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Optical Control of Cannabinoid Receptor 2-Mediated Ca²⁺ Release Enabled by Synthesis of Photoswitchable Probes *J. Am. Chem. Soc.* **2021**, *143*, 736–743, DOI: 10.1021/jacs.0c08926.

Optical Control of the Cannabinoid Receptor 2

Significance: Cannabinoid receptor 2 (CB2) is a G protein-coupled receptor with important roles in immunobiology. Pharmacological regulation holds promise for the treatment of neurological disorders. Photoswitchable probes would offer high spatiotemporal control, leading to new insights into CB2 signaling. The Carreira and Frank groups describe the development of **azo-HU308-3**, a probe that is inactive in the dark and can be activated upon irradiation with 375 nm light.

SYNFACTS Contributors: Dirk Trauner, Johannes Morstein Synfacts 2021, 17(04), 0453 Published online: 18.03.2021 **DOI:** 10.1055/s-0040-1719461; **Reg-No.:** T01821SF

Comment: A series of three HU308-derived photoswitches (**azo-HU308-1–3**) were synthesized from the terpene (+)-verbenone. **3-OTf-HU308** could be accessed in seven robust and high-yielding steps. Azobenzene photoswitches were attached to this intermediate using Buchwald–Hartwig or Suzuki–Miyaura couplings with potassium trifluoroborate reagents **C** and **D** as pioneered by Molander (*Synlett* **2005**, 1763).

Category

Chemistry in Medicine and Biology

Key words

G protein-coupled receptors

photoswitches

azobenzenes

