

ZB MED – Informationszentrum Lebenswissenschaften

Publikation von Forschungsdaten in den Lebenswissenschaften – Fachrepositorium Lebenswissenschaften

ZB MED – Informationszentrum Lebenswissenschaften

- ▶ Zentrales Servicezentrum für Fachinformationen und Forschungsunterstützung in den Lebenswissenschaften (Deutsche Zentralbibliothek für Medizin, Gesundheit, Umwelt, Ernährung und Agrar)
- ▶ seit 1.1.2014 Stiftung des öffentlichen Rechts
- ▶ weltweit größte Bibliothek der Fächerkombination Medizin, Gesundheit, Ernährungs-, Umwelt- und Agrarwissenschaften
- ▶ wichtige Arbeitsgebiete sind der Einsatz für Open Access und Open Data
- ▶ angewandte Forschung u.a. zur Verbesserung der ZB MED-Services

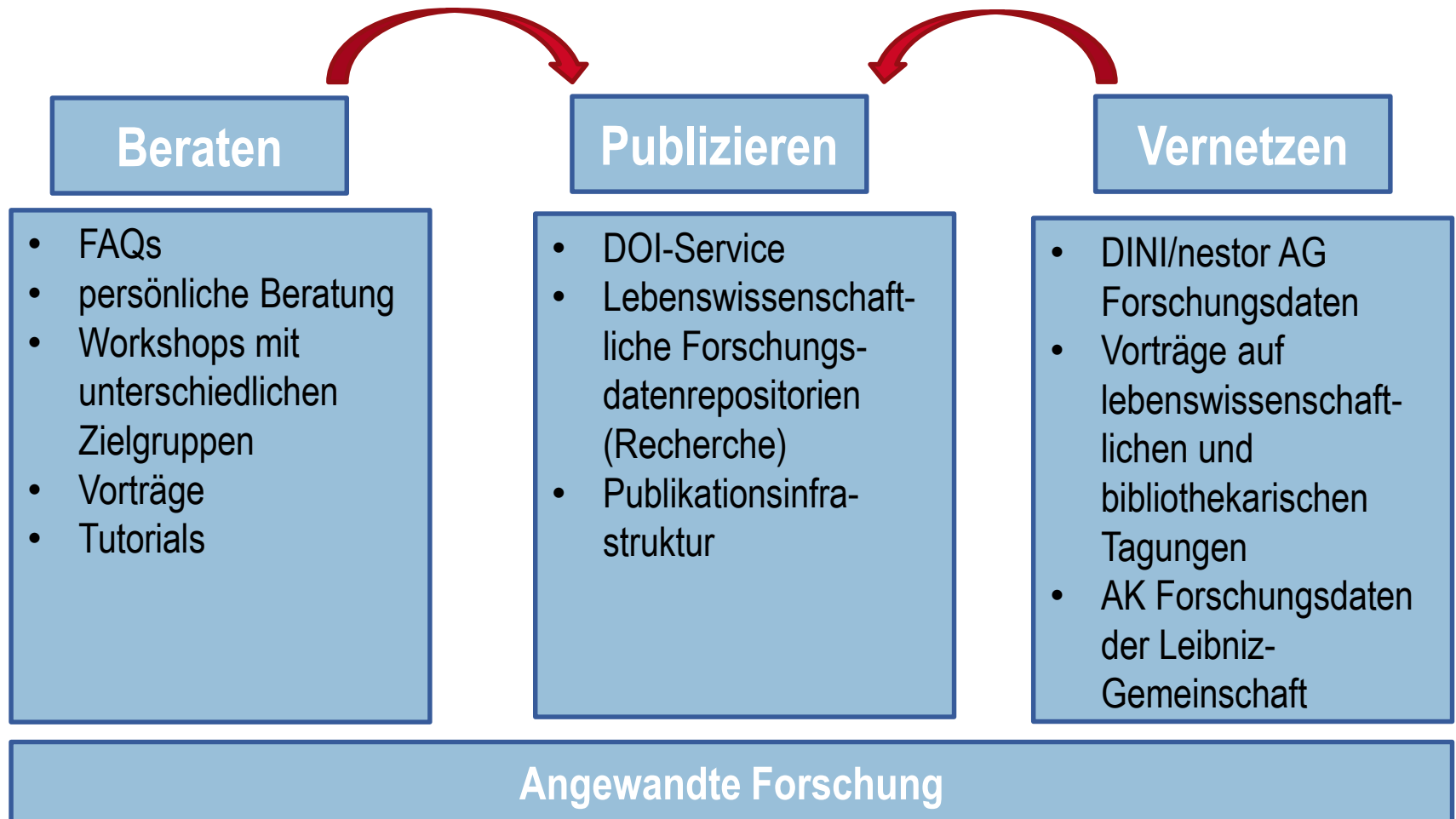


Ziele und Strategien des Forschungsdatenmanagement

- ▶ Aufzeigen bereits vorhandener Infrastrukturen
- ▶ Identifizierung von Lücken
- ▶ „Long tail“ der Forschungsdaten
- ▶ Aufbau eigener Publikationsinfrastrukturen in Kooperation mit lebenswissenschaftlichen Fachcommunities
- ▶ Nachweis von lebenswissenschaftlichen Forschungsdaten im Suchportal LIVIVO

ZB MED und Forschungsdaten: eine Einordnung

PUBLISSO PUBLIKATIONSPORTAL LEBENSWISSENSCHAFTEN



Was sind Forschungsdaten in den Lebenswissenschaften?

Inhalt der Daten

- ▶ Patienten-/personenbezogene Daten, z.B.
 - Bilddaten aus bildgebenden Verfahren (z.B. MRT),
 - Sensordaten aus Biosignal- oder Vitalparametermessung (z.B. EKG, EEG),
 - Biomaterialdaten aus Laboruntersuchungen (z.B. Blutproben, Genom-Daten),
 - Befunddaten aus ärztlichen Diagnostik (z.B. Anamnese)
- ▶ Daten aus Grundlagenforschung, z.B.
 - Genom-Sequenzierungsdaten (Mensch, Tier, Pflanze)
 - Proteindaten
- ▶ Messwerte (Boden, Wetter, Emissionen, Blutwerte)

Was sind Forschungsdaten in den Lebenswissenschaften?

Art der Daten:

- ▶ Bilder (z.B. MRT, Satellitenaufnahmen),
- ▶ Videos (z.B. Operationsfilme, Interviews),
- ▶ statistische Daten,
- ▶ sog. Big Data (z.B. genomische Sequenzen, Daten von Landmaschinen),
