



2024 American Pediatric Society Election Candidate

Position: President-elect

Candidate: Suhas G. Kallapur, MBBS, MD

Institution(s): David Geffen School of Medicine UCLA and
UCLA Mattel Children's Hospital

Subspecialty: Neonatal-Perinatal Medicine

Candidate Statement of Interest:

I am honored and humbled to run for the office of President elect of the APS. A recent comprehensive NASEM report has highlighted several challenges in Pediatrics care. Strong initiatives by the APS working with other Pediatrics organizations will be vital in making progress.

I am currently the Chief, Div. of Neonatology and Developmental Biology, Professor of Pediatrics at UCLA since 2017. I was previously a faculty at Cincinnati Children's Hospital for over 25 years. I will bring my rich experience in working in a stand alone premier Children's Hospital and a premier University based integrated health care model to the APS.

I am a physician-scientist whose basic/translational research laboratory has garnered continuous NIH funding since 2002. Our work is focused on Perinatal infections, immunology, and lung injury/BPD. I have been an invited expert on many NIH panels on BPD and Perinatal infections.

I have been actively engaged as a member of the APS since 2017. I was a APS Journeys cohort leader from 2021-23, PAS program committee member from 2021-24, and an APS career support committee member from 2022-25. I am passionate about mentoring both trainees and junior faculty. My laboratory has directly mentored more than 30 fellows/post graduate scholars including several that are Under Represented in Medicine.

I am strongly committed to the APS mission of advancing child health through fostering the development of future academic Pediatrics thought leaders fully incorporating the principles of Diversity, Equity and Inclusion. I will bring my vast clinical, research and leadership experiences in different health systems and geographic locations to the APS. I will be a powerful voice for advancing programs for development of physician scientists and for career development in leadership. I am motivated to enhance research support for child health and build a diverse robust Pediatrics academic work force and train next generation leaders.

Suhas G. Kallapur, MBBS, MD
Chief, Divisions of Neonatology and Developmental Biology
Professor of Pediatrics
David Geffen School of Medicine UCLA
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CURRICULUM VITAE

SUHAS G. KALLAPUR

Professor of Pediatrics David Geffen School of Medicine UCLA

CONTACT INFORMATION:

(Business Address)

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Career highlights:

- Current and continuous NIH funding since 2002: Research areas – Fetal inflammation, lung injury and BPD, Placenta and reproductive immunology, Preterm birth
- Publications: 175 peer-reviewed + 27 reviews and chapters
- h-index: 57, Total Citations: 10,548 (Google scholar)
- Co-Editor: Book title “Updates on chronic lung disease” (Elsevier press, 2019)
- Associate Editor American Journal of Reproductive Immunology (2022 onward)
- NIH panel invited expert
- NIH grants study section member since 2012
- Laboratory research mentor: >30 fellows/postdoctoral scholars/students including several women and under-represented in medicine; 2 fellows won SPR Best research award, 1 Ped resident won best SPR best resident research award, 1 fellow won AAP Marshall Klaus best research award
- APS service:
 - Active engaged member since 2017
 - APS Career support committee member (2022-25)
 - APS/SPR National Cohort leader for the Journeys program for career mentoring (2021-22 and 2022-23)
 - PAS program committee member (2021-22 and 2022-23)

DEI activities:

- As a Chief of Neonatology at UCLA - 65% Neonatology faculty are women, 1/14 URiM, 3 women faculty promoted to Professor rank (2 of these during my tenure).
- Adopted holistic fellowship recruiting practices. 7/21 Fellows matched since 2017 are URiM.
- Oversaw multiple initiatives for systemic DEI improvements including creating a Epic based dashboard with real-time data for racial disparities in perinatal outcomes

EDUCATION:

- M.B.,B.S. Seth G.S. Medical College, Univ. of Bombay (1983) (present university affiliation is Maharashtra University of Health Sciences)
- D.C.H. (Diploma in Child Health) College of Physicians and Surgeons, Bombay 1986.
- M.D. (Pediatrics) University of Bombay (1986)
- Pediatric Residency, Univ. of Bombay, KEM hospital and B.J. Wadia Children's hospital Bombay (3/84-11/87- N.B. Kumta MD – Chairman of Pediatrics).
- Pediatric Residency, Children's Hospital of Michigan, Detroit MI (8/88-6/90- Alan B. Gruskin MD – Chairman of Pediatrics).

