Title (en)

METHODS FOR SCREENING COMPOUNDS USING ENCAPSULATED CELLS

Title (de)

SCREENING-METHODE FÜR VERBINDUNGEN MIT HILFE EINGEKAPSELTER ZELLEN

Title (fr)

METHODES DE TRI DE COMPOSES AU MOYEN DE CELLULES ENCAPSULEES

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Abstract (en)

[origin: WO9841869A1] The present invention relates to an integrated approach to drug screening that is designed to couple a screening assay both temporally and spatially to natural product synthesis in a microorganism. The present invention provides a screening unit which is a gel droplet comprising a producing species that produce natural products for the drug screen, and an assay system that detects or measures a desired biological activity. A producing species is coencapsulated with an assay system in a screening unit when the producing species is at a phase in its life cycle that is optimal for producing natural products, such as secondary metabolites. The producing species is spatially positioned relative to the assay system in the same unit such that compounds produced by the producing species can come into contact with the assay system. If a compound possesses the desired activity, the assay system will generate a signal that enables the identification and/or isolation of the screening unit. The present invention also provides methods for forming a screening unit, and methods for using a screening unit in drug screening. The methods are useful for screening naturally occurring organisms as well as genetically engineered cells, and solid carriers containing chemicals.

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