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Letter to Editor

Volatile Metabolomics for Fungi and Plant Applications for Consideration for Publication

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Letter to Editor

We would like to submit a review article entitled "Volatile Metabolomics for Fungi and Plant Applications" for consideration for publication. The manuscript has been prepared by Jinyan She, Dr. Debra Mlsna, Dr. Richard Baird and Dr. Todd Mlsna. It will be approximately7 printed journal pages. In this manuscript, we will review mass spectrometry based metabolomics with a focus on fungi and plant volatile metabolites. The time span of the review is from the year 2014 to 2017s.

This review begins with an introduction to the metabolomics field, then narrowest include analysis of volatile metabolites produced by microorganisms and plants. Further discussion on sampling methods, pretreatment of gas chromatography/mass spectrometry data, chemometric analysis of volatile compounds will be included. Finally, the review provides examples of volatile metabolomics applications in a number of research fields. The article is divided into five sections. Suggested section headings

Introduction to metabolomics

Volatile metabolites

a. Plant volatile organic compounds

b. Microbial volatile organic compounds

c. Sesquiterpenes

Applications

a. Indoor air quality control and human health monitoring

b. Interspecies signaling

c. Ecology

d. Food quality and agriculture

e. Biotechnologies

Sample preparation and extraction

a. Thermal desorption tubes

b. Purge and trap

c. Solid-phase micro extraction (SPME)

d. Stir bar sorptive extraction (SBSE)

Data processes and pretreatment

a. Peak identification and alignment

b. Data filtration and normalization

Chemometric analysis and data mining

a. Univariate and multivariate

b. Principle component analysis

c. Partial least square

d. Cluster analysis

e. Self-organizing map

Each of the authors confirms that this manuscript has not been previously published and is not under consideration by any other journal. All of the authors have approved the contents of this review and have agreed to the Analytical Methods' submission policies.