- Fellowship in Neonatal-Perinatal medicine, Cincinnati Children's Hospital Medical Center, Cincinnati OH (7/90-6/93- Reginald Tsang MD – Director of Neonatology)
- Post-doctoral research training in Developmental Biology and Molecular Genetics with Drs. Richard Akeson (7/90-6/93) and Thomas Doetschman (1993-1995)

MEDICAL LICENSURE:

- OHIO (35.061845) – Since 7/1991
- CALIFORNIA (C149272) –Since 05/2017
- ECFMG – (7/1983) (Medical and English components) (Cert. issued 2/10/88)
- VQE (9/1983)
- TOEFL (8/1987)
- TSE (Test of spoken English) (3/1991)
- FLEX - Michigan (components I and II) (12/1989) (FIN# 610421501)

BOARD CERTIFICATION:

- American Board of Pediatrics – Certified - Sub-board Neonatal-Perinatal Medicine (2622), 9/1/93. Recertified 1999 and 2007. Certification is current as of 2020
- American Board of Board - Certified in Pediatrics, (44803) 11/14/90, Recertified 2000, 2007, and 2017. Certification is current as of 2020

PROFESSIONAL EXPERIENCE:

- Present academic appointments
 - Professor of Pediatrics (with Tenure – State FTE) David Geffen School of Medicine at UCLA (since 9/2017)
 - Chief, Divisions of Neonatology and Developmental Biology (since 2017)
 - Adjunct (Clinical) Professor, Univ. of Western Australia (2010 -)
- Previous academic appointments:
 - Lecturer in Pediatrics (K.E.M. Hospital and the Seth G.S. Medical College) University of Bombay, Bombay, India. (1987 -1988)
 - Instructor in Pediatrics, University of Cincinnati, Cincinnati OH, USA. (1992-1996)
 - Assistant Professor of Clinical Pediatrics, University of Cincinnati (10/1/96 – 8/31/04)
 - Associate Professor of Clinical Pediatrics, University of Cincinnati (9/1/04- 8/31/12)
 - Professor of Clinical Pediatrics, University of Cincinnati (9/1/12- 2/28/13)
 - Professor of Pediatrics with Tenure – Cincinnati Children's Hospital/University of Cincinnati (3/1/13 – 8/30/17)

PROFESSIONAL ACTIVITIES:

- Member - American Academy of Pediatrics (Since 1995)
- Member- Society for Pediatric research (Since 2001)
- Abstract reviewer for the PAS (SPR)(since 2004)
- Active member - American Pediatric Society (since 2016)
- Executive member – Borne scientific collaborative for research in prevention of preterm births (since 2020)

HONORS AND SPECIAL AWARDS:

- Best Resident at the K.E.M. Hospital, Bombay, India (1987).
- Sanford Cohen award for the Best Pediatric Resident for 1989 - 1990 at the Children's Hospital of Michigan, Detroit, Michigan, USA.
- William C. Procter scholarship 1993, Univ. of Cincinnati.
- Reviewer for the NIH study sections (Ad hoc) (2012 onward)