- ▶ geräteabhängige Daten (z.B. Röntgengerät, Emissionsmessgerät)
- ▶ Metadaten, z.B. zu klinischen Studien
- ▶ Klassifikationen und Codes zu Krankheiten oder Materialien (z.B. International Statistical Classification of Diseases and Related Health Problems (ICD)),
Ontologien, Thesauri
- ▶ Datenmodelle, Methodenbeschreibungen, Softwaretools

Herausforderungen des Forschungsdatenmanagements in der Medizin

- ▶ Schutz persönlicher Interessen (Personenbezug von Phänotypdaten, *omics-Daten, Biomaterial) / Pflicht zur Anonymisierung
- ▶ Gesetzliche Aufbewahrungsfristen (minimal und maximal)
- ▶ Rechtlicher Rahmen: Geflecht aus MBO-Ä (ärztliche Schweigepflicht), Bundes-/ Landesdatenschutzgesetz, Gesetz zur wirtschaftlichen Sicherung der Krankenhäuser und zur Regelung der Krankenhauspflegesätze
- ▶ Urheberrecht
- ▶ Ethische Aspekte bzgl. Erhebung und Nutzung
- ▶ Komplexes Regelwerk bzgl. klinischer Studien („Gute klinische Praxis“)
- ▶ Schutz kommerzieller Interessen (Innovationsschutz)
- ▶ proprietäre Formate
- ▶ „Big Data“, z.B. Genomdaten (5V's: volume, variety, velocity, veracity and value)

Publikationswege für Forschungsdaten

- ▶ Generisches/institutionelles (Forschungsdaten-) Repository
- ▶ Zusammen mit Volltext/Journalartikel / supplementary material
- ▶ Data paper in einem data journal
- ▶ Fachliches (Forschungsdaten-) Repository

Generisches/institutionelles Repository



REGISTRIERUNG

ANMELDEN

MENÜ ▾ 🔍 SUCHE

RADAR

Ein Repository für die
Wissenschaft zur sicheren
Aufbewahrung und
Veröffentlichung von
Forschungsdaten.

FÜR INSTITUTIONEN

FÜR FORSCHENDE

Generisches/institutionelles Repositorium

Universität Bielefeld

PUB – Publications at Bielefeld University

Deutsch

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1 2 3 4 ... 8 9 »

2017 | Research Data | PUB-ID: 2908937

Competitive State Anxiety and Psychological Skills (Research Data)

Hagan Jr. JE (2017)

Bielefeld University.

