

Rohan Reddy Tummala, MD

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Work Experience

- 2024 – present HCA Healthcare TriStar Centennial Medical Center: Transitional Year & Neurology Resident Physician
- Neurology residency begins with a 1-year transitional year (2024-2025) in Nashville, TN
- 2024 – present Cosmic Group, LLC: Founder and CEO
- Started a company investing in and forming healthcare startups and subsidiaries in other industries
- 2017 – 2019 Princeton University Neuroscience Tutor
- Selected by college and tutored eight students struggling with Princeton neuroscience courses
- 2017 – 2019 Kaplan Test Prep Instructor and Student Brand Ambassador
- Trained high school students preparing for college preparation tests such as ACT, PSAT, and SAT
 - Provided undergraduate students with resources to prepare for graduate school entrance exams
- 2015 – 2016 Princeton University TigerCall Student Employee
- Contacted Princeton alumni to increase engagement with the Annual Giving campaign

Education

- 2019 – 2024 **University of Tennessee Health Science Center (UTHSC) College of Medicine.** Doctor of Medicine (M.D.), May 2024
- 2015 – 2019 **Princeton University.** Bachelor of Arts in Molecular Biology; Certificate in Neuroscience
- 2011 – 2015 **Ravenwood High School.** Graduated as valedictorian with the highest GPA in school history

Honors and Awards

- 2022 **Imhotep Honor Society.** Inducted in 2022 at UTHSC for exemplary service and leadership contribution to medical student life
- 2019 **Sigma Xi Scientific Research Honor Society.** Nominated and inducted in 2019 for outstanding Princeton University senior thesis
- 2015 **TN State AP Scholar and National AP Scholar.** State AP Scholar awarded to one male and female in Tennessee with the highest average on the highest number of Advanced Placement exams
- 2015 **Valedictorian.** Graduated as rank 1 out of 462 from Ravenwood High School in Brentwood, TN

Research Experience and Accolades

- Feb. 2023 – present **University of Tennessee Health Science Center, Department of Neurology.** “Meta-Analysis of Mechanical Thrombectomy in the Treatment of Stroke in the Elderly Population.”
- Conducted statistical analyses, created figures, and drafted manuscript; abstract has been submitted
- Jan. 2021 – Feb. 2022 **Independent Research in Biostatistics.** “Swimmer Plot R Package to Streamline the Creation of Powerful Visual Timelines.”
- Selected to present at the 2022 American Statistical Association Conference on Statistical Practice

