2026)** – recognised for academic achievement in Advanced Placement examinations
- **CBSE Grade 10 Social Science:** 98/100, the highest mark among approximately 96 students

RESEARCH & INNOVATION

Patent Application, Indian Patent Office *Filed 1 October 2026*

- **Title:** An Adaptive Incubation System and Method for Maintaining a Controlled Thermal Environment (Application No. 202641117891)
- Developed an Arduino-based incubation system that monitors and regulates incubation conditions using temperature sensors, an LCD, a relay-controlled heating bulb and a fan.
- **Status:** published 9 October 2026; awaiting request for examination. Verifiable on the Indian Patent Office Public Search Portal.

Nanoparticle Researcher, Devaraja Sannaingaiah Lab, Tumkur University, Karnataka *Grade 11 | 4 months*

- Conducted two concurrent laboratory projects investigating antioxidant mechanisms, anti-inflammatory pathways and nanoparticle-based therapies.
- Performed experiments, analysed oxidative stress markers, and edited three research manuscripts (one published, one under review).

Neuroscience Researcher, ThinkNeuro Research Program *Grade 11 | 4 months | 50 hours*

- Investigated Alzheimer's disease and therapeutic delivery across the blood–brain barrier, focusing on lipid nanoparticles as potential carriers for antibody-based therapies.
- Analysed data using R, collaborated asynchronously across time zones, and co-authored an internal research report.

Biochemistry & Pharmaceutical Research Assistant, SHRM Biotechnologies *Grade 12 | 5 months*

- Reviewed medicinal plant phytochemicals for antibacterial applications and their potential as antibiotic adjuvants.
- Examined mechanisms of action, antibiotic resistance and potential clinical applications.

Student Biomedical Researcher, University of Pennsylvania, Biomedical Research Academy *Grade 12 | 3 weeks*

- Explored biomedical diagnostic techniques, including ELISA, blood typing and Cas12a-based diagnostics.
- Investigated influenza HA/NA vaccine targets, presented findings, and gained introductory Python programming experience.

Evolutionary Biology Research Intern, Pharmint, Fermat Research Internship *Grade 11 | 5 weeks*

- Analysed Darwin's finch beak data using R to investigate natural selection pressures.
- Completed an independent research project applying statistical analysis to evolutionary biology.

OLYMPIADS & COMPETITIONS

- Gold Award, Hong Kong International Mathematical Olympiad (HKIMO), Heat Round 2026 *Grade 12*
- Gold Honour, Asia International Mathematical Olympiad (AIMO) Open Contest 2026, Trial Round *Grade 12*
- Silver Award, Singapore International Math & Science Olympiad (SIMSO) 2026, National Round *Grade 12*
- Gold Award, Thailand International Mathematical Olympiad (TIMO) 2025–26, Heat Round *Grade 11*
- Bronze Award, FERMAT Mathematical Olympiad 2025–26, National Round *Grade 11*
- Participant, Asian Science & Mathematics Olympiad (ASMO), Mathematics National Round *Grade 11*

ACADEMIC ENRICHMENT

Program Scholar, IIT Madras, Department of Biotechnology *Grade 12 | 8 weeks*

- Studied biomolecules, proteins, DNA, bioinformatics, PCR and genetic engineering.
- Explored molecular system design beyond the school curriculum.

Program Scholar, IIT Madras, Department of Chemical Engineering *Grade 11 | 8 weeks*

- Studied thermodynamics and process engineering through lectures and graded assessments.
- Earned 90% in the final examination.

LEADERSHIP & COMMUNITY IMPACT

Founder & Social Impact Project Lead, 1M1B *Grades 11–12*

- Collected 200 kg of electronic waste and reached 3,000+ students across 12 schools and community sites.
- Coordinated with recycling partners and supported the provision of water filters to 4 schools.

Public Health Outreach Volunteer, Gullab Sevaa Foundation *Grades 9–12*

- Created cervical cancer awareness materials and supported HPV vaccination outreach across schools and factories.
- Contributed to prevention campaigns reaching more than 1,000 people.

Youth Ambassador & Advisory Board Reviewer, HundrED *Grade 11*

- Engaged with global youth changemakers on education and the UN Sustainable Development Goals.
- Reviewed 20 global education innovations for the Planetary Health Spotlight.

CREATIVE ACHIEVEMENTS & LANGUAGES

- **Trinity College London, Piano:** Distinctions in Grade 1 and Grade 2 Theory, Merit in Grade 3 Theory; completed Grade 1 Practical.
- **Trinity College London, Theatre:** completed Grade 7 Theatre; performed a lead role in an environmental drama exploring resource scarcity and conflict.
- **French:** six years of study, developing conversational skills and practical language abilities.