

# Dr. Keshav Kumar

The Brown School, Washington University in Saint Louis  
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<https://toriolalab.wustl.edu/current-team/>

## PROFESSIONAL SUMMARY

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Pursuing master's on the prestigious Brown School Global Health Scholar Award at Washington University in St. Louis, USA. Headed metabolomics study on breast cancer and enrolled participants in the DUET Study at Washington University School of Medicine. Analyzing the CDC EHDI large dataset using R studio to create parameters to compare states' performance. Graduated from India's top medical school with a Bachelor of Dental Surgery from Banaras Hindu University. Worked professionally under various leadership capacities as a medical officer at Tata Memorial Center during the COVID pandemic overseeing a ward with 60+ patients and in the Head and Neck Oncology Department of Tata Memorial Center, South Asia's largest cancer centre, serving 400,000 cases annually. As a public health officer headed a cancer screening program for a population of nearly 5 million in the remote village of Bihar. India's top 4 finalists for Inter-Institutional School of Diagnostic Innovation in Biodesign Fellowship.

## ADDITIONAL SKILLS

- Educator and Professional motivator
- Data Analysis- **R, Python, Stata, SPSS, SQL**
- Data Visualization- **R, Tableau, Office**
- Healthcare Management
- Basic life support (BLS)
- Volunteer and community mobilizer
- Certification & interdepartmental coordinator
- Innovator & entrepreneur
- Excellent communication
- Data-driven leadership
- Online course on Excel 2016: Cleaning Up Your Data
- Online Course on R Essential Training: Wrangling and Visualizing Data, January 2023
- completed 2-day E-Workshop on data analysis with Python.
- completed 2 credit-hour master course in Oral Cancer Management 2021
- Accomplished 3 credit-hour short course in Clinical Research Methodology.

## PROFESSIONAL EXPERIENCES

**Washington University in St. Louis, MO, USA** March, 2023 –Present  
*Graduate Research Assistant (Center for Public Health System Sciences)*

- Worked on the CDC's EHDI state data from 2007 to 2020 for 50 states and the District of Columbia to analyze and visualize the state's performance by creating a set of new parameters out of the data variables. All the analysis and visualization is done using R.
- All these analysis and visualization is being made available for the general public on a website hosted by Washington University in St. Louis.

**Washington University School of Medicine, MO, USA** May, 2023 – August, 2023  
*Graduate Student, Toriola Lab, Department of Surgery, Public Health*

- Led a study to investigate the association of amino acids, carbohydrates, energy, and peptides on mammographic breast density.
- This research was the first of its kind to pave the way for breast cancer prevention strategies from dietary metabolites.
- Worked in the DUET Clinical study to recruit and consent participants.

**Washington University in St. Louis, MO, USA** September 22, 2022– March, 2023  
*Engagement Ambassador*

- Engaged with Washington University alumni, parents, and friend donors of WashU and learn a different perspective of people across the rainbow specialty.
- Delivered my management and sales skills to build rapport with them and work towards fundraising for the university with their generous donation.

**Tata Memorial Centre (HBCH&RC), Muzaffarpur, India.**

February 2022–June 2022

*District Technical Officer*

- Led the public cancer screening & awareness program in 4,801,062 population. Conducted large-scale cancer screening and awareness campaigns to detect early-stage cancer from the community for definitive intervention and treatment at cancer research centers.
- Handling district-level screening data collection, cleaning, and analysis for research and reporting to higher centers.
- In rotation worked as Physician Assistant to Medical Oncologist for taking detailed initial history, consents for tests and chemo medication, Transcribing protocol on MOIS, counseling about side effects and dosing, making online prescriptions after consultant approval, grading chemo toxicity as well as medical management of palliative patients.
- Responsible for scheduling patients to the physician, follow-up cases, helping the physician in his administrative works, logistic management, inter/intra department liaising, Pre-certification for government aid, Documentation & verification for an Insurance claim.

**Tata Memorial Centre (MPMMCC & HBCH), Varanasi, India.**

April 2021–October 2021

*Medical Officer*

- Served in rotation COVID intensive care unit and wards for clinical management of patients. Consultant ward rounds and bedside teaching enhanced the clinical as well as medical management of patients.
- Worked on clinical research to interview participants and place phone calls every Saturday, recording treatment outcomes, updating medical records, data entry, scheduling upcoming visits, and analyzing the large data set of hospitals using statistical software for research & literature review.
- Worked in the Head and Neck oncology department and learned holistic cancer care while serving in OPD, wards, and operation theatre. Evaluating new and follow-up oral cancer cases in OPD, performed minor day care surgical procedures biopsy of the lesion, wound dressing, Ryles tube insertion, cleaning and dressing of wounds/suture sites. In the operation theatre, assisted surgeries as a secondary or tertiary surgeon. Maintaining surgical logs, verifying consumable instruments and medications in the operation theatre, and communicating with surgeons and consultants.

**Max7 Hospital, Purnia, India.**

December 2020–March 2021

*Resident Internship*

- Learned the multispecialty corporate hospital work culture, disease diagnosis, and critical care management. Under the consultant, supervision learned OPD management and disease treatment approach.
- Conducted a Public outreach program on tobacco cessation. Research and seminar was part of everyday clinical activity. Interdepartmental liaising and interpersonal communication enhanced working in corporate culture.

**Faculty of Dental Sciences & Sir Sunderlal Hospital (IMS) Banaras Hindu University. Varanasi, India**

December 2019–December 2020

*One-Year Rotary Internship*

- Served all nine streams of dentistry in addition to the emergency department at medical college, university student health center, and employee health center. This experience boosted my confidence and taught me minute details while talking to and treating a patient.
- As a fresh healthcare professional graduate working under a senior consultant brought a vision and approach to problem-solving. Learned basic life-saving emergency management, community outreach programs related to cancer screening, and tobacco cessation awareness was part of the work and grading. Got comprehensive life immersion experience.