PUB | [Files available](#) | DOI

2017 | Research Data | PUB-ID: 2908653

Supplementary Material for "Polyphonic sonification of electrocardiography signals for diagnosis of cardiac pathologies"

Kather JN, Hermann T, Bukschat Y, Kramer T, Schad LR, Zöllner FG (2017)

Bielefeld University.

PUB | [Files available](#) | DOI

2017 | Research Data | PUB-ID: 2908988

Data for Effects of the social environment during adolescence on the development of social behaviour, hormones and morphology in male zebra finches (*Taeniopygia guttata*)

Börling S, von Engelhardt N (2017)

Bielefeld University.

PUB | [Files available](#) | DOI

2017 | Research Data | PUB-ID: 2908623

Data for the paper: Macroeconomics with Heterogeneous Agent Models: Fostering Transparency, Reproducibility and Replication

Dawid H, Harting P, van der Hoog S, Neugart M (2017)

Bielefeld University.

PUB | [Files available](#) | DOI

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Search

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▼ Hits per page: 20

▼ Sort

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▼ Embed

Publikation von zugrundeliegenden Daten über DRYAD



- ▶ Forschungsdaten
 - zugrundeliegende Daten zu einem GMS-Zeitschriftenartikel über Dryad
 - Kostenübernahme durch ZB MED



Data from: The active participation of German-speaking countries in conferences of the Association for Medical Education in Europe (AMEE) between 2005 and 2013: a reflection of the development of medical education research?



Files in this package

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Title	German-speaking AMEE participation 2005-2013
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Raes P, Bauer D, Schöppe F, Fischer MR (2014) The active participation of German-speaking countries in conferences of the Association for Medical Education in Europe (AMEE) between 2005 and 2013: a reflection of the development of medical education research? GMS Zeitschrift für Medizinische Ausbildung 31(3): 28. <http://dx.doi.org/10.3205/zma000920>

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Raes P, Bauer D, Schöppe F, Fischer MR (2014) Data from: The active participation of German-speaking countries in conferences of the Association for Medical Education in Europe (AMEE) between 2005 and 2013: a reflection of the development of medical education research? Dryad Digital Repository. <http://dx.doi.org/10.5061/dryad.9b56t>

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Living Books

4 laufende Buchprojekte

Nächster Schritt: Ausbau der Plattform für Zeitschriften und Kongresse

DFG gefördert

The screenshot shows the PUBLISSO website interface. At the top, there is a navigation bar with 'Contact PUBLISSO', 'Logout', and 'EN DE'. Below the navigation bar, the breadcrumb trail reads 'PUBLISSO > Publishing > Books > Overview Books'. The main content area displays four book entries, each with a cover image, title, description, and a 'view book' link. The logos of the respective institutions are shown to the right of each entry.

- Living Handbook of Perishable Food Supply Chains**
The aim of this textbook is to present the combined interdisciplinary knowledge in the field of cold chain management in food supply chains.
view book
universitätbonn
- Online Lehrbuch der Medizinischen Psychologie und Medizinischen Soziologie**
Dieses Open-Access-Lehrbuch liefert einen umfassenden und aktuellen Überblick über die Inhalte und das Prüfungswissen der Fächer Medizinische Psychologie und Medizinische Soziologie.
view book
GMS
DGMS
DGMP
- Urogenital Infections**
The aim of this textbook is to present the updated international knowledge and views of urologists in collaboration with gynecologists, clinical microbiologists, and infectious diseases specialists
view book
GMS
eu
esiu
- Your Handbook**
You are kindly invited to publish your Living Handbook in the area of the Life Sciences with us.
view book
- Living Textbook of Hand Surgery**
Living Textbook of Hand Surgery is Open Access, freely available on the internet.
The aim of this textbook is to represent the collective knowledge and views of international hand surgeons.
view book
GMS

Multimediaeinbindung

The screenshot shows a digital textbook interface. At the top, there is a navigation bar with links: Read Book, Surgical Techniques, Editorial Team, Authors, About this Book, Table of Contents, and External Link. A search box is located on the right. The main content area is titled 'Introduction' and features a large image of dolphins underwater. Below the image, there is a placeholder for a video that failed to load. The right sidebar contains a 'Citation Note' for the chapter, a 'Doi of this Chapter' (10.3205/LTBxxxx), and options to 'Print', 'Download PDF', 'Export as XML', and 'Download to Reference Manager(RIS)'. Below this is a 'Search PubMed.gov' section with search terms 'find:hand surgery' and 'find:background hand surgery'. At the bottom of the sidebar, there is a 'CC BY-SA' license notice and a 'Previous Versions' section showing 'Version 25/07/2014'. The footer of the page includes copyright information: '© gms - Living Books 2014' and links for 'Imprint', 'General business terms', 'Terms of use', 'Contact', and 'Login'.

