

Supplement

Articles included in the beta version of PTSDDDB

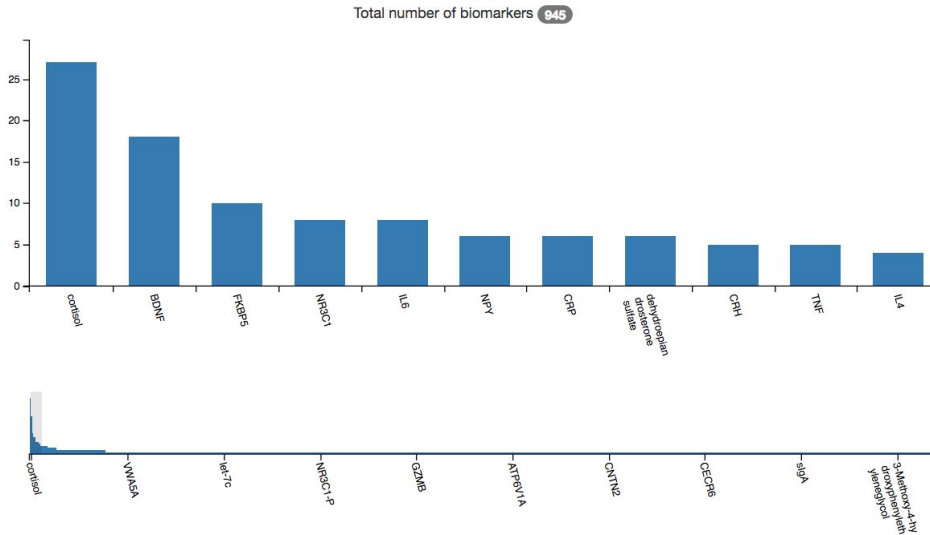
10200738 10202571 10715359 11847483 12114005 12207110 12562397 12798257 14744465 15026269 15199367
15289280 15685253 16325152 16585438 16647142 16891590 16934764 17853400 17884095 17888517 18037027
18055084 18277217 18295412 18342888 19107725 19269131 19393990 19394765 19409951 19576571 19628221
19751939 20097247 20298515 20439746 20488551 20621148 20643177 21078706 21145962 21196013 21208596
21350482 21508514 21508515 21536970 21714072 21906725 22137507 22867760 23319005 23379997 23650250
23701537 23774996 24035186 24362070 24485499 24576974 24661442 24704382 24709369 24759737 24929195
24952092 25080589 25106657 25129579 25311155 25345735 25706090 25745955 25754082 25800148 25827033
25848535 25867994 26074844 26112329 26120081 26120806 26151924 26160204 26174795 26277035 26305478
26324104 26361058 26447678 26481549 26632874 26649946 26673150 26714394 26751122 26894484 26923850
26997371 26999419 27025668 27038412 27193345 27479108 27716956 27886370 28521179 9137116

Supplement Text 1. List of the 109 PubMed identifiers corresponding to articles included in the beta version of the database. The current list of articles can be accessed by querying the following API:

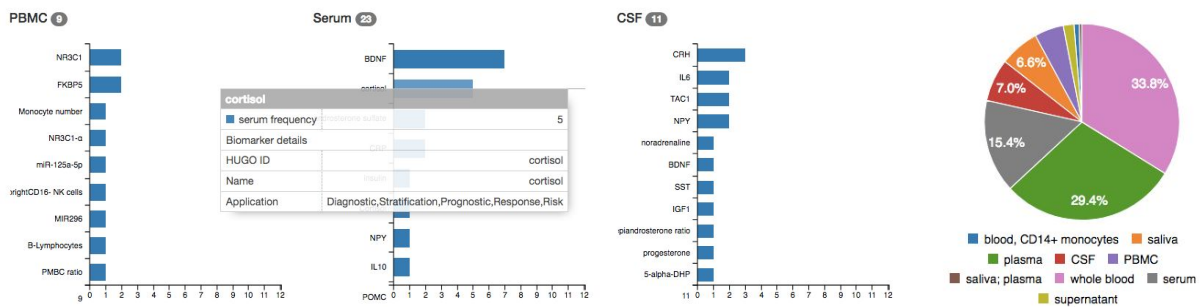
<https://ptsd.scai.fraunhofer.de/api/pubmed/all>

