



GANESH PUSAPATI

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 GaneshPusapati
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Present position

Senior Research Scientist, Stanford University
06/2018 - present

Education

07/2001 - 04/2004

B.Sc. (Biotechnology), Andhra University, India

07/2004 - 04/2006

M.Sc. (Animal Biotechnology), University of Hyderabad, India

10/2006 - 12/2010

Ph.D., University of Ulm, Germany
Advisor: Thomas Seufferelin, M.D.

Research Experience

01/2011 - 02/2013

Post-doc, Stanford University, United States
Advisor: Suzanne Pfeffer, Ph.D.

03/2013 - 12/2015

Post-doc, Stanford University, United States
Advisor: Rajat Rohatgi, M.D., Ph.D.

01/2016 - 05/2018

Research Scientist, Stanford University, United States

Honors and Awards

06/2005 - 04/2006

Shantha Biotech Merit Scholarship

10/2006 - 12/2009

Graduate College 1041 - Molecular Diabetology and
Endocrinology in Medicine - Ph.D. Fellowship

07/2014 - 06/2016

American Heart Association - Postdoctoral Fellowship

Research interest

Signal transduction cascades regulating development
and disease

Professional Affiliations

2008-2009

Member, American Society for Cell Biology

2010-2011

Member, American Association for Cancer Research

2013-2014

Member, American Heart Association

2015-present

Editorial Board, *Journal of Molecular Biology Research* and
Cancer and Clinical Oncology

2015-present

Peer Reviewer, *Frontiers in Cell and Developmental Biology*,
Advances in Biochemistry, and *Cancer Research Journal*

Conferences and Talks

- 2007 Annual Meeting of the Graduate College 1041 - Molecular Diabetology and Endocrinology in Medicine, Germany (Talk)
- 2008 Annual Meeting of the International Graduate School in Molecular Medicine, Germany (Talk)
- 2008 Annual Meeting of the American Society for Cell Biology (Poster)
- 2009 Annual Meeting of the International Graduate School in Molecular Medicine, Germany (Talk)
- 2009 Annual Meeting of the German Society for Digestive and Metabolic Diseases (Poster)
- 2010 Annual Meeting of the American Association for Cancer Research (Poster)
- 2010 Annual Meeting of the German Society for Digestive and Metabolic Diseases (Poster)
- 2014 Keystone Symposia - Cilia, Development and Disease (Poster)
- 2018 Annual Meeting of the American Association for Cancer Research

Publications

1. **Pusapati GV**, Krndija D, Armacki M, von Wichert G, von Blume J, Malhotra V, Adler G, Seufferlein T. Role of the second cysteine-rich domain and Pro275 in PKD2 interaction with ARF1, TGN recruitment and protein transport. *Mol Biol Cell*. 2010 21: 1011-1022
2. Azoitei N, **Pusapati GV***, Kleger A*, Moeller P, Kuefer R, Genze F, Wagner M, Van Lint J, Carmeliet P, Adler G, Seufferlein T. Protein kinase D2 is a crucial regulator of tumor cell-endothelial cell communication in gastrointestinal tumors. *Gut*. 2010 59: 1316-1330 (*equal contribution)
3. Kleger A, Seufferlein T, Malan D, Tischendorf M, Storch A, Wolheim A, Latz S, Protze S, Porzner M, Proepper C, Brunner C, Katz SF, **Varma Pusapati G**, *et al*. Modulation of calcium activated potassium channels induces cardiogenesis of pluripotent stem cells and enrichment of pacemaker-like cells. *Circulation*. 2010 122: 1823-1836
4. Kleger A, Loebnitz C, **Pusapati GV**, Armacki M, Mueller M, Tuempel S, Illing A, Hartmann D, Brunner C, Liebau S, *et al*. Protein kinase D2 is an essential regulator of murine myoblast differentiation. *PLoS One*. 2011 6: e14599
5. Azoitei N, Kleger A, Schoo N, Thal DR, Brunner C, **Pusapati GV**, Filatova A, Genze F, Moeller P, Acker T, *et al*. Protein kinase D2 is a novel regulator of glioblastoma growth and tumor formation. *Neuro Oncol*. 2011 13: 710-724
6. **Pusapati GV***, Eiseler T*, Rykx A, Vandoninck S, Derua R, Waelkens E, Van Lint J, von Wichert G, Seufferlein T. Protein kinase D regulates RhoA activity via rhotekin phosphorylation. *J Biol Chem*. 2012 287: 9473-9483 (*equal contribution)