- Obstetric and Pediatric Pharmacology – May 2012.
- Pregnancy and Neonatology - June 2013
- NIAID International Collaborations in Infectious Diseases Research (ICIDR) Research Project - July 2014
- Pregnancy and Neonatology - Feb 2015
- Pregnancy Neonatology member conflict special emphasis - March 2016
- Pregnancy and Neonatology - October 2015
- NICHD Global network Special emphasis panel ZHD1 DSR-A 50 1–March 2018
- Perinatal grants submitted to the Italian Ministry of Science (in collaboration with the NIH) in 2009
- NIH/NIBIB member study section Special emphasis panel ZEB1 OSR-D A1 P, ImmuneChip: Engineering Microphysiological Tissue Platforms (U01) -July 2019
- March of Dimes – National grant review – September 2020
- NIH/NIAID member study section special emphasis panel ZAI 1 SB-X (J1) 1 – Dec 2020.
- NIH member study section special emphasis panel 2021/10 ZRG1 EMNR-S (55) R – July 2021
- NIH/NIAID member study section special emphasis panel 022/01 ZAI1 MMF-X (J1) 1 and 2022/01 ZAI1 KGH-X (J1) 1 – October 2021
- NIH PN study section June 2022
- NIH special emphasis panel **2023/05 ZRG1 EMS-E (55) R** – April 2023
- NIH/NIAID special emphasis panel **2024/01 ZAI1 AM-I (J1) 2** - October 2023
- Associate Editor Am J Reprod Immunol (2022 -)
- Invited Guest Editor, Clinics in Perinatology – Issue on “Bronchopulmonary dysplasia – An Update” – Dec. 2015 issue
- Manuscript on decidua immunology published in the Biology of Reproduction (2015) was recommended by the Faculty of 1000 prime as being of special significance in its field.
- Invited expert for NIH workshops
 - NHLBI - Perinatal Determinants of Lung health and Disease (Oct 2015)
 - NICHD - BPD workshop (antenatal determinants) (Oct 2016)
 - NIAID – Sexually transmitted illnesses – clinical trials group workshop (Apr 2018)
- Member, Scientific Advisory Board Ayuvis Research Inc. (start-up Biotech company in Fort Worth TX – Pre-IND and IND studies for novel drug development for BPD)
- APS/SPR National Cohort leader for the Journeys program for career mentoring (2021-22 and 2022-23)
- PAS program committee member (2021-22 and 2022-23)
- APS Career support committee member (2022-25)
- Associate Editor Am J Reprod Immunol (2022 onward)

RESEARCH GRANTS AND FELLOWSHIPS

Active

PAR 18-511

06/01/19-03/31/24

2.4 calendar

NIH HD98389

Kallapur PI (6/1/19 – 3/31/24)

Anti-inflammatory drug target to reduce adverse pregnancy outcomes

This grant proposes unraveling the mechanisms of preterm labor and fetal inflammation in new models of intrauterine infection induced by live E. coli in Rhesus macaques. These studies are pre-clinical pharmacological evaluations of Anakinra (recombinant human IL-1 receptor antagonist) to prevent preterm labor and fetal inflammation.

Role: PI

NIH- UG3 HL 137872 Hydrocortisone for BPD Respiratory and Developmental (HyBRID) outcomes study: Clinical coordinating center (DeMauro Sara –contact PI) (Kallapur, Kirpalani, Hintz – multiple PI) (7/1/17 – 6/30/24)

This grant is designed to do a school age follow up for Respiratory and Developmental outcomes on approx. 700 infants enrolled in the Hydrocortisone for BPD trial conducted across 18 NRN research sites. Dr. Kallapur is the PI for the National Respiratory follow up study in which functional respiratory outcomes will be measured at 3 sites (Cincinnati, Philadelphia, and Indianapolis) forced oscillometry test will be administered.

R01 HD103676 A novel mechanism for inflammation-induced preterm birth via PR-A phosphorylation 06/01/2021 - 08/31/2025 0.6 calendar (Mesiano -PI, **Kallapur SG Co-I**)

This grant will study signaling downstream of progesterone receptor during intrauterine inflammation and shed light on mechanisms of preterm labor induced by intrauterine inflammation. Studies will use mouse models, Rhesus macaque samples, and human uterus biopsies.

R44 HD107857 A novel approach for prevention of Bronchopulmonary dysplasia in at-risk pre-term infants (Acharya-PI, **Kallapur SG -consultant**) (04/01/2022 to 03/30/2024)

This is a SBIR grant on pre-clinical and early phase clinical testing of a novel anti-inflammatory drug for Bronchopulmonary dysplasia. The drug was developed by AyuVis Research Inc. Dr. Kallapur will advise the team on human ex-vivo immunology and lamb respiratory studies, including experimental design and data analyses.