Survey of PTSDDB visualizations

1. Biomarker overview (<https://ptsd.scai.fraunhofer.de/frequencies>)



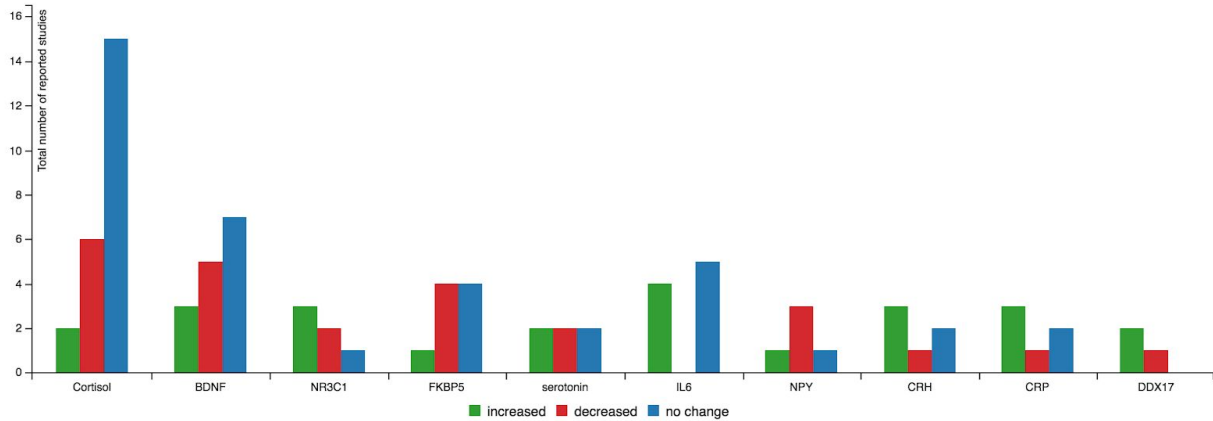
Supplementary Figure 1. Frequencies of the different biomarkers from the curated articles and included in PTSDDB.



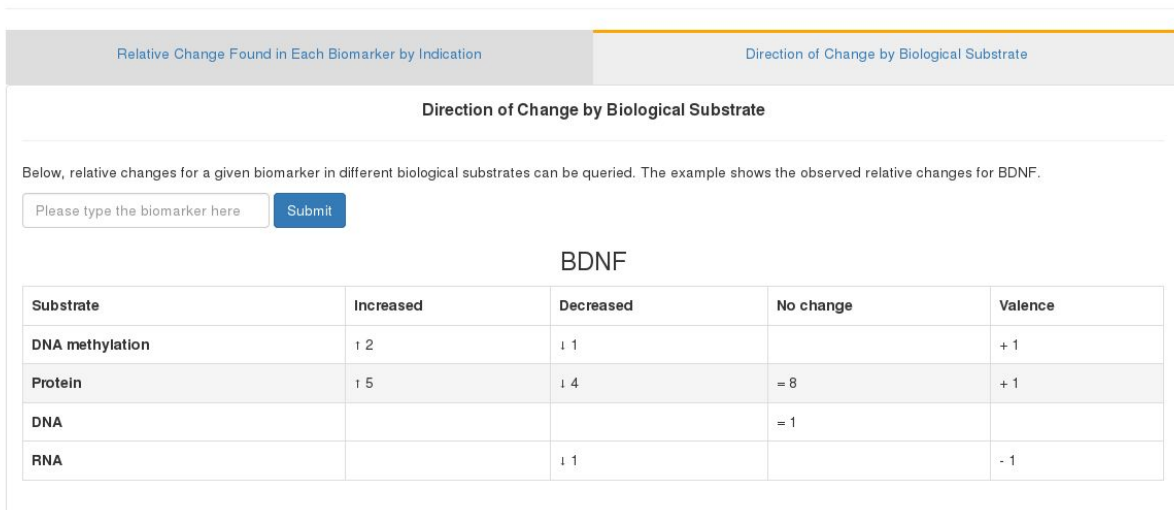
Supplementary Figure 2. Frequencies of the biomarkers by biofluids in which they were measured (left). These interactive visualizations offer more details of each biomarker when users hovers the bars. Biomarker frequencies by biological substrate and findings are represented as pie charts (right).

