

# Experience with **LabGuru** Electronic lab notebook

Michael Lisby

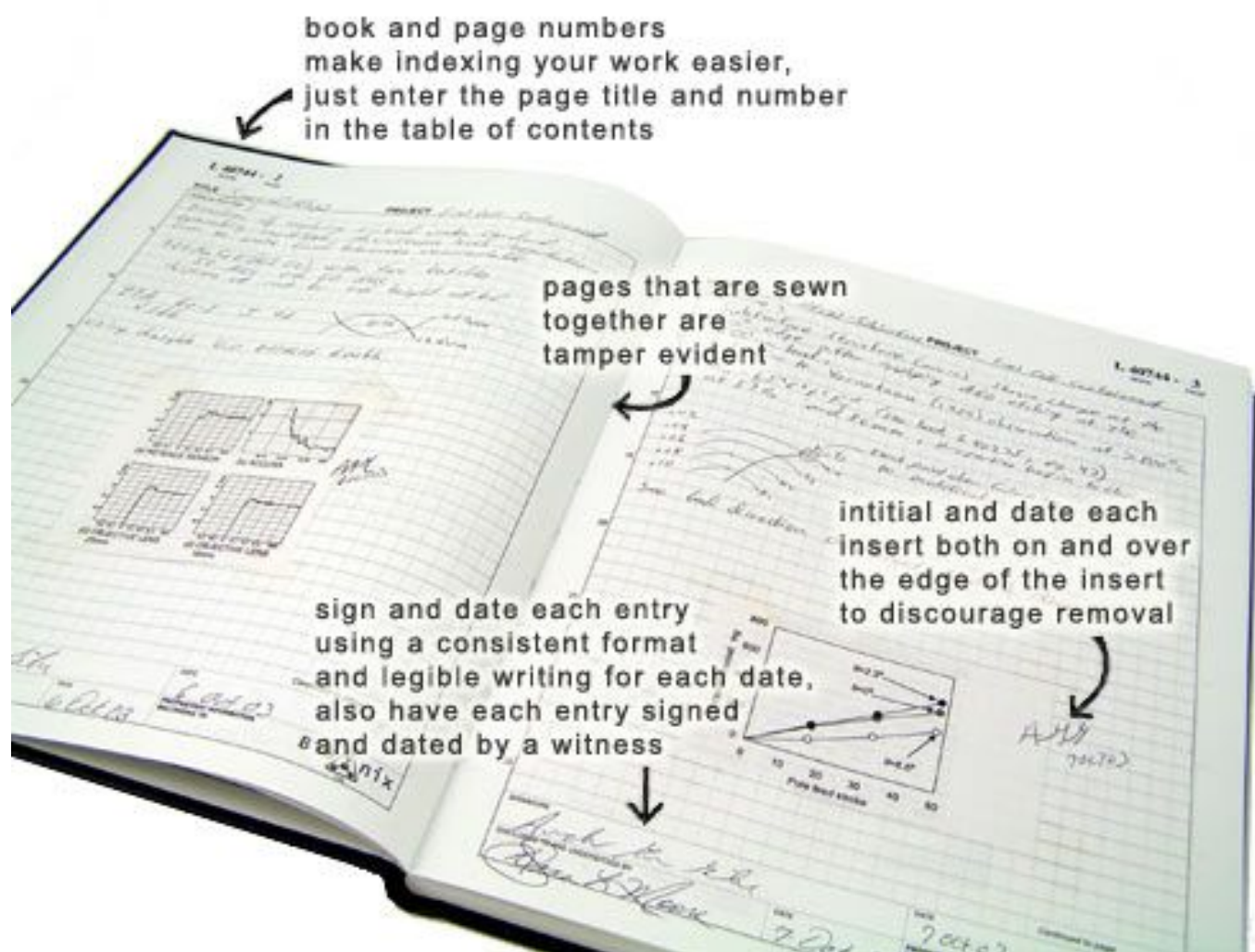
Department of Biology, University of Copenhagen

