

Sowmy Thuppal M.D., Ph.D.
Research Assistant Professor of Surgery
Division of Cardiothoracic Surgery
Southern Illinois University School of Medicine

EDUCATION

- Ph.D. **Tufts University, Sackler School of Graduate Biomedical Sciences** 2015
Boston, MA, United States
Clinical and Translational Science (Clinical Research)
Dissertation: Treatment of Human Immunodeficiency virus with zidovudine and tenofovir regimen in India: A comparative effectiveness study
- M.D. **I.M. Sechenov First Moscow State Medical University** 2001
Moscow Russia

POST DOCTORAL TRAINING

- **Southern Illinois University School of Medicine-Clinical Research** 2018-2019
Springfield, IL, United States
- **Purdue University, Department of Nutrition -Nutritional Epidemiology** 2015- 2018
West Lafayette, IN, United States

MEDICAL INTERNSHIP

Christian Medical College and Hospital, Vellore, India 2004-2005

PROFESSIONAL EXPERIENCE

Southern Illinois University School of Medicine, USA

- Research Assistant Professor of Surgery March 2019-Present
Division of Cardiothoracic Surgery
Faculty, Center for Clinical Research
Faculty, Global Health Program
- Post-doctoral research Fellow, Center for Clinical Research 2018-2019

Purdue University, Nutrition Science, USA

- Research Associate 2017-2018
- Post-doctoral research associate 2015-2017

Tufts University, Nutrition Infection Unit, USA

- PhD Candidate 2010-2015

Christian Medical College and Hospital, India

- Medical Officer, Antiretroviral Therapy clinic (HIV clinic) 2013-2014
- Research Medical Officer, Department of Gastrointestinal Sciences 2009-2010
- Senior Research Fellow, rotavirus surveillance project, Indian Council for Medical Research, Department of Gastrointestinal Sciences 2005-2009

Ramya Pediatric Clinic, India - Assistant Physician 2001-2004

CURRENT PROJECTS

1. Comparative Effectiveness study to compare medical treatment and Lung Volume Reduction Surgery in patients with severe emphysema, Role: PI

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2. Patient Identification Algorithm for Low-Dose Computer Tomography Screening (LDCT) for Lung Cancer: A Screening Initiative, Role: Co-PI
3. Efficacy and Effectiveness of Video Assisted Thoracic Surgery (VATS) and Robotic Thoracic Surgery (RTS) for lung cancer: A Randomized Control Trial (VARTS Study), Role: Co-I
4. A Prospective, Randomized, Single-Blind, Active Control Trial to Compare Safety and Effectiveness Of Liposomal Bupivacaine (Exparel) to Standard Bupivacaine HCl (Marcaine) for Pain Management in Patients Undergoing Video-Assisted Thoracoscopic Lobectomy (BEMP study), Role: Co-I
5. Objective Treatment Allocation with SBRT vs. Surgery in High Risk Patients with Early Stage Lung Cancer within an Accountable Care Collaborative Effort between Cardiothoracic Surgery and Radiation Oncology, Role: Co-I
6. Assessment of clinical outcomes and quality of life of emphysema patients after Lung Volume Reduction Surgery, Role: Co-I

PUBLICATIONS, Peer reviewed

Google Scholar Metrics (Updated April 17, 2019)

Citations	621	
h-index	14	h-index = number of publications with at least that number of citations
i10-index	16	i10-index = number of publications with at least 10 citations

