

Request for Comments on USPTO Initiatives to Ensure the Robustness and Reliability of Patent Rights

Porta Sophia, a non-profit organization, has the mission of making prior art in the psychedelic technology fields more readily accessible. Porta Sophia was founded recognizing three facts: 1) patent application filings related to psychedelic technologies have dramatically increased; 2) highly relevant prior art in these fields is not found in traditional databases; and 3) challenges in finding this highly relevant prior art have resulted in a non-trivial number of patents issuing with claims that lack novelty.

Increased filings

Prior to 2001, very few applications were filed in the psychedelic technology fields. From 2010-2016, psychedelics focused patent applications doubled relative to the previous decade. From 2017-2019 then 2020-2021, applications doubled once and again suggesting an exponential increase. There has been a significant increase of over 800% in the 2020s relative to early 2000s in the number of psychedelics focused applications filed.

Prior art not found in traditional databases

Historically, due to the legal status of many psychedelic compounds, very few patent applications and peer-reviewed publications related to psychedelic compounds and their uses have been published. As a consequence, the databases that patent examiners traditionally utilize in their searches contain little relevant information for claims relating to psychedelics. However, during the 1950s and 1960s, significant amounts of work occurred within these fields that qualify as prior art under the patent statute. This work is often published in locations that are not readily accessible by patent examiners or not accessed due to the obscurity.

Non-novel patents issuing

in 2021 when Porta Sophia was founded, a significant number of patents with non-novel claims were issuing. For example, Porta Sophia noticed that patents pertaining to uses of psychedelic compounds were issuing with non-novel claims at a rate approaching 50%. A review of the file histories of these patents showed that the patent examiners were using sound search terms but were not finding the relevant prior art in the databases that they were reviewing.

Porta Sophia's solution

To address these concerns, Porta Sophia has primarily focused on two efforts: 1) establishing a free, public database of relevant prior art; and 2) submitting third party comments to the Patent Office.

