



CEPLAS

Cluster of Excellence on Plant Sciences

Online intro to elabFTW

July 14th, 2020

Dominik Brilhaus



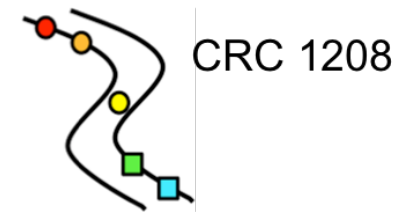
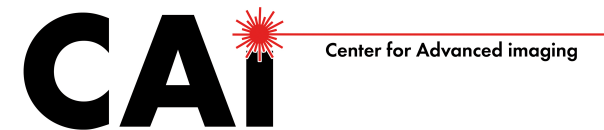


- This seminar is being recorded!
- Discussions after the talk
 - Use “raise hand” to discuss live
 - Use the question panel and ask me or the general audience
- Links to slides and recordings will be shared after the seminar via
 - ELN mailing list and
 - HHU Rocketchat (https://rocketchat.hhu.de/channel/elb_eln)
- Please fill out the survey



The organizers

- Nina Knipprath, Bert Zulauf
 - <https://www.fdm.hhu.de>
- Stefanie Weidtkamp-Peters
 - <https://www.cai.hhu.de>
 - <https://www.sfb1208.hhu.de>
- Hajira Jabeen, Dominik Brilhaus
 - <https://www.ceplas.eu>





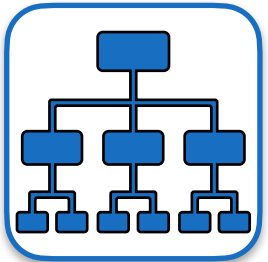
FAIR principles of data stewardship



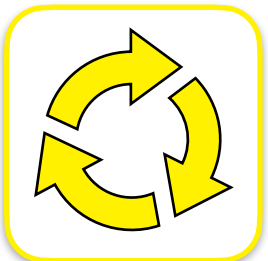
Findable



Accessible



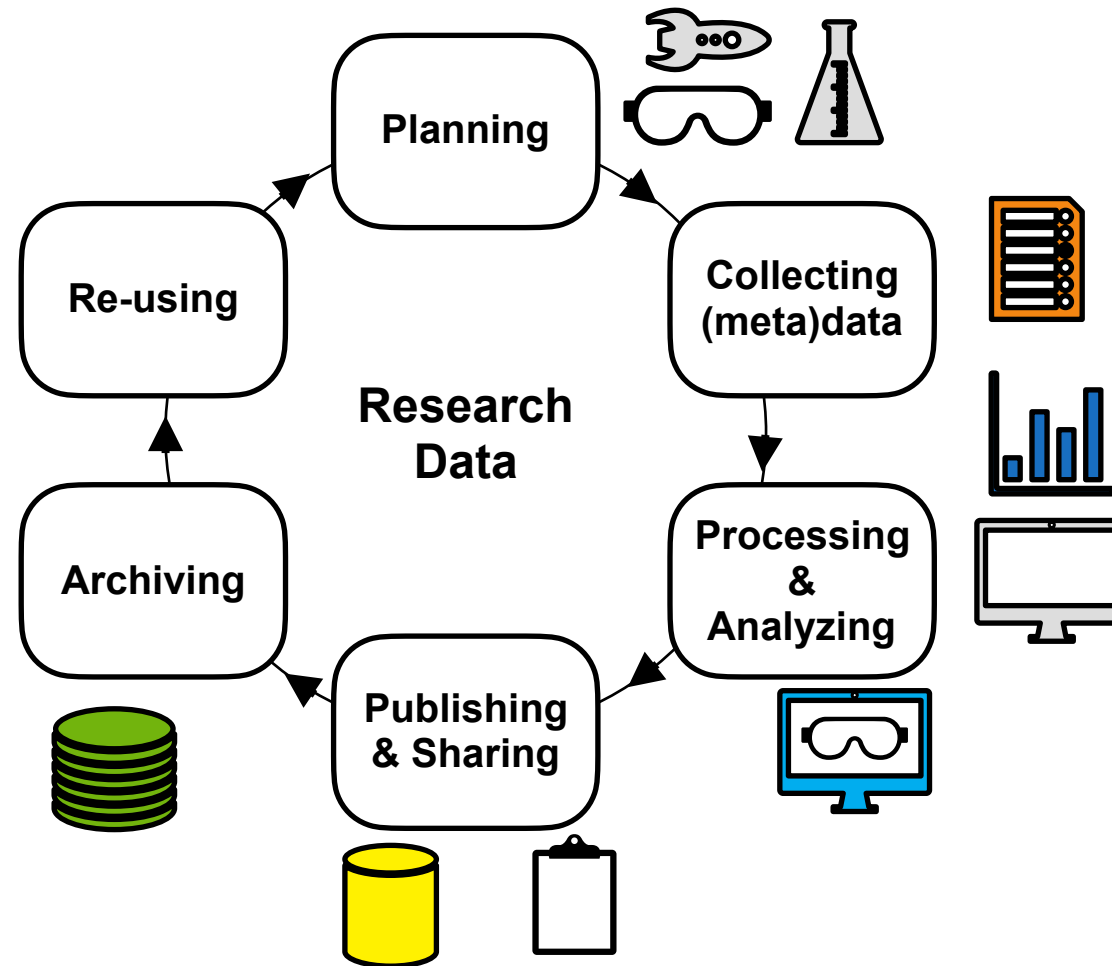
Interoperable



Reusable

Wilkinson, M., et al. (2016)
The FAIR Guiding Principles for scientific data management
and stewardship. *Sci Data* **3**, 160018.
<https://doi.org/10.1038/sdata.2016.18>