Index der Videos, Tabellen etc.


Abgestufte Gliederung (4)

Abspielen von multimedialen Inhalten im Text

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Versionierung

Data Journal



Journal of **open** health data

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Next Steps (formerly known as the Longitudinal Study of Young People in England)
Lisa Calderwood, Carole Sanchez

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Open Health Data features peer-reviewed data papers describing health datasets with high reuse potential. We are working with a number of specialist and institutional data repositories to ensure that the associated data are professionally archived, preserved, and openly available. Equally importantly, the data and the papers are citable, and reuse will be tracked.

VBORNET gap analysis: Mosquito vector distribution models utilised to identify areas of potential species distribution in areas lacking records.
Schaffner et al. — 19 Dec 2016

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VBORNET Gap Analysis: Sand Fly Vector Distribution Models Utilised to Identify Areas of Potential Species Distribution in Areas Lacking Records
Alten et al. — 19 Dec 2016

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Physical Activity and Respiratory Health (PhARaoH): Data from a Cross-Sectional Study
Orme et al. — 05 Dec 2016

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<http://openhealthdata.metajnl.com/>

Data Journal

ELSEVIER

Home > Journals > Data in Brief



ISSN: 2352-3409

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Journal Metrics

CiteScore: **0.25**

More about CiteScore

Source Normalized Impact per Paper (SNIP): **0.065**

SCImago Journal Rank (SJR): **0.187**

Data in Brief

> Open Access

Editor-in-Chief: Hao-Ran Wang

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Data in Brief provides a way for researchers to easily share and reuse each other's datasets by publishing data articles that:

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Fachliche (Forschungsdaten-) Repositorien



The screenshot shows the NCBI GenBank website. At the top, there is a navigation bar with "NCBI Resources" and "How To" menus, and a "Sign in to NCBI" link. Below this is a search bar with "Nucleotide" selected and a "Search" button. A secondary navigation bar contains dropdown menus for "GenBank", "Submit", "Genomes", "WGS", "Metagenomes", "TPA", "TSA", "INSDC", and "Other".

GenBank Overview

What is GenBank?

GenBank® is the NIH genetic sequence database, an annotated collection of all publicly available DNA sequences (*Nucleic Acids Research*, 2013 Jan;41(D1):D36-42). GenBank is part of the [International Nucleotide Sequence Database Collaboration](#), which comprises the DNA DataBank of Japan (DDBJ), the European Nucleotide Archive (ENA), and GenBank at NCBI. These three organizations exchange data on a daily basis.

A GenBank release occurs every two months and is available from the [ftp](#) site. The [release notes](#) for the current version of GenBank provide detailed information about the release and notifications of upcoming changes to GenBank. Release notes for [previous GenBank releases](#) are also available. GenBank growth statistics for both the traditional GenBank divisions and the WGS division are available from each release. GenBank growth [statistics](#) for both the traditional GenBank divisions and the WGS division are available from each release.

An [annotated sample GenBank record](#) for a *Saccharomyces cerevisiae* gene demonstrates many of the features of the GenBank flat file format.

Access to GenBank

There are several ways to search and retrieve data from GenBank.

- Search GenBank for sequence identifiers and annotations with [Entrez Nucleotide](#), which is divided into three divisions: [CoreNucleotide](#) (the main collection), [dbEST](#) (Expressed Sequence Tags), and [dbGSS](#) (Genome Survey Sequences).
- Search and align GenBank sequences to a query sequence using [BLAST](#) (Basic Local Alignment Search Tool). BLAST searches CoreNucleotide, dbEST, and dbGSS independently; see [BLAST info](#) for more information about the numerous BLAST databases.
- Search, link, and download sequences programmatically using [NCBI e-utilities](#).
- The ASN.1 and flatfile formats are available at NCBI's anonymous FTP server: <ftp://ftp.ncbi.nlm.nih.gov/ncbi-asn1> and <ftp://ftp.ncbi.nlm.nih.gov/genbank>.

