Publications

2020

1. Sameer Kumar Malladi, David Schreiberb, Ishika Pramanick, Malavika Abhineshababu Sridevi, Adi Goldenzweig, Somnath Dutta, Sarel Jacob Fleishman, Raghavan Varadarajana. One-step sequence and structure-guided optimization of HIV-1 envelope gp140. Current Research in Structural Biology, 2020.

2019

2. Eshan Ghosh, Hemlata Dwivedi, Mithu Baidya, Ashish Srivastava, Punita Kumari, Tomek Stepniewski, Hee Ryung Kim, Mi-Hye Lee, Jaana van Gastel, Madhu Chaturvedi, Debarati Roy, Shubhi Pandey, Jagannath Maharana, Ramon Guixà-González, Louis M Luttrell, Ka Young Chung, Somnath Dutta, Jana Selent, Arun K Shukla. Conformational Sensors and Domain Swapping Reveal Structural and Functional Differences Between β-Arrestin Isoforms. Cell Report, 2019.

3. Kumar S, Panda H, Makhdoomi MA, Mishra N, Safdari HA, Chawla H, Aggarwal H, Reddy ES, Lodha R, Kumar Kabra S, Chandele A, Dutta S, Luthra K. An HIV-1 Broadly Neutralizing Antibody from a Clade C-Infected Pediatric Elite Neutralizer Potently Neutralizes the Contemporaneous and Autologous Evolving Viruses. J Virol. 2019

3. Nidhi Kundu, Pratima Verma, Anil Kumar, Vinica Dhar, Somnath Dutta, Kausik Chattopadhyay. N-terminal region of Vibrio parahaemolyticus thermostable direct hemolysin regulates membrane-damaging action of the toxin. Biochemistry, 2019.

4. Koehl A, Hu H, Feng D, Sun B, Zhang Y, Robertson MJ, Chu M, Kobilka TS, Laeremans T, Steyaert J, Tarrasch J, Dutta S, Fonseca R, Weis WI, Mathiesen JM, Skiniotis G, Kobilka BK. Structural insights into the activation of metabotropic glutamate receptors. Nature. 2019 ;566(7742):79-84

5. Bhandari S, Biswas S, Chaudhary A, Dutta S, Suguna K. Dodecameric structure of a small heat shock protein from Mycobacterium marinum M. Proteins. 2019.

6. Madhurima Datta, Shashanka Arolia, Kapudeep Karmakara, Somnath Dutta, Dipshikha Chakravortty, Umesh Varshney. Development of mCherry tagged UdgX as a highly sensitive molecular probe for specific detection of uracils in DNA. Biochemical and biophysical research communication, 2019.

2018

6. Sadfari HA, Pandey S, Shukla AK, Dutta S. Illuminating GPCR Signaling by Cryo-EM. *Trends Cell Biol*. 2018 Volume 28, Issue 8, p591-594

Upto 2016:

1. De M, Oleskie AN, Ayyash M, Dutta S, Mancour L, Abazeed ME, Brace EJ, Skiniotis G, Fuller RS. The Vps13p-Cdc31p complex is directly required for TGN late endosome transport and TGN homotypic fusion. *J Cell Biol*. 2017, 216:425-439.

2. Yee A, Oleskie AN, Dosey AM, Kretz CA, Gildersleeve RD, Dutta S, Su M, Ginsburg D, Skiniotis G.Visualization of an N-terminal fragment of von Willebrand factor in complex with factor VIII. *Blood*. 2015, 126:939-42.

3.Dutta, S., Whicher, J. R., Hansen, D. A., Hale, W. A., Chemler, J. A., Congdon, G. R., Narayan, A. R., Håkansson, K., Sherman, D. H., Smith, J. L., and Skiniotis, G. Structure of a modular polyketide synthase. *Nature*. 2014, 510(7506):512-17.

4. Whicher, J. R., Dutta, S., Hansen, D. A., Hale, W. A., Chemler, J. A., Congdon, G. R., Narayan, A. R., Håkansson, K., Sherman, D. H., Smith, J. L., and Skiniotis, G. Structural rearrangements of a polyketide synthase module during its catalytic cycle. *Nature*. 2014, 510(7506):560-64. [*Equal contribution].

5. Akey DL, Brown WC, Dutta S, Konwerski J, Jose J, Jurkiw TJ, DelProposto J, Ogata CM, Skiniotis G, Kuhn RJ, Smith JL. Flavivirus NS1 structures reveal surfaces for associations with membranes and the immune system. *Science*. 2014, 343(6173):881-85.

6. Dutta, S, Banerjee, KK, Ghosh AN. Cryo-electron microscopy reveals the membrane insertion mechanism of *V. cholerae* hemolysin. *J Biomol Struct Dyn*. 2013, 32(9):1434-42.

7. Lyon AM, Dutta S, Boguth CA, Skiniotis G, Tesmer JJ. Full-length Gα(q)-phospholipase C-β3 structure reveals interfaces of the C-terminal coiled-coil domain. *Nat Struct Mol Biol.* 2013, 20(3):355-62.

8. Mancour LV, Daghestani HN, Dutta S, Westfield GH, Schilling J, Oleskie AN, Herbstman JF, Chou SZ, Skiniotis G. Ligand-Induced Architecture of the Leptin Receptor Signaling Complex. *Mol Cell*. 2012, 48(4):655-61.

9. Westfield GH*, Rasmussen SG*, Su M*, Dutta S*, DeVree BT, Chung KY, Calinski D, Velez-Ruiz G, Oleskie AN, Pardon E, Chae PS, Liu T, Li S, Woods VL Jr, Steyaert J, Kobilka BK, Sunahara RK, Skiniotis G.Structural flexibility of the G alpha s alpha-helical domain in the beta2-adrenoceptor Gs complex. *Proc Natl Acad Sci*. U S A. *2011*, 108(38):16086-91. [* Equal contribution]

10. Gu L, Eisman EB, Dutta S, Franzmann TM, Walter S, Gerwick WH, Skiniotis G, Sherman DH. Tandem acyl carrier proteins in the curacin biosynthetic pathway promote consecutive multienzyme reactions with a synergistic effect. *Angew Chem Int Ed Engl*. 2011, 50(12):2795-98.

11. Dutta S, Mazumdar B, Banerjee KK, Ghosh AN. Three-dimensional structure of different

functional forms of the Vibrio cholerae hemolysin oligomer: a cryo-electron microscopic study. *J Bacteriol*. 2010, 192(1):169-78.