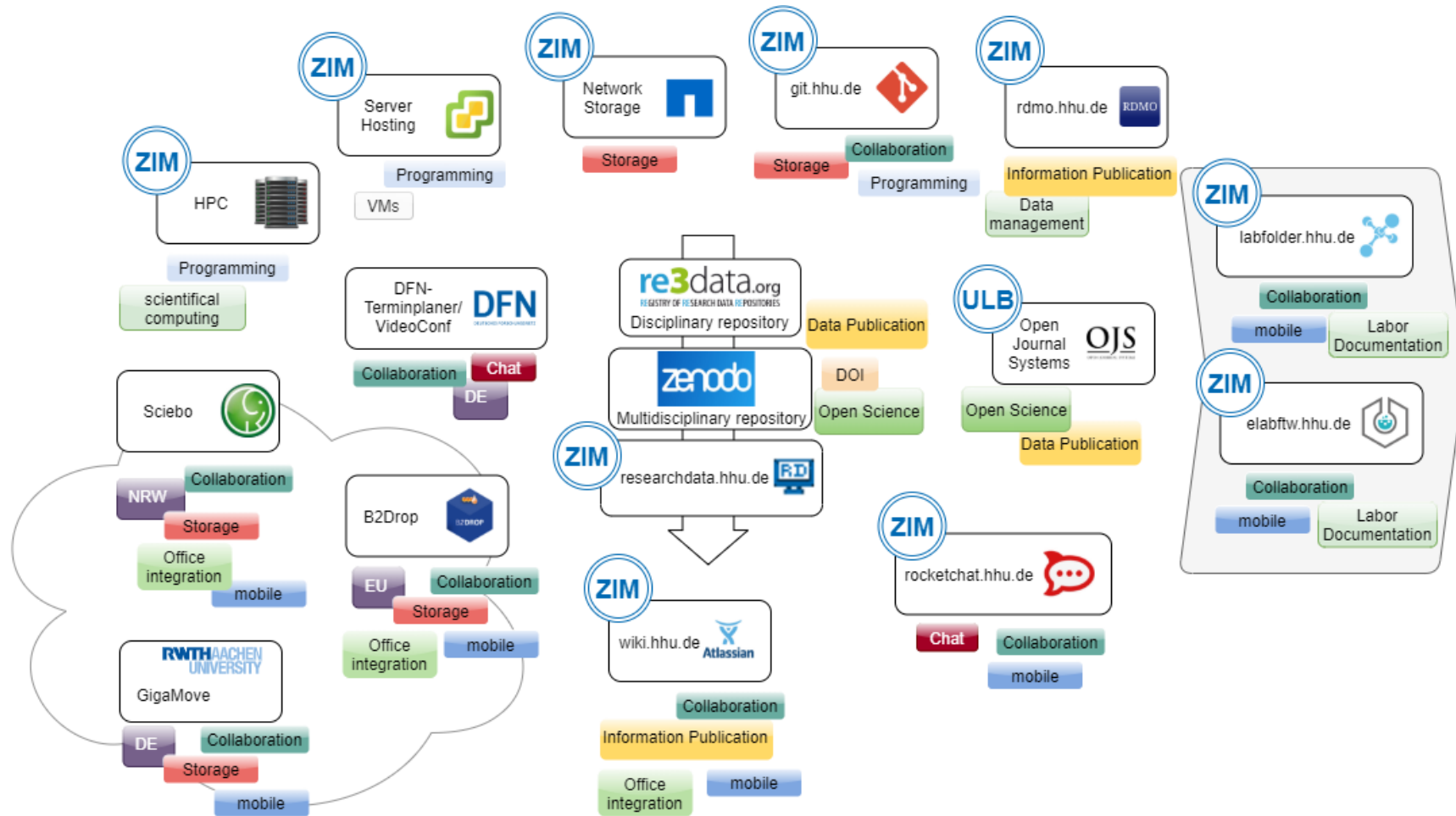
The research data cycle





Research data management tools

<https://www.fdm.hhu.de/fdm-tools.html>



- Register at <https://elabftw.hhu.de/register.php>

⏪ [gehen Sie zurück zur Anmeldeseite](#)



Eigenes Konto erstellen

Team

Wählen Sie ein Team ▼

E-Mail

Passwort

Vorname

Nachname

ERZEUGEN



Bereitgestellt von eLabFTW
Seite generiert in 0,02015 Sekunden

- Register at <https://elabftw.hhu.de/register.php>

[← gehen Sie zurück zur Anmeldeseite](#)



Eigenes Konto erstellen

Team

- ✓ Wählen Sie ein Team
- AG Wesselborg
 - Bio 280
 - BuMBI
 - Cardiovascular Research Laboratory
 - CEPLAS Data
 - Demo-Team
 - ERS-TA
 - Experimentelle Kardio-Bildgebung
 - GTL
 - HPC
 - KnoThoLab
 - Lab Bauer
 - Lab Degrandi
 - Lab Frommer
 - Lab Gohlke
 - Lab Gould
 - Lab Groth
 - Lab Hartmann
 - Lab Hegemann



Bereitgestellt von eLabFTW
Seite generiert in 0,02015 Sekunden

- Register at
<https://elabftw.hhu.de/register.php>
- Login at
<https://elabftw.hhu.de/>



Benutzer Login

E-Mail

Passwort [Passwort vergessen?](#)

☒ Anmeldung merken

ANMELDEN

Noch keinen Benutzer? Jetzt [registrieren!](#)



Bereitgestellt von eLabFTW
Seite generiert in 0,019 Sekunden



- Register at
<https://elabftw.hhu.de/register.php>
- Login at
<https://elabftw.hhu.de/>
- ZIM ticket system: elabftw@hhu.de
 - Starting a new team
 - Account and admin support

- ELN softwares: elabFTW, Labfolder
 - <https://www.fdm.hhu.de/fdm-tools/elektronische-laborbuecher.html>
- Tutorials
 - <https://mediathek.hhu.de/playlist/410>
- NRW ELN Wiki
 - <https://wiki.hhu.de/display/ELB>
- Rocketchat channel
 - https://rocketchat.hhu.de/channel/elb_eln



- Nicolas Carpi
 - Deltablot (www.deltablot.com, www.elabftw.net)
-
- Alexander Minges
 - www.biochemplant.hhu.de (Prof. G. Groth)
 - Iuliia Novoselova
 - www.medicalphysics.hhu.de (Prof. C. Monzel)
 - Jan Meyer
 - www.neurobiologie.hhu.de (Prof. C. Rose)



**The Free and Open Source
Electronic Lab Notebook**

Summary

- Why use an electronic lab notebook?
- Why use an open source solution?
- Why use eLabFTW?
- Why use Deltablot hosting?

Why use an ELN?

Problem:

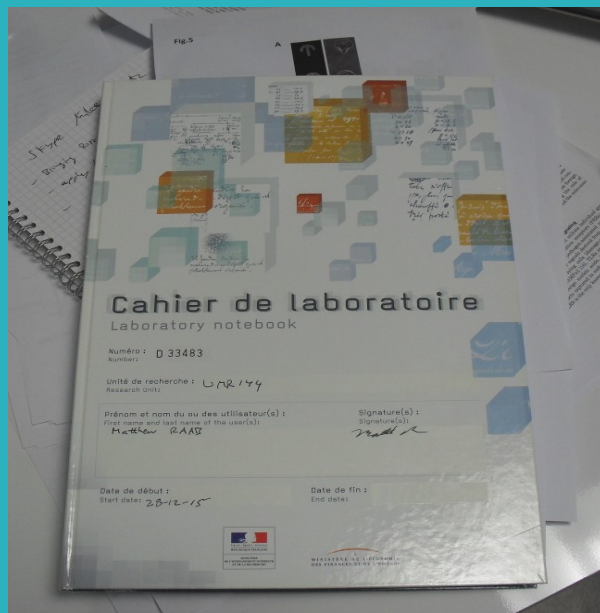
Need to store metadata of experiments (what, when, where, who, why, how)

Why use an ELN?

Problem:

Need to store metadata of experiments (what, when, where, who, why, how)

Solution:

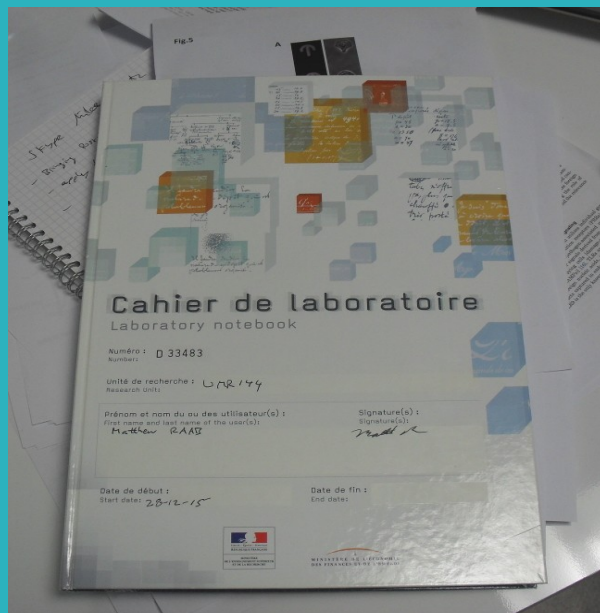


Why use an ELN?