GenBank Data Usage

The GenBank database is designed to provide and encourage access within the scientific community to the most up to date and comprehensive DNA sequence information. Therefore, NCBI places no restrictions on the use or distribution of the GenBank data. However, some submitters may claim patent, copyright, or other intellectual property rights in all or a portion of the data they have submitted. NCBI is not in a position to assess the validity of such claims, and therefore cannot provide comment or unrestricted permission concerning the use, copying, or distribution of the information contained in GenBank.

Confidentiality

Some authors are concerned that the appearance of their data in GenBank prior to publication will compromise their work. GenBank will, upon request, withhold release of new submissions for a specified period of time. A date must be specified; we can not hold a sequence indefinitely pending publication. However, if a paper citing the sequence or accession number is published prior to the specified date, the sequence will be released upon publication. In order to prevent the delay in the appearance of published sequence data, we urge authors to inform us of the appearance of the published data. As soon as it is available, please send the full publication data—all authors, title, journal, volume, pages and date—to the following address: update@ncbi.nlm.nih.gov


Privacy

If you are submitting human sequences to GenBank, do not include any data that could reveal the personal identity of the source. GenBank assumes that the submitter has received any necessary informed consent authorizations required prior to submitting sequences.

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- [Submission Tools](#)
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re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES

Fachliche (Forschungsdaten-) Repositorien

Fachrepositorium Lebenswissenschaften von ZB MED

Forschungsdaten

Hilfe

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Urheberschaft

Autor* ?

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Lizenz* ?

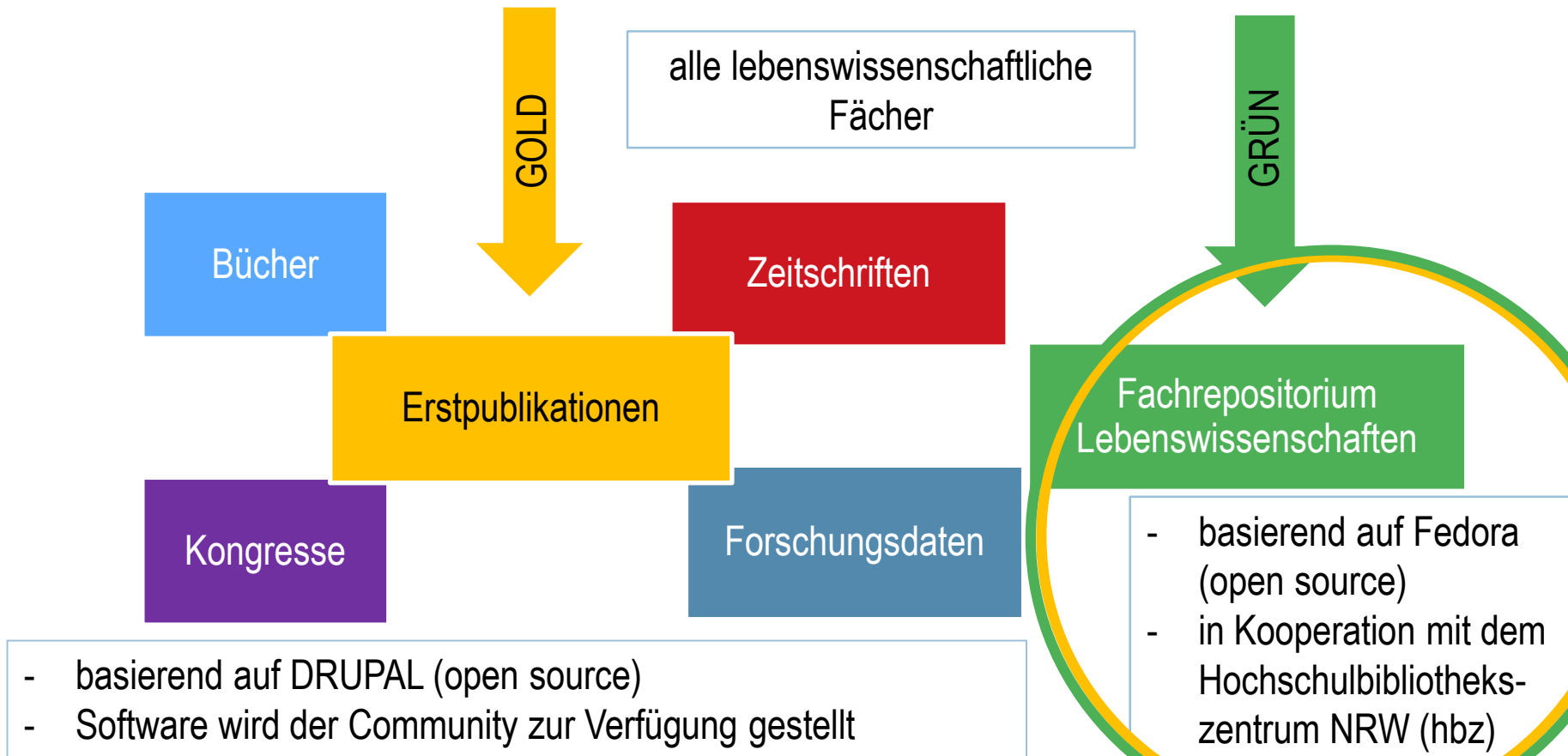
Embargo ?

