



Venkata Ganesh Varma Pusapati

Senior Research Scientist - Basic Life, Biochemistry

 Curriculum Vitae available Online

Publications

PUBLICATIONS

- **Design principles of a membrane-spanning ubiquitin ligase.** *Molecular cell*
Williams, C., Nocka, L. M., Hedger, G., Parashara, P., Pardon, E., Latorraca, N. R., Pusapati, G. V., Sarkar, P., Lartey, D., Gao, L., Milenkovic, L., Chalk, R., Steyaert, et al
2026
- **Direct ionic stress sensing and mitigation by the transcription factor NFAT5.** *Science advances*
Khandwala, C. B., Sarkar, P., Schmidt, H. B., Ma, M., Pusapati, G. V., Lamoliatte, F., Kinnebrew, M., Patel, B. B., Tillo, D., Lebensohn, A. M., Rohatgi, R.
2025; 11 (8): eadu3194
- **Regulated N-glycosylation controls chaperone function and receptor trafficking.** *Science (New York, N.Y.)*
Ma, M., Dubey, R., Jen, A., Pusapati, G. V., Singal, B., Shishkova, E., Overmyer, K. A., Cormier-Daire, V., Fedry, J., Aravind, L., Coon, J. J., Rohatgi, R.
2024; 386 (6722): 667-672
- **Gene-teratogen interactions influence the penetrance of birth defects by altering Hedgehog signaling strength.** *Development (Cambridge, England)*
Kong, J. H., Young, C. B., Pusapati, G. V., Espinoza, F. H., Patel, C. B., Beckert, F., Ho, S., Patel, B. B., Gabriel, G. C., Aravind, L., Bazan, J. F., Gunn, T. M., Lo, et al
2021
- **Mutations in GRK2 cause Jeune syndrome by impairing Hedgehog and canonical Wnt signaling** *EMBO MOLECULAR MEDICINE*
Bosakova, M., Abraham, S. P., Nita, A., Hruba, E., Buchtova, M., Taylor, S., Duran, I., Martin, J., Svozilova, K., Barta, T., Varecha, M., Balek, L., Kohoutek, et al
2020
- **A Membrane-Tethered Ubiquitination Pathway Regulates Hedgehog Signaling and Heart Development.** *Developmental cell*
Kong, J. H., Young, C. B., Pusapati, G. V., Patel, C. B., Ho, S. n., Krishnan, A. n., Lin, J. I., Devine, W. n., Moreau de Bellaing, A. n., Athni, T. S., Aravind, L. n., Gunn, T. M., Lo, et al
2020
- **R-spondins engage heparan sulfate proteoglycans to potentiate WNT signaling.** *eLife*
Dubey, R. n., van Kerkhof, P. n., Jordens, I. n., Malinauskas, T. n., Pusapati, G. V., McKenna, J. K., Li, D. n., Carette, J. E., Ho, M. n., Siebold, C. n., Maurice, M. n., Lebensohn, A. M., Rohatgi, et al
2020; 9
- **Discovery of gene regulatory elements through a new bioinformatics analysis of haploid genetic screens.** *PloS one*
Patel, B. B., Lebensohn, A. M., Pusapati, G. V., Carette, J. E., Salzman, J. n., Rohatgi, R. n.
2019; 14 (1): e0198463
- **Cholesterol accessibility at the ciliary membrane controls Hedgehog signaling.** *eLife*