1. Seadler B, **Thuppal S**, Rizvi N, Markwell S, Sawyer JD, McCullough K, Thomas M, Crabtree T, Hazelrigg SR. Clinical and Quality of Life Outcomes Following Lung Volume Reduction Surgery. *Annals of Thoracic Surgery*, 2019.
2. Ruan GJ, **Thuppal S**, Sawyer JD, Seadler B, Markwell S, Hazelrigg SR. Compensatory Hyperhidrosis and Quality of Life Post Sympathectomy in Palmar Hyperhidrosis. Accepted for Publication. *The American Surgeon*, April 2019.
3. **Thuppal S**, Markwell S, Crabtree T, Hazelrigg S. Comparison between the EQ-5D and the SF6D quality of life (QOL) questionnaires in patients with Chronic Obstructive Pulmonary Disease (COPD) undergoing Lung Volume Reduction Surgery (LVRS). Accepted for Publication. *Quality of Life Research*, 2019. <https://doi.org/10.1007/s11136-019-02123-x>
4. Ventura Marra M, **Thuppal SV**, Johnson EJ, Bailey RL. Validation of a Dietary Screening Tool in a Middle-Aged Appalachian Population. *Nutrients* 10 (3):345, March 2018
5. Jun S, **Thuppal SV**, Maulding MK, Eicher-Miller HA, Savaiano DA. Poor Dietary Guidelines Compliance among Low-Income Women Eligible for Supplemental Nutrition Assistance Program-Education (SNAP-Ed). *Nutrients* 10 (3): 327, March 2018
6. **Thuppal SV**, Shinyoung Jun, Alexandra Cowan and Regan Bailey. The Nutrition Status of HIV-infected US adults. *Curr Dev Nutr* September 2017, cdn.117.001636; DOI: <https://doi.org/10.3945/cdn.117.001636>
7. **Thuppal SV**, Clemens von Schacky, William S. Harris , Katherine D. Sherif , Nigel Denby , Suzanne R. Steinbaum , Bryan Haycock 8 and Regan L. Bailey. Discrepancy between

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- Knowledge and Perceptions of Dietary Omega-3 Fatty Acid Intake Compared with the Omega-3 Index. *Nutrients* 2017, 9(9), 930; doi:10.3390/nu9090930
8. Bailey RL, Fulgoni VL, Taylor CL, Pfeiffer CM, **Thuppal SV**, McCabe GP, and Yetley EA. Correspondence of folate dietary intake and biomarker data. April 26, 2017, doi: 10.3945/ajcn.116.148775, *AJCN* 2017
 9. McAnulty J, Akabas S, Paxson E, Sowmyanarayanan V. **Thuppal**, Saklani S, Tucker KL, Bailey RL. Fiber intake differs by race/ethnicity and by poverty in the United States. *Nutrition Today*- In Press, 2017.
 10. Regan L Bailey, Sharon R Akabas, Erin E Paxson, Sowmyanarayanan V **Thuppal**, Shilpa Saklani, Katherine L Tucker. Total Usual Intake of Shortfall Nutrients Varies With Poverty Among US Adults. *Journal of Nutrition Education and Behavior*- In Press, 2017.
 11. Gagandeep Kang, Sowmyanarayanan V. **Thuppal**, Rajan Srinivasan, Rajiv Sarkar, Beula Subashini, Srinivasan Venugopal, Kulandaipalayam Sindhu, Dhivya Anbu, Nathalie Parez, Lennart Svensson, Anuradha Bose. Randomized, double-blind, placebo-controlled trials of Racecadotril in the management of rotavirus and non-rotavirus pediatric diarrhea in the hospital and the community. *Indian Pediatrics*- In Press, 2016.
 12. Kathleen M. Hill Gallant, Connie M. Weaver, Dwight A. Towler, Sowmyanarayanan V. **Thuppal**, Regan L. Bailey. Nutrition in Cardio-Skeletal Health. *Advances in Nutrition*. In Press.
 13. Regan L. Bailey, Elizabeth A. Parker, Donna G. Rhodes, Joseph D. Goldman, John C. Clemens, Alanna J. Moshfegh, Sowmyanarayanan V. **Thuppal**, Connie M. Weaver. Estimating Sodium and Potassium Intakes and Their Ratio in the American Diet. *Journal of Nutrition*. March 2016. DOI: 10.3945/jn.115.221184.
 14. **Thuppal V.** Sowmyanarayanan, Christine A. Wanke, Abraham C. Ooriapickal, Farzad Noubary, Joshua T. Cohen, Mkaya Mwamburi, Jayaprakash Muliylil, Gagandeep Kang, George M Varghese, Priscilla Rupali, Rajiv Karthik, Rajkumar Sathasivam, Peace Clarence, Susanne A. Pulimood, Dincy Peter, Leni George. Toxicity and clinical outcomes in patients with HIV on zidovudine and tenofovir based regimens: a retrospective cohort study. *Trans R Soc Trop Med Hyg*, doi: 10.1093/trstmh/trv016
 15. **Thuppal V.** Sowmyanarayanan, Rajiv Karthik, Ooriapadical C Abraham, Christine A Wanke, Mkaya Mwamburi, Norma Terrin, Joshua T Cohen, Dilip Mathai, Jayaprakash Muliylil, Gagandeep Kang. Cost Estimation of First-Line Antiretroviral Therapy with Zidovudine/Stavudine as the Nucleoside Backbone in India: A Pilot Study. *Journal of the International Association of Providers of AIDS Care*, March/April 2015, 14 (2): 180-4
 16. Ann Mathewa, P.S. Sundar Rao, **Thuppal V.** Sowmyanarayanan, Gagandeep Kang. Severity of rotavirus gastroenteritis in an Indian population: Report from a 3 year surveillance study. *Vaccine* 32S (2014) A45–A48
 17. Anu Paul, Sudhir Babji, **Thuppal V.** Sowmyanarayanan, Mandeep Singh Dhingra, Sasirekha Ramani, Deepthi Kattula, Gagandeep Kang. Human and bovine rotavirus strain antigens for evaluation of immunogenicity in a randomized, double-blind, placebo-controlled trial of a single dose live attenuated tetravalent, bovine-human-reassortant, oral rotavirus vaccine in Indian adults. *Vaccine* 04/2014

