

## Curriculum vitae

### Juhi Bagaitkar, Ph.D.

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#### PERSONAL INFORMATION

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#### EDUCATION

<b>B.Sc.</b> , Industrial Microbiology, University of Pune, India	<b>2003</b>
<b>M.Sc.</b> , (Honors) Environmental Sciences, University of Pune, India	<b>2005</b>
<b>M.S.</b> , Microbiology and Immunology, University of Louisville, Louisville, USA	<b>2008</b>
<b>Ph.D.</b> , Microbiology & Immunology, University of Louisville, USA	<b>2010</b>

#### PAST EXPERIENCE/ EMPLOYMENT

- Ph.D. Fellow – University of Louisville (2007-2011)
- Postdoctoral fellow - Dept. of Pediatrics, Washington University in St. Louis (2011 – 2016)
- Assistant Professor, Department of Oral Immunology and Infectious Diseases, School of Dentistry, University of Louisville (12/2016- present)

#### AWARDS/HONORS

2008 **Travel Award** Society for Leukocyte Biology Annual Meeting

2009 **First Place: Condict Moore Graduate Student Research Prize**, University of Louisville

2010 **Travel Award** Society for Leukocyte Biology Annual Meeting

2010 **Presidential Award** (Graduate level) Society for Leukocyte Biology, Annual Meeting

2010 **Dean's Citation** for Excellence in Graduate Studies, University of Louisville

2010 **Guy Stevenson Award** for Excellence in Graduate Studies—*Highest honor presented to a singular doctoral degree recipient, University of Louisville*

2013 **Elected Chair** for **Gordon Research Seminars** on Phagocytes

2014 **Adel A. Younis Award** for Excellence in Hematology, Washington University School of Medicine, St. Louis

2014 **Travel Award** Society for Leukocyte Biology Annual Meeting

2015 **Travel Award** Society for Leukocyte Biology Annual Meeting

2016 **Travel Award** Society for Leukocyte Biology Annual Meeting

2016 **Presidential Award** (Post-doc/junior faculty category), Society for Leukocyte Biology Annual meeting

#### PROFESSIONAL SERVICE

##### **Service- Scientific Societies**

2013 Chair, Gordon Research Seminars on Phagocytes

2015- 2017 Chair, Members in Transition and Training Group (MTTG) Committee, Society for Leukocyte Biology

2018 Liaison, National Research and Mentorship Network (NRMN) and Society for Leukocyte Biology Partnership

**Committee assignments and University service**

2017- present Admissions Committee member, Masters in Oral Biology (MSOB), School of Dentistry, University of Louisville.  
2017-present DMD Program Curriculum Committee, School of Dentistry, University of Louisville.  
2018-present Director, cell biology and tissue culture core for the Department of Oral Immunology and Infections, University of Louisville.

**Scientific symposia**

2015 Session Co-chair, Society for Leukocyte Biology, Annual Meeting  
2016 Scientific session Chair, Society for Leukocyte Biology, Annual Meeting  
2017 Scientific session Chair, Society for Leukocyte Biology, Annual Meeting

**Primary mentor and Graduate Student Committees**

2017-present *Master's thesis mentor - Salil Kawatra (Masters in Oral Biology)*  
2017-present Shilpa Singh, Master's candidate, MSOB program, School of Dentistry, UoL  
2017-present Regina M Friedl, Master's candidate, MSOB program, School of Dentistry, UoL

**Reviewer**

2012- present Ad hoc Reviewer, *Blood*  
2014- present Ad hoc Reviewer, *Journal of Leukocyte Biology*  
2017- present Ad hoc Reviewer, *Infection and Immunity*  
2017- present Ad hoc Reviewer, *Journal of Clinical Periodontology*

**Teaching**

- *Organizer* – Work in Progress seminar series; Department of Oral Immunology and Infectious Diseases, UoL
- Guest lecturer – OIID 800 Correlated Sciences

**INVITED TALKS/PRESENTATIONS**

- *Invited presenter*, Gordon Conference on Periodontal Diseases, 2009.
- *Invited speaker*, American Association of Dental Research (AADR), Washington D.C., 2010.
- *Invited speaker/Presidential award winner* for Society for Leukocyte Biology, Annual meeting, and 2010.
- *Invited presenter*, Gordon Research Conference on Phagocytes, 2013, 2011.
- *Invited speaker*, Society for Leukocyte Biology & The International Endotoxin and Innate Immunity Society Meeting, Salt Lake City, October 23-25, 2014.
- *Invited speaker*, American Society for Hematology (ASH) annual meeting, San Francisco, Dec 6<sup>th</sup> to 9<sup>th</sup> 2014.
- *Invited speaker*, Gordon conference on Phagocytes, 2015.
- *Invited Speaker/Presidential Award winner*, Society for Leukocyte Biology annual meeting and Neutrophils (joint meeting), Verona, Italy, 2016.

