

How to Search PVD

1. Search using chemical name or PubChem CID.

1.i. Click “Select” to open the desired search box.

Plant-Associated Volatile Organic Compound (VOC) Database (PVD)
A database supporting research and application of VOCs produced by plants and plant-associated microbes

Search Volatile Organic Compound (VOC)

Chemical Name:

PubChem CID:

Chemical Class:

Abiotic Stimulus: 10104570

Biotic Stimulus: 10108

Plant Species: 102299374

Microbial Species: 102562

Confirmed/Hypothesized Function:

Submit

The Search function allows users to browse PVD for the following:

- if a particular VOC is produced by plants or plant-associated microbes (via **Name** or **PubChem CID**);
- VOCs under a specific **Chemical Class**;
- VOCs produced under specific abiotic/biotic conditions or stimuli (via **Abiotic Stimuli** or **Biotic Stimuli**);
- VOCs produced by a specific plant or microbial species (via **Plant Species** or **Microbial Species**);
- which VOC(s) are known or hypothesized to be associated with a specific function (via **Confirmed/Hypothesized Function**).

Use the pull-down menu for the following searches: **Chemical Class**, **Abiotic Stimuli**, **Biotic Stimuli**, **Plant Species**, **Microbial Species**, and **Confirmed/Hypothesized Function**. More information about how to use PVD can be found in [FAQ](#).

1.ii. A list of chemical names or PubChem CIDs will appear in a drop-down menu, from which the desired term can be selected. Alternatively, in the open search box, users can either manually enter the chemical name/PubChem CID or use a copy-paste. If the chemical name/PubChem CID of interest is available in the database, it will appear (auto-populate) in a blue box below the search box. The selected chemical name/PubChem CID of interest can be entered by clicking on the blue box.

Plant-Associated Volatile Organic Compound (VOC) Database (PVD)
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Search Volatile Organic Compound (VOC)

Chemical Name:

PubChem CID:

Chemical Class: 1,3,4,10-Famesatetraene

Abiotic Stimulus: 1,3,13,16,10-Famesatetraene

Biotic Stimulus: (Z,E)-Farnesol

Plant Species: 2-branch-10-farnesol

Microbial Species:

Confirmed/Hypothesized Function:

Submit

The Search function allows users to browse PVD for the following:

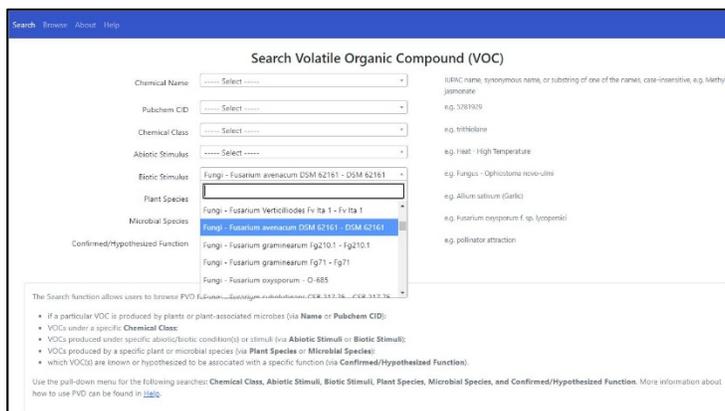
- if a particular VOC is produced by plants or plant-associated microbes (via **Name** or **PubChem CID**);
- VOCs under a specific **Chemical Class**;
- VOCs produced under specific abiotic/biotic conditions or stimuli (via **Abiotic Stimuli** or **Biotic Stimuli**);
- VOCs produced by a specific plant or microbial species (via **Plant Species** or **Microbial Species**);
- which VOC(s) are known or hypothesized to be associated with a specific function (via **Confirmed/Hypothesized Function**).

Use the pull-down menu for the following searches: **Chemical Class**, **Abiotic Stimuli**, **Biotic Stimuli**, **Plant Species**, **Microbial Species**, and **Confirmed/Hypothesized Function**. More information about how to use PVD can be found in [FAQ](#).

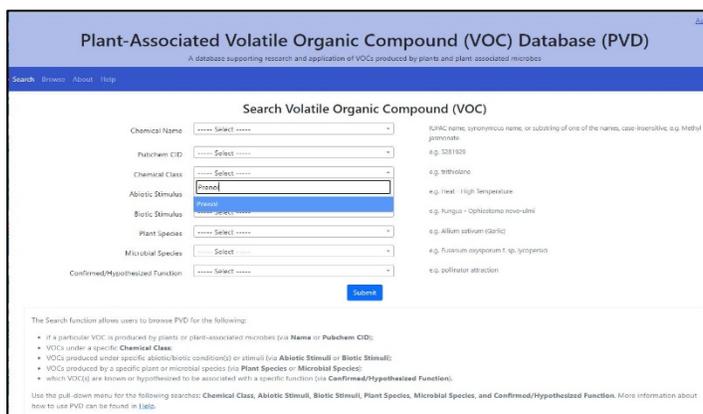
1.iii. Click “Submit” to retrieve results.

2. Search using the chemical class, nature of abiotic or biotic stimuli that affect VOC production, plant or microbial species that produce VOC, or confirmed/hypothesized function(s) associated with VOC.

2.i. Click “select” from the desired search box to open the drop-down menu. Users can then scroll down to locate the desired search term.



2.ii. Alternatively, users can manually enter or copy-paste the desired search term into the appropriate search box. If a search item is available in the database, it will appear (auto-populate) in a blue box in the drop-down menu, which can be entered by clicking on it.



2.iii. Click “Submit” to retrieve results.

Users can search by using one or more search parameters.

To clear a search term, click the search box back and chose the “select” option from the drop-down menu.

Search Results Page

The search results page displays a list of chemical (IUPAC) names with the corresponding PubChem CID, chemical classes, and formula.

Click on the chemical of interest to access detailed information associated with it.

The number of chemicals displayed per page can be adjusted using the “show entries” option.

Chemical Information Page

The chemical information page displays information on the selected compound, including its structure, IUPAC name, PubChem CID number, formula, molecular weight, chemical class, and stimuli associated with its production.

Users can access additional information (e.g., metabolic pathways, synonymous names, and associated references) by clicking on relevant selectable links.