Erschließung

Beschreibung* ?

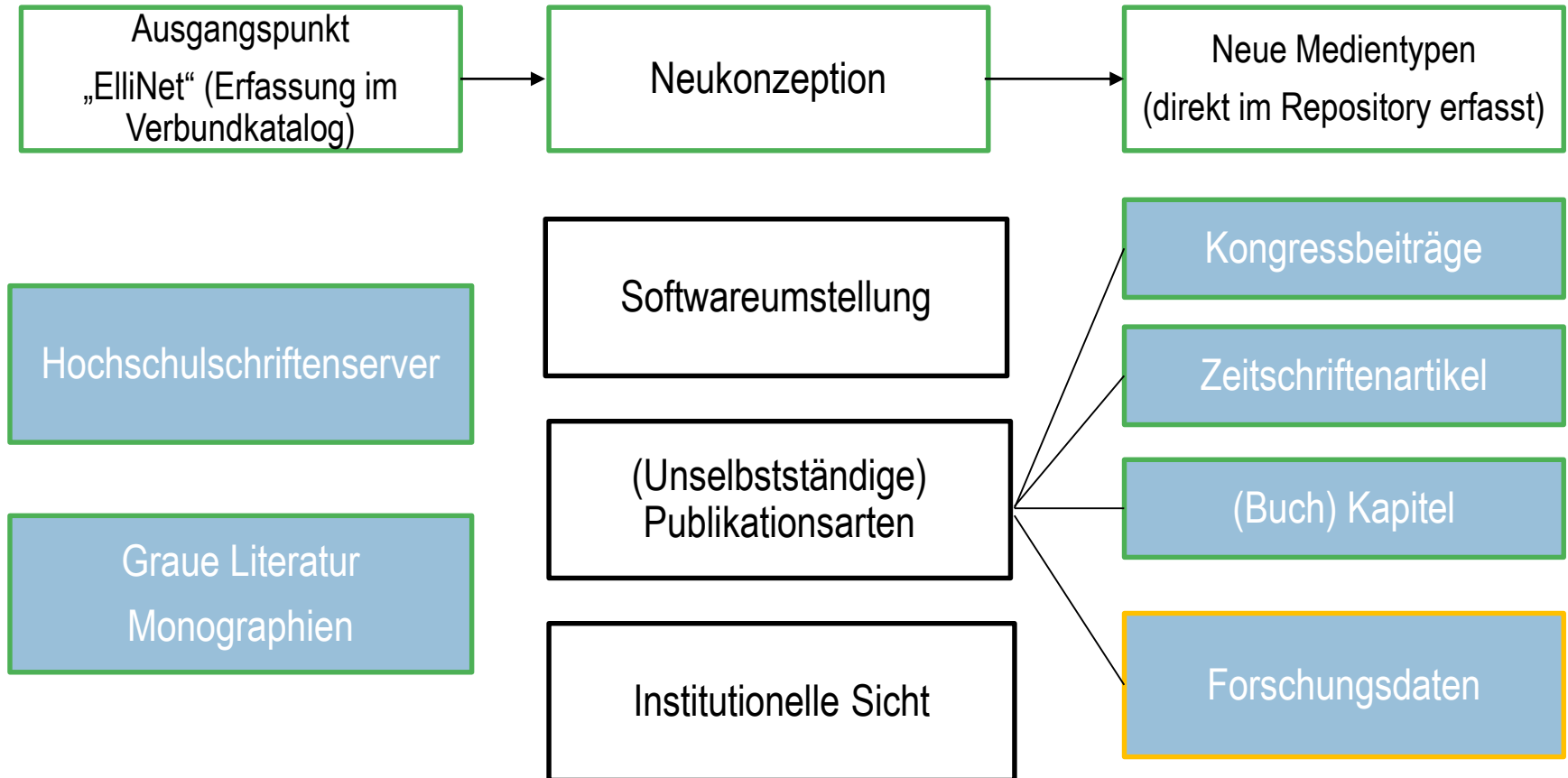
Fachrepositorium Lebenswissenschaften in PUBLISSO – Open-Access-Publikationsportal

PUBLISSO-Publikationsangebote



Fachrepositorium Lebenswissenschaften

Wohin geht die Entwicklung?