Aug. 2020 – Nov. 2021	<p>Independent Research in Biostatistics. “Two-Sample Corrgrams and Multidimensional Correlation Arrays.”</p> <ul style="list-style-type: none"> ▪ Invented novel graphical representation called the two-sample corrgram, a variant of the corrgram ▪ Independently published “corrarray” R package with streamlined functionality to create multidimensional correlation arrays, including two-sample correlation matrices ▪ 1st Place poster in 2021 American Statistical Association Conference on Statistical Practice ▪ Presented at Sigma Xi 2021 Student Research Showcase and 2021 Student Research Conference ▪ Presented at useR! 2022, an international statistics conference
June 2020 – Oct. 2021	<p>University of Tennessee Clinical Health. Mentors: Christine Lamey, M.D.; Jeffrey Nelson, M.D.</p> <ul style="list-style-type: none"> ▪ Presentation title: “Clinical and Socioeconomic Predictors of Palliative Care Use” ▪ Presented poster at UTHSC Longitudinal Scholar’s Project Showcase of Scholarly Research ▪ 1st Place Abstract & Poster Presentation at TN American College of Physicians 2020 Conference ▪ Qualified to national abstract and poster competition, representing Tennessee at the American College of Physicians 2020 Conference ▪ 2nd Place Annual Rural Health Association of Tennessee’s Virtual Research Poster Competition ▪ Presented at 2021 Tennessee Academy of Family Physicians' 72nd Annual Scientific Assembly
Feb. 2019 – Nov. 2020	<p>Independent Research in Bioethics. “Clarifying Brain Death: Identifying and Treating Reversible Coma with Regenerative Medicine.”</p> <ul style="list-style-type: none"> ▪ Presented abstract and oral presentation at Sigma Xi 2020 Annual Student Research Conference
July 2018 – Dec. 2020	<p>Princeton University, Department of Molecular Biology. Mentor: Jeffry Stock, Ph.D. Senior thesis: “A Meta-Analysis of Curcumin in Neurodegenerative Disease Treatment and Prevention.”</p> <ul style="list-style-type: none"> ▪ Presented at 2019 Ivy Plus Dining Directors Conference about curcumin’s neuroprotective effects ▪ Collaborated with Campus Dining in Project Spices & Alzheimer’s to develop healthy recipes
May – July 2017	<p>Vanderbilt University Medical Center, Department of Neurology. Mentor: Katty Kang, M.D., Ph.D.</p> <ul style="list-style-type: none"> ▪ Scored EEGs to characterize seizure occurrence in a Dravet syndrome mouse model of epilepsy
June – Aug. 2016	<p>Vanderbilt University Medical Center, Department of Medicine, Division of Diabetes, Endocrinology, and Metabolism. Mentors: Kevin Niswender, M.D., Ph.D., Richard Printz, Ph.D.</p> <ul style="list-style-type: none"> ▪ Performed site-directed mutagenesis to obtain DNA stocks of eight SNPs of the GLP-1 receptor in a precision-medicine type 2 diabetes drug discovery project
June – Aug. 2015	<p>Vanderbilt University Medical Center, Department of Radiology. Mentor: Calum Avison, Ph.D.</p> <ul style="list-style-type: none"> ▪ Conducted fat-water imaging and statistical analyses of adipocytes’ role in insulin production
July – Aug. 2014	<p>Vanderbilt University Medical Center, Department of Chemistry. Mentor: Libin Xu, Ph.D.</p> <ul style="list-style-type: none"> ▪ Applied analytical organic chemistry techniques to study Smith-Lemli-Opitz syndrome ▪ Purified ergosterol-derived oxysterol compounds using chromatographic techniques
June 2013	<p>Vanderbilt University Medical Center, Vanderbilt Kennedy Center, Department of Psychiatry. Mentor: Zeljka Korade, D.V.M., Ph.D.</p> <ul style="list-style-type: none"> ▪ Studied the cholesterol biosynthesis pathway and Smith-Lemli-Opitz syndrome in mouse model ▪ Dissected and collected mouse tissues for subsequent immunohistochemistry assays

Research Publications

Dec. 2020	Tummala RR. “A Meta-Analysis of Curcumin in Neurodegenerative Disease Treatment and Prevention.” <i>Princeton University Food & Agriculture Initiative, Year Three Learnings Report</i> . 2020 Dec.
Aug. 2020	Tummala RR. “Corrarray” R Package to Generate and Visualize Correlations of Dichotomous Data. <i>Comprehensive R Archive Network</i> , Package Version 1.2.0. 2020 Aug. http://www.bit.ly/corrarray

- July 2020 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." *University of Tennessee Health Science Center*. 2020 July.
<http://dc.uthsc.edu/lsp/7>
- June 2019 Tummala RR. "A Meta-Analysis of Curcumin in Neurodegenerative Disease Treatment and Prevention: Achieving Neuroprotection through a Medicinal Meal." *Princeton University*. 2019 June.
<http://arks.princeton.edu/ark:/88435/dsp013j333507x>
- Feb. 2019 Tummala RR. "Revisiting Brain Death: Restoring Consciousness with Cutting-Edge Research." *The Journal of the International Youth Neuroscience Association*. 2019 Feb; 2(7).

