Templates in eLabFTW -
Why and how to design them

eLabFTW User meeting 01.10.2026

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INF Team SFB 1638, Heidelberg University

Funded by DFG Deutsche Forschungsgemeinschaft German Research Foundation

UNIVERSITÄT HEIDELBERG ZUKUNFT SEIT 1386

Who needs what?



#18847 ANTIBODIES ADD STATUS

Ab006 anti-OPA1

MAIN TEXT

OPA1 antibody (m)

clone: 18/OPA1

BD (612606)

Current lot: **7 (conc: 1 mg/mL)**

In primary antibody box

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Ab006 anti-OPA1

MAIN TEXT

OPA1 antibody (m)

clone: 18/OPA1

BD (612606)

Current lot: 7 (conc: 1 mg/mL)

In primary antibody box

VS

#18846 ANTIBODIES ADD STATUS

Ab006 anti-OPA1

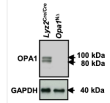
Vial tracking table

Controlled vocabulary for Status: Available | Reserved | Depleted | Discarded. For CoA attached: yes | no | not available from supplier.

Vial ID	Lot number	Date received	Concentration	Volume	Expiry date	Storage location	CoA attached	Status	Notes
Ab006.1	lot 7	2024-03-01	1 mg/mL	100 µL	2027-03-01	-20°C freezer 1, rack C, box 3, A2	yes	Available	
Ab006.2	lot 10	2026-06-09	1 mg/mL	100 µL	2029-05-01	-20°C freezer 1, rack C, box 3, A2	yes	backup	

Antibody validation record (five-pillar framework)

Record in-house validation evidence here. Based on the five-pillar framework (Uhlen et al., Nature Methods 2016). Not all pillars are required or feasible for every antibody — document what has been done. Link eLabFTW experiment entries and vial/lot references in the relevant columns.

Validation pillar	Done?	Vial / lot used	Experiment / reference	Result / notes
1. Genetic strategy Knockout/knockdown of target gene — signal lost in negative control	2018	unknown	Freshly purified mouse neutrophils of Opa1NΔ and control mice were analyzed for OPA1 protein expression. Amini, P., Stojkov, D., Felser, A. *et al.* Neutrophil extracellular trap formation requires OPA1-dependent glycolytic ATP production. *Nat Commun* **9**, 2958 (2018). https://doi.org/10.1038/s41467-018-05387-y	

Unique_ID

Research Resource Identifier. Pre-filled with AB_ prefix — append the numeric identifier. Find or register at https://www.antibodyregistry.org/. If no RRID exists, register the antibody to obtain one before publication.

RRID:AB_399888

TARGET INFORMATION

Target

Primary target name using standard gene/protein symbol (e.g. TP53, ERK1/2, H3, FLAG). Use HGNC approved symbol for human proteins: https://www.genenames.org. For tag antibodies use the tag name (FLAG, HA, His, GFP, GST, MBP).

OPA1

ANTIBODY PROPERTIES

Clonality

Antibody clonality. Monoclonal: single epitope. Polyclonal: multiple specificities. Recombinant monoclonal: from cloned antibody genes without hybridoma.

Monoclonal

Clone_name

Clone identifier for monoclonal antibodies (e.g. M2, DO-1, 9E10, EP302Y). Leave blank for polyclonal antibodies.

18/OPA1

SUPPLIER INFORMATION

Supplier

Supplier or manufacturer. Select 'Other' and fill Supplier_details for suppliers not in the list. For in-house antibodies enter 'Other' and name the producing lab in Supplier_details.

BD Biosciences

Catalogue_number

Supplier catalogue number WITHOUT size suffix (e.g. F1804 not F1804-200UG, ab32572 not ab32572-100). Many suppliers append sizing information (-100, S, L, 50uL) to the same base product — the RRID registry uses one RRID per product regardless of size. Strip the size suffix here; record the full size-specific code in Alternative_catalogue_number.

612606

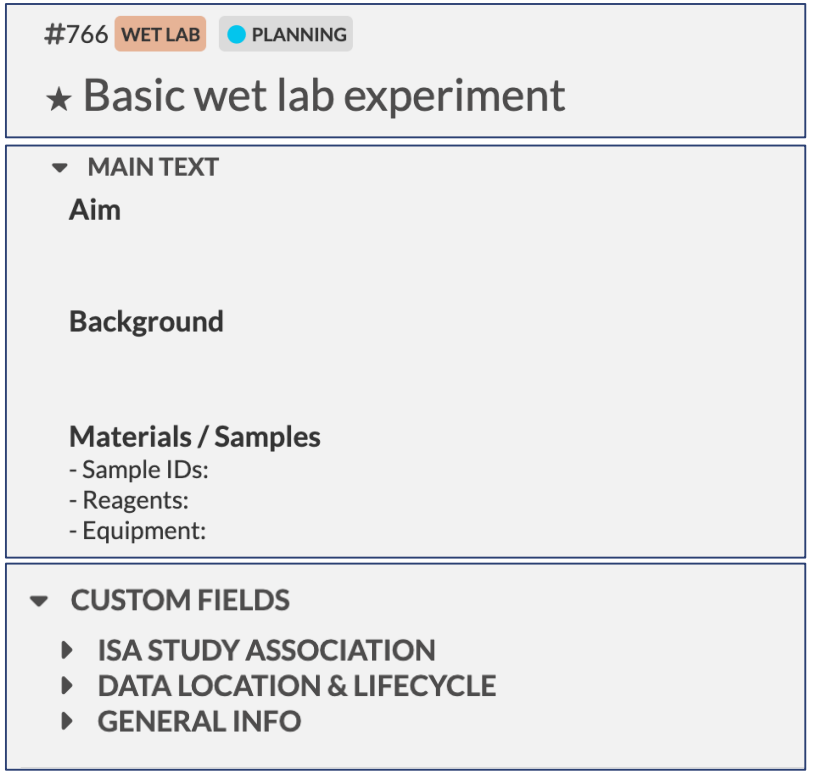
Ways of using templates

To make a **new entry** with pre-set:

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- metadata (category, tags, status, filled custom fields)
- structure in main body or custom fields



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- prompt for specific info (main body or custom fields)
- instructions for completing the entry

#750 CLONING ADD STATUS

★molecular Cloning

Block A — Insert preparation [delete if not applicable]

A1. PCR amplification of insert

Template	[name / Lab_ID / prep date / concentration used]
Primer pair	[names from Section 1.4 table]
Expected product size	[bp]

Reaction setup (per tube / master mix for [ ] reactions — specify which):

Component	Volume (µL)	Stock conc.	Notes
[ ] Polymerase / Master Mix	[ ]	[ ]x	[ ]
5x Buffer	[ ]	5x	[ ]
dNTPs	[ ]	[ ] mM	[ ]
Fwd primer	[ ]	[ ] µM	[ ]
Rev primer	[ ]	[ ] µM	[ ]
Template DNA	[ ]	[ ] ng/µL	[ ] ng total
H_2O (nuclease-free)	[ ]	—	[ ]
Total volume	[ ]	—	[ ] tubes

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To modify **existing entry**:

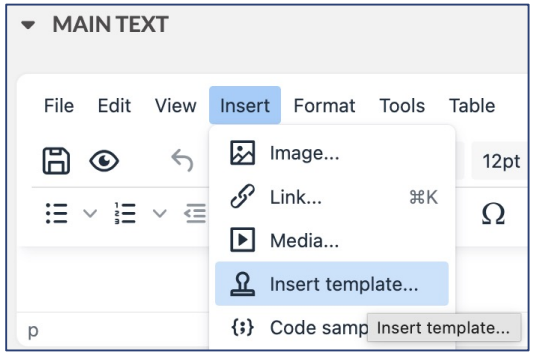
Ways of using templates

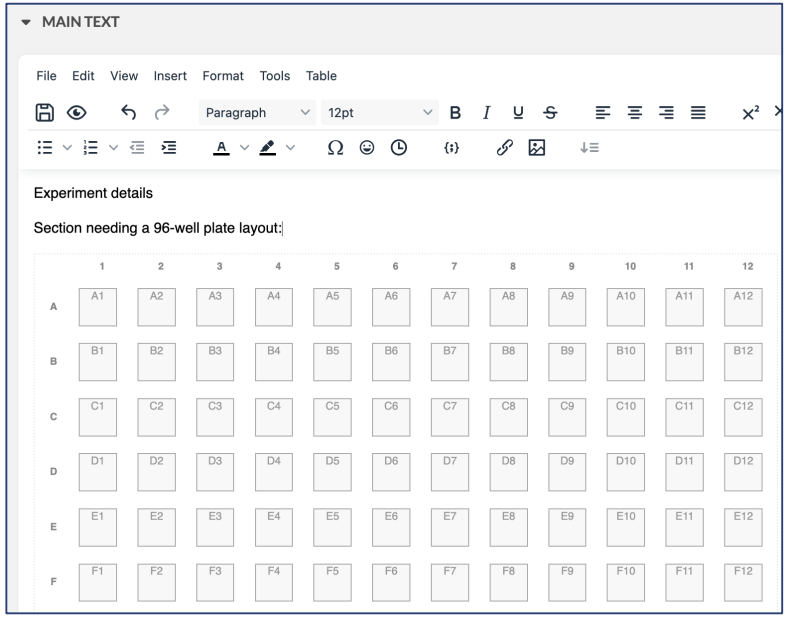
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- add to main body
- add custom fields





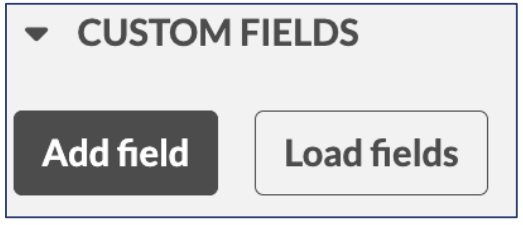
Ways of using templates

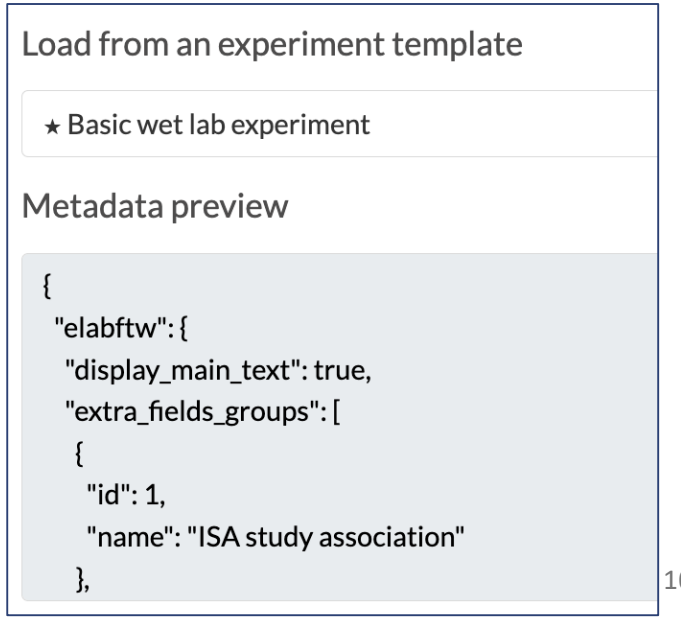
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Benefits of using templates



Entries are:

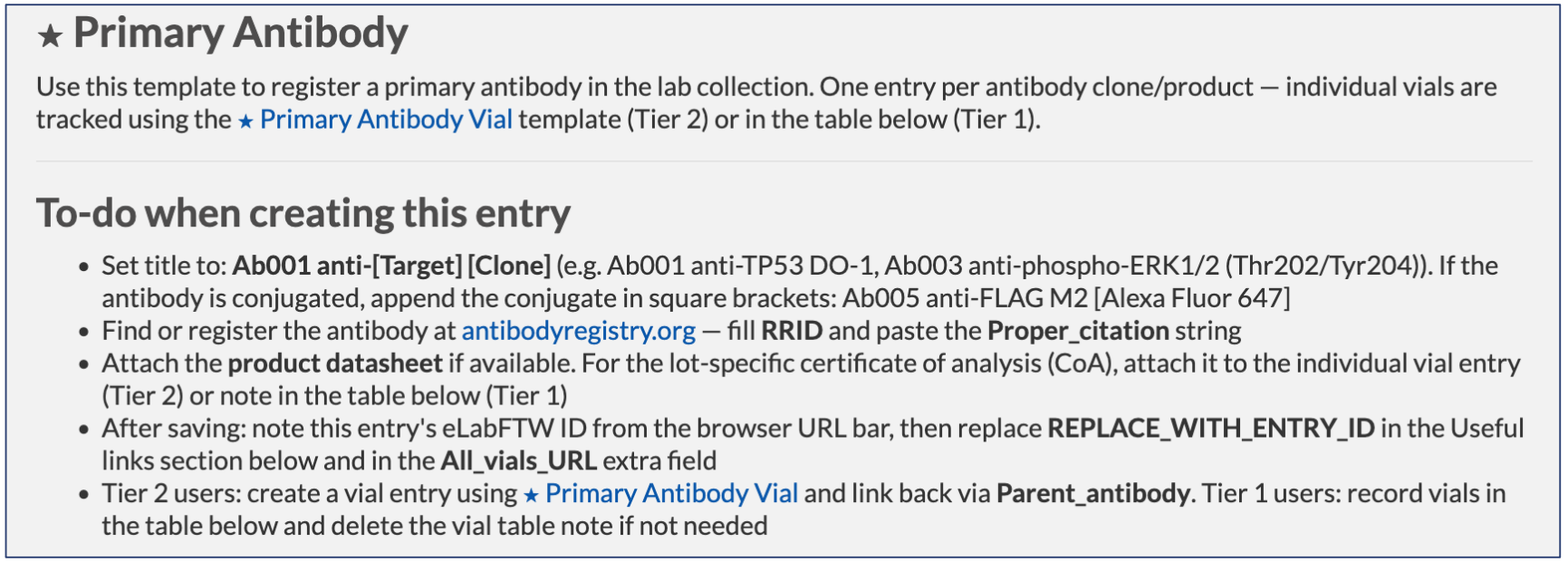
- **more complete**
- **more consistent (structure, vocabulary, data format)**
- **quicker to write**

Important elements for templates

- Metadata (category, status, permissions (for derived entries), links, etc.)

Important elements for templates

- Metadata (category, status, permissions (for derived entries), links, etc.)
- Main body:
  - Instructions on how to complete the entry
  - Listing of relevant other templates/entries



★ Primary Antibody

Use this template to register a primary antibody in the lab collection. One entry per antibody clone/product — individual vials are tracked using the ★ Primary Antibody Vial template (Tier 2) or in the table below (Tier 1).

To-do when creating this entry

- Set title to: **Ab001 anti-[Target] [Clone]** (e.g. Ab001 anti-TP53 DO-1, Ab003 anti-phospho-ERK1/2 (Thr202/Tyr204)). If the antibody is conjugated, append the conjugate in square brackets: Ab005 anti-FLAG M2 [Alexa Fluor 647]
- Find or register the antibody at antibodyregistry.org — fill **RRID** and paste the **Proper_citation** string
- Attach the **product datasheet** if available. For the lot-specific certificate of analysis (CoA), attach it to the individual vial entry (Tier 2) or note in the table below (Tier 1)
- After saving: note this entry's eLabFTW ID from the browser URL bar, then replace **REPLACE_WITH_ENTRY_ID** in the Useful links section below and in the **All_vials_URL** extra field
- Tier 2 users: create a vial entry using ★ Primary Antibody Vial and link back via **Parent_antibody**. Tier 1 users: record vials in the table below and delete the vial table note if not needed

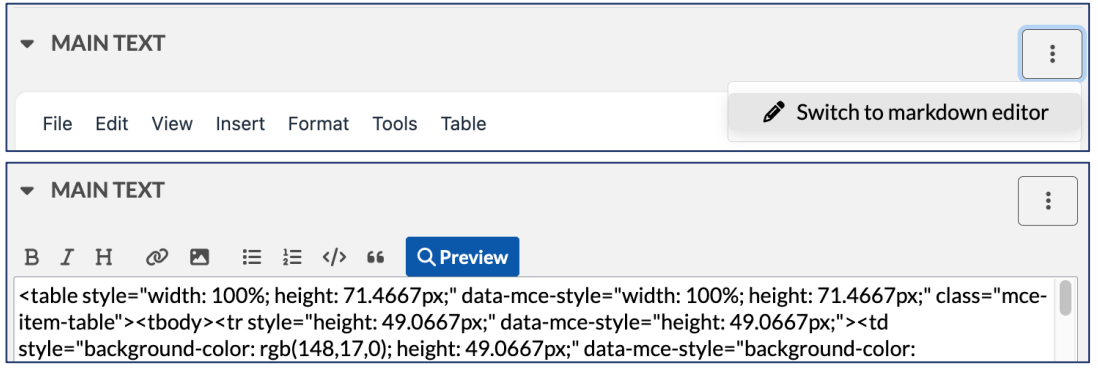
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  - Formatting:
    - accessible colour combinations in light/dark/midnight modes
    - consistent between templates
    - use heading formatting to enable TOC feature (from 6.x)

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Could an LLM help you format your main body with HTML code?