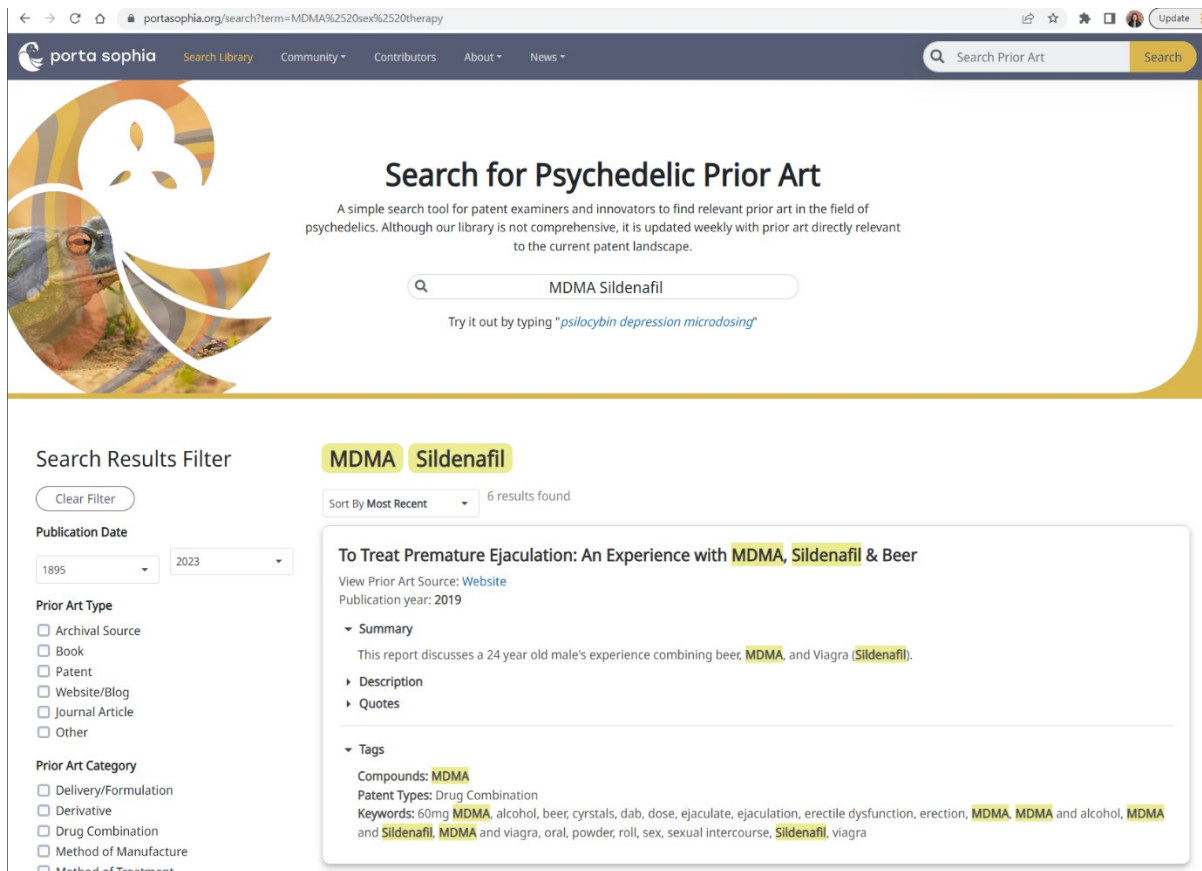
The Porta Sophia database

The Porta Sophia database features prior art relevant to greater than fifty psychedelic compounds from patents, journal articles, books, websites, archival sources, and other non-traditional sources. On a weekly basis, the Porta Sophia team reviews all U.S. and international patents/applications referencing any of the psychedelic compounds. The team assess the scope of claims in relation to the data presented in the filings and generate keywords and themes for prior art searches beginning in the most common places such as old patent documents, journal articles, books and websites.

For some prior art that is difficult to find in traditional places, the Porta Sophia team relies upon an Archival Researcher Network (ARN), which was established to expand the prior art library through the

expertise of a global network of psychedelic historical researchers to crowdsource relevant archival prior art. By leveraging historical expertise about psychedelics, ARN helps increase access to disparate knowledge of psychedelic science, practice, and tradition.

Subsequently, the team curates this prior art to be easily searchable and add it to the Porta Sophia library database. The prior art search tool is free and easy to use, it features filters for publication date range, prior art type (patent, archival source, book, etc.), prior art category (delivery, formulation, derivative, etc.), compounds, and keywords. Search terms are highlighted in search results.



The screenshot displays the Porta Sophia search interface. At the top, the browser address bar shows the URL `portasophia.org/search?term=MDMA&%2520&ex%2520therapy`. The website header includes the logo and navigation links: Search Library, Community, Contributors, About, and News. A search bar on the right contains the text "Search Prior Art" and a "Search" button.

The main content area features a large graphic of a bird on the left and a central heading "Search for Psychedelic Prior Art". Below the heading is a descriptive paragraph: "A simple search tool for patent examiners and innovators to find relevant prior art in the field of psychedelics. Although our library is not comprehensive, it is updated weekly with prior art directly relevant to the current patent landscape." A search input field contains the text "MDMA Sildenafil", and a suggestion below it reads "Try it out by typing 'psilocybin depression microdosing'".

The search results section is titled "Search Results Filter" and includes a "Clear Filter" button. It shows filters for "Publication Date" (ranging from 1895 to 2023) and "Prior Art Type" (with options like Archival Source, Book, Patent, Website/Blog, Journal Article, and Other). The "Prior Art Category" section includes options like Delivery/Formulation, Derivative, Drug Combination, Method of Manufacture, and Method of Treatment.

The search results are sorted by "Most Recent" and show "6 results found". The first result is titled "To Treat Premature Ejaculation: An Experience with MDMA, Sildenafil & Beer". It includes a "View Prior Art Source: Website" link and a "Publication year: 2019". The "Summary" section states: "This report discusses a 24 year old male's experience combining beer, MDMA, and Viagra (Sildenafil)." The "Description" and "Quotes" sections are collapsed. The "Tags" section lists "Compounds: MDMA", "Patent Types: Drug Combination", and "Keywords: 60mg MDMA, alcohol, beer, crystals, dab, dose, ejaculate, ejaculation, erectile dysfunction, erection, MDMA, MDMA and alcohol, MDMA and Sildenafil, MDMA and viagra, oral, powder, roll, sex, sexual intercourse, Sildenafil, viagra".

