



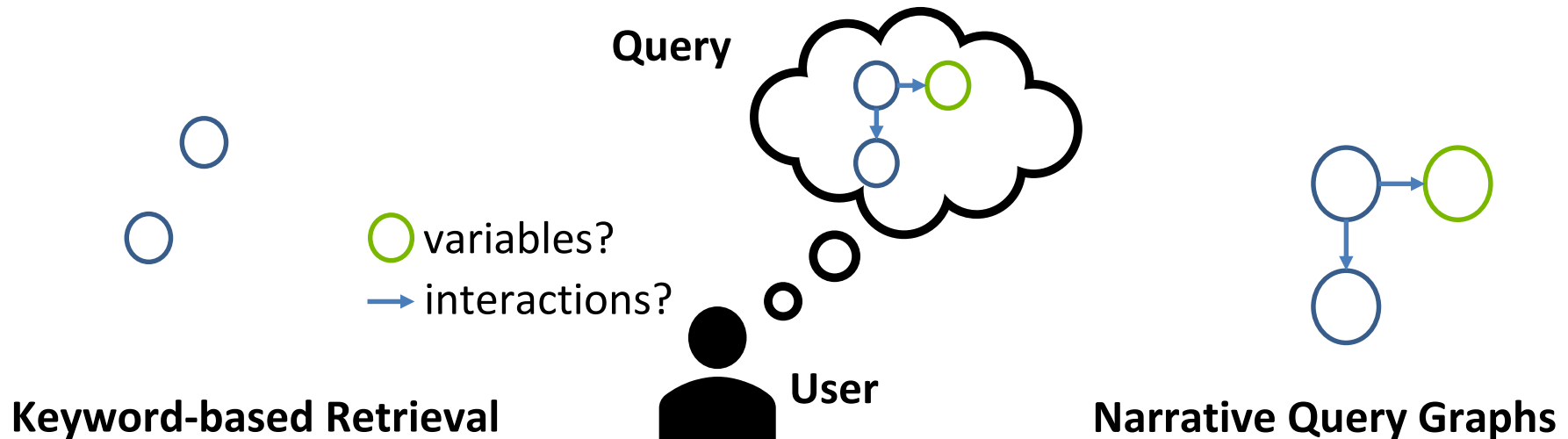
FACHINFORMATIONSDIENST
PHARMAZIE
TU Braunschweig