Important elements for templates

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- Custom fields:
  - consistent names (across templates, name is identifier)
  - field descriptions – educational and sufficient for understanding the captured data

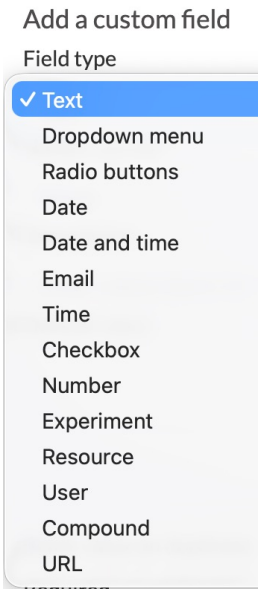
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Research Resource Identifier. Pre-filled with AB_ prefix — append the numeric identifier. Find or register at https://www.antibodyregistry.org/. If no RRID exists, register the antibody to obtain one before publication.

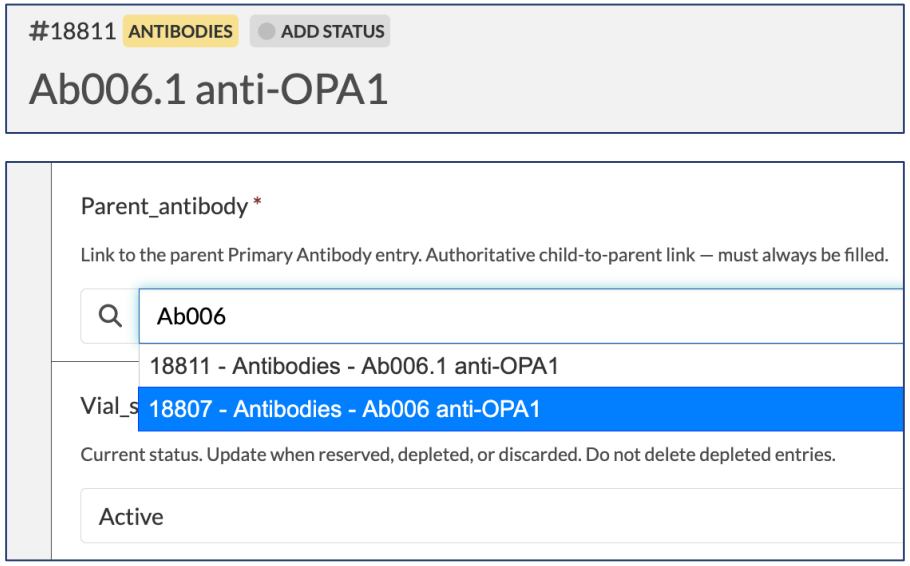
RRID:AB_399888

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  - make use of different types of fields
    - create parent-child relationships (linking child to parent; many-to-many since v6.0)



Important elements for templates



Resource/Experiment Custom Fields make connections easy and give them more meaning

Important elements for templates

#18811 ANTIBODIES ADD STATUS

Ab006.1 anti-OPA1

Parent_antibody *

Link to the parent Primary Antibody entry. Authoritative child-to-parent link — must always be filled.

Ab006

18811 - Antibodies - Ab006.1 anti-OPA1

18807 - Antibodies - Ab006 anti-OPA1

Vial_s

Current status. Update when reserved, depleted, or discarded. Do not delete depleted entries.

Active

#33638 WET LAB ADD STATUS

ND0049 - Transient FLAG-TP53 expression validation in HEK293T

CUSTOM FIELDS

ISA STUDY ASSOCIATION

Study_ID

Link to ISA Study entry.

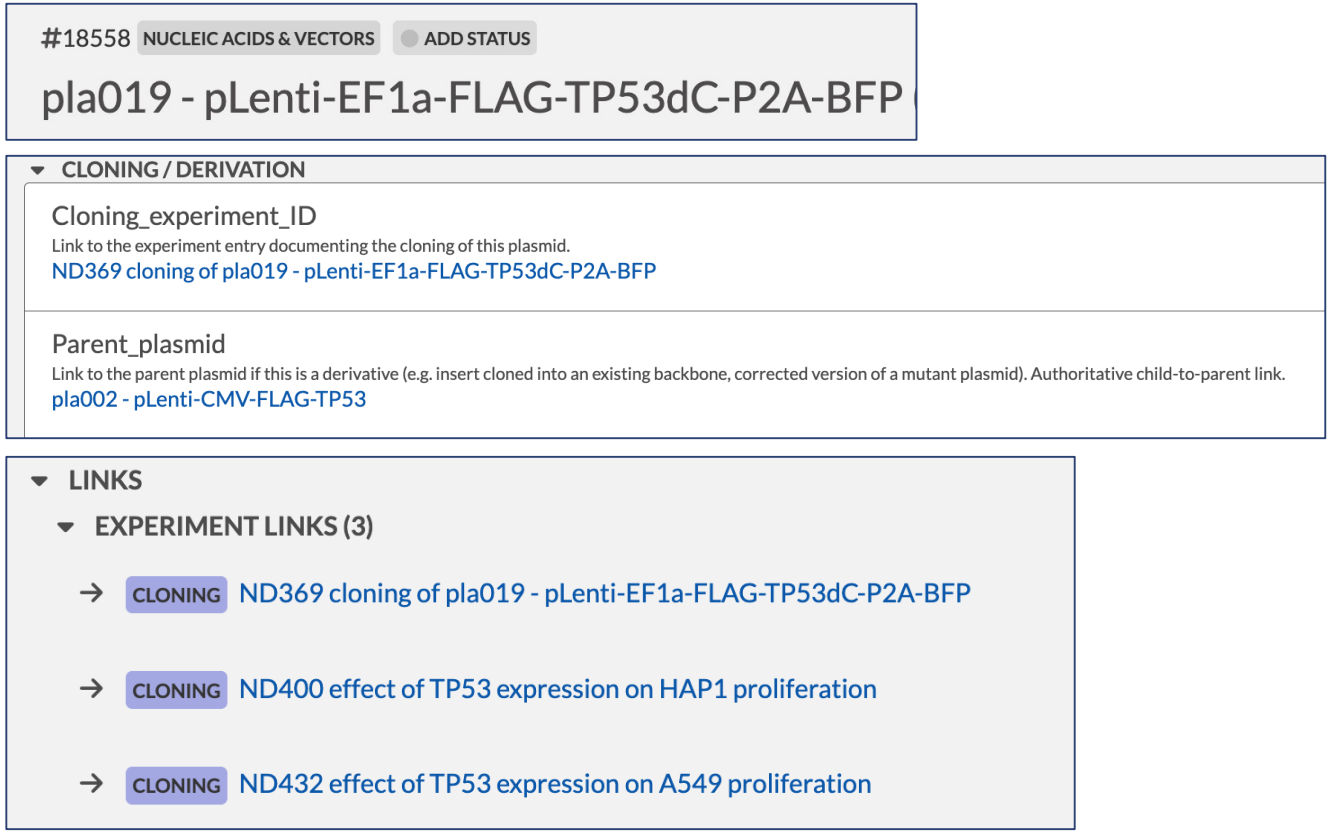
I02_S01 — Functional analysis of FLAG-TP53 in HEK293T cells