Schritte beim Ausbau des Fachrepositoriums Lebenswissenschaften

1. Entwicklung eines Metadatenschemas („Erfassungsmaske“)
2. technische Implementierung der Erfassungsmaske
3. Erprobung durch Publikation realer Forschungsdaten



abgeschlossen

weitgehend abgeschlossen

Kontakte zu Kooperationspartnern

Publikation von Forschungsdaten im Fachrepositorium



Ziele

- ▶ Sicherstellung der Nachnutzbarkeit der Forschungsdaten
- ▶ Publikation singulärer Forschungsdaten („raw research data“) sowie von Forschungsdaten, die mit einem Volltext verknüpft sind („enhanced publication“)
- ▶ Lizenzierung der Daten im Sinne von Open Data, also der Möglichkeit zur Nachnutzung
- ▶ dauerhafte Archivierung von Forschungsdaten aus den Lebenswissenschaften (geplant)

Forschungsdaten

Titel [Hilfe](#)

Titel* [?](#)

Urheberschaft

Autor* [?](#)

[+](#) [-](#) [↑](#) [↓](#)

Dateiupload

Medium* [?](#)

CopyrightJahr* [?](#)

Lizenz* [?](#)

Embargo [?](#)

Erschließung

Beschreibung* [?](#)

Metadatenchema Fachrepositorium – Pflichtfelder

Metadatum (übergeordneter Begriff)	Feldname	Feldname (untergeordnet)
Titel	Titel	
Urheberschaft	Autor*in (Linked Data: Gemeinsame Normdatei GND)	Nachname
		Vorname
		ORCID (optional)
		Affiliation (optional)
	Körperschaft (wenn kein Autor vorhanden)	
Dateiupload	Hochzuladende Datei	
	Format (xls, jpeg, etc.)	
	Medientyp (Bild, Video, Software, etc.)	
	Größe	
	Zugriffsrechte (open access, Embargo)	Embargofristende
	Copyrightjahr	
	Lizenz	Empfehlung: Open Data Commons Open Database Licence (ODbL)
	DOI	Neu
	Vorhanden	
	Zuletzt hochgeladen	
Erschließung	Abstract / Hinweise zur Nutzung	Sprache
	Fachgruppenzuordnung (Medizin, Umwelt, Agrar, Ernährung, interdisziplinär)	
	DDC-Klassifikation (lebenswiss. Fachgruppen)	
	Sprache (dt., engl., frz., span., ital.)	


Metadatenschema Fachrepositorium – optionale Felder

Metadatum (übergeordneter Begriff)	Feldname	Feldname (untergeordnet)
Beteiligte	Beteiligte Personen (Linked Data: Gemeinsame Normdatei GND)	ORCID
		Affiliation
	Förderer	Förder-ID
Erfassung	Schlagworte (GND, AGROVOC)	Sprache
	Datenerhebungsform (z.B. Probe, Interview, Genomsequenzierung)	
	Erhebungszeit	Zeitpunkt
		Zeitraum
Erfassungsort	Koordinaten (Point)	
	Koordinaten (Box)	
Externe Referenzen	Verwendete Publikationen	
	Zugehörige Publikationen	
	Versionen	Vorgänger
Nachfolger		

„Enhanced Publication“ – Dateihierarchie

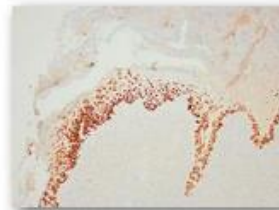
Startseite »  How do I diagnose Pagetoid Bowen Disease »  88-237-1-PB-jpg

„Kind-Objekt“

-  Neue Überordnung
-  Neuer Band
-  Neues Heft
-  Neuer Artikel
-  Neue Datei



88-237-1-PB-jpg

- Ansicht
- Zugriffsrechte
- Extras
- Bearbeiten
- Status



Größe (Byte): 567204
Dateityp: image/jpeg
Überordnung:

How do I diagnose Pagetoid Bowen Disease
 Carvalho, Rita [✉](#) | Martins, Manuela [✉](#) | Oliveira, Mário Ferraz [✉](#).
 2015