Method of Treatment
 Other

Compound

Q

- 1-methylpsilocin
- 18-MC
- 18-methoxycoronaridine
- 2-bromo-lsd
- 2-me-det
- 2-me-dmt

Keywords

Q

- (-)-2,5-dimethoxy-4-methylamphetamine
- (2,6)-hydroxynorketamine
- (2R,6R)-HNK
- (2R,6R)-Hydroxynorketamine
- (R)-2,5-dimethoxy-4-iodoamphetamine
- (R)-2,5-dimethoxy-4-iodoamphetamine [(R)-DOI]
- (r)-2,5-dimethoxy-4-iodoamphetamine,
- (r)-doi
- (r)-doi ((r)-1-(2,5-dimethoxy-4-iodophenyl)-2-aminopropane)
- (R)-ketamine
- (S)-(-)-uh 301

To Treat Premature Ejaculation

View Prior Art Source: [Website](#)
Publication year: 2019

▼ Summary

An individual uses a combination of alcohol, **MDMA**, and **Sildenafil** to treat issues with premature ejaculation.

► Quotes

▼ Tags

Compounds: **MDMA**
Patent Types: Delivery/Formulation, Drug Combination, Method of Treatment
Keywords: 25 mg, 60 mg **MDMA**, alcohol, beer, drug combination, ed, erectile dysfunction, erection, **MDMA**, **MDMA** dose, mixing, penis, premature ejaculation, safety, **Sildenafil**, viagra, wine

Finally I was Able to Orgasm: An Experience with **MDMA & **Sildenafil****

View Prior Art Source: [Website](#)
Publication year: 2019

▼ Summary

This web page provides a report of an individual who combined **MDMA** and Viagra (**Sildenafil**).

► Description

► Quotes

▼ Tags

Compounds: **MDMA**
Patent Types: Drug Combination, Method of Treatment
Keywords: 80mg **MDMA**, crystal, dose, erection, **MDMA**, **MDMA** and **Sildenafil**, **MDMA** and viagra, oral, orgasm, powder, roll, sex, sexual intercourse, **Sildenafil**, viagra

Sildenafil (Viagra) and Club Drug Use in Gay and Bisexual Men: The Role of Drug Combinations and Context

View Prior Art Source: [Journal](#)
Publication year: 2007

Third party submissions

Porta Sophia has filed 18 third-party preissuance submissions with the USPTO. For example, on 7/22/22 Porta Sophia filed a third-party preissuance submission with the USPTO regarding U.S. Pat. App. Ser. No. 17/525,248 titled "SEXUAL THERAPY FORMULATION AND METHOD OF TREATMENT". The application received a non-final rejection with all claims rejected and the examiner cited prior art included in Porta Sophia's third-party preissuance submission as grounds for that action. Specifically mentioned in the rejection was a post from Erowid (a non-profit educational organization that provides information about psychoactive plants and chemicals) detailing both the drug combination and the dosage ranges described within the application. As a result, the examiner concluded that the application failed to meet the novelty requirement of patentability. The Erowid materials are readily searchable in the Porta Sophia database but would typically not be yielded by traditional patent examiner searches.

Response to request for feedback on prior art not currently available through the Patents End-to-End Search system

Porta Sophia's curated prior art library and search tool is freely available at <https://www.portasophia.org/> and provides examiners critical sources of prior art that are not currently available through the Patents End-to-End system. The database is continuously updated by a professional staff having both relevant scientific and legal expertise. The database combines, in one location, prior art from niche third party resources, very old prior art from archival sources, books, catalogues, and rare and extinct journals, as well as relevant traditional prior art in the form of patents, patent applications, and peer-reviewed publications.

Response to request for feedback on procedures for third-party input

As noted above, Porta Sophia is a frequent user of the current third-party preissuance submission process. In using this process, Porta Sophia has the following recommendations for improvement:

- The Track One filing option has sometimes denied third parties the opportunity to intervene via third-party submission with prior art establishing the application's claims lack novelty, i.e., when applications issue or receive an office action prior to publication as a result of expedited examination. This has led to overly broad patent claims in the psychedelic space being granted.
- Changing the submission requirement from before the date of a first Office action on the merits rejecting any claims to before the date of final rejection would allow more time for submissions and allow submission of prior art related to what we frequently see as wholesale changes of patent claims after the first office action.
- The submission portal is difficult to navigate and upload format requirements of non-patent literature documents are unclear and make third party submission time consuming.
- The submission portal does not allow progress saving without registration with the USPTO.
- Though submissions are limited to 10 prior art references per submission, we suggest that this figure be increased to 20 or more prior art references per submission. We have found that 20 would be sufficient in most instances to address all claims of an individual patent application while 10 is frequently insufficient.
- Email alert for confirmation of successful third-party submission. Currently, time to confirmation varies widely across different filings if confirmation is provided at all.