**PROFESSIONAL MEMBERSHIPS**

2008- present Society of Leukocyte Biology  
2014- present American Society for Hematology

2014- present American Society for Microbiology  
 2017- present American Association for Dental Research  
 2017- present International Association for Dental Research

## PUBLICATIONS (Peer-reviewed)

- 1) Liu W, **Bagaitkar J** and Watabe K. *Roles of AKT signal in breast cancer*. Front Biosci., 2007 May 1; 12: 4011-9.
- 2) Whitehurst B, Flister MJ, **Bagaitkar J**, Volk L, Bivens CM, Pickett B, Castro-Rivera E, Brekken RA, Gerard RD and Ran S. *Anti-VEGF-A therapy reduces lymphatic vessel density and expression of VEGFR-3 in an orthotopic breast tumor model*. Int J Cancer. 2007 Nov 15; 121 (10): 2181-91.
- 3) **Bagaitkar J**, Demuth DR and Scott DA. *Tobacco use and susceptibility to bacterial infection*. Tob Induc Dis. 2008 Dec 18; 4 (1):12.
- 4) **Bagaitkar J**, Williams LR, Renaud DE, Benakanakere MR, Martin M, Scott DA and Demuth DR. *Tobacco induced alterations to Porphyromonas gingivalis– host interactions*. Environ Microbiol. 2009 May; 11(5): 1242-53.
- 5) **Bagaitkar J**, Demuth DR, Daep-Amorin C, Renaud DE, Pierce DL and Scott DA. *Tobacco upregulated P. gingivalis fimbrial proteins, which induce TLR2 hyposensitivity*. PLoS One. 2010 May 4; 5(5): e9323.
- 6) Budunelli N, Larsson L, Biyikoglu B, Renaud DE, **Bagaitkar J**, Scott DA. *Fatty acid profiles in smokers with chronic periodontitis*. J Dent Res. 2011 Jan; 90(1):47-52.
- 7) **Bagaitkar J.**, Daep CA, Patel CK, Renaud RE, Demuth DR and Scott DA. *Tobacco smoke augments Porphyromonas gingivalis-Streptococcus gordonii biofilm formation*. PLoS One. 2011; 6(11): e27386. Epub 2011 Nov 14.
- 8) **Bagaitkar J**, Matute JD, Austin A, Arias AA, Dinauer MC. *Activation of neutrophil respiratory burst by fungal particles requires phosphatidylinositol 3-phosphate binding to p40<sup>phox</sup> in humans but not in mice*. Blood. 2012 Oct 18; 120(16): 3385-7.
- 9) Bondy-Carey JL, Galicia J, **Bagaitkar J**, Potempa JS, Potempa B, Kinane DF, Veillard F, Scott DA. *Neutrophils alter epithelial response to Porphyromonas gingivalis in a gingival crevice model*. Mol Oral Microbiol. 2012 Nov 22.
- 10) **Bagaitkar J**, Zeller I, Renaud DE, Scott DA. *Cotinine inhibits the pro-inflammatory response initiated by multiple cell surface Toll-like receptors in monocytic THP cells*. Tob Induc Dis. 2012 Nov 23; 10(1): 18.
- 11) Zeng MY, Pham D, **Bagaitkar J**, Liu J, Otero K, Shan M, Wynn TA, Brombacher F, Brutkiewicz RR, Kaplan MH, Dinauer MC. *An efferocytosis-induced, IL-4-dependent macrophage-iNKT cell circuit suppresses sterile inflammation and is defective in murine CGD*. Blood; 2013 Apr 25; 121(17): 3473-83.
- 12) **Bagaitkar J**. *Cellular Dynamics of resolving inflammation*. Blood 2014 Sep 11; 124(11): 17013.
- 13) Hutcherson JA, **Bagaitkar J**, Nagano K, Yoshimura F, Wang H, Scott DA. *Porphyromonas gingivalis RagB is a proinflammatory signal transducer and activator of transcription 4 agonist*. Mol Oral Microbiol. 2015 Jun; 30 (3): 242-52.
- 14) Hutcherson JA, Scott DA and **Bagaitkar J**. *Scratching the surface-tobacco-induced biofilms*. Tob Induc Dis. 2015 Feb 10; 13(1). (Invited Review)
- 15) Tussiwand R, Everts B, Grajales-Reyes GE, Kertzer NM, Iwata A, **Bagaitkar J**, Wu X, Wong R, Anderson DA, Murphy TL, Pearce EJ, Murphy KM. *Klf4 expression in conventional dendritic cells is required for T helper 2 cell responses*. Immunity 2015 May 19; 42(5):916-28.
- 16) **Bagaitkar J**, Nancy K Pech, Stoyan Ivanov, Zeng MY, Guangming Haung and Mary C Dinauer. *Dysregulated IL-1 $\alpha$ -G-CSF axis exacerbates sterile inflammation in Chronic Granulomatous Disease*. Blood. 2015 Oct 6\*.