Problem:

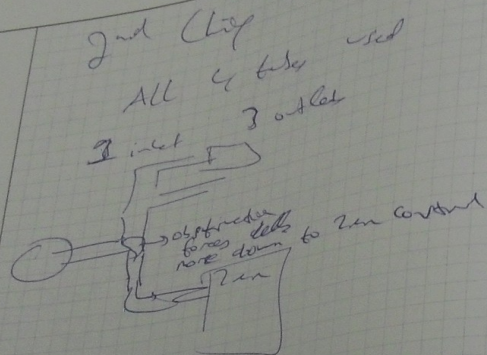
Need to store metadata of experiments (what, when, where, who, why, how)

Solution:



Limitations:

- Can be lost or burned
- No backups
- Often empty
- Not readable by others easily
- Can't search for something



Essentially went
to 200 bar.

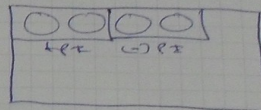
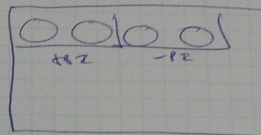
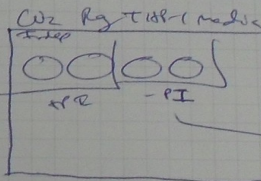
Raised to inside pressure for test,
then every few min bring
down to mix via pin bar

- Problem!
- ① cells not getting into
tubes in outlets, I think
they are stuck here
 - ② cells in LTR are
leaking from RT?

26 Aug 2016

Testing Cell Death ^{HP-9} _{cells}

20K cells

37°C 5% CO₂37°C No CO₂250 No CO₂

Add PR next day
waited 15 min, then image
dead cells

Fragile every 1-2 hrs, then test all
3 in incubator O/N. I'm used
again next day.

Conclusion → PR in media (2mg/ml)

Kills cells after a few hours.
Not 1-2 hrs, but 3-5 hours

- CO₂ Frappe media improves
things a bit, but RT really isn't
so bad for cells

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Table of Contents

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$$V = \text{const}$$

(5000)

Po



Now you want to use an ELN

Problem:

Which one?

“Should we use the free solutions out there?”

“But if it’s free, it means we are the product, right?”

“Those privacy policies mention too many times the word “marketing” to my taste”

Now you want to use an ELN

Problem:

Which one?

“But should I give all my research results to a foreign company on which I have no control?”

“What happens if that company gets bought by a Chinese consortium?”

“What happens to my data if that company closes”

Now you want to use a free and open source ELN

Problem:

Which one?

Well, eLabFTW of course! It's the most popular one and the most flexible, modern and fast ELN out there!* ;)

*source: me

eLabFTW

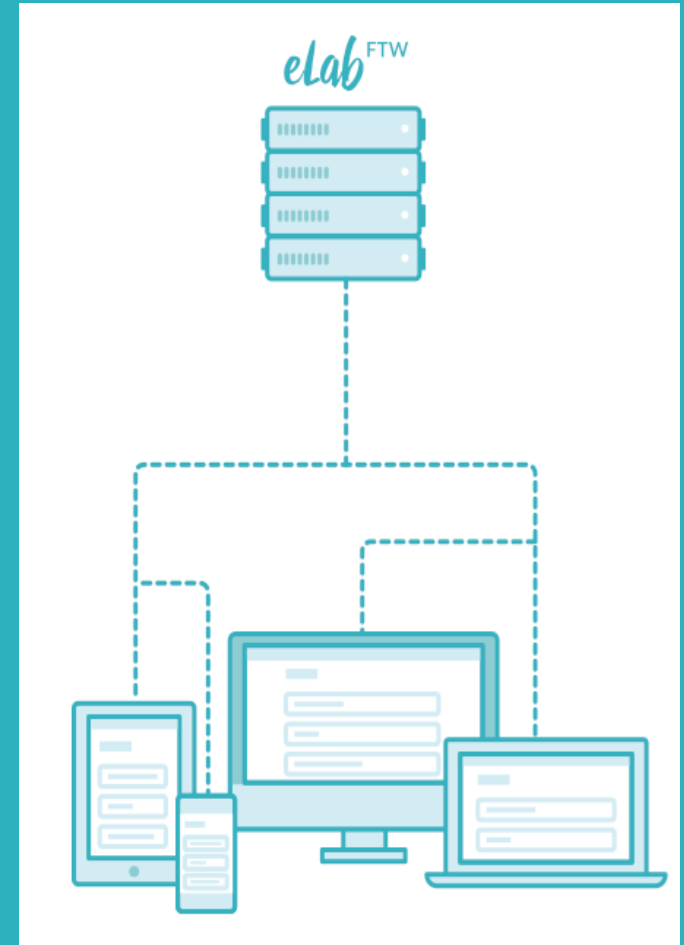
- Developed since 2012
- Free as in beer
- Free as in speech
- 350+ stars on GitHub
- Vibrant users community contributing to the software
- Modern
- Has great features
- Secure
- Popular all over the world

eLabFTW: key features

Web based

No client to install

Responsive design
(works with all screen
sizes)

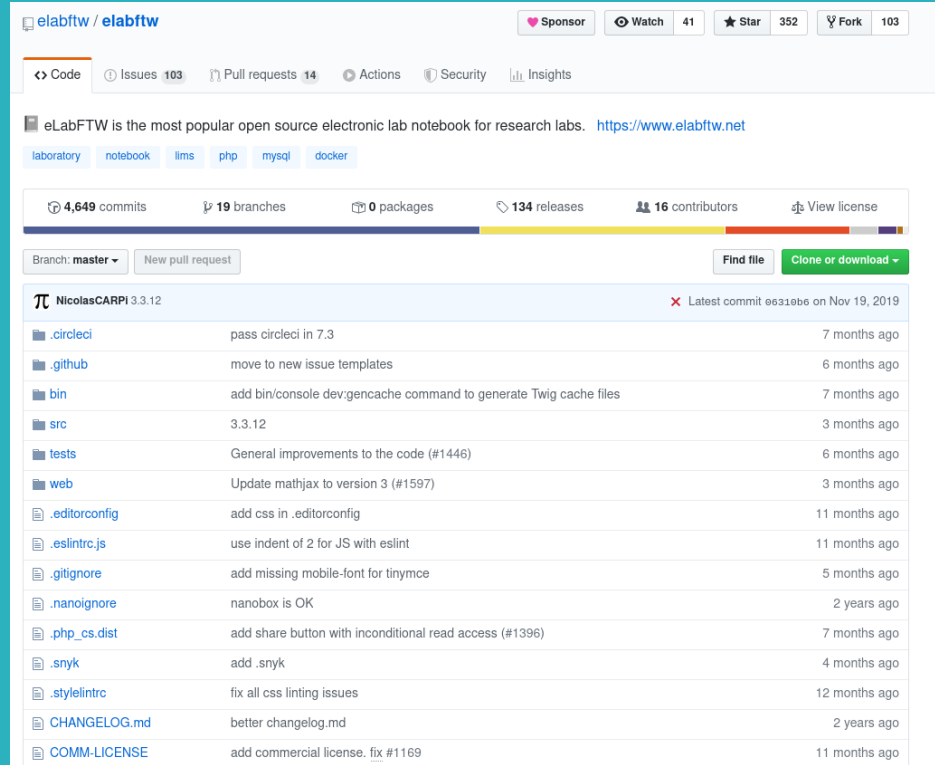


eLabFTW: key features

Open source

Access to the source code is immediate

Users contributions are welcome


























A good read: [The closed source sustainability crisis](#)