Research Posters and Abstracts

- June 2022 Tummala RR. Visualizing Dichotomous Data Correlations Using Two-Sample Corrgrams. useR! 2022 Conference; 2022 June; virtual conference.
- Oct. 2021 Tummala RR. Visualizing Dichotomous Data Correlations Using Two-Sample Corrgrams. Sigma Xi 2021 Student Research Conference; 2021 Oct; virtual conference.
- April 2021 Tummala RR. Visualizing Dichotomous Data Correlations Using Two-Sample Corrgrams. Sigma Xi 2021 Student Research Showcase; 2021 April; virtual showcase.
- Feb. 2021 Tummala RR. Visualizing Dichotomous Data Correlations Using Two-Sample Corrgrams. American Statistical Association Conference on Statistical Practice; 2021 Feb; virtual conference.
- Nov. 2021 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." Rural Health Association of Tennessee 6th Annual Academic Poster Contest; 2020 Nov; virtual contest.
- Oct. 2021 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." 2021 Tennessee Academy of Family Physicians 72nd Annual Scientific Assembly; 2021 Oct; Gatlinburg, TN.
- April 2021 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." UTHSC Department of Medicine and Alpha Omega Alpha Medical Student Virtual Research Symposium; 2021 Apr; virtual symposium.
- April 2021 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." American College of Physicians 2020 Abstract Competition; 2021 April; virtual contest.
- Oct. 2020 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." American College of Physicians Tennessee Chapter 2020 Abstract Competition; 2020 Oct; virtual contest; chapter winner.
- July 2020 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." UTHSC Longitudinal Scholar's Project Showcase; 2020 July; virtual showcase.

Oral Research Presentations

- April 2021 Tummala RR. Visualizing Dichotomous Data Correlations Using Two-Sample Corrgrams. Sigma Xi 2021 Student Research Showcase; 2021 April; virtual showcase.
- Nov. 2020 Tummala RR. Clarifying Brain Death: Identifying and Treating Reversible Coma with Regenerative Medicine. Sigma Xi 2020 Student Research Conference; 2020 Nov; virtual conference.
- July 2020 Tummala RR, de Jesus AM, Tillett ND, Nelson JS, Lamey CM. "Clinical and Socioeconomic Predictors of Palliative Care Utilization." UTHSC Longitudinal Scholar's Project Showcase; 2020 July; virtual showcase.

- May 2019 Tummala RR. "A Meta-Analysis of Curcumin in Neurodegenerative Disease Treatment and Prevention: Achieving Neuroprotection through a Medicinal Meal." Senior Thesis Presentation; 2019 May; Princeton University, Princeton, NJ.
- Mar. 2019 Tummala RR. "A Meta-Analysis of Curcumin in Neurodegenerative Disease Treatment and Prevention: Achieving Neuroprotection through a Medicinal Meal." Ivy Plus Dining Directors Conference; 2019 Mar; Princeton University, Princeton, NJ.

Community Service and Volunteering

- 2023 – pres. Tennessee Science Bowl Volunteer: Science Judge
- Reviewed National Science Bowl questions for accuracy prior to high school science competition
 - Ensured proper pronunciation of science questions and operated buzzer system during competition
- 2021 – pres. Princeton University Alumni Schools Committee: Interviewer
- Interviewed high school students applying to Princeton University
- 2019 – 2020 Council for International and Area Outreach
- Volunteered at the Wellness and Stress Clinic, providing free medical care in Memphis, TN
- 2019 – 2020 Memphis Street Health Community Service
- Volunteered at food donation sites to serve meals to the homeless population in Memphis, TN
- May 2018 – Princeton Internships in Civic Service: Intrepid College Prep
- Aug. 2018
- Collaborated with administrators to perform network-level tasks in preparation for school year
- 2015 – 2017 University Medical Center of Princeton at Plainsboro Volunteer

Organizational Involvement

- 2022 – 2024 Global Healthcare and Innovation Group: Co-Founder and Co-President
- Started an international organization to convene healthcare students and providers from over 30 countries to discuss solutions to challenges in healthcare worldwide
 - Created website independently: <https://www.bit.ly/ghig1>
- 2019 – pres. American Academy of Neurology
- Executive Board Member of UTHSC Chapter of the Student Interest Group in Neurology
- 2019 – pres. American College of Physicians
- 1st Place Abstract & Poster Presentation at TN American College of Physicians 2020 Conference
 - Qualified to national abstract and poster competition, representing Tennessee at the American College of Physicians 2020 Conference
- 2019 – pres. Tennessee Medical Association
- Spoke about novel healthcare systems to maximize access to affordable healthcare at the 2022 Student Leadership Summit training students to become effective physician leaders
 - Advocated for healthcare reform at Doctors' Day on the Hill 2022, an event for physicians and medical students to engage with state legislators through face-to-face discussions on Capitol Hill
- 2019 – 2023 American Academy of Family Physicians
- Presented at 2021 Tennessee Academy of Family Physicians' 72nd Annual Scientific Assembly
 - Attended events including Advocacy Primers and Practice Enhancement Seminars