- Kinnebrew, M. n., Iverson, E. J., Patel, B. B., Pusapati, G. V., Kong, J. H., Johnson, K. A., Luchetti, G. n., Eckert, K. M., McDonald, J. G., Covey, D. F., Siebold, C. n., Radhakrishnan, A. n., Rohatgi, et al
2019; 8
- **CRISPR Screens Uncover Genes that Regulate Target Cell Sensitivity to the Morphogen Sonic Hedgehog.** *Developmental cell*
Pusapati, G. V., Kong, J. H., Patel, B. B., Krishnan, A. n., Sagner, A. n., Kinnebrew, M. n., Briscoe, J. n., Aravind, L. n., Rohatgi, R. n.
2018; 44 (1): 113–29.e8
 - **Spatiotemporal manipulation of ciliary glutamylation reveals its roles in intraciliary trafficking and Hedgehog signaling.** *Nature communications*
Hong, S. R., Wang, C. L., Huang, Y. S., Chang, Y. C., Chang, Y. C., Pusapati, G. V., Lin, C. Y., Hsu, N. n., Cheng, H. C., Chiang, Y. C., Huang, W. E., Shaner, N. C., Rohatgi, et al
2018; 9 (1): 1732
 - **G protein-coupled receptors control the sensitivity of cells to the morphogen Sonic Hedgehog.** *Science signaling*
Pusapati, G. V., Kong, J. H., Patel, B. B., Gouti, M. n., Sagner, A. n., Sircar, R. n., Luchetti, G. n., Ingham, P. W., Briscoe, J. n., Rohatgi, R. n.
2018; 11 (516)
 - **Dynamic Remodeling of Membrane Composition Drives Cell Cycle through Primary Cilia Excision.** *Cell*
Phua, S. C., Chiba, S., Suzuki, M., Su, E., Roberson, E. C., Pusapati, G. V., Setou, M., Rohatgi, R., Reiter, J. F., Ikegami, K., Inoue, T.
2017; 168 (1-2): 264-279 e15
 - **An essential role for Grk2 in Hedgehog signalling downstream of Smoothened** *EMBO REPORTS*
Zhao, Z., Lee, R. T., Pusapati, G. V., Iyu, A., Rohatgi, R., Ingham, P. W.
2016; 17 (5): 739-752
 - **Allogeneic IgG combined with dendritic cell stimuli induce antitumour T-cell immunity.** *Nature*
Carmi, Y., Spitzer, M. H., Linde, I. L., Burt, B. M., Prestwood, T. R., Perlman, N., Davidson, M. G., Kenkel, J. A., Segal, E., Pusapati, G. V., Bhattacharya, N., Engleman, E. G.
2015; 521 (7550): 99-104
 - **Location, location, and location: compartmentalization of Hedgehog signaling at primary cilia.** *EMBO journal*
Pusapati, G. V., Rohatgi, R.
2014; 33 (17): 1852-1854
 - **EFCAB7 and IQCE Regulate Hedgehog Signaling by Tethering the EVC-EVC2 Complex to the Base of Primary Cilia** *DEVELOPMENTAL CELL*
Pusapati, G. V., Hughes, C. E., Dorn, K. V., Zhang, D., Sugianto, P., Aravind, L., Rohatgi, R.
2014; 28 (5): 483-496
 - **A novel splice variant of calcium and integrin-binding protein 1 mediates protein kinase D2-stimulated tumour growth by regulating angiogenesis.** *Oncogene*
Armacki, M., Joodi, G., Nimmagadda, S. C., De Kimpe, L., Pusapati, G. V., Vandoninck, S., Van Lint, J., Illing, A., Seufferlein, T.
2014; 33 (9): 1167-1180
 - **Ric1-Rgp1 Complex Is a Guanine Nucleotide Exchange Factor for the Late Golgi Rab6A GTPase and an Effector of the Medial Golgi Rab33B GTPase** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Pusapati, G. V., Luchetti, G., Pfeffer, S. R.
2012; 287 (50): 42129-42137
 - **RUTBC2 Protein, a Rab9A Effector and GTPase-activating Protein for Rab36** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Nottingham, R. M., Pusapati, G. V., Ganley, I. G., Barr, F. A., Lambright, D. G., Pfeffer, S. R.
2012; 287 (27): 22740-22748
 - **Protein Kinase D Regulates RhoA Activity via Rhotekin Phosphorylation** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Pusapati, G. V., Eiseler, T., Rykx, A., Vandoninck, S., Derua, R., Waelkens, E., Van Lint, J., von Wichert, G., Seufferlein, T.
2012; 287 (12): 9473-9483
 - **Protein kinase D2 is a novel regulator of glioblastoma growth and tumor formation** *NEURO-ONCOLOGY*
Azoitei, N., Kleger, A., Schoo, N., Thal, D. R., Brunner, C., Pusapati, G. V., Filatova, A., Genze, F., Moeller, P., Acker, T., Kuefer, R., Van Lint, J., Baust, et al

2011; 13 (7): 710-724

● **Protein Kinase D2 Is an Essential Regulator of Murine Myoblast Differentiation** *PLOS ONE*

Kleger, A., Loebnitz, C., Pusapati, G. V., Armacki, M., Mueller, M., Tuempel, S., Illing, A., Hartmann, D., Brunner, C., Liebau, S., Rudolph, K. L., Adler, G., Seufferlein, et al

2011; 6 (1)

● **Modulation of Calcium-Activated Potassium Channels Induces Cardiogenesis of Pluripotent Stem Cells and Enrichment of Pacemaker-Like Cells** *CIRCULATION*

Kleger, A., Seufferlein, T., Malan, D., Tischendorf, M., Storch, A., Wolheim, A., Latz, S., Protze, S., Porzner, M., Proepper, C., Brunner, C., Katz, S., Pusapati, et al

2010; 122 (18): 1823-?

● **Protein kinase D2 is a crucial regulator of tumour cell-endothelial cell communication in gastrointestinal tumours** *GUT*

Azoitei, N., Pusapati, G. V., Kleger, A., Moeller, P., Kuefer, R., Genze, F., Wagner, M., Van Lint, J., Carmeliet, P., Adler, G., Seufferlein, T.

2010; 59 (10): 1316-1330

● **Role of the Second Cysteine-rich Domain and Pro275 in Protein Kinase D2 Interaction with ADP-Ribosylation Factor 1, Trans-Golgi Network Recruitment, and Protein Transport** *MOLECULAR BIOLOGY OF THE CELL*

Pusapati, G. V., Krndija, D., Armacki, M., von Wichert, G., Von Blume, J., Malhotra, V., Adler, G., Seufferlein, T.

2010; 21 (6): 1011-1022