eLabFTW: key features

- Trusted timestamping (RFC 3161)
- API access
- SAML authentication
- Templates
- Database for products/protocols
- Export in ZIP, PDF, CSV, JSON
- Molecule editor
- Todolist
- Tex rendering
- Very customizable
- Translated in 17 languages

eLabFTW: community driven development

<input type="checkbox"/>	 Auto logout afer x min of inactivity feature request	 1
	#1558 opened 22 days ago by Aveyron-RelD	
<input type="checkbox"/>	 Keyboard shortcuts in TinyMCE editor feature request	 1
	#1556 opened 23 days ago by squirrel198	
<input type="checkbox"/>	 Add status select on zip import feature request	
	#1538 opened on Oct 2 by NicolasCARPI	
<input type="checkbox"/>	 Add backup in API feature request	
	#1534 opened on Sep 30 by NicolasCARPI	
<input type="checkbox"/>	 Add mysql port config and tls with path to cert feature request	 1
	#1498 opened on Sep 5 by NicolasCARPI	
<input type="checkbox"/>	 Integration of a "follow this experiment" button feature request	 1
	#1496 opened on Sep 4 by AlfredoCampari	
<input type="checkbox"/>	 In the model items categories allow steps to be prefilled feature request	 1
	#1495 opened on Sep 3 by Aveyron-RelD	
<input type="checkbox"/>	 keep the filter enabled when navigating to and back from an experience or database item feature request	 5
	#1494 opened on Sep 3 by Aveyron-RelD	
<input type="checkbox"/>	 Suggestion: add folder hierarchy feature request	 7
	#1471 opened on Aug 22 by andrewjho	
<input type="checkbox"/>	 .json viewer / editor feature request	 1
	#1467 opened on Aug 20 by christophys	
<input type="checkbox"/>	 Sharing templates across different teams feature request	 3
	#1457 opened on Aug 15 by riefler	
<input type="checkbox"/>	 Modification Scheduler feature request	
	#1453 opened on Aug 13 by Benjamin218	
<input type="checkbox"/>	 Show linked database items too in 'show related' link feature request	 3
	#1432 opened on Jul 31 by Aveyron-RelD	

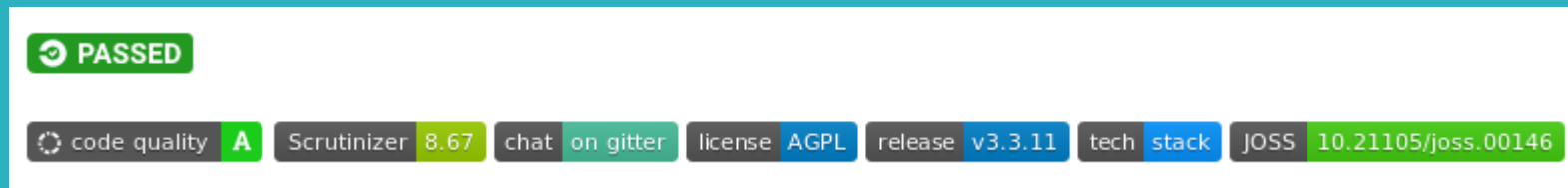
eLabFTW: key features

For research centers/universities

- Host it on your network
- Centralize your results on one server
 - No data gets lost if a laptop of a postdoc is stolen
 - Several teams can be hosted on the same instance

eLabFTW: quality software

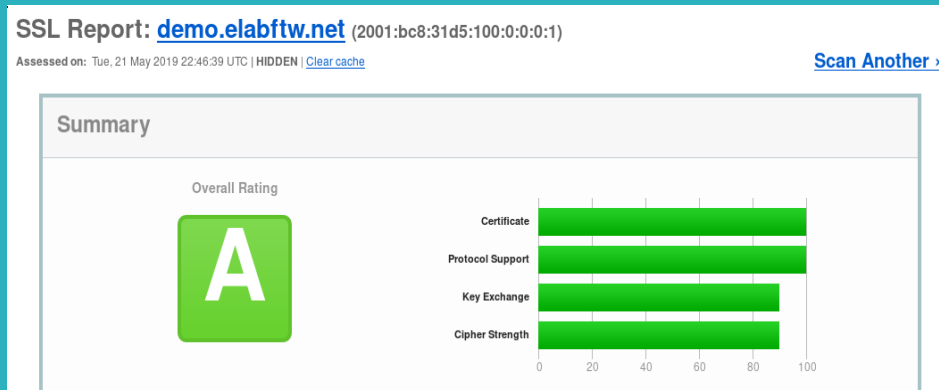
- Test suite (unit, acceptance, static analysis)
- Respects code standards
- Best practices followed
- Modern tooling used





eLabFTW: secure software

- Tight and secure configuration at different levels
- Vulnerability scans
- Signed releases
- Perfect score on Mozilla's Observatory

eLabFTW: secure software



Scan Summary	
	Host: demo.elabftw.net
	Scan ID #: 10877555 (unlisted)
	Start Time: May 22, 2019 1:38 AM
	Duration: 4 seconds
Score: 110/100	
Tests Passed: 11/11	

Security Report Summary	
	Site: https://demo.elabftw.net/login.php
	IP Address: 2001:bc8:31d5:100::1
	Report Time: 21 May 2019 22:43:47 UTC
	Headers: <div>✓ Strict-Transport-Security ✓ X-Frame-Options ✓ X-XSS-Protection ✓ X-Content-Type-Options ✓ Content-Security-Policy ✓ Referrer-Policy ✓ Feature-Policy</div>

eLabFTW: secure software ... not like others...

Scan Summary <div><div>F</div><div>Host: ny.labguru.com Scan ID #: 10882470 Start Time: May 22, 2019 12:04 PM Duration: 1 seconds Score: 20/100 Tests Passed: 6/11</div></div>	Scan Summary <div><div>D</div><div>Host: www.docollab.com Scan ID #: 10882496 Start Time: May 22, 2019 12:11 PM Duration: 2 seconds Score: 35/100 Tests Passed: 6/11</div></div>	Scan Summary <div><div>F</div><div>Host: www.eclabnote.com Scan ID #: 10882493 Start Time: May 22, 2019 12:11 PM Duration: 2 seconds Score: 0/100 Tests Passed: 5/11</div></div>	Scan Summary <div><div>B</div><div>Host: ny.scinote.net Scan ID #: 10882483 Start Time: May 22, 2019 12:08 PM Duration: 6 seconds Score: 75/100 Tests Passed: 10/11</div></div>	Scan Summary <div><div>C⁻</div><div>Host: eln.chemotion.net Scan ID #: 10882556 Start Time: May 22, 2019 12:19 PM Duration: 3 seconds Score: 45/100 Tests Passed: 9/11</div></div>
Scan Summary <div><div>F</div><div>Host: exemplarln.com Scan ID #: 10882503 Start Time: May 22, 2019 12:12 PM Duration: 3 seconds Score: 15/100 Tests Passed: 5/11</div></div>	Scan Summary <div><div>F</div><div>Host: labcollector.com Scan ID #: 10882563 Start Time: May 22, 2019 12:21 PM Duration: 19 seconds Score: 0/100 Tests Passed: 3/11</div></div>	Scan Summary <div><div>C⁻</div><div>Host: openware.org Scan ID #: 10882490 Start Time: May 22, 2019 12:10 PM Duration: 2 seconds Score: 45/100 Tests Passed: 8/11</div></div>	Scan Summary <div><div>F</div><div>Host: osf.io Scan ID #: 10882485 Start Time: May 22, 2019 12:09 PM Duration: 2 seconds Score: 10/100 Tests Passed: 7/11</div></div>	Scan Summary <div><div>B⁺</div><div>Host: www.labi.app Scan ID #: 10882569 Start Time: May 22, 2019 12:22 PM Duration: 3 seconds Score: 80/100 Tests Passed: 10/11</div></div>
Scan Summary <div><div>D</div><div>Host: www.benchling.com Scan ID #: 10882521 Start Time: May 22, 2019 12:16 PM Duration: 2 seconds Score: 35/100 Tests Passed: 6/11</div></div>	Scan Summary <div><div>C</div><div>Host: app.labstep.com Scan ID #: 10882589 Start Time: May 22, 2019 12:26 PM Duration: 4 seconds Score: 50/100 Tests Passed: 10/11</div></div>	Scan Summary <div><div>F</div><div>Host: www.scilligence.com Scan ID #: 10882597 Start Time: May 22, 2019 12:28 PM Duration: 1 seconds Score: 0/100 Tests Passed: 5/11</div></div>	Scan Summary <div><div>F</div><div>Host: www.labware.com Scan ID #: 10882601 Start Time: May 22, 2019 12:29 PM Duration: 6 seconds Score: 0/100 Tests Passed: 3/11</div></div>	Scan Summary <div><div>D⁻</div><div>Host: pillar.science Scan ID #: 10882612 Start Time: May 22, 2019 12:30 PM Duration: 1 seconds Score: 25/100 Tests Passed: 9/11</div></div>

