



**Deltablot**



**eLabFTW**

**by Deltablot**



Chapter 00

# **THE SOFTWARE: eLabFTW**

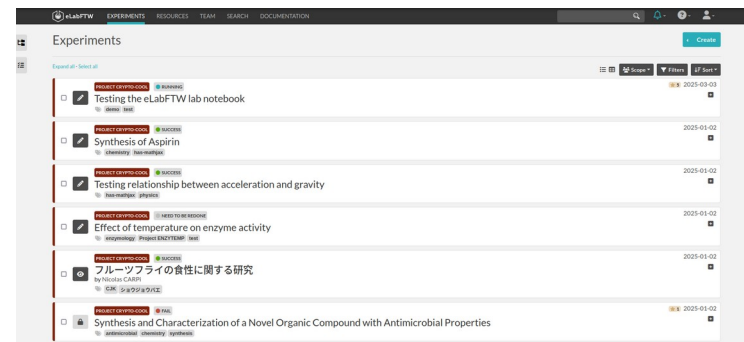


# The software: eLabFTW

**eLabFTW** is an electronic laboratory notebook for research groups



Modernity





eLabFTW

EXPERIMENTS

TEMPLATES

RESOURCES

SCHEDULER

TEAM

TOOLS

🔔

?

TL

Experiments

Create

Search experiments

Filter category

Filter status

Filter owner

Tags

□

✖

👤

☰

⬇

☰

TESTS

SUCCESS

□

✎

Synthesis of Aspirin

by Tutu Yundt

🔗 chemistry

generated from yml

has-mathjax

2025-01-02

📌

+

PROJECT CASIMIR

SUCCESS

□

✎

フルーツフライの食性に関する研究

🔗 CJK

generated from yml

ショウジョウバエ

2025-01-02

📌

+

PROJECT CRYPTO-COOL

RUNNING

□

✎

Testing the eLabFTW lab notebook

🔗 demo

generated from yml

test

★ 5

2025-03-03

📌

+

PROJECT CRYPTO-COOL

SUCCESS

□

✎

Testing relationship between acceleration and density

2025-01-02

📌

+



# The software: eLabFTW

... allows you to:

- Store digital results in a digital notebook
- Share procedures and protocols through templates
- Collaborate on scientific results
- Improve probity, traceability and integrity of results
- Use tablets or phone to access it
- Step into the XXI<sup>st</sup> century



**open source**  
**initiative**  
Approved License®

# Features of eLabFTW

- **Freedom:** published under an OSI approved license (AGPL3.0)
- **Utility:** saves time
- **Popular:** greatly appreciated by users
- **Flexibility:** adaptable to all kinds of research
- **Security:** code audits, bug bounty program, good practices
- **Accessibility:** follows WCAG 2.1 specifications
- **Internationalisation** : available in 21 languages
- **Community:** large user base from various domains



# ELN + Laboratory stock management (LIMS)

- Highly customizable database to store:
  - Antibodies
  - Plasmids
  - Cell lines
  - Chemical products
  - Equipment
  - Basically any kind of resource → every team can configure it



# It's also a booking system

- Manage booking of resources:
  - Microscopes
  - Rooms
  - Machines, *etc...*
- Configure precisely:
  - Who is allowed to book a time slot
  - For how long
  - How many times in the day, *etc...*





# Scheduler

Select a resource below in order to book it.



Filter by category ▾

Select a resource ▾



today

3 – 7 Mar 2025

day

week

list

month

	Mon 03/03	Tue 04/03	Wed 05/03	Thu 06/03	Fri 07/03
08					
09					
10					
11					11:00 - 13:00 [STORM/PALM] (Toto Le sysadmin)
12	12:00 - 14:30 [PCR Machine 2] (Toto Le sysadmin)		11:30 - 14:30 [Video microscope Bravo] (Toto Le sysadmin)		
13				13:00 - 14:30 [Video microscope Bravo] (Toto Le sysadmin)	
14			14:00 - 16:30 [STORM/PALM] (Toto Le sysadmin)	13:30 - 16:00 [PCR Machine 2] (Toto Le sysadmin)	
15					
16					
17					
18					
19					



# A chemical compounds database

**eLabFTW** EXPERIMENTS TEMPLATES RESOURCES SCHEDULER TEAM TOOLS

## Compounds

Compounds are chemical entities. This page allows you to manage your compounds (Create, Edit, Delete, Import, Export, Search, etc.).