Autism Research Institute grant Discovery of ASD related pathways in a novel preterm Rhesus macaque maternal immune activation model (Kallapur-PI)(02/01/23-01/31/24)

This grant will uncover mechanisms of Autism related pathways in preterm Rhesus macaque brain regions exposed to intrauterine inflammation induced by intraamniotic injection of LPS. Single-nucleus RNA seq comparisons will be done on several brain regions from animals exposed to saline (control), LPS, LPS+ Anakinra (IL1 receptor antagonist).

Pending grants:

NIH R01 HD114495 Drug repurposing of a novel synthetic progestin for the prevention of preterm labor and fetal inflammation 12/01/23-11/30/28 – **Kallapur contact PI**, Mesiano MPI (impact score 23, 6%ile)

This grant proposes testing efficacy of a novel synthetic progestin that is resistant to intracellular inactivation in preventing preterm labor and adverse fetal brain injury and immune changes. The studies will use a Rhesus macaque model of intrauterine infection induced by live E. coli.

R01 AI85636 Mechanisms of maternal-fetal immune responses to intrauterine infection (6/1/24 to 5/31/29) **Kallapur contact PI**, Konnikova MPI

This grant will explore detailed immune perturbations in the mother, fetus, and at the maternal-fetal interface in a Rhesus macaque model of intrauterine infection induced by E.coli. Pre-clinical studies of IL1 blockade and its effects on maternal-fetal immune system will be studied.

DOD AR230294 A Rhesus macaque model to study prenatal origins of Autism spectrum defects after intrauterine inflammation (6/1/24 to 5/31/26) **Kallapur PI**

This proposal will study mechanisms of fetal brain neuronal injury after intrauterine infection in Rhesus macaques that may predispose to ASD in infancy.

Awards to Mentees

K01 DK127004 Iron and Pregnancy: Regulatory Mechanisms and Adverse Outcomes (PI – Veena Sangkhae PhD) (2/2/21 – 1/31/26)

This project will use transgenic mouse models complemented by Rhesus macaque and human studies to evaluate iron homeostasis in the mother and fetus during pregnancy (Mentor – Elizabetha Nemeth PhD, **Co-Mentor Suhas G. Kallapur MD**)

T32 HL086345 Macrophage-Mediated Immunity during intrauterine infection (Neema Pithia, PI, **Mentor Kallapur SG**) 06/1/2022-05/31/2023

Goal: Mentor Neonatology fellow Dr. Pithia in reproductive immunology

TL1 DK132768 and U2C DK129496 Unraveling the Role of IL-1 and TNF signaling in Macrophage-Mediated Immunity during intrauterine infection (Neema Pithia, PI, **Mentor Kallapur SG**) 06/1/2023-05/30/2024

Goal: Mentor Dr. Pithia in studying decidua macrophage function and immunophenotype at the maternal fetal interface in Rhesus monkey and in human placenta from chorioamnionitis

Patents:

- 1) US Patent application number 17597515 (2022) Compounds useful for inhibiting BFL1 and their use in therapy – Inventors: Hildeman DA, Herr A, **Kallapur SG**, Meller, J, Thorman A.
- 2) US Patent 11541073 (2023) Methods of attenuating an immune response by inhibition of BFL1 – Inventors: Hildeman DA, Herr A, **Kallapur SG**, Meller, J, Thorman A.

PUBLICATION / BIBLIOGRAPHY:

Quality review of publications (as of October 2023) – Google scholar h-index: 57, Total Citations: 10,458; Citations in 2022: 960

Fig 2. Kallapur SG - Publication domains (source Web of Science 2023)

Recent publications:

