List of nominee's 10 best publications

1. Reshi HA, Medishetti R, Ahuja A, Balasubramanian D, Babu K, Jaiswal M, **Maddika S**. EYA protein complex is required for Wntless retrograde trafficking from endosomes to Golgi. **Dev Cell.** 2024 (In Press) (doi: 10.1016/j.devcel.2024.05.021).

2. Tathe P, Chowdary KVSR, Murmu KC, Prasad P, **Maddika S**. SHP-1 dephosphorylates histone H2B to facilitate its ubiquitination during transcription. **EMBO J**. 2022; 41(19):e109720.
3. Vamadevan V, Chaudhary N, **Maddika S**. Ubiquitin-assisted phase separation of dishevelled-2 promotes Wnt signalling. **J Cell Sci.** 2022;135(24):jcs260284.
4. Kumar P, Tathe P, Chaudhary N, **Maddika S**. PPM1G forms a PPP-type phosphatase holoenzyme with B56δ that maintains adherens junction integrity. **EMBO Rep.** 2019: e46965.

5. Shinde SR, **Maddika S**. PTEN regulates glucose transporter recycling by impairing SNX27 retromer assembly. **Cell Reports**. 2017, 21(6): 1655-1666.

6. Shinde SR, **Maddika S**. PTEN modulates EGFR late endocytic trafficking and degradation by dephosphorylating Rab7. **Nature Communications**. 2016, 7:10689.

7. Chaudhary N, **Maddika S**. WWP2-WWP1 ubiquitin ligase complex co-ordinated by PPM1G maintains the balance between cellular p73 and ΔNp73 levels. **Mol Cell Biol**. 2014; 34(19): 3754-64.

8. Kavela S., Shinde SR., Ratheesh R., Viswakalyan K., Bashyam MD., Swarnalata G., Vamsy G., Pattnaik S., Rao S., Sastry RA., Srinivasulu M., Chen J & **Maddika S**. PNUTS functions as a proto-oncogene by negatively regulating PTEN. ***Cancer Research.*** 2013; 73(1): 205-14.

9. **Maddika S**, Kavela S, Rani M, Palicherla PV, Chen J. WWP2 is an E3 ubiquitin ligase for PTEN. ***Nature Cell Biol.*** 2011; 13(6): 728-33.

10. **Maddika S**, Chen J. Protein kinase DYRK2 is a scaffold that facilitates the assembly of an E3-ligase. ***Nature Cell Biol*** 2009; 11(4):409-19.

Highlights of the important discoveries from the listed publications

- **EYA Protein Complex & Wntless Trafficking**: The EYA protein complex is identified as essential component in vertebrates for the retrograde trafficking of Wntless from endosomes to the Golgi, crucial for Wnt signalling and organ development (Dev Cell, 2024).
- **SHP-1 & Histone H2B Dephosphorylation**: SHP-1 was identified as vital phosphatase for gene regulation via its phosphatase activity on histone H2B, facilitating its ubiquitination during transcription (EMBO J, 2022).
- **Ubiquitin & Dishevelled-2**: A new role for ubiquitin chain was identified to assist in the phase separation of Dishevelled-2, enhancing Wnt signaling pathways (J Cell Sci, 2022).

- **PPM1G & Adherens Junctions**: A first holoenzyme complex assembled by a PPM family member is discovered. PPM1G forms a holoenzyme with B56δ to preserve adherens junction integrity, crucial for cell-cell adhesion (EMBO Rep, 2019).
- **PTEN & vesicular trafficking**: In this work, a novel role of PTEN in regulation of vesicular trafficking was demonstrated. PTEN affects glucose transporter recycling by disrupting SNX27 retromer assembly, impacting cellular glucose uptake (Cell Reports, 2017). On the other hand, PTEN modulates EGFR trafficking and degradation by dephosphorylating Rab7, affecting receptor turnover (Nature Communications, 2016).
- **New substrates and regulators of oncogenic E3 ligase WWP2.** Tumor suppressors PTEN and p73 were identified as new substrates of WWP2 E3 ligase, which critically contributes to tumor promoting ability of WWP2. On the other hand, PNUTS was identified as an oncogenic negative regulator of PTEN phosphatase (Mol Cell Biol, 2014), (Cancer Research, 2013), (Nature Cell Biol, 2011).
- **DYRK2 & E3 Ligase Assembly**: Protein kinase DYRK2 was identified as a scaffold for assembling an E3 ubiquitin ligase complex, influencing protein degradation pathways (Nature Cell Biol, 2009). This is milestone discovery in the field of ubiquitin biology, where a protein kinase was identified as an integral component of E3 ligase machinery.