[Import from PubChem](#)

Search: O=N(=O)C=1C(F)=C(C(F)(F)F)C=C1

Double-click a row in the table below to edit the compound.

Name	SMILES	InChI	InChI Key
2,8,16-Trihydroxy-9-(hydroxyimino)-9H-pyrido[2,1-b]quinoline	<chem>Oc1ccc2c(c1)c3c(c2)nc(=O)[nH]3</chem>	InChI=1S/C20H13O5/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20	WHSUEVLJUHPRC
Kynurenic Acid	<chem>O=C1C=CC(=O)N1C(=O)O</chem>	InChI=1S/C10H7NO3/c1-2-3-4-5-6-7-8-9-10	HCZHHFIFKROPD
CID 1919	<chem>C=CC1=C2C(=C3C=CC(=C2)N1C(=O)N3C(=O)O</chem>	InChI=1S/C13H10N2O/c1-2-3-4-5-6-7-8-9-10-11-12-13	BGKNXHODSGM
2-(2,4-Dichlorophenoxy)acetic acid	<chem>OC(=O)COc1cc(Cl)cc(Cl)c1</chem>	InChI=1S/C20H16Cl2FN/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20	ATSLQZTUCNEW
CID 39919	<chem>[Na+].[O-]C(=O)CC1=CC(=NC(=C1)C(=O)O</chem>	InChI=1S/C11H18N2O2S/c1-2-3-4-5-6-7-8-9-10-11	AWLILQARPMWU

### Import from PubChem

Import a chemical compound from [PubChem online database](#): you can specify directly the CID of the compound you wish to import, or search from its CAS number.

PubChem CID

CID  [Search](#)

CAS number

CAS  [Search](#)

[Cancel](#) [Import](#)

Available in upcoming version 5.2



## Edit compound

Search associated resources

Name

Kynurenic Acid

IUPAC Name

4-oxo-1H-quinoline-2-carboxylic acid

CAS number

492-27-3

EC number

200-362-1

Molecular formula

C<sub>10</sub>H<sub>7</sub>NO<sub>3</sub>

Molecular weight

189.17

SMILES

C1=CC=C2C(=C1)C(=O)C=C(N2)C(=O)O

InChI

InChI=1S/C<sub>10</sub>H<sub>7</sub>NO<sub>3</sub>/c12-9-5-8(10(13)14)11-7-4-2-1-3-6(7)

InChI Key

HCZHHEIFKROPDY-UHFFFAOYSA-N

## Safety information

Hazardous to health

## Safety information

Hazardous to health

Corrosive

Explosive

Flammable

Gas under pressure

Hazardous to environment

Serious health hazard

Oxidising

Toxic

Radioactive

Controlled substance

Antibiotic precursor

Explosive precursor

Drug precursor

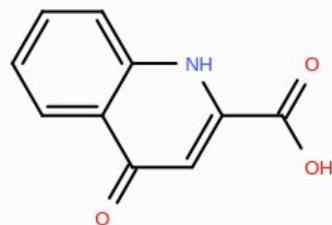
Carcinogenic, mutagenic and reprotoxic (CMR)

Nanomaterial





## Chemical Structure Editor



H

C

N

O

S

P

F

Cl

Br

I

PT

[A]

ET

[Add to compounds database](#)[Search similar structures](#)☐ Exact structure



# OpenCloning

[CLONING](#)[PRIMERS](#)[DESCRIPTION](#)[SEQUENCE](#)[DATA MODEL](#)

1

Read from file example.gbk



2



bacterial terminator  
pBRforEco  
AmpR promoter  
J23119(SpeI) promoter  
gRNA scaffold  
Myc  
6xHis

Annotate features

CRISPR

Gateway

Gibson assembly

Homologous recombination

In-Fusion

Join overlap extension PCR fragments

Ligation (sticky / blunt)



PCR

Polymerase extension

Restriction

Restriction + ligation / Golden Gate





## Custom fields can be added to templates and experiments

Paragraphe 12pt B I U

P

Host

Rabbit

Storage temperature

+4 °C

Dilution to use for IF

Dilution to use for WB

Number of aliquots left

Make sure to decrement this when using one!

