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A fluorescence resonance energy transfer based pH probe for visualizing acidification in fungal cells

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Research Highlight

- A rhodamine-coumarin based fluorescence resonance energy transfer (FRET) ratiometric probe was successfully applied in visualizing pH and acidification in pathogenic *Candida albicans*.
- The probe was designed for pH through the H⁺-triggered reversible closed-open process of spiroboronate with high sensitivity and selectivity. The coumarin group has significantly pushed the closed-open equilibrium constant of the probe from > 8.0 into 6.0, the region that suits pH imaging of fungal cells.
- With excellent cellular permeability and ignorable biotoxicity in fungi, the probe manifested precise pH change from 7.5 to 6.5 in amiodarone treated fungal cells. This work might be able to shed some light on the fluorescence imaging of fungal cells with versatile molecular probes

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