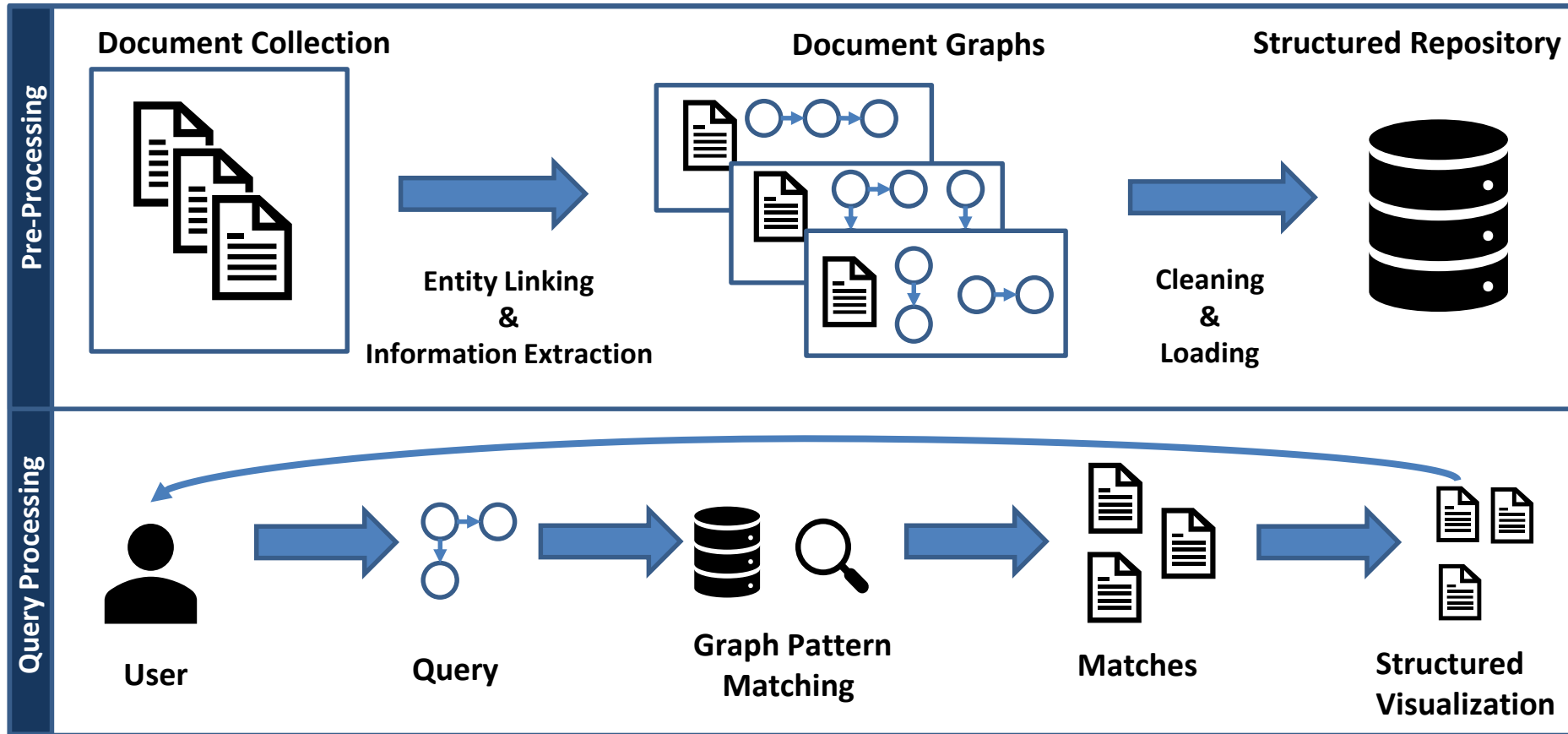
Vorstellung des Narativen Dienstes des FID Pharmazie