Ajouter un champs supplémentaire

Groupe

Ajouter groupe

Nouveau nom de groupe

Informations de base

Type de champs

Date

Nom (requis) \*

Date de réception

Description

Entrez une description pour ce champs

Valeur par défaut

mm / dd / yyyy

Supprimer la valeur lors de la duplication

Requis

Lecture seule

Fermer Enregistrer

Ajouter un champs Charger les champs



# Integrity, probity, timestamping



- eIDAS qualified timestamping (910/EU/2014 - RFC 3161)
- Blockchain timestamping (Consortium Bloxberg)
- Immutable audit logs
- Immutable files with integrity cryptographic sum
- Cryptographic signatures (ed25519 elliptic curves)
- Soft delete mechanism to prevent destructive actions



# Centralised authentication

Login through your institution

Select an identity provider

Acme University ▲

Acme University

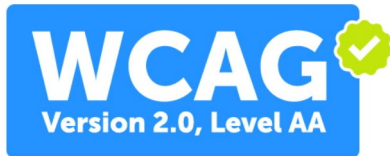
Example Institute

- Use your institutional authentication service
- Support for federated services
- SAML or LDAP protocols





# Accessibility



- Compliant with WCAG2.1 guidelines
- Level AA et AAA when possible
- Included in Continuous Integration pipeline

Download our accessibility report:

<https://www.deltablot.com/files/deltablot-accessibility-report-WCAG.pdf>



## Comments

Batch actions

TK

Hans-Peter Falkenberg



German



7 hours



"Sammelaktion" has a different meaning in German. "Gebündelte Aktion" or "Bündelaktion" would be a literal translation but sounds kind of clunky. Therefore, I think that "Batch-Aktion" is good compromise.

LB

Katrin Steinbauer



German



5 hours



i have to agree

MS

Markus Hohenfeld



German



2 hours



Oder vielleicht ist etwas wie "Stapelverarbeitung" gemeint?

# Internationalization

Translated into 21 languages by the user community (160+ contributors)

Each user is free to display the interface in the language of their choice



# Users in Europe

eLabFTW ELN is massively used in Europe by numerous Universities and companies



France: CNRS, IRD, INRAE, SOLEIL, ENS, various Universities and research centers

Germany: even more in use than France...

Spain, Portugal, Belgium, Italy, United Kingdom, Finland, Sweden, the list doesn't stop!



# Users in United States of America

- **Brandeis University** (Massachusetts)
- **Montana State University** (Montana)
- **University of New England** (Maine)
- **NHLBI National Heart, Lung, and Blood Institute** (Maryland)
- + various labs and private companies





## Chapter 02

# **SOFTWARE SECURITY**



# Quality and security

openssf best practices silver

▼ Basics	13/13 ●
▼ Change Control	9/9 ●
▼ Reporting	8/8 ●
▼ Quality	13/13 ●
▼ Security	16/16 ●
▼ Analysis	8/8 ●

## Quality and security aspects

- Code audits by external security companies
- Bug bounty program for security researchers
- Responsible disclosure through CVE publication
- Advanced configuration options: centralized authentication, password policy, multi factor, protection against brute-force attacks, *etc...*
- Good practices of project management (OpenSSF referential)



# eLabFTW: quality and security

## Scan Summary



Host:	demo.elabftw.net
Scan ID #:	20518336 (unlisted)
Start Time:	July 28, 2021 2:59 PM
Duration:	6 seconds
Score:	115/100
Tests Passed:	11/11

*Scan result from [observatory.mozilla.org](https://observatory.mozilla.org)*

## More security aspects

- Perfect score on Mozilla's Observatory
- Services hardening
- Services containerization
- Automated vulnerabilities scanning



# eLabFTW: quality and security

The screenshot shows a GitHub release page for the repository 'elabimg'. The release is titled 'elabimg 5.2.0 with elabftw-5.1.4' and is marked as the 'Latest' version. The release is signed by NicolasCARPi, with a verified signature. The release includes two assets: 'Source code (zip)' and 'Source code (tar.gz)'. A tooltip on the left provides additional information, including the GPG key ID and a link to learn about vigilant mode.

last week

NicolasCARPi

5.1.4

This tag was signed with the committer's **verified signature**.