2. Direction of change by biomarker

(https://ptsd.scai.fraunhofer.de/relative_changes)

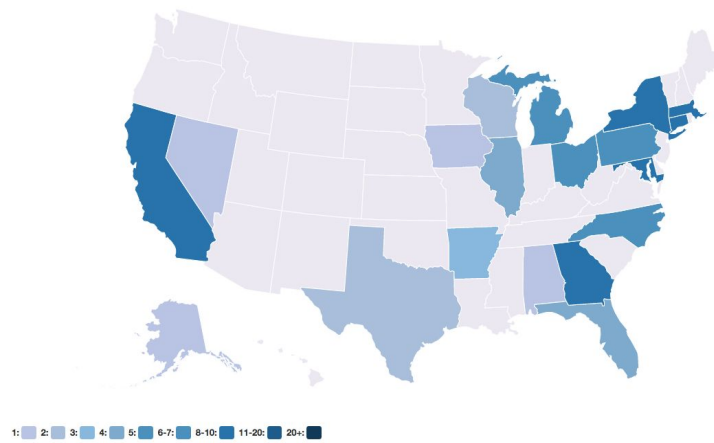


Supplementary Figure 3. Findings for the top ten studied biomarkers by valence of finding, representing the contradictory evidence found in the literature. Users can select other biomarkers and specifically visualize relative changes and the PubMed identifiers reporting those findings for a given biomarker.

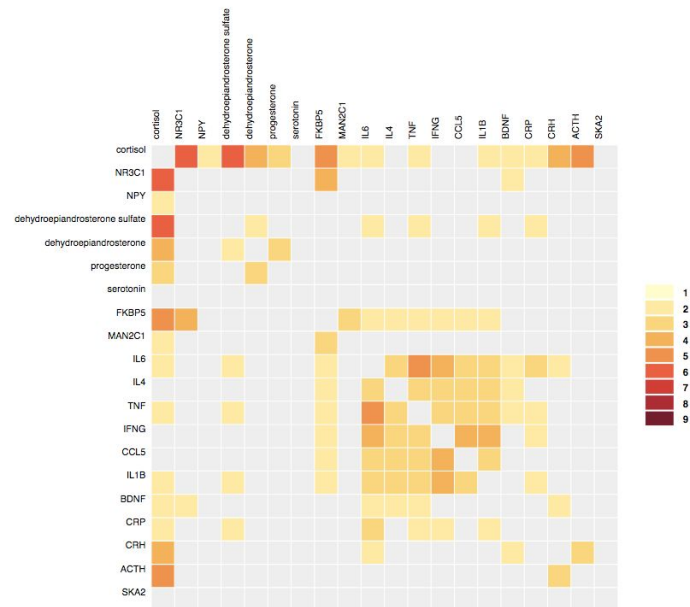


Supplementary Figure 4. Direction of change by biological substrate for a given biomarker. This interactive table presents the biomarker findings for different biological substrates (e.g., RNA, metabolite, protein, etc).