10.06.2025

Narrativer Informationszugriff

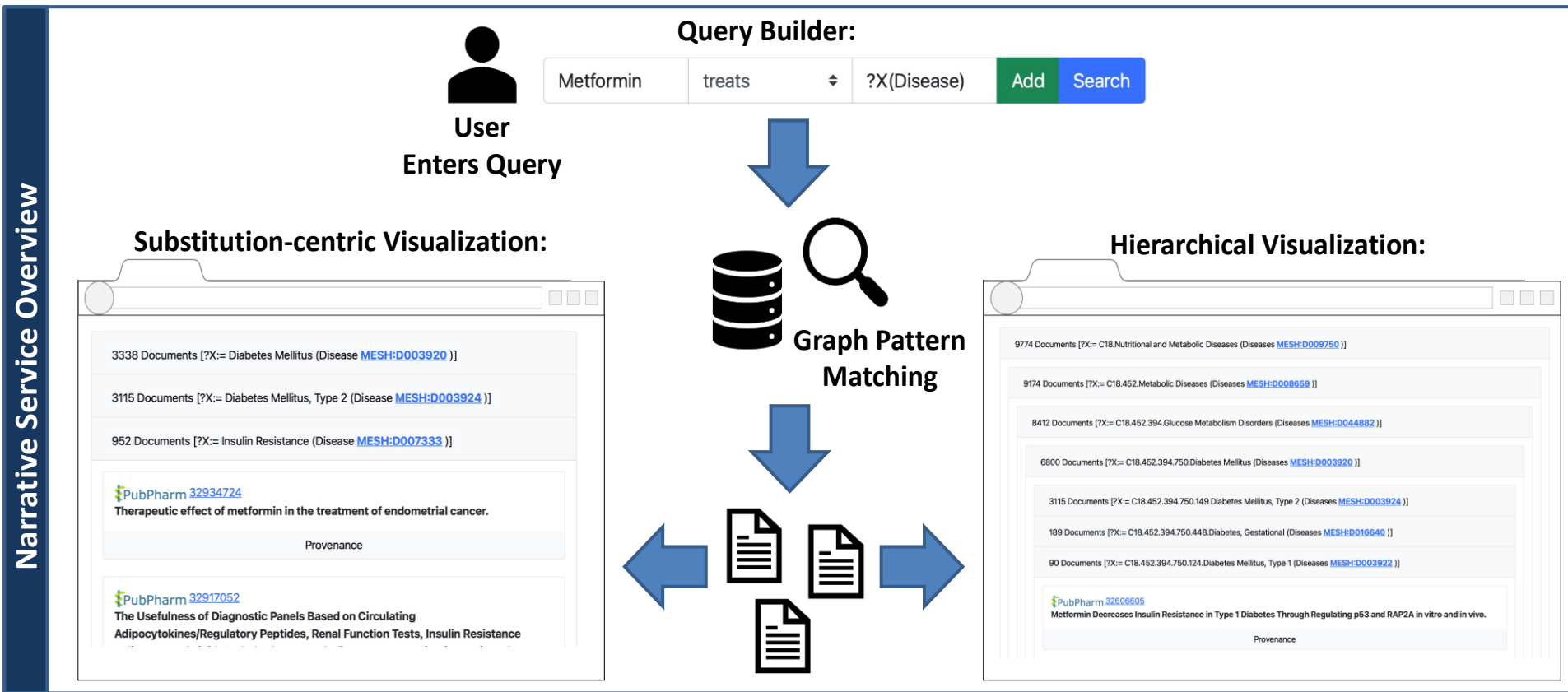


Entwicklung des Narrativen Service



[ICADL2021]

Live Demo: Narrativer Service



<http://www.pubpharm.de/services/prototypes/narratives/>

Fazit Narrativer Service

- Unser narrativer Service ermöglicht:
 - Eine **präzise Suche** nach relevanter Literatur
 - Eine **strukturierte Übersicht** der Literatur mittels Variablen in der Suche

- **Vorstellung des Narrativen Service:**
 - In der Fachcommunity (EUFEPS, Feedbackrunden, Webinar, Newsletter, Twitter, LinkedIn)
 - Kooperation mit dem Robert Koch-Institut (**Long Covid** Fragestellungen)
 - Anpassung der Vokabulare (z.B. Long Covid und Vakzine)
 - Nachnutzung der ZB MED Covid Pre-Prints (Preview)

Community Arbeit

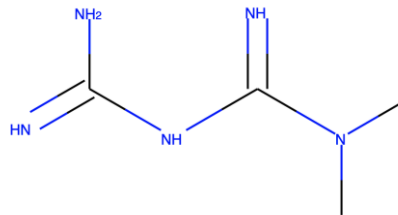
- **Wieso Narrativer Informationszugriff?**
 - [JCDDL2022]: „What a Publication Tells You – Benefits of Narrative Information Access in Digital Libraries“
- **Analyse der Extraktionstools (in Politikwissenschaften):**
 - [JCDDL2022]: „A Library Perspective on Nearly-Unsupervised Information Extraction Workflows in Digital Libraries“

Narrative Drug Overviews

- **Suche** mittels **Wirkstoff/Substanz**
- **Ziel: Übersicht** über Wirkstoff erzeugen
 - Extrahierte Aussagen des Narrativen Service (Administrations, Indications, Targets, Drug-Drug Interactions, etc.)
 - Kurierte Informationen aus Fachdatenbank ChEMBL