\* *Commentary by Borregaard et al. Blood 2015 Oct 6.*

- 17) Lu Q, Yokoyama CC, Williams JW, Baldrige MT, Jin X, DesRochers B, Bricker T, Wilen CB, **Bagaitkar J**, Loginicheva E, Segushichev A, Kreamalmeyer D, Keller BC, Zhao Y, Kambal A, Green DR, Martinez J, Dinauer MC, Holzman MJ, Crouch EC, Beatty W, Boon AC, Zhang H, Randolph GJ, Artyomov MN and Virgin HW. *Homeostatic control of innate immune lung inflammation by Vivi Syndrome Gene Epg5 and additional autophagy genes promotes Influenza virus pathogenesis*. Cell Host & Microbe, 2016 Jan 13;19(1):102-13.
- 18) **Bagaitkar J**, Barbu EA, Perez-Zapata LJ, Austin A, Huang G and Dinauer MC. *PI (3)P- p40<sup>phox</sup> binding regulates NADPH oxidase activation in mouse macrophages and magnitude of inflammatory responses in vivo*. J Leukoc Biol. 2017 Feb;101(2):449-457.
- 19) **Bagaitkar J**, Huang J, Zeng MY, Pech NK, Monlish DA, Perez-Zapata LJ, Miralda I, Schuettelpelz LG and Dinauer MC. *NADPH oxidase activation regulates apoptotic neutrophil clearance by murine macrophages*. Blood. 2018 May 24; 131(21):2367-2378

## BOOK CHAPTER

Scott DA and **Bagaitkar J**.

Tobacco smoke and susceptibility to infectious bacterial diseases.

Published In: "**Cigarette Smoke Toxicity**" David Bernhard, Editor. Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany.

## ABSTRACTS

- 1) **Bagaitkar J**, Williams LR, Daep C Demuth DR, Scott DA. *Tobacco smoke-exposure alters Porphyromonas gingivalis W83-innate cell interactions*. 2008, ASM, Society for Leukocyte Biology, Denver, Colorado, USA.
- 2) **Bagaitkar J**, Demuth DR, Scott DA. *Tobacco smoking, innate immunity and susceptibility to bacterial infection*. 2008, ASM, International Society for the Prevention of Tobacco-Induced Diseases, Kyoto, Japan.
- 3) Patel C, **Bagaitkar J**, Amorin-Daep C, Demuth DR, Renaud DE, Scott DA. *Cigarette smoke extract promotes Porphyromonas gingivalis biofilm formation*. Research! Louisville 2010 (**First Place, Dental Student Category**) and **Hinman Student Research Symposium, Memphis, TN 2010**.
- 4) Boyle AY, **Bagaitkar J**, Renaud DE, Demuth DR, Scott DA. *Cigarette smoke extract alters the structure and immune function of Porphyromonas gingivalis LPS*. AADR, Washington D.C., 2010.
- 5) **Bagaitkar J**, Demuth DR, Daep C, Pierce DL Renaud DE, Scott DA. *Tobacco-regulated changes to P. gingivalis fimbrial proteins and capsule polysaccharides induce TLR2 hyposensitivity*. AADR, Washington D.C., 2010 **and** Gordon Conference on Periodontal Diseases, 2009 **and** James Graham Brown Annual Research Retreat. Louisville, KY, 2009. **First Place: Condict Moore Graduate Student Research Prize**.
- 6) **Bagaitkar J**, Donald R Demuth, Carlo Amorin-Daep, Deanne L Pearce, Dinae E Renaud, David A Scott. *Tobacco-induced alterations to Porphyromonas gingivalis fimbriae promote host colonization*. Society for Leukocyte Biology, Annual meeting 2010. **Presidential award SLB 2010, junior/graduate student category**
- 7) **Bagaitkar J**, Renaud DE, Scott DA. *Tobacco alkaloids inhibit pro-inflammatory signaling initiated through multiple cell surface TLRs*. 2010; ASM, International Society for the Prevention of Tobacco-Induced Diseases, Boston, MA.
- 8) Bondy-Carey JL, Galicia J, **Bagaitkar J**, Kinane DF, Scott DA. *Neutrophils alter epithelial response to Porphyromonas gingivalis in a gingival crevice model*. 2011; ASM, International Society for the Prevention of Tobacco-Induced Diseases, Vienna, Austria.
- 9) **Bagaitkar J**, Patel C, Renaud DE, Daep CA, Demuth DR, Scott DA. *Tobacco smoke augments oral (P. gingivalis – S. gordonii) biofilm formation*. 2011, Society for Anaerobic Microbiology, London, England.

