

THE DISTILLERY

This week in techniques

| Approach | Summary | Licensing status | Publication and contact information |
|---|--|---|---|
| Assays & screens | | | |
| Bacterial cytological profiling (BCP) to identify the mechanism of action for antibacterial compounds | Fluorescence imaging–based BCP can help identify the mechanism of action for antibacterial compounds. BCP distinguished between inhibitors of five major biological pathways including translation, transcription, DNA replication, membrane synthesis and peptidoglycan synthesis. BCP also distinguished subclasses of inhibitors within each of the five classes. In <i>Escherichia coli</i> grown in the presence of compounds at five times minimum inhibitory concentration, BCP revealed that spirohexenolide A—a compound with an unknown mechanism of action—caused a collapse in proton motive force and induced a phenotype similar to that initiated by the antibacterial peptide nisin. Next steps include using BCP to screen for new antibacterial compounds and developing BCP for use in other pathogens. | Patent application filed; licensed to Linnaeus Bioscience Inc. | Nonejuie, P. <i>et al. Proc. Natl. Acad.</i> <i>Sci. USA</i> ; published online Sept. 17, 2013; doi:10.1073/pnas.1311066110 Contact: Joe Pogliano, University of California, San Diego, La Jolla, Calif. e-mail: jpogliano@ucsd.edu |

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