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18. M Steffi Jennifer, Deepthi Kattula, **Thuppal V.** Sowmyanarayanan, Rajiv Sarkar, Gagandeep Kang. Health Utilization for Childhood Gastroenteritis in Southern India. *The Indian Journal of Pediatrics* 02/2014
19. Kulandaipalayam N C Sindhu, **Thuppal V.** Sowmyanarayanan, Anu Paul, Sudhir Babji, Sitara S R Ajjampur, Sophia Priyadarshini, Rajiv Sarkar, K A Balasubramanian, Christine A Wanke, Honorine D Ward, Gagandeep Kang. Immune response and intestinal permeability in children with acute gastroenteritis treated with *Lactobacillus rhamnosus* GG (LGG): a randomized, double-blinded, placebo-controlled trial. *Clinical Infectious Diseases* 02/2014, DOI: 10.1093/cid/ciu065
20. Indrani Mukhopadhyaya, Rajiv Sarkar, Vipin Kumar Menon, Sudhir Babji, Anu Paul, Priya Rajendran, **Thuppal V.** Sowmyanarayanan, Prabhakar D Moses, Miren Iturriza-Gomara, James J Gray, Gagandeep Kang. Rotavirus shedding in symptomatic and asymptomatic children using reverse transcription-quantitative PCR. *Journal of Medical Virology*, September 2013, 85 (9): 1661-1668
21. Rajiv Sarkar, Sitara S R Ajjampur, Ashok D Prabakaran, Jayanthi C Geetha, **Thuppal V.** Sowmyanarayanan, Anne Kane, Joanne Duara, Jayaprakash Muliylil, Vinohar Balraj, Elena N Naumova, Honorine Ward, Gagandeep Kang. Cryptosporidiosis Among Children in an Endemic Semi-urban Community in Southern India: Does a Protected Drinking Water Source Decrease Infection? *Clinical Infectious Diseases*, August 2013: 57 (3): 398-406
22. Kang G, Desai R, Arora R, Chitambar S, Naik TN, Krishnan T, Deshpande J, Gupte MD, Venkatasubramanian S, Gentsch JR, Parashar UD, Mathew A, Anita, Ramani S, **Thuppal V.** Sowmyanarayanan, Moses PD, Agarwal I, Simon A, Bose A, Arora R, Chhabra P, Fadnis P, Bhatt J, Shetty SJ, Saxena VK, Mathur M, Jadhav A, Roy S, Mukherjee A, Singh NB. Diversity of Circulating Rotavirus Strains in Children Hospitalized with Diarrhea in India, 2005-2009, *Vaccine*, 06/2013; 31(27): 2879-2883.
23. **Thuppal V.** Sowmyanarayanan, Patel T, Sarkar R, Broor S, Chitambar SD, Krishnan T, Arora R and Kang G. Direct costs of hospitalization for rotavirus gastroenteritis in different health facilities in India. *Indian J Med Res* 136, July 2012: 68-73
24. **Thuppal V.** Sowmyanarayanan, Ramani S, Sarkar R, Arumugam R, Warier JP, Moses PD, Simon A, Agarwal I, Bose A, Arora R, Kang G. Severity of rotavirus gastroenteritis in Indian children requiring hospitalization. *Vaccine* 30S. 2012: A167– A172
25. Christopher S, Verghis RM, Belavendra A, **Thuppal V.** Sowmyanarayanan, Kootallur NB, Kang G and Cooper BS. Transmission Dynamics of Methicillin-Resistant *Staphylococcus aureus* in a Medical Intensive Care Unit in India. *PLoS ONE*. 2011, 6(7): e20604. doi:10.1371/journal.pone.0020604
26. Ramani S, Paul A, Saravanabavan A, Menon VK, Arumugam R, **Thuppal V.** Sowmyanarayanan, Samuel P and Kang G. Rotavirus Antigenemia in Indian Children with Rotavirus Gastroenteritis and Asymptomatic Infections. *Clin Infect Dis*. 2010, 51(11):1284-1289
27. Sarkar R, **Thuppal V.** Sowmyanarayanan, Samuel P, Azara SS, Bose A, Muliylil J and Kang G. Comparison of group counseling with individual counseling in the comprehension of informed consent: a randomized controlled trial. *BMC Medical Ethics* . 2010, 11:8