3. Literature analysis (<https://ptsd.scai.fraunhofer.de/literature>)

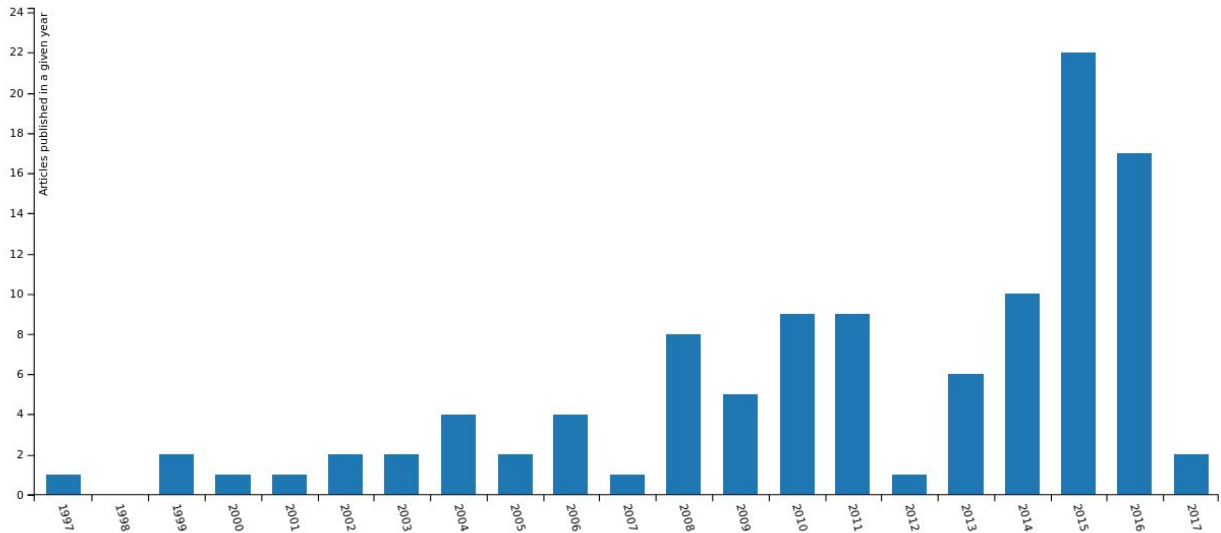


Supplementary Figure 5. Geographical distribution for the american authors in the articles included in PTSDDDB. Additionally, a world map presents the full spectrum of countries involved in the articles curated (*Figure 2C* in the manuscript). This interactive view allows the identification of hub centers in the area of PTSD biomarker research.



Supplementary Figure 6. Heatmap presenting the frequency in which pairwise-combination of biomarkers are studied together in the same publication. The heatmap can be interactively explored and allows for the clustering of biomarkers; in the example, cortisol emerges as the most commonly studied biomarker in combination with others. Moreover, we implemented two complementary heatmaps: 1) presenting the combination of biological substrates used in the extracted studies and 2) the combinations of biological substrates and bio-fluid utilized.

Analysis of the years of publication of the studies included in PTSDDB.



Supplementary Figure 7. Publication years of the articles included in PTSDDB.

4. Study metadata (<https://ptsd.scai.fraunhofer.de/study>)

Study Metadata

This page allows users to explore the collected metadata in the studies included in PTSDDB. The form below, presents information about the studies containing the queried biomarkers. Since the table that contains the information has 14 columns and cannot be visualized completely, users can scroll over the table.

BDNF

Clinical studies metadata containing 'BDNF' as a biomarker

Show entries Search:

PubMed ID	Type	Timeline	Challenge type	Treatment response	Primary Indication	Trauma exposed controls	Other psych subj tested	Other psych subj	Clean controls	Other psych patients indication	Extra notes primary indication
19409951	Cross-sectional	NaN	NaN	False	18	NaN	NaN	NaN	18	NaN	NaN
20097247	Cross-sectional	NaN	NaN	NaN	34	NaN	NaN	NaN	34	NaN	Trauma-exposed patients include acute and post traumatic stress w/ recent (<1 year) or remote (>4 years) trauma exposure
20097247	Cross-sectional	NaN	NaN	NaN	13	NaN	NaN	NaN	34	NaN	Trauma-exposed patients include acute and post traumatic stress w/ recent (<1 year) or remote (>4 years) trauma exposure

Supplementary Figure 8. The study metadata allows users to explore the collected metadata in the studies included in PTSDDDB. The form above the page enables users to select biomarkers optionally filtered by their application to summarize the information about each clinical study that evaluated this biomarker.

5. Database statistics and API (<https://ptsd.scai.fraunhofer.de/overview>)

swagger /static/ptsdjson/swagger.json Explore

PTSD BIOMARKER DATABASE API 0.1.0
[Base URL: ptsd.scai.fraunhofer.de]
</static/ptsdjson/swagger.json>
EXPOSES THE ENDPOINTS OF PTSDDDB AS A RESTFUL API

Schemes
HTTPS

Query

- GET /api/indication_effects/{indication}
- GET /api/biomarker_effect/{biomarker}
- GET /api/ancestry/to_pubmed/
- GET /api/biomarkers_matrix/{top}

API Returning set of all models

- GET /api/biomarker/all
- GET /api/pubmed/all
- GET /api/indication/all
- GET /api/approach_detail/all
- GET /api/ancestry/all
- GET /api/substrate/all

Supplementary Figure 9. The PTSDDDB Swagger UI presents a user-friendly and interactive API visualization allowing developers and end consumers to interact with the API endpoints. This view is available at <https://ptsd.scai.fraunhofer.de/swagger-ui>.