eLabFTW: supported software

Free support on GitHub

PRO support available from Deltablot

Hosting available from Deltablot

<https://www.deltablot.com>

contact@deltablot.email



eLabFTW: get hosted!



Hosting a web service can be tricky if you don't have the right knowledge.

HSTS, SSH, TLS, CSP, Docker, Nginx, etc...

Don't worry about all of that, and use Deltablot's hosting!

- PRO support included
- Daily backups
- Secure CentOS server (when I say secure I mean paranoid config)
- Free updates on new releases

Get in touch:
contact@deltablot.email



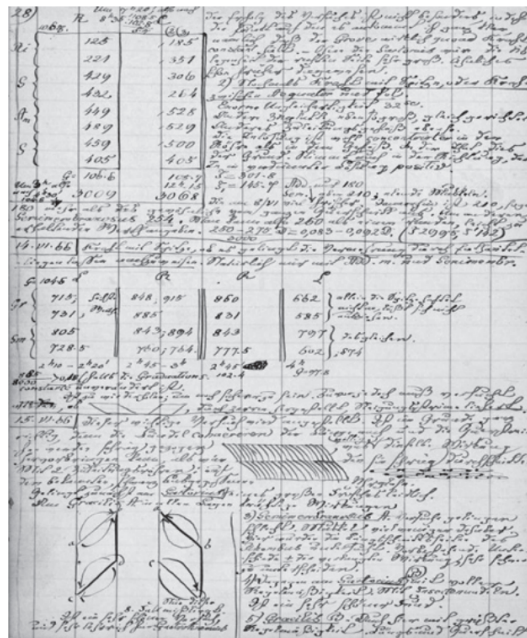
eLabFTW Use Case

Institute of Biochemical Plant Physiology

14.07.2020

Objectives

- Replace hand-written lab notebooks
 - Searchable
- Central repository
 - Protocols
 - Manuals
 - Lab inventory
- Harmonisation of entries by using templates



Current environment

- Self-hosted instance (set up 2015)
 - Historical reasons
- 24 users (total since start of instance)
- > 300 experiments (approx. 75 % timestamped)
- > 300 database items

Organisation

“Why aren’t there any categories?”

Using Tags

- Powerful and flexible – if used correctly
- All users should stick to a agreed-upon style (e.g. all lowercase, CamelCase, etc.)
- Use auto-completion to avoid fragmentation and duplicate tags!
- Use the admin panel to manage tags!

Experiments

[Back to listing](#)

2019.10.01

Admin panel

TEAM GROUPS USERS STATUS TYPES OF ITEMS EXPERIMENTS TEMPLATE IMPORT TAG MANAGER

Manage tags of the team



From here you can edit or delete the tags for your team. Click the tag to edit it. Then click the deduplicate button to merge similar tags.


  2xGST

  2xGST-AtETR1(1-157)_QTY

  2YT

  2YT medium

  Acetonfällung

  activity

Experiment status

Admin panel

TEAM GROUPS USERS STATUS TYPES OF ITEMS EXPERIMENTS TEMPLATE IMPORT TAG MANAGER

Add a New Status

Name

Color

Allow ☐ timestamp

Edit an Existing Status

Name	Color	<input type="checkbox"/> Allow timestamp	<input checked="" type="radio"/> Default status	<input type="button" value="SAVE"/>	<input type="button" value="DELETE"/>	<input type="button" value="↕"/>
<input type="text" value="In progress"/>	<input type="color" value="#0000ff"/>					
Name	Color	<input checked="" type="checkbox"/> Allow timestamp	<input type="radio"/> Default status	<input type="button" value="SAVE"/>	<input type="button" value="DELETE"/>	<input type="button" value="↕"/>
<input type="text" value="Success"/>	<input type="color" value="#008000"/>					
Name	Color	<input checked="" type="checkbox"/> Allow timestamp	<input type="radio"/> Default status	<input type="button" value="SAVE"/>	<input type="button" value="DELETE"/>	<input type="button" value="↕"/>
<input type="text" value="Needs to be redone"/>	<input type="color" value="#808080"/>					
Name	Color	<input checked="" type="checkbox"/> Allow timestamp	<input type="radio"/> Default status	<input type="button" value="SAVE"/>	<input type="button" value="DELETE"/>	<input type="button" value="↕"/>
<input type="text" value="Failure"/>	<input type="color" value="#ff0000"/>					

Database items

- From a programmer's point of view identical to experiments
- Categories (aka „item types“) available
- Additional types via admin panel
- Items may be bookable via calendar (e.g. machines, rooms)

TEAM GROUPS USERS STATUS TYPES OF ITEMS EXPERIMENTS TEMPLATE IMPORT TAG MANAGER

Add a new type of item

Name Color Bookable in the ☐ scheduler

Edit View Insert Format Tools Table

↶ ↷ Paragraph B I U ≡ ≡ ≡ ≡ ×² ×₂ ∷ ∷ ∷ ∷ ∷ ∷ A ∷ ∷ Ω 🔗

P

POWERED BY TINY

SAVE

Database Items Types

Name <input type="text" value="Laboratory"/>	Color <input type="color" value="#90ee90"/>	<input checked="" type="checkbox"/> Bookable	EDIT THE TEMPLATE	SAVE	DELETE	⬆
Name <input type="text" value="Office"/>	Color <input type="color" value="#0000ff"/>	<input checked="" type="checkbox"/> Bookable	EDIT THE TEMPLATE	SAVE	DELETE	⬆
Name <input type="text" value="Protocol"/>	Color <input type="color" value="#ff0000"/>	<input type="checkbox"/> Bookable	EDIT THE TEMPLATE	SAVE	DELETE	⬆

Database items

- From a programmer's point of view identical to experiments
- Categories (aka „item types“) available
- Additional types via admin panel
- Items may be bookable via calendar