Institutional Service at UTHSC

- 2021 – 2024 Student Committee on Research in Education: Research Resources Team
- Collaborated with the Office of Research to prepare research resources for the College of Medicine
- 2019 – 2024 Student Interest Group in Neurology: Executive Board Member
- Coordinated events to connect and encourage students pursuing a specialty in neurology
- 2019 – 2024 Medical Student Executive Council: Committee Member: Support and Advisory Group for Evaluations
- Analyzed student evaluation results to suggest areas for curricular and campus improvement
- 2019 – 2021 UTHSC Student Surgical and Neurosurgical Societies: Executive Board Member
- Discussed with surgeons about their career paths and work and networked with students
- 2019 – 2024 UTHSC South Asian Medical Science Alliance
- Engaged with medical students coming from or interested in South Asian culture

Academic Leadership at Princeton

- 2017 – 2019 Princeton University Molecular Biology Undergraduate Committee Member
- Selected by the Molecular Biology department to improve and plan programs for the department
- 2017 – 2019 Princeton University Wilson College Residential College Leadership Team
- Selected by Pace Center for Civic Engagement and Director of Studies to improve student life
- 2017 – 2019 Princeton University Wilson College Peer Academic Adviser
- Selected by Director of Studies to mentor first- and second-year students in their academic pursuits
- 2016 – 2019 Princeton University Wilson and Butler College Council: Academic Chair
- Programmed academic events such as faculty dinners to connect students to faculty across campus
- 2015 – 2019 Princeton University Biological Sciences Society: President and Treasurer
- Promoted awareness of biological sciences and organized student discussions with professors

Healthcare Organizational Leadership at Princeton

- 2017 – 2019 Princeton Health Professions Advising: Peer Adviser
- Selected by HPA Office to guide pre-health students through programming such as speaker panels
- 2016 – 2019 Princeton Partners in Health Engage: Founder, President, and Team Coordinator
- Helped build the movement for the right to health via fundraising and global health advocacy
- 2015 – 2017 Unite for Sight: Vice President of Fundraising Outreach
- Fundraised for sight-restoring surgeries in Ghana, Honduras, and India
 - Received Global Health Society Chapter of the Year Award in 2015-2016
- 2015 – 2019 Princeton Premedical Society: Premedical Mentor
- Mentored premedical students and connected them to alumni in the medical field
- 2015 – 2019 Minority Association of Premedical Students: Academic Liaison
- Coordinated fundraisers for global health charities and mentored underserved students

Skills

• Laboratory Skills

- Biology: Immunohistochemistry | Polymerase Chain Reaction PCR | Dissections | Microscopic Analysis
- Analytical Chemistry: Flash Column Chromatography | HPLC | Mass Spectroscopy | NMR | UV Visualization
- Drug Discovery: Site-Directed Mutagenesis | Plasmid Preparation | DNA Restriction Enzyme Assay | Cell Culture
- Neurology: Genotyping | Western Blotting | Confocal Microscopy | Neural Sectioning with Cryomicrotome

- **Technical Skills** (Computer Languages, etc.): Java, SQL, HTML, R, MATLAB, SPSS, Microsoft Office, Advanced Statistics, Regression Analysis, Neural Networks, Computer-Aided Design, Patent Applications, Web Development

Hobbies and Interests

- Yoga, Meditation: practicing daily and attending events at the Isha Institute of Inner-Sciences
- Tennis: varsity tennis in high school followed by weekly casual play; table tennis and other racket sports
- Cycling: built an electric bicycle using a front-wheel conversion kit
- Martial arts: black belt in taekwondo
- Computer Programming, Statistics: creating websites; invented the two-sample corrgram using R
- Innovation: inventing devices and systems; patent pending on multi-functional device