April 2018

# LabGuru pilot project

- 2 year project
- Participants: Department of Biology, UCPH  
(Michael Lisby & Vibe Østergaard + 20 students,  
postdocs, and a technician)

# Why replace the paper lab notebook with an electronic lab notebook (ELN)?



# What to achieve with ELNs:

- Facilitate better documentation of experiments (✓)
- Better traceability (embedding or link to other electronic files) ✓
- Improved search ability ✓✓
- Paperless labs (GMO labs) (✓)
- Enable better communication between project members and sharing of reagents and protocols ✓
- Prepare students and postdocs for the world outside the University ✓
- Backup of data ✓
- Increase research productivity (✓)

# What more is an ELN?

Electronic version of paper lab notebook

## **+ lab management:**

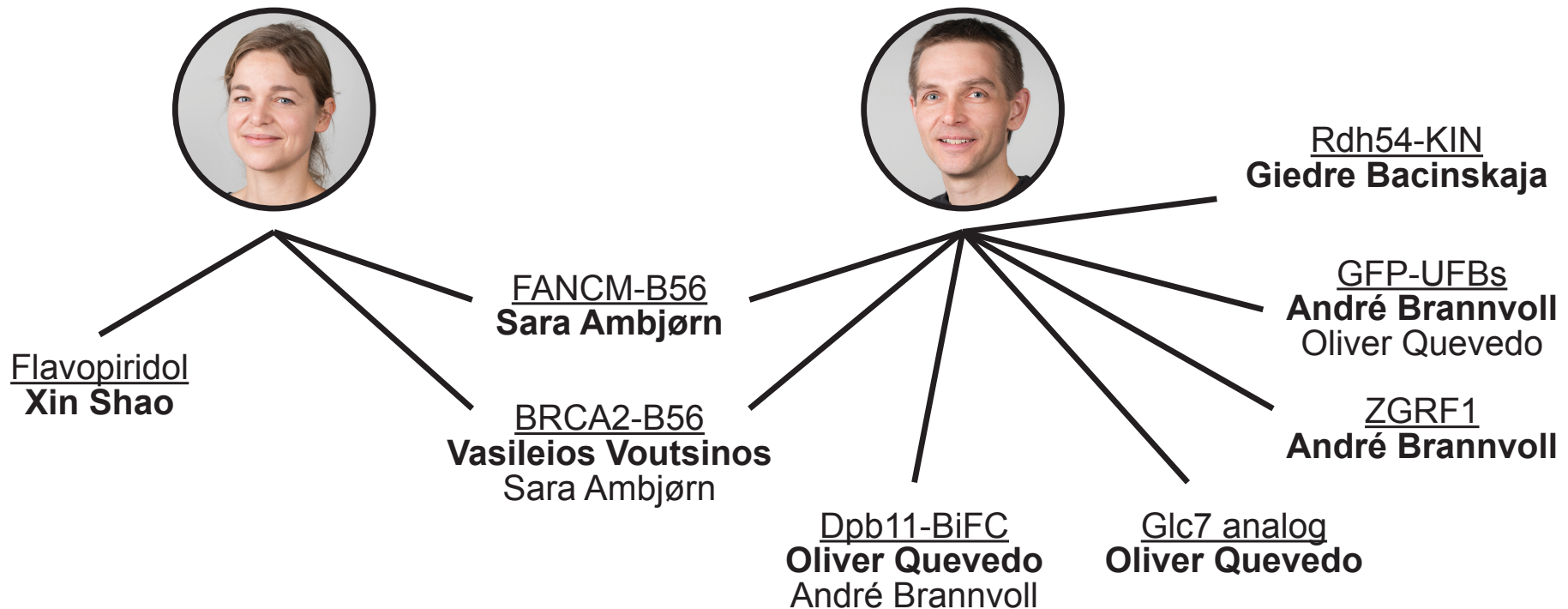
- Reagent and material inventories (chemicals, cell lines, DNA samples, ...) (✓)
- Internal communication (meetings, conferences, ...) (✓)
- Sharing of instruments (booking calendars) ÷
- Added value: weekly digests ✓