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28. Tate JE, Chitambar S, Douglas HE, Sarkar R, Gladstone B, Ramani S, Raghava MV, **Thuppal V.** Sowmyanarayanan, Gandhe S, Arora R. Disease and economic burden of rotavirus diarrhoea in India. *Vaccine* (2009), Nov; 27: F18-F24
29. **Thuppal V.** Sowmyanarayanan, Natarajan SK, Ramachandran A, Sarkar R, Moses PD, Simon A, Agarwal I, Christopher S, Kang G . Nitric oxide production in acute gastroenteritis in Indian children. *Trans R Soc Trop Med Hyg* (2009), Aug;103(8):849-51
30. Mendelsohn AS, Asirvatham JR, Mwamburi DM, **Thuppal V.** Sowmyanarayanan, Malik V, Muliylil J, and Kang G. (2008) Estimates of the economic burden of rotavirus-associated and all- cause diarrhoea in Vellore, India. *Trop Med Int Health.* 13(7): 934–942
31. Ramani S, **Thuppal V.** Sowmyanarayanan, Gladstone BP, Bhowmick K, Asirvatham JR, Jana AK, Kuruvilla KA, Kumar M, Gibikote S, Kang G. (2008) Rotavirus Infection in the Neonatal Nurseries of a Tertiary Care Hospital in India. *Pediatr Infect Dis J.* 27(8):719-23
32. **Thuppal V.** Sowmyanarayanan, Mukhopadhy A, Gladstone BP, Sarkar R, Kang G. (2008) Investigation of a hepatitis A outbreak in children in an urban slum in Vellore, Tamil Nadu, using geographic information systems. *Indian J Med Res* 128, 32-37

BOOK CHAPTER

1. Bailey R, **Thuppal SV,** Sherif K, Denby N, Steinbaum S, Haycock B, Cowan A, Nieters J, von Schacky C. In book: Nutritional Influences on Bone Health. Chapter: No Relationship Between Serum 25(OH) Vitamin D Concentrations and Perceptions of Vitamin D Dietary Intake Adequacy in US and German Adults Not Using Dietary Supplements: Nutritional Influences on Bone Health: 10th International Symposium. January 2019. DOI: 10.1007/978-3-319-98464-3_20