RESOURCE LINKS (8)

- INSTRUMENTS Bio-Rad ChemiDoc Imaging System — DEMO
- INVESTIGATIONS & STUDIES I02_S01 — Functional analysis of FLAG-TP53 in HEK293T cells
- METHODS & PROTOCOLS Western blot — chemiluminescent detection v1
- NUCLEIC ACIDS & VECTORS pla015 - pcDNA3 flag p53
- ORGANISMS HEK293T
- STOCKS HEK293T WT - MCV_0010
- STOCKS dna003 - pla015 pcDNA3 flag p53 miniprep 2026-08-22

Resource/Experiment Custom Fields make connections easy and give them more meaning

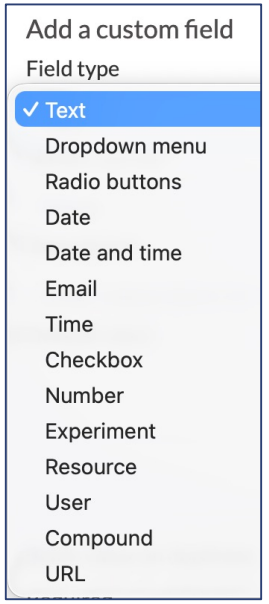
Important elements for templates



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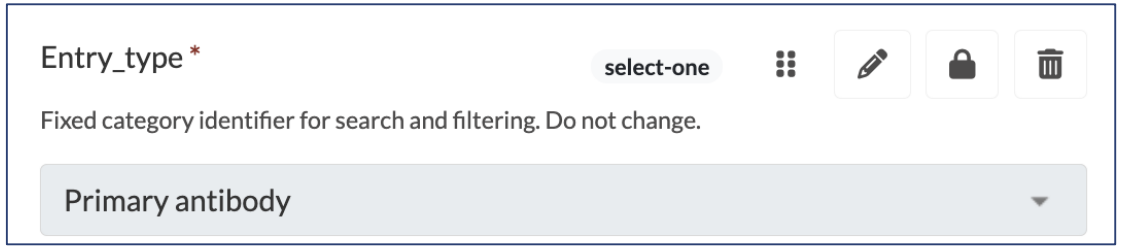
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    - controlled vocab
    - data format (date, units)
    - usability (URL)



Important elements for templates

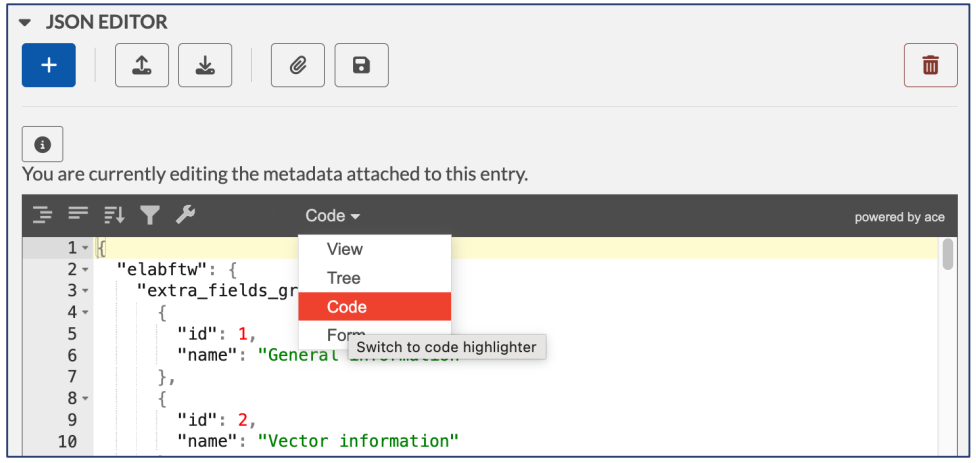
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    - controlled vocab
    - data format (date, units)
    - usability (URL)
    - lock fields to prevent accidental editing and use as identifiers beyond standard metadata



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Could an LLM help you modify your custom field json code?