Publications continued

7. Nottingham RM, **Pusapati GV**, Ganley IG, Barr FA, Lambricht DG, Pfeffer SR. RUTBC2: A Rab9A effector and GTPase activating protein for Rab36. *J Biol Chem.* 2012 287: 22740-22748
8. **Pusapati GV**, Luchetti G, Pfeffer SR. Ric1/Rgp1 complex is a guanine nucleotide exchange factor for the late Golgi rab6A GTPase and an effector for the medial Golgi Rab33B GTPase. *J Biol Chem.* 2012 287: 42129-42137
9. Armacki M, Joodi G, Nimmagadda SC, de Kimpe L, **Pusapati GV**, Vandoninck S, Van Lint J, Illing A, Seufferlein T. A novel splice variant of calcium and integrin-binding protein 1 mediates protein kinase D2-stimulated tumour growth by regulating angiogenesis. *Oncogene.* 2014 33: 1167-1180
10. **Pusapati GV***, Hughes CE*, Dorn KV*, Zhang D*, Sugianto P, Aravind L, Rohatgi R. EFCAB7 and IQCE regulate hedgehog signaling by tethering the EVC-EVC2 complex to the base of primary cilia. *Dev Cell.* 2014 28: 483-496 (*equal contribution)
11. **Pusapati GV**, Rohatgi R. Location, location, and location: compartmentalization of Hedgehog signaling at primary cilia. *EMBO J* 2014 33: 1852-1854
12. Carmi Y, Spitzer MH, Linde IL, Burt BM, Prestwood TR, Perlman N, Davidson MG, Kenkel JA, Segal E, **Pusapati GV**, Bhattacharya N, Engleman. Allogeneic IgG combined with dendritic cell stimuli induce antitumour T-cell immunity. *Nature.* 2015 521: 99-104
13. Zhao Z, Lee RT, **Pusapati GV**, Iyu A, Rohatgi R, Ingham PW. An essential role for Grk2 in Hedgehog signalling downstream of Smoothed. *EMBO Rep.* 2016 17:739-752
14. Phua SC, Chiba S, Suzuki M, Su E, Roberson EC, **Pusapati GV**, Setou M, Rohatgi R, Reiter JF, Ikegami K, Inoue T. Dynamic remodeling of membrane composition drives cell cycle through primary cilia excision. *Cell.* 2017 168:264-279
15. **Pusapati GV***, Kong JH*, Patel BB*, Krishnan A, Sagner A, Kinnebrew M, Briscoe J, Aravind L, Rohatgi R. CRISPR screens uncover genes that regulate target cell sensitivity to the morphogen sonic hedgehog. *Dev Cell.* 2018 44: 113-129 (*equal contribution)
16. **Pusapati GV***, Kong JH*, Patel BB, Gouti M, Sagner A, Sircar R, Luchetti G, Ingham PW, Briscoe J, Rohatgi R. G protein-coupled receptors control the sensitivity of cells to the morphogen Sonic Hedgehog. *Sci Signal.* 2018 11: eaao5749 (*equal contribution)
17. Hong SR, Wang CL, Huang YS, Chang YC, Chang YC, **Pusapati GV et al.** Spatiotemporal manipulation of ciliary glutamylation reveals its roles in intraciliary trafficking and Hedgehog signaling. *Nat Commun.* 2018 9:1732
18. Patel BB, Lebensohn AM, **Pusapati GV**, Carette JE, Salzman J, Rohatgi R. Discovery of gene regulatory elements through a new bioinformatics analysis of haploid genetic screens. *PLoS One.* 2019 14:e0198463
19. Kinnebrew M, Iverson EJ, Patel BB, **Pusapati GV**, Kong JH, Johnson KA, Luchetti G, Eckert KM, McDonald JG, Covey DF, Siebold C, Radhakrishnan A, Rohatgi R. Cholesterol accessibility at the ciliary membrane controls hedgehog signaling. *eLife.* 2019 8: e50051.
20. Dubey R, van Kerkhof P, Jordens I, Malinauskas T, **Pusapati GV**, McKenna JK, Li D, Carette JE, Ho M, Siebold C, Maurice M, Lebensohn AM, Rohatgi R. R-spondins engage heparan sulfate proteoglycans to potentiate WNT signaling. *eLife.* 2020 9:e54469.

Publications continued

21. Kong JH*, Young CB*, **Pusapati GV***, Patel C, Ho S, Krishnan A, Lin JI, Devine W, de Bellaing AM, Athni TS, L. Aravind, Gunn TM, Lo CW, Rohatgi R. A membrane-tethered ubiquitination pathway regulates Hedgehog signaling and heart development. *Dev Cell*. 2020 55:432-449 (*equal contribution)
22. Bosakova M, Abraham SP, Nita A, Hrubá E, Buchtová M, Taylor SP, Duran I, Martin J, Svozilová K, Barta T, Varecha M, Balek L, Kohoutek J, Radaszkiewicz T, **Pusapati GV et al.** *EMBO Mol Med*. 2020 12:e11739

References

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