

### List of publications

1. Ganguly, S.; Murugan, A.; Ghosh, D.; **Narayanaswamy N.**; Govindaraju, T.; Basu, G. DNA minor groove-induced cis-trans isomerization of a NIR fluorescent probe. *Biochemistry*, **2021**, *60*, 2084-2097.
2. Ganguly, S.; Ghosh, D.; **Narayanaswamy N.**; Govindaraju, T.; Basu, G. Dual DNA binding mode of a turn-on red fluorescent probe thiazole coumarin. *Plos one*, **2020**, *15*, e0239145
3. **Narayanaswamy, N.\***; Chakraborty, K.\*; Saminathan, A.; Zeichner, E.; Leung K-H.; Devany, J.; Krishnan, Y. A pH-correctable, DNA-based fluorescent reporter for organellar Calcium. *Nat. Methods*, **2019**, *16*, 95-102. (\* equal contribution)
4. Salgado, E.; Rodriguez, B.G.; **Narayanaswamy, N.**; Krishnan, Y.; Harrison S.C. Visualization of Ca<sup>2+</sup> loss from rotavirus during cell entry. *J. Virol.*, **2018**, *92*, e01327-18.
5. Suseela, Y. V.; **Narayanaswamy, N.**; Sumon, P.; Govindaraju, T. Red-NIR fluorescence probes for canonical and non-canonical nucleic acid structures: current progress and future implications. *Chem. Soc. Rev.*, **2018**, *47*, 1098-1131.
6. Rajasekhar, K.; **Narayanaswamy, N.**; Murugan, N. A.; Viccaro, K.; Lee, H-G.; Shah, K.; Govindaraju, T. A $\beta$  plaque-selective NIR fluorescence probe to differentiate Alzheimer's disease from tauopathies. *Biosensors and Bioelectronics*, **2017**, *98*, 54-61.
7. **Narayanaswamy, N.**; Narra, S.; Nair, R. R.; Saini, D. K.; Kondaiah, P.; Govindaraju, T. Stimuli-responsive colorimetric and NIR fluorescence combination probe for selective reporting of cellular hydrogen peroxide. *Chem. Sci.*, **2016**, *7*, 2832-2841.
8. **Narayanaswamy, N.**; Nair, R. R.; Suseela, Y. V.; Saini, D. K.; Govindaraju, T. Molecular beacon based DNA-switch for reversible pH sensing in vesicles and live cells. *Chem. Commun.*, **2016**, *52*, 8741-8744.
9. Rajasekhar, K.; **Narayanaswamy, N.**; Murugan, N. A.; Kuang, G.; Ågren, H.; Govindaraju, T. An effective high affinity red fluorescent and colorimetric probe for Amyloid  $\square$  aggregation. *Sci. Rep.*, **2016**, *6*, 23668.
10. **Narayanaswamy, N.**; Das, S.; Samanta, P. K.; Banu, K.; Sharma, G. P.; Mondal, N.; Dhar, S. K.; Pati, S. K.; Govindaraju, T. Sequence-specific recognition of DNA minor groove by an NIR-fluorescence switch-on probe and its potential applications. *Nucleic Acids Res.*, **2015**, *43*, 8651-8663.
11. **Narayanaswamy, N.**; Suresh, G.; Priyakumar, U. D.; Govindaraju, T. Double zipper helical assembly of deoxyoligonucleotides: mutual templating and chiral imprinting to form hybrid DNA ensembles. *Chem. Commun.*, **2015**, *51*, 5493-5496.
12. **Narayanaswamy, N.**; Unnikrishnan, M.; Gupta, M.; Govindaraju, T. Fluorescence reporting of G-quadruplex structures and modulating their DNAzyme activity using polyethylenimine-pyrene conjugate. *Bioorg. Med. Chem. Lett.*, **2015**, *25*, 2395-2400.

13. **Narayanaswamy, N.**; Kumar, M.; Das, S.; Sharma, R.; Samanta, P. K.; Pati, S. K.; Dhar, S. K.; Kundu, T. K.; Govindaraju, T. A thiazole coumarin (TC) turn-on fluorescence probe for AT-base pair detection and multipurpose applications in different biological systems. *Sci. Rep.*, **2014**, *4*, 6476.
14. Rajasekhar, K.; **Narayanaswamy, N.**; Mishra, P.; Suresh, S. N.; Manjithaya, R.; Govindaraju, T. Synthesis of hybrid cyclic peptoids and identification of autophagy enhancer. *ChemPlusChem* **2014**, *79*, 25-30.
15. **Narayanaswamy, N.**; Avinash, M. B.; Govindaraju, T. Exploring hydrogen bonding and weak aromatic interactions induced assembly of adenine and thymine functionalized naphthalenediimides. *New J. Chem.*, **2013**, *37*, 1302-1306.
16. **Narayanaswamy, N.**; Govindaraju, T. Aldazine-based colorimetric sensors for Cu(II) and Fe(III). *Sens. Actuators B: Chemical* **2012**, *161*, 304 – 310.
17. **Narayanaswamy, N.**; Maity, D.; Govindaraju, T. Reversible fluorescence sensing of Zn<sup>2+</sup> based on pyridine-constrained bis(triazole-linked hydroxyquinoline) sensor. *Supramol. Chem.* **2011**, *23*, 703-709.

#### **Patents filled**

1. Govindaraju, T.; **Narayanaswamy, N.**; Rajasekhar, K. "Small molecular probes, processes and use thereof" 2020, US Patent 10,745,393.
2. Govindaraju, T.; **Narayanaswamy, N.** "Compounds as DNA probes, methods and applications thereof". 2020, US Patent 10,683,273.
3. Govindaraju, T.; **Narayanaswamy, N.** "Compounds as stimuli-responsive probes, methods and applications thereof". 2020, US Patent 10,544,167.
4. Govindaraju, T.; Rajasekhar, K.; Manjithaya, R.; Mishra, P.; Suresh, S. N.; **Narayanaswamy, N.** Hybrid Cyclic Peptoids, Synthesis and Applications Thereof. Indian Patent Application No.: 3712/CHE/2013.