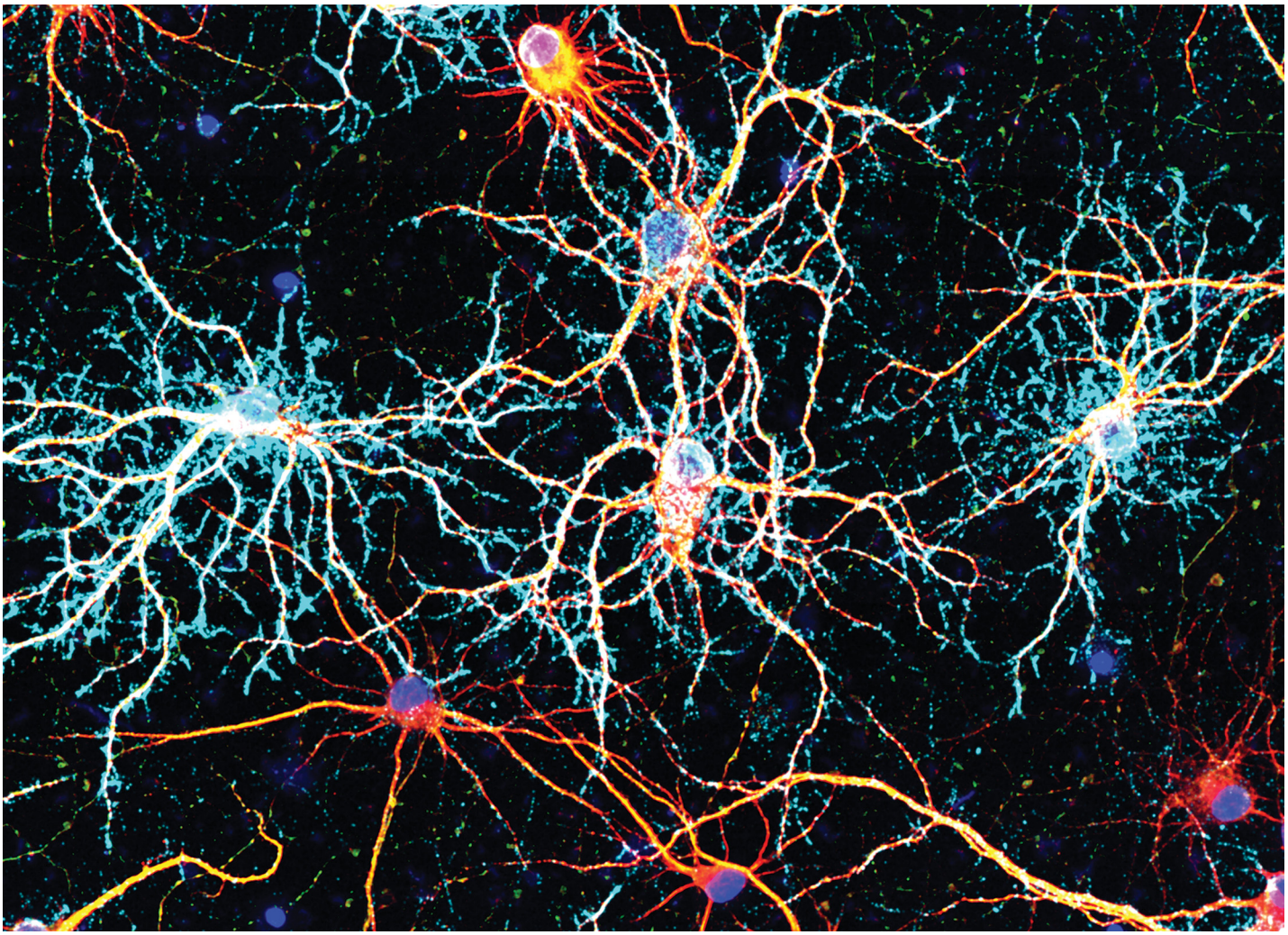

Showcasing research from Professor Singamaneni and Raman's laboratories, School of McKelvey School of Engineering, Washington University in St. Louis, St. Louis, MO, USA.

Neuronal maturation-dependent nano–neuro interaction and modulation

Utilizing plasmonic-fluors as ultrabright nanolabels, we show that the nano–neuro interaction depends on the surface charge of the nanoparticles and strongly correlates with the maturation stage of each individual neurons in the network, which in turn determines the homogeneity of nano–neuromodulation in a maturing neural network. A comprehensive understanding of the factors influencing nano–neuro interaction will greatly advance our capability to seamlessly integrate nanomaterials with the nervous system and could help shape the future of nano–neuromodulation.

As featured in:

See Baranidharan Raman, Srikanth Singamaneni *et al.*, *Nanoscale Horiz.*, 2023, **8**, 1537.

ROYAL SOCIETY OF CHEMISTRY

rsc.li/nanoscale-horizons

Registered charity number: 207890