Metformin



Molecular Formula: C₄H₁₁N₅

Molecular Mass: 129.17

AlogP: -1.03

CX LogP: -0.92

CX Acid pK_A: -

CX Basic pK_A: 12.33

CX LogD pH 7.4: -5.62

See ChEMBL: [CHEMBL1431](https://www.ebi.ac.uk/chembl/compound/1431)



Live Demo: Narrative Drug Overviews

Overview

Drug

Administration (66)

Indications (1072)

Adverse Effects (654)

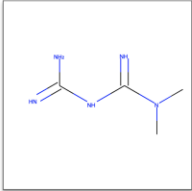
Drug Interactions (213)

Target Interactions (1112)

Lab Methods (157)

Recent Papers

Metformin



Metformin
Molecular Formula: C₄H₁₁N₅
Molecular Mass: 129.17
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CX LogP: -0.92
CX Acid pKA: -
CX Basic pKA: 12.33
CX LogD pH 7.4: -5.62
See ChEMBL: [ChEMBL1431](#)

Administration

Delayed-Action Preparations 217 Tablets 182 Injections 180 Administration, Oral 180 Nanoparticles 91 Dosage Forms 38 Capsules 38

Injections, Intraperitoneal 33 Liposomes 24 modified release tablets 24 Injections, Subcutaneous 23 Hydrogels 22 Microspheres 21 granulate 19

Powders 18 pellets 18 mucoadhesive preparations 18 Drug Delivery Systems 16 Micelles 11 Pharmaceutical Vehicles 9 Injections, Intravenous 8

Emulsions 8 Spray 8 microneedle 7 Insulin Infusion Systems 6 Suppositories 6 films 6 coated tablet 5 Nanotubes 5 Suspensions 5

Administration, Topical 4 Nanospheres 3 Aerosols 3 Ointments 3 Injections, Intramuscular 3 Nebulizers and Vaporizers 3 patches 2

Indications (Study Phase via ChEMBL)

Diabetes Mellitus 4215 11 Diabetes Mellitus, Type 2 3814 11 Neoplasms 1570 11 Insulin Resistance 1170 11 Polycystic Ovary Syndrome 905 0

Syndrome 636 2 Obesity 597 11 Diabetes, Gestational 258 11 Body Weight 246 2 Breast Neoplasms 245 11 Acidosis 240 2 Acidosis, Lactic 230 2

Wounds and Injuries 208 2 Weight Loss 208 2 Death 199 2 Kidney Diseases 188 2 Weight Gain 186 11 Hyperglycemia 175 2 Inflammation 174 1

Myotonic Dystrophy 162 2 Glucose Intolerance 161 11 Metabolic Diseases 154 11 Overweight 145 2 Cardiovascular Diseases 144 0

Metabolic Syndrome 143 11 Hypoglycemia 138 2 Heart Failure 138 11 Hypertension 135 11 Colorectal Neoplasms 134 11 Fatty Liver 134 11

Adverse Effects



Visualisierung einer Veröffentlichung

[View Paper](#)

[Open in a new tab](#)



- ☒ All
- ☒ Chemical
- ☒ Disease
- ☒ Drug
- ☒ Excipient
- ☒ Gene
- ☒ Method
- ☒ Species

Metformin in nucleus accumbens core reduces cue-induced cocaine seeking in male and female rats.

Chan, A | Willard, A | Mulloy, S | Ibrahim, N | Sciacotta, A | Schonfeld, M | Spencer, S