# How we made it work?

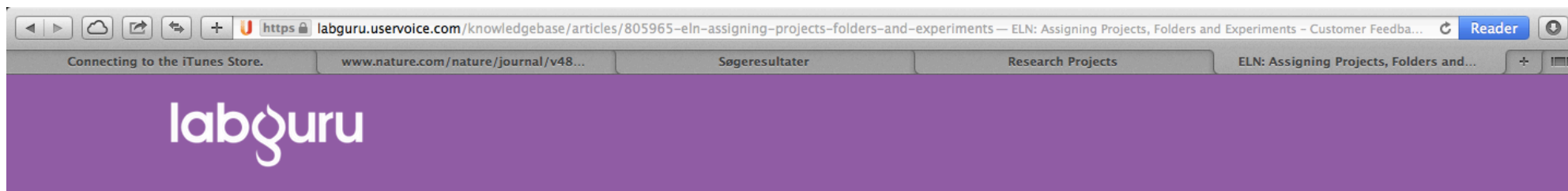
- a) 100% commitment
- b) Knowledge database
- c) Local files still allowed
- d) Follow-up meeting (every) month

# Administration of projects

- Vibe and Michael set up projects and add members to the projects:



# Assigning Projects, Folders and Experiments (privileges)



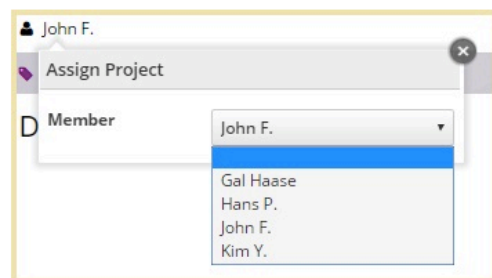
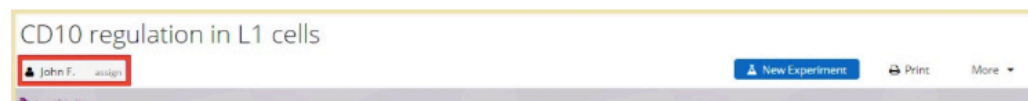
## ELN: Assigning Projects, Folders and Experiments

[← e-Notebook](#)

New and returning users may [sign in](#)

**You can assign a project, a folder or an experiment to give ownership to another member in the account.**

In project, folder or experiment pages, under its title, when you hover above the name of the owner you will see "assign" appearing. Click on assign and then on the member's name to open a drop-down menu from which you can choose the new owner.



Ownership of a project, folder or an experiment helps the account owner to manage the research going on in her/his lab, showing exactly who in the group is working on what. project owners will see their project appear first in the projects index page and their picture will appear next to the projects and folder they own. In addition, owners will receive all notification created in their folders and experiments (such as in 'Steps' element or when setting a time frame for sections)

### e-Notebook

[The e-Notebook \(ELN\) - The Heart of Your Work](#)

[New Look and Design for the e-Notebook Module](#)

[ELN: How to Attach Images and Other Files to an Experiment](#)

[ELN: How to Add Samples to an Experiment](#)

[ELN: How to Create Protocols and Add Them to Experiments](#)

[ELN: Managing Your Sections in Experiment and Protocol Pages](#)

[ELN: How to Create Printed Reports of Experiments, Folders and Projects.](#)

[ELN: Signing and Witnessing an Experiment](#)

[ELN: How to Reorder Your Folders](#)

[ELN: How to Move Experiments and Folders](#)

[ELN: Attachments Pool in Projects](#)

[ELN: How to Archive Your Projects](#)

### **ELN: Assigning Projects, Folders and Experiments**

[ELN: Keyboard Shortcuts for Text Areas](#)

[ELN: Plate Element in Protocols and Experiments](#)

[SOPs for Industrial Accounts](#)

[Working Together on Experiments](#)

[New: Flagging Experiments](#)

[ELN: Creating Chemical Compounds and Reactions](#)

[ELN: Folders and sub folders](#)



# Assigning Projects, Folders and Experiments

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By default, projects, folders and experiments are visible (and editable) to all members of the account, but you can decide to make a project private and visible only to selected members. Those members would then be the only ones that are able to write and edit inside the project and it's folders.