Team

SCHEDULER INFORMATION TEMPLATES EMAIL

Select an equipment ▼



today

Jun 8 – 14, 2020

	MON 6/8	TUE 6/9	WED 6/10	THU 6/11
6am				
7am		7.00 - [Centrifuge room (Zentrifugenraum)]	7.00 - [Centrifuge room (Zentrifugenraum)]	7.00 - [Centrifuge room (Zentrifugenraum)]
8am				
9am	9.00 - 1.30 [Centrifuge room (Zentrifugenraum)]			
10am	Wartung beider Zentrifugen durch Beckman (um 09.00 Uhr, Ende offen) (Dominik Dluhosch)			
11am		11.00 - 1.00 [Centrifuge room (Zentrifugenraum)] 1xUZ (Dominik Dluhosch)		
12pm				
1pm				
2pm				

Use internal links

- Link to database items related to your experiment

SAVE AND GO BACK

Linked items

Add a link

PPDK

104 - Plasmid - pETEV16b_FtPPDK_E413TAG_K590TAG

72 - Plasmid - pUC57-Kan-FtPPDK-dW

21 - Protocol - Purification of FtPPDK/FpPPDK

5 - Protocol - Expression of FtPPDK/FpPPDK

Use internal links

- Link to other experiments or database items from within the text
- Enter „#“ to bring up auto-completion
- Start typing to bring up a list of possible results

Experimental procedure / Results

- Refer to #PPDK|

- Resuspe

- Cell lysis

- Heated l

- Cleared l

- F

- P

- P

[Plasmid] pETEV16b_FtPPDK_E413TAG_K590TAG

[Plasmid] pUC57-Kan-FtPPDK-dW

[Protocol] Purification of FtPPDK/FpPPDK

[Protocol] Expression of FtPPDK/FpPPDK

[Experiment] Surface Entropy Reduction (SERp) variants of MtPPDK

[Experiment] Purification of MtPPDK


[Experiment] SEC of MtPPDK

Time stamps

What are time stamps?

- Proof of defined status at a specific point in time
- Signed by time stamping authority (TSA) e.g. DFN
- Verification of data integrity by cryptographic hash

 Experiment was timestamped by Dalibor Milic on 2016-12-07 at 16:23:12  

 2016.09.27

 Needs to be redone  Team  User

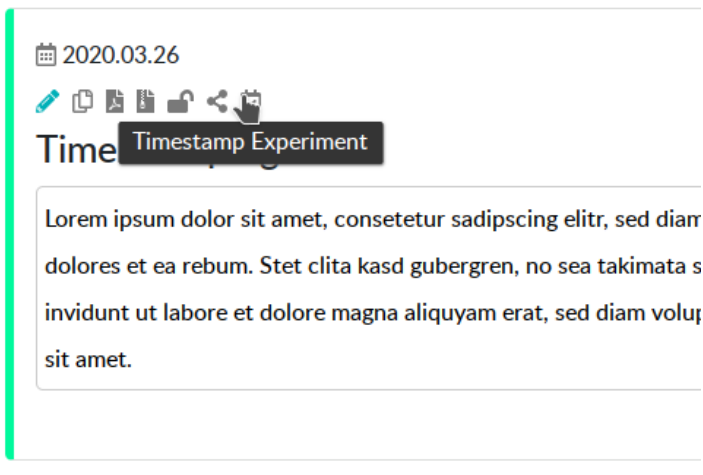
    

NMR - STD - H10-tev-AtETR1 or H10-tev-AtETR1_1-157 + NOP-1 (DM-2016-062)

Related experiments

How to time stamp?

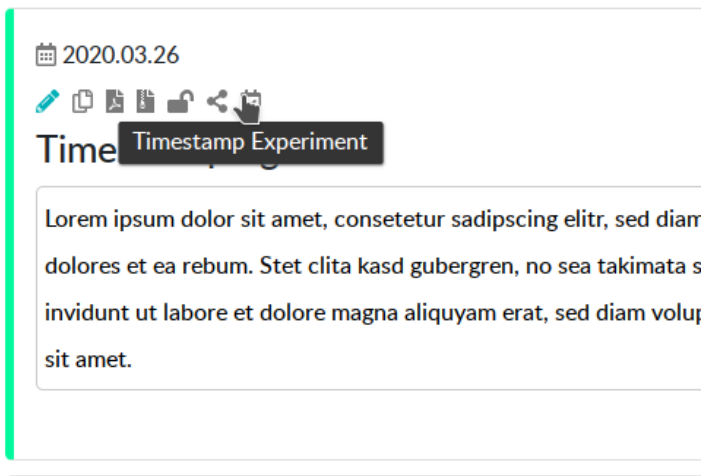
- Choose an experiment status that allows time stamping (e.g. „Success“)
- Click the calendar button in the experiment view



Time stamps

Remember:


- Time stamping will irrevocably lock the experiment!
- Duplication is still possible
- Comments are allowed



Technical background

- PDF of experiment is sent to the TSA
- Attached files are **not** time-stamped
 - Major shortcoming of current implementation
 - Difficult to solve (file size!)
- PDF and generated token can be downloaded for verification

 Experiment was timestamped by Dalibor Milic on 2016-12-07 at 16:23:12  

 2016.09.27

 Needs to be redone  Team  User

NMR - STD - H10-tev-AtETR1 or H10-tev-AtETR1_1-157 + NOP-1 (DM-2016-062)

Related experiments

State of adoption

- Used on a daily basis
- Stable and up to the task of replacing our analog notebooks
- Highlights:
 - Full text search
 - Easy download of complete entries as printer-friendly PDFs
 - Protocol exchange (lab inventory)

Things to be improved

- Direct import from proprietary formats (e.g. MS Office)
- Support for experiment categories
- More complex privilege handling (possible with „Groups“ in 3.x)
- Time stamping should include attachments
- Simple signature functionality (see Sneak Preview)

Sneak preview

~ Signatures

2020-03-26 13:06:24 | **Alexander Minges** signed and approved revision 1 (current revision is 4).

2020-03-26 13:16:44 | **Alexander Minges** signed and approved revision 2 (current revision is 4).

2020-07-14 11:02:23 | **Alexander Minges** signed and approved the current revision.

SIGN AND APPROVE

Thank you for your kind
attention!



eLabFTW

User Experience

[AG Monzel](#)

Iuliia Novoselova
iuliia.novoselova@hhu.de

Main User Page

The screenshot displays the eLabFTW Main User Page. The top navigation bar is dark grey with the eLabFTW logo and links to EXPERIMENTS, DATABASE, TEAM, SEARCH, and GROUP PLANNER. The EXPERIMENTS link is highlighted with a red oval. On the right of the navigation bar is a search bar. Below the navigation bar, the page title 'Experiments' is shown. To the right of the title are user controls: 'Howdy, Team', a settings icon, a user icon, a list icon, a help icon, and a share icon. Below the title is a 'Create new' button. To the right of this button are filters: 'Filter status', 'Order by', 'Sort', and a page count of '15'. Below these filters is a 'Select all' link. The main content area contains a list of experiments, each with a colored bar on the left, a title, a status icon and label, a date, a user name, and a plus icon on the right. The experiments listed are: 'Lipid Bilayers' (SUCCESS, 2020.02.17, Valeska Rathe), 'Lipid Bilayer heated.' (SUCCESS, 2020.02.14, Valeska Rathe), 'Zeta_potential an DLS (Synomag-D 70 nm_New)' (RUNNING, 2020.02.14, Mohammad Reza Safari), 'Vesicles osmolarity PS' (SUCCESS, 2020.02.13, Valeska Rathe), and 'Zeta_potential an DLS (Synomag-D 50 nm_New)' (RUNNING, 2020.02.13, Mohammad Reza Safari). A large red oval highlights the entire list of experiments.

