

## LIPIDOMIC PROFILING OF DICTYOSTELIUM DISCOIDEUM

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## LIPIDOMIC PROFILING OF DICTYOSTELIUM DISCOIDEUM

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### Abstract:

The lipid profile of *Dictyostelium discoideum*, a cellular slime mold found evolutionarily between plants and animals, has never been clearly defined. To address this, the fatty acid content of vegetative cells was analyzed by gas chromatography-mass spectrometry of fatty acid methyl esters and their identities verified with synthesized authentic standards. The synthetic scheme developed to produce the unusual fatty acids found in *D. discoideum* was engineered to afford the labeling of compounds (2H) for use in feeding studies to elucidate the fatty acid elongation and desaturation pathways present in *D. discoideum*. After establishing the fatty acid profile and acyl metabolic pathway, an initial understanding the complex lipids present in *D. discoideum*, chiefly sphingolipids, was sought. Triple quadrupole and quadrupole time-of flight mass spectrometers equipped with electrospray ionization sources were used to identify these complex lipids.

### Description:

Indiana University-Purdue University Indianapolis (IUPUI)

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