To change the visibility of projects click on 'More' in the upper right corner, and then on 'Visible to'.

In the new window open you can see to whom the project is visible, click on "Edit" if you want to change it.

You can assign projects, folders and experiments only to members that are permitted to view the project involved.

**Visible to** Edit

Selected members: Gal Haase (Me) | Hans P. | Kim Y.

**More** menu options:

- Duplicate...
- Archive
- Export as ZIP
- Share project
- Visible to...**
- Linked resources
- Delete project...

**ELN: Assigning Projects, Folders and Experiments - Customer Feedba...**

- ELN: Keyboard Shortcuts for Text Areas
- ELN: Plate Element in Protocols and Experiments
- SOPs for Industrial Accounts
- Working Together on Experiments
- New: Flagging Experiments
- ELN: Creating Chemical Compounds and Reactions
- ELN: Folders and sub folders

Search

**Give feedback**

**Knowledge Base**

- e-Notebook** 20
  - Storage & Equipment Module 12
  - Inventory Module (Collections, Consumables and Shopping List) 12
  - Knowledgebase Module 3
  - General Information 6
  - Short Tutorials (videos) 8
  - Short Guides 8
  - The Rodents Collection 5
  - Labelguru 2
  - Back up and Security 4
  - Case Studies 7
  - All articles

**labguru**

# Signing and Witnessing an Experiment

labguru

## ELN: Signing and Witnessing an Experiment

[← e-Notebook](#)

New and returning users may [sign in](#)

To ensure a higher standard of research completed experiments in Labguru can be signed and witnessed. This is a two-step procedure involving two separate group members: any participant in the experiment can sign it, and then only an authorized member can witness. The account's owner has witnessing privileges and can give these privileges to whom he chooses. To learn how control members privileges - [click here](#).

### How to Sign and Witness an experiment?

When you finish an experiment you can sign it, marking it as completed.

**Screenshot 1: Initial Experiment View**

KLK6 PCR  
Kim Y.

Buttons: Sign (highlighted), Print, More

Once the experiment is signed, an indication with the signer's name and time of signing will appear under the experiment's name.

**Screenshot 2: Experiment After Signing**

KLK6 PCR  
Signed by Kim Y. on June 29, 2016 at 12:31  
Kim Y.

Buttons: Revert signature, Print, More

Signed experiments cannot be edited (comments can still be written in discussion), but the signature can be reverted, making it editable again.

**Screenshot 3: Experiment After Reverting Signature**

KLK6 PCR  
Signed by Kim Y. on June 29, 2016 at 12:31  
Kim Y.

Buttons: Revert signature (highlighted), Print, More

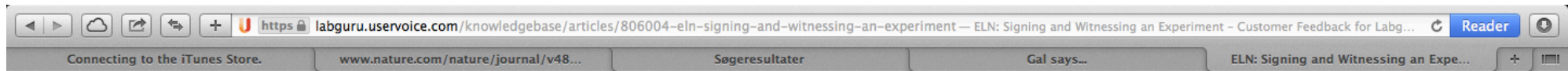
Once an experiment is signed, a notice is sent to the account's owner or any other members with witnessing privileges and will appear in the right side of their entry page under the title "Signed Experiments For Witnessing".

### e-Notebook

- [The e-Notebook \(ELN\) - The Heart of Your Work](#)
- [New Look and Design for the e-Notebook Module](#)
- [ELN: How to Attach Images and Other Files to an Experiment](#)
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- [ELN: How to Create Protocols and Add Them to Experiments](#)
- [ELN: Managing Your Sections in Experiment and Protocol Pages](#)
- [ELN: How to Create Printed Reports of Experiments, Folders and Projects.](#)
- ELN: Signing and Witnessing an Experiment**
- [ELN: How to Reorder Your Folders](#)
- [ELN: How to Move Experiments and Folders](#)
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- [ELN: Assigning Projects, Folders and Experiments](#)
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- [New: Flagging Experiments](#)
- [ELN: Creating Chemical Compounds and Reactions](#)
- [ELN: Folders and sub folders](#)


Search

# Signing and Witnessing an Experiment



Once an experiment is signed, a notice is sent to the account's owner or any other members with witnessing privileges and will appear in the right side of their entry page under the title "Signed Experiments For Witnessing".