TEACHING EXPERIENCE

- Teaching Assistant - Public Health Nutrition, NUTR 430, Instructor- Dr. Eicher-Miller PhD, Nutrition Science, Purdue University, IN 47906 Spring 2016
- Resource Person for teaching councilors and social workers providing care for HIV patients - Tamil Nadu AIDS control society, Integrated Counselling and Testing Center councilors training program, conducted by the Department of Psychiatry, Christian Medical College Vellore, Tamil Nadu, India. Supported by the Global Funds for AIDS Tuberculosis and Malaria round-7 (Principal Recipient: TATA Institute of Social Sciences, India). March/April 2014
- Resource Person for teaching nurses providing care for HIV patients - Training program for ART nurses and training the Trainers program for nurses conducted by College of Nursing, Christian Medical College, Vellore, India. Supported by the Global Funds for AIDS Tuberculosis and Malaria round-7 (Principal Recipient: Indian Nursing Council, India).March/April 2014

PRESENTATIONS in scientific conferences

1. Poster Presentation, Treatment of Human Immunodeficiency virus with zidovudine and tenofovir containing regimens in India: A comparative Effectiveness Study. **Thuppal SV,** Kang G, Ooriapdickal AC, Noubary F, Cohen JT, Mwamburi M, Wanke CA. SIU Global Health Conference 2018, November 16, **2018**

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2. Abstract- Perceptions of vitamin D adequacy and serum 25 (OH)D concentrations in U.S. and German Adults, Bailey RL, **Thuppal SV**, Harris WS, Sherif KD, Denby N, Steinbaum SR, Haycock B, von Schacky C. 10th International Symposium on Nutritional Aspects of Osteoporosis, Hong Kong., **2017**
3. Abstract-Validation of the Dietary Screening Tool in a Middle-Aged Appalachian Population MV Marra, SV **Thuppal**, RL Bailey, E Johnson, The FASEB Journal 31 (1 Supplement), 955.5-955.5, **2017**
4. Abstract- Total Usual Intake of Most Shortfall Nutrients Varies with Poverty among US adults. RL Bailey, SR Akabas, EE Paxon, S Saklani, SV **Thuppal**, KL Tucker. The FASEB Journal 31 (1 Supplement), 647.16-647.16, **2017**
5. Poster presentation at the Experimental Biology, 2016, San Diego, topic: “*Nutritional Status in People Living With HIV and Trends in HIV Prevalence Using NHANES (1999-2012)*” April 2-6, **2016**
6. Oral presentation at the First Global Health Research and Innovations Day, Tufts center for Global Public Health, Tufts University on the topic “ *Comparing two drug regimens for HIV in India: Comparative Effectiveness Study*”, November 20, **2014**
7. Poster presentation at the 15th Annual Clinical and Translational Science Symposium, Tufts CTSI, Tufts University, titled, “*Economic evaluation of treatment of HIV with zidovudine and tenofovir regimen in India: A cost effectiveness study*”, May **2014**
8. Poster presented titled “*Cost Estimation of First-line Anti-retroviral Therapy with Zidovudine/Stavudine as the Nucleoside Backbone: Pilot Study*” at the 14th Clinical and Translational Science Symposium, Tufts University, May 4, **2012**
9. Presentation of poster titled “*Nitric Oxide Production in Acute Gastroenteritis in Indian Children*” at the 7th Winter Symposium on Integrating Basic Sciences into Public Health at Christian Medical College, Vellore, Tamilnadu, India January 22 – 23, **2009**
10. Presentation of poster entitled “*Epidemiology and clinical presentation of Rotavirus infection in children <5 years hospitalized with acute gastroenteritis*” at the 7th Winter Symposium on Integrating Basic Sciences into Public Health at Christian Medical College, Vellore , Tamilnadu , India January 22 – 23, **2009**
11. Presentation of poster on “*Enteric Pathogens and Nitric Oxide Production in Gastroenteritis*” at the 31 Annual conference of the Indian Association of Medical Microbiologist, November 16 – 18, **2007**