- 10) **Bagaitkar J**, Matute J, Austin A, Arias A, Hawkins PT and Dinauer M.C. *Superoxide production in response to fungal particles is differentially regulated by p40<sup>phox</sup> subunit of NADPH oxidase in human and murine neutrophils*. Gordon Conference on Phagocytes 2013.
- 11) **Bagaitkar J**, Renaud DE, Scott DA\*. *The innate response to the RagB protein of Porphyromonas gingivalis*. Hutcherson J, Federation of European Microbiology Societies Congress, Leipzig, Germany, 2013.
- 12) **Bagaitkar J**, Austin A, Gautier EL, Zeng MY and Dinauer MC. *p40<sup>phox</sup> regulates inflammatory cell recruitment and clearance in sterile peritonitis*. Gordon Research Seminars and Gordon Conference on Phagocytes, 2013.
- 13) Shan M, **Bagaitkar J**, Pingel JT, Liu J, Brutkiewicz RR and Dinauer MC. *Differential activation of iNKT cells in peritonitis is WT and NADPH-oxidase deficient mice*. 7<sup>th</sup> International Symposium on CD1 and iNKT cells. Tours, France, 2013; and Gordon Research Seminars and Gordon Conference on Phagocytes, 2013.
- 14) **Bagaitkar J**, Austin A, Gautier EL, Zeng MY and Dinauer MC. *NADPH-oxidase deficiency regulates inflammatory cell recruitment and clearance in sterile peritonitis*. Autumn Immunology 2013, Chicago.
- 15) Roshini Sarah Abraham, Mathew Smith, Tamara Pozos, **Juhi Bagaitkar**, Mary Dinauer. *Unusual presentation of possible chronic granulomatous disease (CGD) in two siblings*. International Primary Immunodeficiency Congress, Lisbon, November 2013.
- 16) **Bagaitkar J**, Pech NK and Dinauer MC. *NADPH oxidase regulates G-CSF and Neutrophilic Inflammation*. International Symposium on Neutrophils, Montreal, May 31st- June 3<sup>rd</sup> 2014.
- 17) **Bagaitkar J**, Pech NK, Ivanov S, Huang G and Dinauer MC. *NADPH oxidase limits sterile inflammation by modulating IL-1/G-CSF-driven neutrophilic inflammation*. Society for Leukocyte Biology & The International Endotoxin and Innate Immunity Society Meeting, Salt Lake City, October 23-25, 2014.
- 18) **Bagaitkar J**, Pech NK, Ivanov S, Huang G and Dinauer MC *NADPH oxidase limits sterile inflammation by modulating IL-1/G-CSF-driven neutrophilic inflammation*. Annual meeting American Society for Hematology. San Francisco, December 6<sup>th</sup>-9<sup>th</sup> 2014.
- 19) **Bagaitkar J**, Matute JD, Arias AA, Barbu EA, Huang G, Pallat S and Dinauer MC. *PI(3)P- dependent generation of ROS regulates inflammatory response*. Society for Leukocyte Biology Annual meeting, Raleigh, 2015.
- 20) Yoo DG, Huang G, **Bagaitkar J** and Dinauer MC. *Evaluation of expression levels of interferon-stimulated genes in X-linked CGD mice*. Washington University Immunology Retreat, 2015.
- 21) **Bagaitkar J**, Huang JH, Zeng MY, Pech NK and Dinauer MC. *NADPH oxidase regulates apoptotic cell clearance and antigenicity*. Society for Leukocyte biology annual meeting 2016. **Presidential award, SLB 2016 (postdoc/ junior faculty category)**
- 22) **Bagaitkar J**, Shchukina I, Shpynov O, Loginicheva K, Porter S, Collins P, Demidov G, Zaitsev K, Oltz EM, and Artyomov MN. *Multi-omics Dissection of Healthy Human Aging with a focus on CD14<sup>+</sup>CD16<sup>-</sup> Monocytes*. Keystone Symposium on Aging, Inflammation and Immunity, Austin TX, 2018.

#### **Corresponding Author Abstracts**

- 23) Bahnsen M, Klaes K and **Bagaitkar J**<sup>#</sup>. *NADPH oxidase –derived ROS regulates TLR2 responses in mouse dendritic cells*. KBRIN