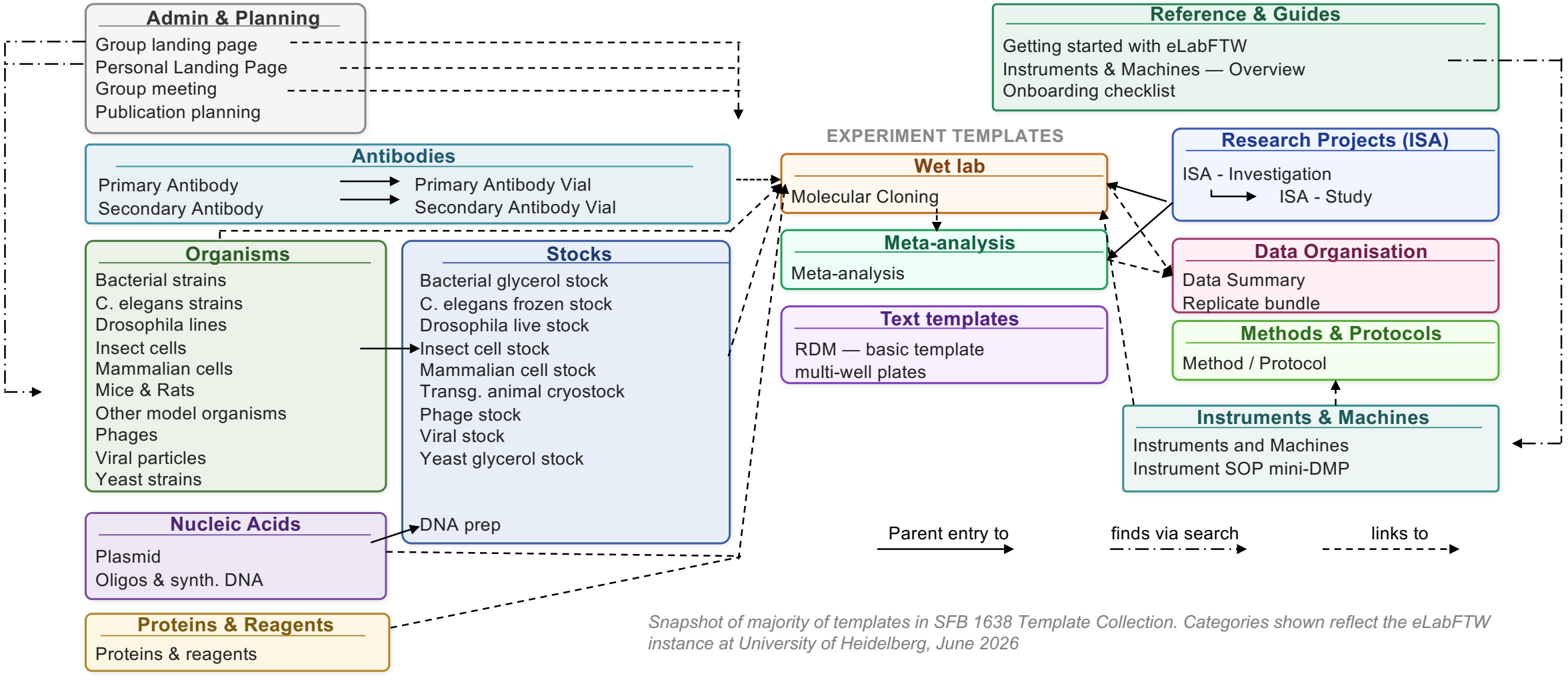
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- other: to do list, attachments, spreadsheet editor

Considerations before starting

- Are you setting up a single template or a network of templates?

Considerations before starting

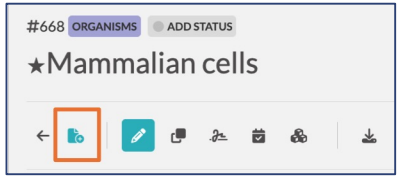


Snapshot of majority of templates in SFB 1638 Template Collection. Categories shown reflect the eLabFTW instance at University of Heidelberg, June 2026

Considerations before starting

Make templates and entries findable via customisable landing pages





eLabFTW EXPERIMENTS RESOURCES SCHEDULER TEAM TOOLS ND

Link to the Team Landing page

#16503 ADMIN & PLANNING ADD STATUS

Group landing page — SFB 1638 INF team

MAIN TEXT

University of Heidelberg · BZH · SFB 1638

AG INF SFB 1638

Last updated July 2026

Organisms & Plasmids

Plasmids (Expression Vector Overview) ⊕
Bacterial strains ⊕
Yeast strains ⊕
Mammalian cell lines ⊕
Insect cells ⊕

Reagents

Proteins & reagents ⊕
Antibodies overview
Primary antibodies ⊕
Primary antibody vials ⊕
Secondary antibodies ⊕
Secondary antibody vials ⊕

Lab Infrastructure

Instruments & booking ⊕
Storage locations

Research Data & Methods

Experiments ⊕ Basic ⊕ Molecular cloning ⊕ Cell culture w/ calculator
Meta-analyses ⊕
Method protocols ⊕
Buffer & media recipes ⊕
Presentations

Investigations

I01 — Structural and biochemical analysis of RecA-family ATPases
I02 — Functional characterisation of target protein X across model systems
↳ Studies: I01_S01 · I01_S02 · I02_S01