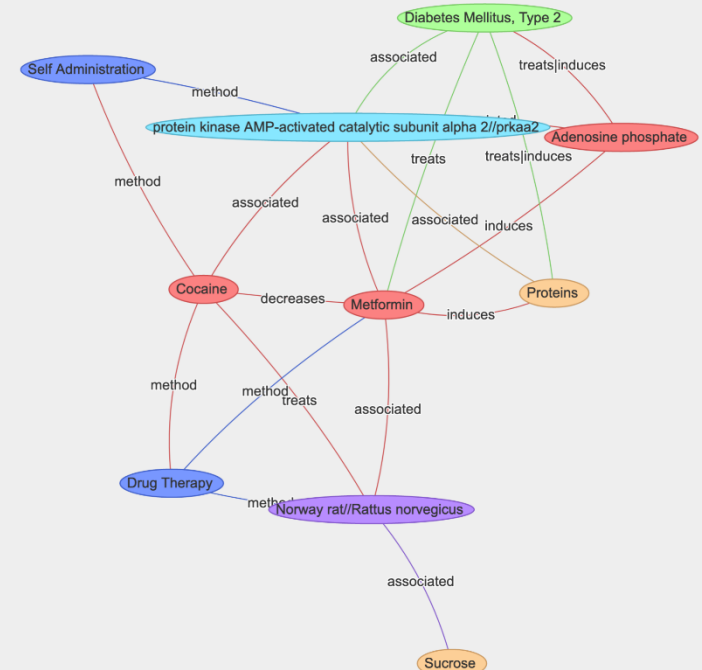
Addiction biology, Vol. 27 No. 3 (May 2022)

5/2022

This study investigated the potential therapeutic effects of the FDA-approved drug metformin on cue-induced reinstatement of cocaine seeking. Metformin (dimethylbiguanide) is a first-line treatment for type II diabetes that, among other mechanisms, is involved in the activation of adenosine monophosphate activated protein kinase (AMPK). Cocaine self-administration and extinction is associated with decreased levels of phosphorylated AMPK within the nucleus accumbens core (NAcore). Previously, it was shown that increasing AMPK activity in the NAcore decreased cue-induced reinstatement of cocaine seeking. Decreasing AMPK activity produced the opposite effect. The goal of the present study was to determine if metformin in the NAcore reduces cue-induced cocaine seeking in adult male and female Sprague Dawley rats. Rats were trained to self-administer cocaine followed by extinction prior to cue-induced reinstatement trials. Metformin microinjected in the NAcore attenuated cue-induced reinstatement in male and female rats. Importantly, metformin's effects on cocaine seeking were not due to a general depression of spontaneous locomotor activity. In female rats, metformin's effects did generalize to a reduction in cue-induced reinstatement of sucrose seeking. These data support a potential role for metformin as a pharmacotherapy for cocaine use disorder but warrant caution given the potential for metformin's effects to generalize to a natural reward in female rats.

Classifications

Pharmaceutical: drug:(175,179), fda:FDA(162,165),
pharm*:pharmacotherapy(1424,1439), therapeutic*:therapeutic(135,146)



In Planung: Narrative Fragment Mining

- Wie wird ein Wirkstoff oder Krankheit in der Literatur **charakterisiert**?
- Narrative Long Covid Fragmente:
 - Worte: *sequelae, mis, follow, survivors, fatigue*
 - Wort Muster: *[acute, patients, post, sequelae]*
 - Satz Muster: *„evidence is emerging that a significant percentage of covid-19 cases experience symptom persistence beyond 30 days and go on to develop post-acute sequelae“*
- „Rounding up Long Covid: Characterizing Latent Entities by Narrative Fragment Mining“



Veröffentlichungen

- Akzeptierte Veröffentlichungen:
 - **[ICADL2021]**: Narrative Query Graphs for Entity-Interaction-Aware Document Retrieval
 - **[OBIB2021]**: Narrative Information Access for a Precise and Structured Literature Search
 - **[DISCO@JCDL2021]**: Open Information Extraction in Digital Libraries: Current Challenges and Open Research Questions
 - **[JCDL2022]**: A Library Perspective on Nearly-Unsupervised Information Extraction Workflows in Digital Libraries
 - **[JCDL2022]**: What a Publication Tells You – Benefits of Narrative Information Access in Digital Libraries
- https://opus4.kobv.de/opus4-bib-info/files/18474/Informationszugriff_Kroll.pdf
- <https://github.com/HermannKroll/NarrativeAnnotation>
- <https://github.com/HermannKroll/NarrativeIntelligence>



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Vielen Dank für Ihre Aufmerksamkeit!