eLabFTW EXPERIMENTS DATABASE TEAM SEARCH GROUP PLANNER

Howdy, Team

Experiments

Create new ▾

Filter status ▾ Order by ▾ Sort ▾ 15 ▾

Select all

- Lipid Bilayers
SUCCESS 2020.02.17 Valeska Rathe
- Lipid Bilayer heated.
SUCCESS 2020.02.14 Valeska Rathe
- Zeta_potential an DLS (Synomag-D 70 nm_New)
RUNNING 2020.02.14 Mohammad Reza Safari
- Vesicles osmolarity PS
SUCCESS 2020.02.13 Valeska Rathe
- Zeta_potential an DLS (Synomag-D 50 nm_New)
RUNNING 2020.02.13 Mohammad Reza Safari

User Control Panel

PREFERENCES

ACCOUNT

TEMPLATES

API KEYS

Language

English (UK)

[Help translate eLabFTW!](#)

Display

Items per page:

15

Order by:

Use default

Sort:

DESC

☒ Use single column layout

Keyboard Shortcuts

You have a chance to set up you account in the way you prefer – some options

PDF configuration

Select paper format for PDF A4

- ☐ Enable Chinese, Japanese and Korean fonts in PDF generation (WARNING: this will dramatically increase the file size unless you disable PDF/A)
- ☒ Generate PDF/A compliant pdfs (will embed the fonts and make the file bigger)
- ☒ Add attached files summary to the pdf
- ☐ Enable french style signature block in pdf export (setting is only set for this browser)


Miscellaneous

- ☒ Show experiments from the team on the Experiments page
- ☐ Display a warning before closing an edit window/tab
- ☐ Display the molecule drawer in edit mode
- ☐ Disable the rich text editor and write Markdown directly
- ☒ Allow members of the team to edit your experiments
- ☐ Only allow members of your team group to edit your experiments

Default visibility for new experiments Team

Team

SCHEDULER INFORMATION TEMPLATES EMAIL

 You belong to the Lab Monzel team. Members: 11 – Experiments: 138 (0 timestamped) – Items: 72

Members

NAME	PHONE	MOBILE	WEBSITE
Cornelia Monzel			
Nina Bartels			
Mohammad Reza Safari			
Amirarsalan Asharion			
Daniel Kuckla			
Valeska Rathe			
Anne Paul			
Christina Siepe			
Team Emphy			
Luisa Coen			
Iuliia Novoselova			

→ e-mails are stored under each name

Team

SCHEDULER INFORMATION TEMPLATES EMAIL

 You belong to the Lab Monzel team. Members: 11 – Experiments: 138 (0 timestamped) – Items: 72



Members

NAME	PHONE	MOBILE	WEBSITE
Cornelia Monzel			
Nina Bartels			
Mohammad Reza Safari			
Amirarsalan Asharion			
Daniel Kuckla			
Valeska Rathe			
Anne Paul			
Christina Siepe			
Team Emphy			
Luisa Coen			
Iuliia Novoselova			

Each group member can enter

→ we write there ReadMe files & Important general remarks

You can mark your progress after you finish experiment

Lipid Mixture	<input checked="" type="checkbox"/> SUCCESS	2020.02.07	Valeska Rathe
Lipid Monolayer	<input checked="" type="checkbox"/> SUCCESS	2020.02.06	Valeska Rathe
Vesicle and Measuring chamber preparation	<input checked="" type="checkbox"/> FAIL	2020.02.05	Valeska Rathe
IN-001-Zeta Potential and Size of "Synomag 50 nm"	<input checked="" type="checkbox"/> RUNNING	2020.02.05	 Iuliia Novoselova  MNP magnetic nanoparticles zeta potential size DLS
DK00009 Single Molecule Tracking	<input checked="" type="checkbox"/> RUNNING	2020.01.30	Daniel Kuckla
CellRox	<input checked="" type="checkbox"/> FAIL	2020.01.29	Valeska Rathe

EVERYTHING you input – stays! You cannot delete experiment you have already created

The screenshot displays the eLabFTW web interface. The top navigation bar includes links for EXPERIMENTS, DATABASE (which is active), TEAM, SEARCH, and GROUP PLANNER. A user profile 'Howdy, Team' is visible in the top right corner. The main content area is titled 'Database' and features a 'Create new' button. To the right of the button are filter controls: 'Filter by type', 'Order by', 'Sort', and a page number '15'. Below these controls is a list of experiments. Three experiments are highlighted with a red rounded rectangle: three 'empty' experiments, each with a yellow bar on the left, a checkbox, an edit icon, the category '(BIO-)CHEMISTRY', and dates 2020.01.01, 2019.12.19, and 2019.12.19 respectively. Other experiments in the list include '(Live) Cell Dyes / Marker' (green bar, CELL CULTURE, 2019.12.19), 'Purification kits' (yellow bar, (BIO-)CHEMISTRY, 2019.12.19), 'Glass Beads' (yellow bar, (BIO-)CHEMISTRY, 2019.12.01), 'Cell Fixation Reagent (Formaldehyde)' (green bar, CELL CULTURE, 2019.08.27), and 'syringe filters' (red bar, LAB (GENERAL), 2019.08.01). Each experiment entry has a plus icon on the right for further actions.

Experiment Name	Category	Date
empty	(BIO-)CHEMISTRY	2020.01.01
empty	(BIO-)CHEMISTRY	2019.12.19
empty	(BIO-)CHEMISTRY	2019.12.19
(Live) Cell Dyes / Marker	CELL CULTURE	2019.12.19
Purification kits	(BIO-)CHEMISTRY	2019.12.19
Glass Beads	(BIO-)CHEMISTRY	2019.12.01
Cell Fixation Reagent (Formaldehyde)	CELL CULTURE	2019.08.27
syringe filters	LAB (GENERAL)	2019.08.01

Database

2019.05.31

 IX73

Team

[illegible]



Search

Search in

Experiments



With the tag

Flow Cytometry

#1516

#1531

#1608



And visibility is:

Select visibility



Search only in experiments owned by:

Yourself



Where date is between

and

And title contains

And status is

Select status



And body contains

And rating is

Select number of stars



Space means

and



Tip: you can use '%' as wildcard

LAUNCH SEARCH

Create items to book or to inform others about:

→ Holidays, Work Trips, Experimental Setups, Repair Page, etc.

The screenshot shows the eLabFTW web interface. The top navigation bar includes links for EXPERIMENTS, DATABASE, TEAM (which is highlighted), SEARCH, and GROUP PLANNER. Below this, the 'Team' section has sub-tabs for SCHEDULER, INFORMATION, TEMPLATES, and EMAIL. The SCHEDULER tab is active, displaying a calendar for the week of July 13-19, 2020. A dropdown menu is open, showing 'Group Planner - Discussion, Conferences, Holidays,' as the selected item. Below it, a red box highlights the option 'All bookable items'. Other visible options in the dropdown are 'Cell Culture Hood - Cell Culture Booking', 'Group Planner - Discussion, Conferences, Holidays,', and 'Olympus IX73 & IX83 - Microscope Booking'. The calendar grid shows the days WED 7/15 and THU 7/16, with a time slot for 7am visible on the left.

eLabFTW EXPERIMENTS DATABASE TEAM SEARCH GROUP PLANNER

Team

SCHEDULER INFORMATION TEMPLATES EMAIL

Group Planner - Discussion, Conferences, Holidays, ▼

- All bookable items
- Cell Culture Hood - Cell Culture Booking
- Group Planner - Discussion, Conferences, Holidays,
- Olympus IX73 & IX83 - Microscope Booking