Publications & Theses

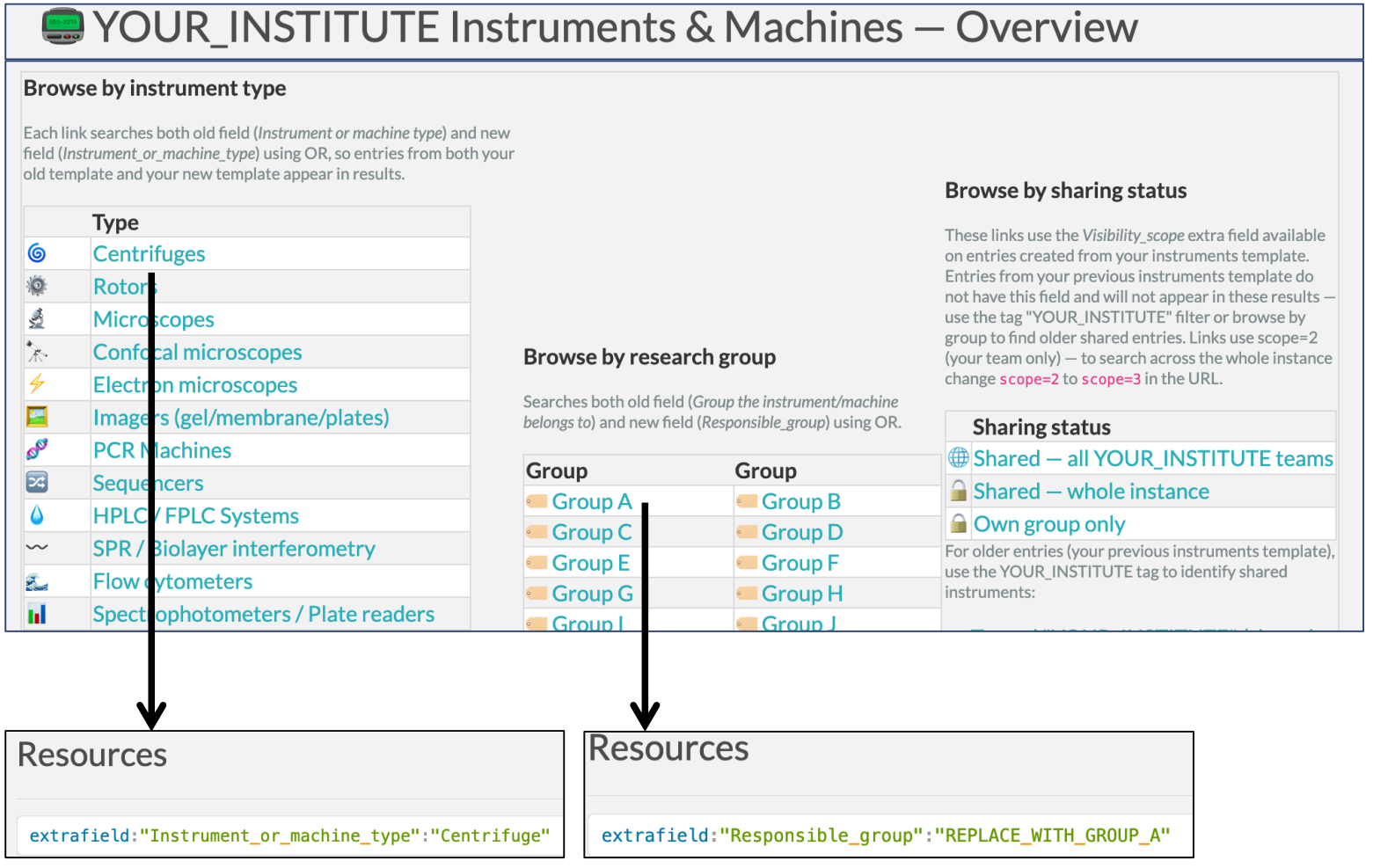
Publication planning
Theses
Lab / group meetings
Presentations

Team

Neele	Dionysios	[Name 3]	[Name 4]	[Name 5]	[Name 6]
Experiments	Experiments	Experiments	Experiments	Experiments	Experiments
Resources	Resources	Resources	Resources	Resources	Resources
Protocols	Protocols	Protocols	Protocols	Protocols	Protocols
[Meeting]	[Meeting]	[Meeting]	[Meeting]	[Meeting]	[Meeting]
Personal page	Personal page	Personal page	Personal page	Personal page	Personal page