NicolasCARPi  
Nicolas CARPi

GPG key ID: 3F1E365415256C7E  
[Learn about vigilant mode.](#)

elabimg 5.2.0 with elabftw-5.1.4 Latest

5.1.4

Assets 2

Source code (zip)

Source code (tar.gz)

*Tagged releases are signed with a GPG key and have a public build log*





# eLabFTW: quality and security

Summary

Jobs

Build images and push to Docker Hub...

Run details

Usage

Workflow file

Build images and push to Docker Hub summary

Docker Build summary

For a detailed look at the build, download the following build record archive and import it into Docker Desktop's Builds view. Build records include details such as timing, dependencies, results, logs, traces, and other information about a build. [Learn more](#)

[elabftw-elabimg-jm2sia.dockerbuild](#) (347.16 KB - includes 1 build record)

Find this useful? [Let us know](#)

ID	Name	Status	Cached	Duration
JM2SIA	elabimg	completed	35%	29m12s

Build inputs

Cimon Security Report - Prevent Mode

Report Summary

Finished auditing CI/CD pipeline successfully

Network Events

PID	Process	Protocol	Address	Domain	Policy
2076	git-remote-http	TCP	140.82.112.3:443	github.com	
3062	docker-buildx	UDP	34.226.69.105:9	index.docker.io	
3062	docker-buildx	UDP	54.196.99.49:9	index.docker.io	
3062	docker-buildx	UDP	3.219.239.5:9	index.docker.io	

*Auditable build logs with kernel level protection against supply chain attacks*



## Chapter 03

# OPEN SCIENCE COMMUNITY



# eLabFTW: a major actor in open science and FAIR data

## Founding member of The ELN Consortium

- 15+ members including other ELN editors
- Created a standardized exchange file format (.eln)
- Based on RO-Crate and JSON-LD
- Recognized as an official media type by [IANA](#)
- Increases interoperability of data (FAIR)





# User reviews



polySpectra's **Cyclic Olefin Resin (COR)** enables manufacturers to **3D print durable end-use products** in numerous advanced application verticals.

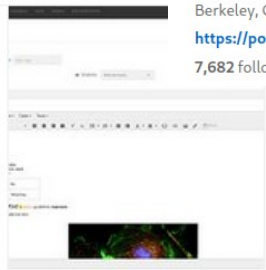


## Laboratory & Engineering:

### eLabFTW - free open source ELN

A free and open source electronic lab notebook for researchers.

[www.elabftw.net](http://www.elabftw.net)



### Raymond Weitekamp ✓ · 3rd

Founder & CEO, polySpectra | Rugged Resins for Additive Manufacturing | Forbes 30u30 - Energy

Berkeley, California, United States · [Contact info](#)

<https://polyspectra.com>

7,682 followers · 500+ connections

 polySpectra

 Caltech

I am in love with eLabFTW. As a synthetic chemist, this is the electronic lab notebook I have been waiting for (for the last decade). eLabFTW is completely free, yet it is hands-down better than LabGuru, LabArchive and CambridgeSoft's E-Notebook. Better features, better customer support, better business model — eLabForTheWin. They have done an amazing job of improving the ease of installation and maintenance over the past few years. If anyone at Institut Curie is reading this right now, please give Nico a raise ;)

Source : <https://medium.com/phd-to-ceo/an-open-source-stack-for-physical-science-startups-c83266852efc>



# User reviews



**Florian Strauß**

14:12

"Great tool for doing and teaching good RDM practices"



**alexander-haller (alexander-haller)**

"Super fast developer feedback" "Easy setup and onboarding"



**Lauritz Bußfeld**

14:32

well maintained interdisciplinary ELN with a lively community



**The Diefenbacher Lab** @DiefenbacherL · Jun 25

Hey #scicenetwitter Our lab is looking for an useful #opensource labbook variant. Anyone any recommendations or experiences on that?  
#AcademicTwitter #academia #Science



3



3



2



**Christoph Engwer**

@EngwerChristoph

Follow

Replying to @DiefenbacherL

I can highly recommend @eLabFTW. I'm using it since more than two years. It's easy to install and maintain. And more over, requests for features are listened to and implemented.



