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## Dihydropyridine-derived BODIPY probe for detecting exogenous and endogenous nitric oxide in Mitochondria

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### Abstract:

A mitochondria-targetable probe **Mito-DHP** for nitric oxide (NO) was designed and synthesized by introducing dihydropyridine and triphenylphosphonium (TPP) moieties into boron dipyrromethene (BODIPY) dye. **Mito-DHP** was able to effectively detect nitric oxide through the aromatization of dihydropyridine to fluorescent pyridine product under oxygen-free conditions. The probe **Mito-DHP** showed high selectivity to NO over a number of reactive oxygen/nitrogen species (ROS/RNS) as well as high sensitivity (detection limit at 25 nM), pH stability and bio-compatibility. Furthermore, **Mito-DHP** proved to target mitochondria specifically and to visualize both exogenous and endogenous NO in real time.

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