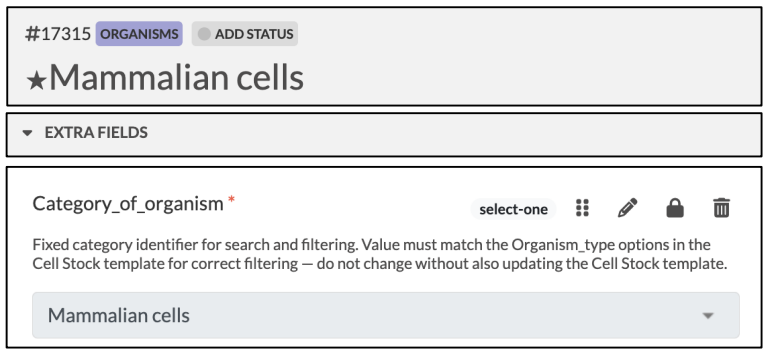
Students

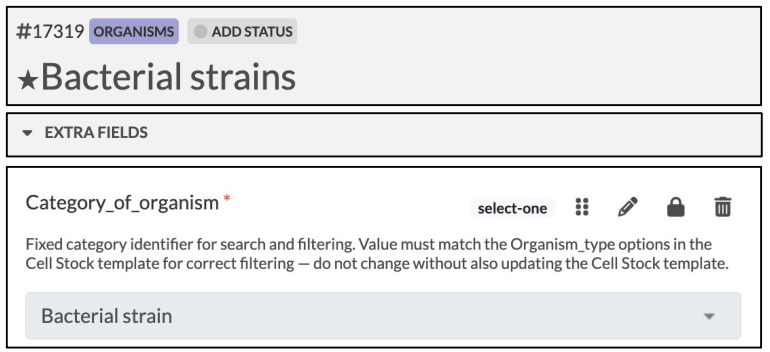
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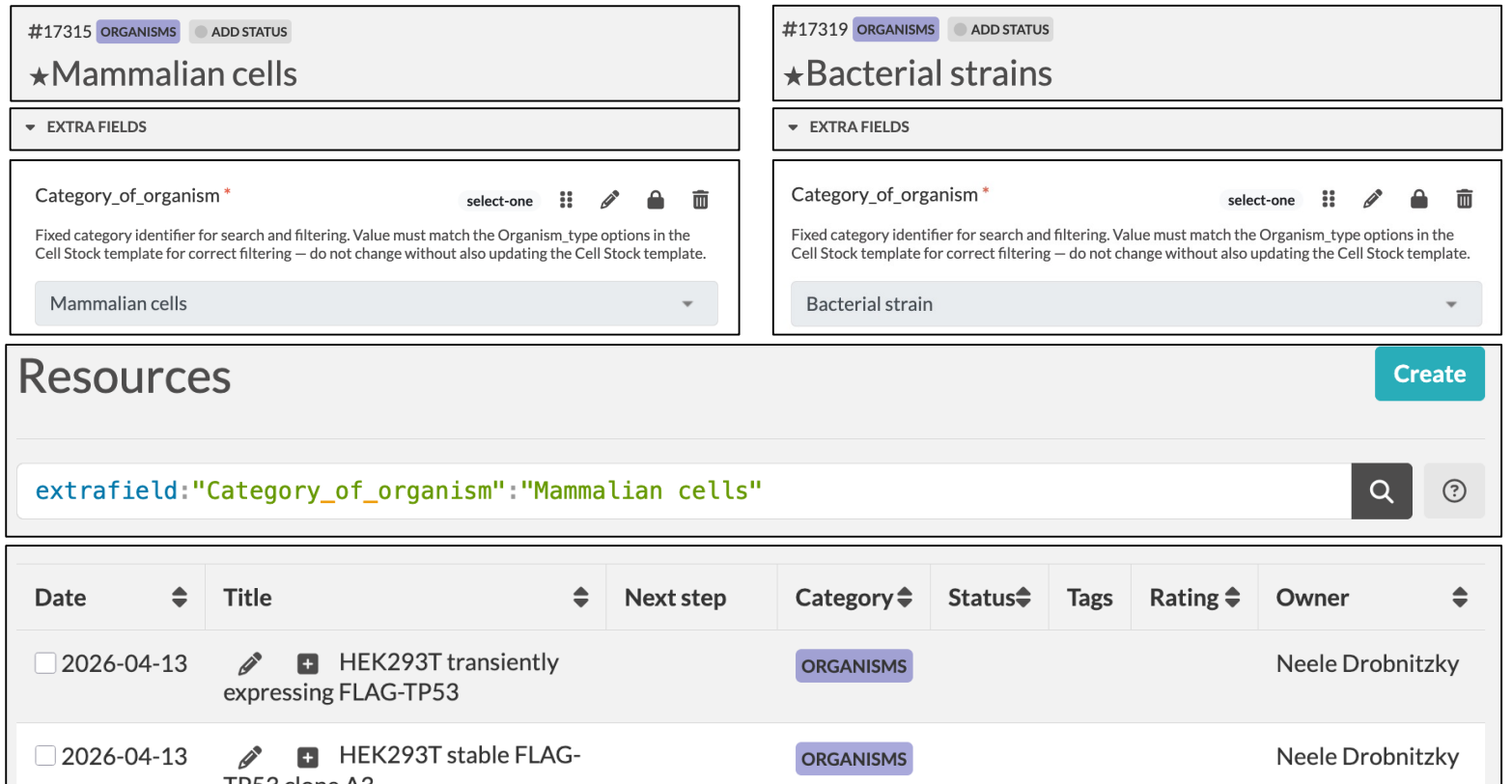
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- unsure if fields are needed?
  → if in doubt include and delete later to have consistent layout and names?
  → elAPI Plugins can help with batch editing of entries, including deletion of fields *

Contribution: Dionysios Antypas **0009-0005-8051-6879** (SFB 1638 INF): elAPI Plugins, see eLabFTW Community Meeting XI
* some functionalities of elAPI Plugins are now incorporated in eLabFTW (from v6.0)

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- Who are you setting templates up for? shared categories? needs?
- What community standards are there on documentation and what processes should work together with the ELN (entries)?

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* some functionalities of elAPI Plugins are now incorporated in eLabFTW (from v6.0)

Building better templates together!

https://github.com/sfb1638/elabftw-templates

GitHub Template repository



Contribution: Achim Winandi **0000-0003-4800-7925** (KIT):
ELN Metadata Diff Viewer, eLabFTW Template Viewer, repository co-conceptualisation

Building better templates together!

GitHub Template repository https://github.com/sfb1638/elabftw-templates

Draft User Guide for template set https://doi.org/10.5281/zenodo.20605340

Let's chat (on Matrix):

DSgG eLabFTW exchange

experiment metadata in eLabFTW exchange

eLabFTW RDM Club

Contribution: Achim Winandi **0000-0003-4800-7925** (KIT):
ELN Metadata Diff Viewer, eLabFTW Template Viewer, repository co-conceptualisation

Contributions, copyright, AI transparency

- Constributions:
  - Achim Winandi 0000-0003-4800-7925 (KIT): ELN Metadata Diff Viewer, eLabFTW Template Viewer, repository co-conceptualisation
  - Dionysios Antypas 0009-0005-8051-6879 (SFB 1638 INF): elAPI Plugins
  - SFB 1638 Data Stewards: feedback in seminars and individual group meetings

- Copyright:

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- AI transparency:
  - AI assistance (Claude, Anthropic) was used throughout template development, primarily to generate candidate metadata lists as the basis for extra field decisions, and to maintain field name consistency across templates. AI also generated the HTML and JSON files underpinning entry bodies and extra field structures, with content and structural intent specified by the author and layouts refined through iterative review.
  - AI assistance (ChatGPT, OpenAI) was used for image generation with user-directed prompts and iterative refinement

Funded by
DFG Deutsche Forschungsgemeinschaft
German Research Foundation