

# Lighting the way: Sensors show drug uptake

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When designing and characterizing new drugs, a key aspect is making sure the drug actually goes where it is intended to. But current tests for drug uptake monitor the process under unrealistic conditions and do not provide information on the amounts of drugs that cross into a cell. Now, one group reports in *ACS Sensors* that fluorescent detector proteins can overcome these challenges.

Kai Johnsson and colleagues developed a biosensor equipped with a drug target and two [fluorescent proteins](#). When the drug was absent from a cell, the proteins fluoresced in a certain color, and when the drug was present, the color changed.

The sensor could be located in the cell, allowing the researchers to monitor drug uptake. Biosensors for two classes of [drug targets](#) were generated, including one associated with carbon dioxide transport and pH homeostasis in the human body. The researchers say the detection method can be adapted to other enzymes of interest to the pharmaceutical industry.

**More information:** "Evaluating Cellular Drug Uptake with Fluorescent Sensor Proteins" *ACS Sensors*, [pubs.acs.org/doi/abs/10.1021/acssensors.7b00331](https://pubs.acs.org/doi/abs/10.1021/acssensors.7b00331)

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