Jul 13 – 19, 2020

WED 7/15 THU 7/16

7am

[Change item](#)

Olympus IX73 & IX83 - Microscope Booking

Group Planner

<

>

today

Sep 16 - 22, 2019

week

	MON 9/16	TUE 9/17	WED 9/18	THU 9/19	FRI 9/20	SAT 9/21	SUN 9/22
6am			6:00 - 10:00 Long-term measurement Corinna (Nina Bartels)	6:00 - 10:00 Transfection long-term (Nina Bartels)	6:00 - 9:00 Long-term measurement MNP incubation (Nina Bartels)		
7am							
8am		8:00 - 4:00 MNP clustering observation (Nina Bartels)					
9am							
10am			10:00 - 11:00 Transfection long-term (Nina Bartels)				
11am			11:30 - 3:00 Test entry (Team Emphy)				
12pm				1:00 - 4:00 CellRox. IX73. 60x. (Valeska Rathe)			
1pm							
2pm							
3pm							
4pm		4:00 - 12:00 Long-term measurement Corinna (Nina Bartels)					
5pm				Long-term measurement MNP incubation (Nina Bartels)			
6pm							
7pm							
8pm							

Experiment #1

Zeta_potential an DLS (Synomag-D 70 nm_New)

Goal:

Measuring the surface charge (Zeta_potential) and hydrodynamic size of the MNPs (DLS)

Procedure:

In this set of measurements, we want to figure out the concentration effect on the quality and reliability of our measured data. Then we decided to prepare a library of different concentrations as below:

- 1) 0.1 mg/ml
- 2) 0.25 mg/ml
- 3) 0.5 mg/ml
- 4) 0.75 mg/ml
- 5) 1.0 mg/ml

* To calculate concentration, the following formula was applied: $C_1V_1 = C_2V_2$.

where C_1 and V_1 are initial (stock) concentration and volume and C_2 and V_2 are final concentration and volume.

Then we performed an ultrasound bath for 10 min (sample pretreatment), which imposes a positive effect on the possible particle aggregation breaking.

We need to switch on the zeta seizer setup at least 30 min before starting the experiment. It is really recommended to be sure that setup is warmed-up and it is valid for all laser-based instruments to prevent thermal fluctuations that may affect the measurement.

* The setup's initial settings could be found in the following tables.

Usually, for the first measurement, we set the equilibrium temperature time for 300 s, and after that, for the further measurements, we change it to 10 s.

* DLS scattering angle = 173 °

results:

Particle: Synomag-D 70 nm (new) _USB 10

* USB 10 (Sample pretreatment = Ultrasound Bath for 10 min)

Date	Record	Data type	Wait time, s T, ° C	# measurements	#subruns	cuvette	Data (av. #subruns)	st. dev. (dist. error)	dispersant concentration (solution), mg / ml	mobility ($\mu\text{mcm} / \text{Vs}$) \pm st. dev	Notes
------	--------	-----------	---------------------------	----------------	----------	---------	------------------------	------------------------------	---	---	-------

Your Creativity to make your Experiment be easily read:

→ Use different Fonts/Sizes/Tables/Colors

2020.02.05

Running Team User

MNP magnetic nanoparticles size DLS synomag 50

Tags to mark project/sample/method/etc

IN-001-Size of "Synomag 50 nm"

Prehistory

This experimental project is a continuation of the work done by Moahammad Reza Safari during his Master studies under the supervision of Jun. Prof. Cornelia Monzel in HHU. The project includes multiple days entries, since the data were collected within a certain time span. Days, when experiments were performed, are identified accordingly.

Moahammad Reza Safari's **Specialization Title**: [Characterization of Magnetic Field Generating Tips for Spatio-Temporally Controlled Manipulation of Magnetic Nanoparticles](#)

Moahammad Reza Safari's **Master Thesis Title**: [Practical Guidelines for Hyperthermic Manipulation of Magnetic Nanoparticles in Nanomedicine](#)

Links in the text

Within the thesis, several types of magnetic nanoparticles (MNPs) were studied by:

- Direct light scattering to determine the size and the Zeta-potential;
- AC susceptometry to measure frequency-dependent magnetic susceptibility;
- Viability tests on HeLa cells incubated with MNPs.

Within this project, the Zeta-potential and the size of all available MNPs dispersed in a solvent (usually, water) were studied by the [Zeta-sizer from Malvern \(AG Schmidt, HHU\)](#).







Goal

In order to publish Reza's results in peer-reviewed manuscript opened to public, it is necessary to check reliability of data produced by the student.

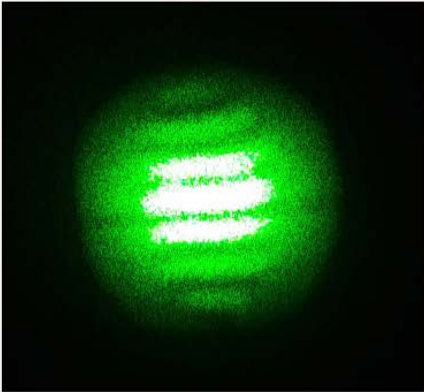
In addition, such effects like material's aging or instability in a solvent play a crucial role and, therefore, should be clarified before data-set can be considered to be of a good quality for a publication.

Surely, attach files (figures, plots, etc.) you created and insert them into the text body

Attached files

 Sola.power.log.1.csv 472.26 KiB - 2019-07-04 14:07:40 Apparently faulty powerlog could later on be used due to software adaption	 Sola.power.log.1.fig 70.84 KiB - 2019-07-10 14:05:02 plot of first power log	 Sola.power.log.2.csv 419.37 KiB - 2019-07-10 14:28:39 Second Power log
 Sola.power.log.2.fig 82.85 KiB - 2019-07-10 14:28:44 plot of second power log	 Sola.power.log.2.fft.fig 304.77 KiB - 2019-07-10 14:28:46 fft of second power log	 comparison.powermeter.primebsi.fig 78.12 KiB - 2019-07-10 15:51:48 normalized intensities of powermeter and camera compared to each other


min coherence time /s	1.45 $\bullet 10^{(-13)}$	1.68 $\bullet 10^{(-13)}$	$3.81 \bullet 10^{(-7)}$	$2.34 \bullet 10^{(-7)}$
min coherence length / m	$4.34 \bullet 10^{(-5)}$	5.05 $\bullet 10^{(-5)}$	95.33	70.15



cropped/resized image of interference fringes of 561 nm laser

After the whole setup was build the adjustment of the lasers through the microscope needed to be done. At first all lenses are removed from the second part of the setup. Afterwards the Beam was at first aligned.

All changes you make are tracked and can be seen by other group members

 22 revisions available



- ☺ There is a manual available [here](#).
- ☺ You can use a TODOlist by pressing 't'. **I don't use, others may cover this point**
- ☺ You can have experiments templates ([Control Panel](#)).
- ☺ You can make links inside the text by typing # and an autocomplete menu will spawn with a list of Experiments/Items.
- ☺ The admin of a team can edit the status and the types of items available ([Admin Panel](#)).
- ☺ If you press Ctrl Shift D in the editor, the date will appear under the cursor.
- ☺ Custom shortcuts are available ([Control Panel](#)). **May be covered by others**
- ☺ You can duplicate experiments in one click.
- ☺ Click a tag to list all items with this tag.
- ☺ Once timestamped an experiment cannot be unlocked or modified. Only comments can be added.

You can comment, improve or develop the software as well!
Visit their official site for more details.