  88-237-1-PB-jpg Monografie

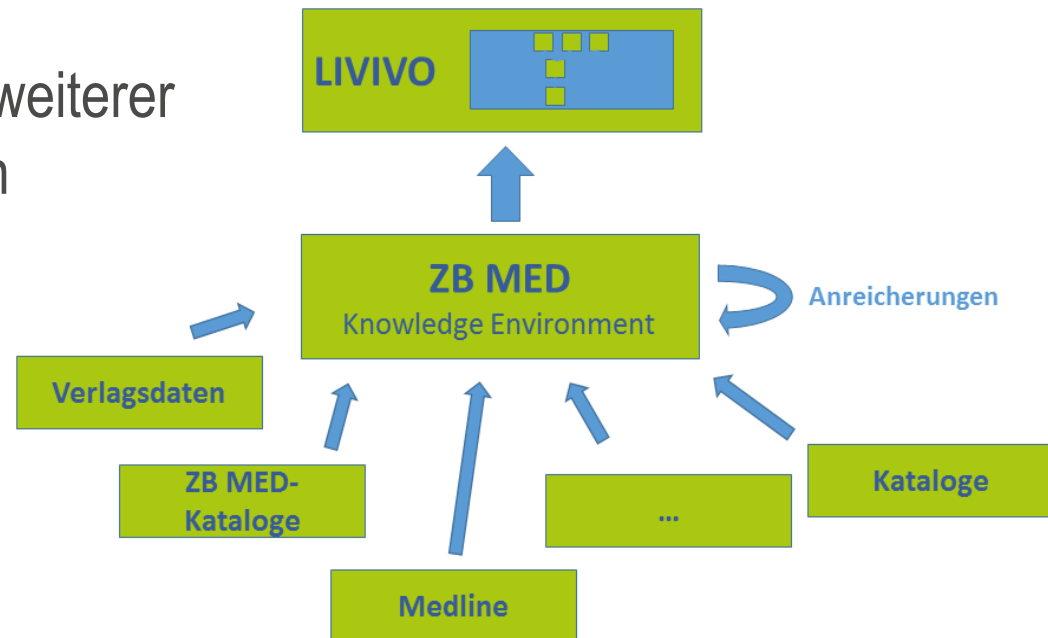
Letzte Änderung Do, 21.01.2016 - 13:30:56 durch hfries-kuepper; erstellt: Do, 21.01.2016 - 13:30:43 durch hfries-kuepper

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- ▼  How do I diagnose Pagetoid Bowen Disease
-  How do I diagnose Pagetoid Bowen Disease 
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-  88-230-1-PB-jpg 
-  88-231-1-PB-jpg 
-  88-232-1-PB-jpg 
-  88-233-1-PB-jpg 
-  88-234-1-PB-jpg 
-  88-235-1-PB-jpg 
-  **88-237-1-PB-jpg** 

LIVIVO - Struktur

- ▶ Knowledge Environment / Base
- ▶ Semantische Suche unter Nutzung von Fachthesauri (MeSH, AGROVOC, UMTHESES)
- ▶ Einbindung PUBLISSO und weiterer Forschungsdatenrepositorien (DataCite)



Indexierung von Forschungsdaten in LIVIVO

Filters

Related terms

- Genetics ▬
- Species ▬
- Evolution ▬
- Geneticvariation ▬
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- Environment 589
- Medicine, Health 52
- Nutrition 24

Year

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Documenttype

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Article + research data ✕

1 Marcussen, Thomas / Sandve, Simen R / Heier, Lise / Spannagl, Manuel / Pfeifer, Matthias // Jakobsen, Kjetill S / Wulff, Brande B H / Steuernagel, Burkhard / Mayer, Klaus F X / Olsen, Odd-Arne

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Science (New York, N.Y.) Link [🔗](#)

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2 Biller, Steven J / Berube, Paul M / Berta-Thompson, Jessie W / Kelly, Libusha / Roggensack, Sara E / Awad, Lana / Roache-Johnson, Kathryn H / Ding, Huiming / Giovannoni, Stephen J / Rocap, Gabrielle / Moore, Lisa R / Chisholm, Sallie W

📄 🔗 Genomes of diverse isolates of the marine cyanobacterium Prochlorococcus. Bookmark

Danke! Fragen?

Birte Lindstädt

Open-Access-Publizieren und
-Beraten

Forschungsdatenmanagement

Gleueler Straße 60

50931 Köln

lindstaedt@zbmed.de