## Signed Experiments For Witnessing

 KLK6 PCR  
Signed by Kim Y.  
on June 29, 2016 at 12:33

Authorized members can witness the experiment and lock permanently, they can also revert the signature to make it editable again. A member cannot witness his own signed experiments, this must be done by a second member.

KLK6 PCR

 Signed by Kim Y. on June 29, 2016 at 12:33

Kim Y.  Witness  Revert signature  Print More ▾

Once it is signed & witnessed, a second indication will appear under the experiment's name, stating the witness's name and time of witnessing.

KLK6 PCR

 Signed by Kim Y. on June 29, 2016 at 12:33  Witnessed by Gal Haase on June 29, 2016 at 12:36

Kim Y.  Print More ▾

**TIP** - Signed & witnessed experiments cannot be edited or reverted, but you can always make a new copy of the experiment by duplicating it.

KLK6 PCR

 Signed by Kim Y. on June 29, 2016 at 12:33  Witnessed by Gal Haase on June 29, 2016 at 12:36

Kim Y.  Print More ▾

Description

 Duplicate...  
 Save as protocol...  
 Linked resources  
 Version history

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[The Rodents Collection](#) 5

[Labelguru](#) 2

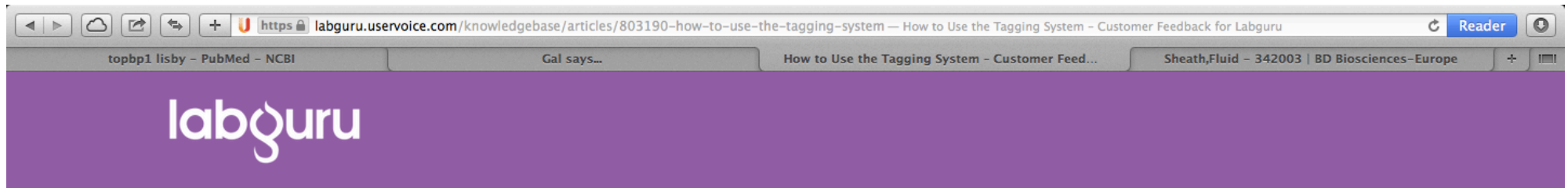
[Back up and Security](#) 4

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# Tags



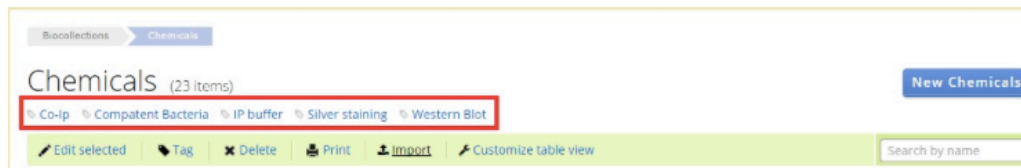
## How to Use the Tagging System

[← Short Guides](#)

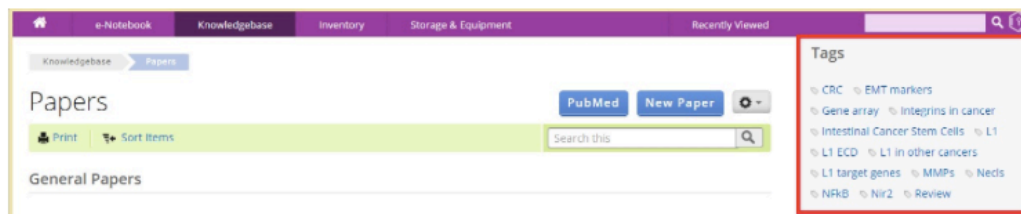
New and returning users may [sign in](#)