**adienne\_karsten | ULB MS**

In reply to **NicolasCARPi**



**Mahadi Xion**

eLabFTW is built on top of a stable OpenAPI design that gives me confidence that my API automation scripts are future proof.

"Intuitive to use, great UI, great community, open source and generically usable!" 🚀



# User reviews

The most adapted ELN software for academic research groups.

A true alternative to paper notebooks, that is simple and intuitive to use.

Garrett Curley – École Polytechnique – Laboratoire Physique des Plasmas

As an open-source tool, eLabFTW allows full customization without expensive licenses. It's great for labs that need flexibility and control over their data

Hüseyin Uzun – RDM Universität Frankfurt

A user-friendly and flexible open source tool with great support and a helpful community

Nikki Parks – Universität Aachen

Easy and simple to setup and use.

Rohit Karthikeyan



## Chapter 04

# THE DELTABLOT COMPANY



- Founded in 2019
- Located in Paris, France
- Operating on 4 continents
- Dedicated to helping research teams



**Nicolas Carpi**  
President



**Sydney Koke**  
Customer Success Manager



**Moustapha Camara**  
Full Stack Developer





# Our partners



easter eggs

Paris, France

**Easter Eggs**  
GNU/Linux  
specialists



Paris, France

**Universign**  
eIDAS qualified  
timestamping



UNIVERSAL PROBATIVE VALUE

Marseille, France

**Keeex**  
Document integrity,  
traceability, and  
probity



# Our team of experts



- **Marcel Bolten:** Fullstack developer



- **Hüseyin Uzun:** Video editor, german language trainer



- **Simon Bekemeier:** German language trainer



- **Manon Stripes:** UI/UX design



- **Anders Märak Leffler:** Cybersecurity specialist



# Our customers





# Open Source is important to us

- We maintain open source projects
- We contribute to open source projects
- We donate to open source projects
- We are member of APRIL association for the promotion of free and libre software

Learn more: <https://www.deltablot.com/opensource/>



## Chapter 05

# CHOOSE YOUR PLAN



Hosted by us in the cloud or  
by you on your network

**1** **PRO HOSTING**  
We take care of everything (SaaS)

**2** **PRO SUPPORT**  
We help you deploy eLabFTW on your  
network and provide support (On-Premise)



# 1. PRO Hosting

- Hosted close to you:
  - Europe → Paris, France, optionally in the SecNumCloud environment
  - North America → Toronto, New York, or San Francisco
  - **Japan**, Australia → **Tokyo**
- Dedicated eLabFTW instance
- Custom domain name
- eIDAS qualified timestamping tokens included
- Fully managed backups and updates
- Ransomware protection
- Infinite updates
- Includes PRO Support



## Hosted in Japan (Tokyo)

- ISO 27001
- SOC 2 Type 2
- SOC 1 Type 2
- PCI DSS





# 1. We take care of everything **PRO Hosting**

Yearly cost is 4,985 € or ~ 799,500 円

Come discuss with us for specific offers  
tailored to your needs!



**SOC 2  
TYPE II**  
CERTIFIED



**SOC 1  
TYPE II**  
CERTIFIED





## 2. Support for self-hosting **PRO Support**

- We help you implement eLabFTW within your IT system
- User training (webinars) in French, English or German
- Access to sandbox instance
- 20% discount on custom development requests
- 1000 eIDAS qualified timestamping token

1 789 € / year

286,940 円 / year





# Contact us

[contact@deltablot.email](mailto:contact@deltablot.email)

or better: come discuss with us now  
that we're here ;)