## **PROFESSIONAL PRESENTATION**

**Poster Presentation at Cancer Research Symposium held at Siteman Cancer Center.**  
Washington University School of Medicine, Missouri, USA Nov 10, 2023

**Invited to conduct a 2-hour Instructional session at the 2024 Early Hearing Detection & Intervention Conference.**  
Denver, USA Mar 17-19, 2024

## **LICENSES & CERTIFICATION**

CITI Program Certification course with Human Research as Curriculum group, Record ID 51270461	September 2022–Present
HIPPA101 Privacy Compliance Training	July 2022–Present
Certified Advanced Cardiovascular Life Support (ACLS)	January 2021–January 2023
Experienced Provider. AHA, Credential ID 215628517371	
Certified Basic Life Support (BLS) for Healthcare Providers. AHA	January 2021–January 2023
Credential ID 215608517302	

## **COMMITTEES & BOARDS**

Founder & President of the cell to society, Brown School, WashU	Sep 2023–Dec 2024
Review Board member of Acta Scientific Dental Sciences Journal.	May 2020–Present
Member of Gephardt Institute's Graduate Impact Forum Advisory Committee	Sep 2022–May 2023
Editorial Board member of college annual Magazine	April 2018–April 2019

<https://issuu.com/wisdom2018/docs/wisdom18>

## **VOLUNTEERING**

**Deshpande Foundation, Varanasi, India.** January 2017–March 2020  
*Master Leader, LEAD. Ek Soch Sandbox*

- Worked on self-initiated leadership projects, as a Leader addressed community problems in alignment with SDG 3 for 3 years.
- Addressed oral hygiene, mosquito-borne diseases, and other problems under 13 leadership projects executed in underprivileged communities in the Varanasi region.
- Promoted from leader to Master Leader Level for the grand success of community projects.
- Earned a 2-star Appreciation certificate for completing 13 leadership initiatives in society.

## **AWARDS & HONOURS**

- Top 4 finalists for Inter-Institutional School of Diagnostic Innovation in Biodesign (SIB) Fellow: Program for building a next-generation pool of diagnostic innovators and entrepreneurs".
- Reserved candidate for Commonwealth shared scholarship 2022 for the MSc Clinical Oncology Program at the University of Birmingham, London.
- Received Brown School Global Health Scholar Award
- Secured 1<sup>st</sup> Rank in Orthodontics and dentofacial orthopedics subject in 4<sup>th</sup> year BDS Professional examination in class.
- Distinction in 2 Subjects Orthodontics & dentofacial orthopedics and Prosthodontics & Implantology in the 4<sup>th</sup> year BDS Professional examination.

- Member of Indian Youth Delegation to China 2018 representing Indian youth on an international forum, organized by the Ministry of Youth Affairs & Sports, Government of India, and People's Republic of China.
- Competed in Peoples Padma Quiz 2018 & grabbed the chance to visit Rashtrapati Bhawan (President's House) to witness the Padma Award Ceremony.
- Invited as a Special Guest on the 73<sup>rd</sup> Republic Day of India to hoist the national flag followed by a motivational session for children and teachers in Little Star School, Varanasi.

## PUBLICATION

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**Kumar, K.**, Kumar, P N, Kumar, D, Kumar, M, Krishna, K, Vaishali (2020). Graphical Trends and Machine Learning Forecast of COVID-19 Around the Globe. *Acta Scientific Dental Sciences*, 3(8). <https://actascientific.com/ASDS/ASDS-04-0941.php>

**Kumar, K.**, & Kumar, P. (2021). Learning local anesthetic techniques in the dental college of Purvanchal Region, India: A cross-sectional questionnaire study. *Journal of Indian Association of Public Health Dentistry*, 19(3), 212–216. [https://doi.org/10.4103/jiaphd.jiaphd\\_167\\_21](https://doi.org/10.4103/jiaphd.jiaphd_167_21)

Singh, A. K., Agrawal, R., T, J., & **Kumar, K.** (2020). Extranodal diffuse large B cell Non-Hodgkin's lymphoma of maxilla: An immunohistochemical study based diagnostic approach. *Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology*, 32(2), 167–170. <https://doi.org/10.1016/j.ajoms.2019.10.011>

## EDUCATION

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<b>Brown School, Washington University in St. Louis</b>	St. Louis, MO, USA
<i>Master of Public Health</i>	Graduation expected May 2024
Specialization in Epidemiology/Biostatistics	

<b>Brown School, Washington University in St. Louis</b>	St. Louis, MO, USA
Artificial Intelligence and Big Data Analytics for Public Health (AIBDA)Certificate	Expected- May 2024

<b>Google Data Analytics Professional Certificate</b>	Expected Completion Jun, 2024
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<b>Institute of Medical Sciences, Banaras Hindu University</b>	Varanasi, India
<i>Bachelor of Dental Surgery</i>	October 2015, November 2019
Specialization in General Dentistry	

<b>Institute of Management Studies, Banaras Hindu University</b>	Varanasi, India
<i>Certificate course in Healthcare Management</i>	October 2018–July 2019

<b>University of Hong Kong, Hong Kong</b>	June 2019
<i>Online certification course in Implant Dentistry</i>	

<b>University of Pennsylvania, Philadelphia, USA.</b>	December 2018
<i>Online course on The Oral Cavity: Portal to Health and Disease.</i>	