1. Van Rompay KKA, Keesler RI, Ardeshir A, Watanabe J, Usachenko J, Singapuri A, Cruzen C, Bliss-Moreau E, Murphy AM, Yee JL, Webster H, Dennis M, Singh T, Heimsath H, Lemos D, Stuart J, Morabito KM, Foreman BM, Burgomaster KE, Noe AT, Dowd KA, Ball E, Woolard K, Presicce P, **Kallapur SG**, Permar SR, Foulds KE, Coffey LL, Pierson TC, Graham BS. – DNA vaccination before conception protects Zika-virus exposed pregnant macaques against prolonged viremia and improves fetal outcomes – **Sci Transl Med** 2019 Dec 18;11(523) PMID: 31852797, PMC7093037
2. Jain VG, Kong F, **Kallapur SG**, Presicce P, Senthamaraiannan P, Cappelletti M, Chougnnet CA, Bhattacharyya S, Pasare C, Muglia LJ – IRAK1 is a critical mediator of inflammation induced preterm birth – **J Immunol** 2020;204:2651-2660 PMID 32238461
3. Cappelletti M, Presicce P, **Kallapur SG** – Immunobiology of acute chorioamnionitis – **Front Immunol** 2020;Apr16;11:649 PMID 32373122 PMCID: PMC7177011
4. Presicce P, Cappelletti M, Senthamaraiannan P, Ma F, Morselli M, Jackson C, Mukherjee S, Miller LA, Pellegrini M, Jobe AH, Chougnnet CA, **Kallapur SG** - TNF-signaling modulates neutrophil-mediated immunity at the fetomaternal interface during

- LPS-induced intrauterine inflammation - **Front Immunol** 2020:Apr 3;11:558 PMID 32308656 PMID: PMC7145904
5. Toothaker JM, Presicce P, Cappelletti M, Stras SF, McCourt CC, Chougnet CA, **Kallapur SG**, Konnikova L – Immune cells in the placental villi contribute to intrauterine inflammation - **Front Immunol** 2020:May 22;11:866 PMID 32528468
 6. Cappelletti M, Presicce P, Ma F, Sentharamaikannan P, Miller LA, Pellegrini M, Sim MS, Jobe AH, Divanovic S, Way SS, Chougnet CA, **Kallapur SG** - The intensity of the immune response to LPS and E. coli regulates the induction of preterm labor in Rhesus macaques – **PLOS Biology** 2021 Sep 8;19(9):e3001385. doi: 10.1371/journal.pbio.3001385. eCollection 2021 Sep. PMID: 34495952
 7. Jackson CM, Demmert M, Mukherjee^S, Isaacs T, R. Thompson R, Chastain C, Gray J, Sentharamaikannan P, Presicce P, Chetal K, Salomonis N, Miller LA, Jobe AH, **Kallapur SG**, Zacharias WJ, Lewkowich IP, Deshmukh H, Chougnet CA - A potent myeloid response is rapidly activated in the lungs of premature Rhesus macaques exposed to intra-uterine inflammation **Mucosal Immunology** 2022 March 21 PMID: 35314757
 8. Toth A, Steinmeyer S, Kannan P, Gray J, Jackson CM, Mukherjee S, Demmert M, Sheak JR, Benson D, Kitzmiller J, Wayman JA, Presicce P, Cates C, Rubin R, Chetal K, Du Y, Miao Y, Gu M, Guo M, Kalinichenko VV, **Kallapur SG**, Miraldi ER, Xu Y, Swarr D, Lewkowich I, Salomonis N, Miller L, Sucre JS, Whitsett JA, Chougnet CA, Jobe AH, Deshmukh H, Zacharias WJ. Inflammatory blockade prevents injury to the developing pulmonary gas exchange surface in preterm primates. **Sci Transl Med.** 2022 Mar 30;14(638):eabl8574. doi: 10.1126/scitranslmed.abl8574. PMID: 35353543
 9. P. Presicce, M. Cappelletti, M. Morselli, F. Ma, P. Sentharamaikannan, G. Protti, B. B. Nadel, L. Aryan, M. Eghbali, L. Salwinski, N. Pithia, E. De Franco, L. M., Miller, M. Pellegrini, A. H. Jobe, C. A. Chougnet, **S. G. Kallapur** - Amnion responses to intrauterine inflammation and effects of inhibition of TNF-signaling in preterm Rhesus macaque **iScience** 2023 Oct 6;26(11):108118, PMID 37953944, PMC10637919

Book:

- 1) **Kallapur SG** and Pryhuber GS (2019) – Editors “Updates on chronic lung disease” – (Elsevier press)