WORKSHOPS attended

1. Completed training programs on “**Introduction to Ethics of Human Subject Research and Introduction to Biostatistics**” conducted by Johns Hopkins University, Baltimore, USA and SGPGI, Lucknow, India, December 2009.
2. Attended “**Workshop in Social Science Research**”, at Christian Medical College, Vellore, from 27th July to 31st July, 2009.
3. Course in “**Contemporary issues in Research Ethics and Good Clinical Practice (GCP) training**”, at Christian Medical College, Vellore, from 24th Sep – 26th Sep, 2008

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4. Training program on "**The fundamentals of Biostatistics in Clinical Research**" sponsored by the National Institutes of Health USA (NIH) and the International Clinical Sciences Support Center USA (ICSSC) at New Delhi from 15th – 17th Sep, 2008
5. Attended "**The Randomized Controlled Trial Workshop**" sponsored by the National Institutes of Health USA (NIH) and the International Clinical Sciences Support Center USA (ICSSC) at New Delhi from 30th April – 02th May, 2008
6. Course in "**Geographical Information System (GIS) Training Programme**" conducted by Community Health Department, Christian Medical College, Vellore (WHO Collaborating Centre for community based health professions education), 8 – 10 January, 2007
7. Participated in "**Foundations of clinical research and good clinical practices (GCP)**" conducted by GlaxoSmithKline Biologicals, 31 January, 2006
8. Course in "**Principles and Practice of Epidemiology**" conducted by Community Health Department, Christian Medical College, Vellore (WHO Collaborating Centre for community based health professions education), August-September, 2006

FUNDING

Study title: Dietary Perceptions and level of omega-3 fatty acid and vitamin D

Role: Co-Principal Investigator

PI: Regan Bailey PhD MPH RD, Nutrition Science, Purdue University

Funding agency: Tonic Life Communications Educational Grant

Year: 2016 - 2017

Study title: Economic evaluation of treatment of HIV with zidovudine/stavudine and tenofovir regimen:
A Cost-effectiveness study

Role: Principal Investigator

Funding agency: Brown/Tufts Fogarty AITRP (NIH Grant# D43TW000237; PI-Susan Cu-Uvin) - Pilot Grant

Year: 2012 - 2013

PROFESSIONAL ACTIVITIES

Reviewer

Trials (23 manuscripts), International Journal of STD and AIDS, Journal of International Association of Providers of AIDS Care, Public Health Nutrition, Journal of American College of Nutrition

Guest Lecturer

- For 'Public Health Nutrition' Course in Purdue University. Topic- 'Clinical Nutrition Service in Public Health' 2017, 2018 and 2019

Lean Six Sigma

Completed the requirements to be recognized as a Lean Six Sigma White Belt, December 2018

Few Select COMPLETED PROJECTS

1. Discrepancy between knowledge and perceptions of dietary omega-3 fatty acid and vitamin D intake compared with the omega-3 index and serum 25(OH) vitamin D concentrations respectively in the US. 2016. Role: PI

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2. Nutritional Status in adults with HIV in United States. 2015. Role: PI
3. Treatment of Human Immunodeficiency virus with zidovudine and tenofovir regimen in India: A comparative effectiveness study 2014: Role PI
4. Toxicity and clinical outcomes in patients with HIV on zidovudine and tenofovir based regimens: a retrospective cohort study. 2013. Role: PI
5. Cost Estimation of First-Line Antiretroviral Therapy with Zidovudine/Stavudine as the Nucleoside Backbone in India. 2011. Role: PI
6. Randomized, double-blind, placebo-controlled trials of racecadotril in the management of rotavirus and non-rotavirus pediatric diarrhea in the hospital and the community.2008.Role Co-PI
7. Hepatitis A outbreak investigation in an urban slum area in Vellore, India. 2006. Role: PI
8. Nitric Oxide production in pediatric gastroenteritis. 2006. Role: PI
9. National Rotavirus Surveillance Network OF India. 2005-2008. Role: Clinical Research Coordinator/Senior Research Fellow