**Tagging in Labguru helps you find the pages you need, groups together pages from different modules and makes the navigation in Labguru faster and easier.**

**Make searching for related items out from long lists easier.** Let's look at the index page of a collection in your inventory (but also of papers, stocks, protocols and more), it is likely to be filled with overwhelmingly numerous lines representing all the items within. It can get to several pages long, making it very hard to see in one page some items that are related to a certain aspect of your research that you wish to sort by. By tagging items, you can now make that search easier by choosing a tag to view only the items with that tag. In collection and stock pages, the tags will appear in the top of the page under the title:



In papers, attachments and image bank you will see the tags in the top right corner of the page:



**Group pages from different modules together.** In many cases, different types of pages will have some meaningful scientific connection. You can link them together and then you can jump from one page to the other. But more useful will be to group them together in one list. Tagging pages will help you categorize your data, grouping the pages together, enabling you to view all of them on one page.

### Short Guides

[How to Edit your Profile](#)  
[How to Add & Lock a Member](#)  
[Team Communication](#)  
[Sharing a Project with Non-Members of Your Account](#)  
[How to Update your Plan](#)  
**How to Use the Tagging System**  
[UpFolder - How to Use it](#)  
[Account Privileges](#)

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### Knowledge Base

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# Knowledge database

The screenshot shows a web browser window with the URL <https://labguru.uservoice.com/knowledgebase>. The browser tabs include "topbp1 lisby - PubMed - NCBI", "Research Projects", "Knowledge Base - Customer Feedback for Labguru", and "Sheath,Fluid - 342003 | BD Biosciences-Europe". The website has a purple header with the "labguru" logo. Below the header, the page is titled "Knowledge Base" with a subtitle "← Customer Feedback for Labguru". A link for "New and returning users may sign in" is visible in the top right. The main content area is divided into four columns of links, each with a document icon and a right-pointing arrow. The first column is "e-Notebook", the second is "Storage & Equipment Module", the third is "Knowledgebase Module", and the fourth is "Short Tutorials (videos)". A sidebar on the right contains a search bar, a "Give feedback" link, a "Knowledge Base" section with a list of categories and article counts, and the Labguru logo at the bottom.

**Knowledge Base**  
← Customer Feedback for Labguru

New and returning users may [sign in](#)

**e-Notebook →**

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- ELN: How to Create Protocols and Add Them to Experiments

20 articles →

**Storage & Equipment Module →**

- Storage: From Room to a Tube
- Storage: How to Add a New Box in the Storage Module
- Storage: How To Relocate a Storage Location
- Stocks: How to Add a Stock
- Stocks: Importing Your Stocks

12 articles →

**Inventory Module (Collections, Consumables and Shopping List) →**

- Setting Up Your Collections
- How to Customize Your Collection
- How to Add New Items to Collections
- How to Add Consumables From the Product Directory
- Importing Your Bio-Collections into Labguru

12 articles →

**Knowledgebase Module →**

- Knowledgebase: Papers
- Knowledgebase: Documents
- How to Manage your Unattached Images and Files and Keep them in Context

**General Information →**

- New- UpFolder access via token
- Labguru - Change Log
- The New Editing Text Toolbar
- FAQs - Labguru


**Short Tutorials (videos) →**

- Video: How to Add Stocks and Set their Location
- Video: The Import Function
- Video: How to Add Items to the Shopping list
- Video: Setting Up Collections

**Give feedback**

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# LabGuru evaluation

## Pro

- Easy setup and use
- Many functionalities
- Easy sharing and looking over the shoulder
- Editable

# LabGuru evaluation

## Cons

- Downtime
- Expensive
- Slow response time
- Privileges cumbersome to manage
- Slow access from mobile devices (iPad and mobile phones)
- Slow response from helpdesk
- Some minor annoying issues (label printing, limiting searches, show tube content, ...)

# Preliminary conclusions on LabGuru

1. There is a **potential** for running and documenting research project more efficiently.
2. Some improvements and developments still required.
3. LabGuru is relatively complicated and expensive for an academic setting (double signing/witnessing, ordering, etc).