Histology Core Facility User Meeting

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Facility access

Due to COVID-19 situation:

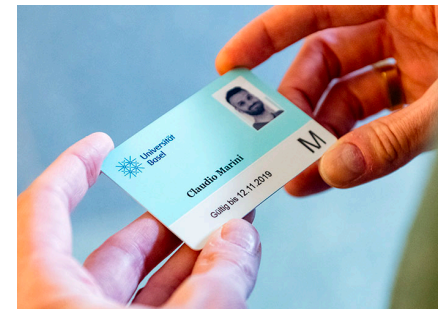- The Anatomy Institute is open from **8.00 to 16.30 from Monday to Friday**.

In general:

- The HCF is open 24/7

- The Anatomy Institute is closed on Basel Stadt bank holidays and in agreement with the

  University of Basel "Frei und Feiertage" Calendar

  https://www.unibas.ch/de/Mitarbeitendenportal/Anstellung/Arbeitszeit-Ferien/Frei-und-Feiertage.html

- The access outside the standard working time is allowed to the trained users only through:

  – The key system, available at Hebelstrasse 20 on request (to be discontinued in the long term)

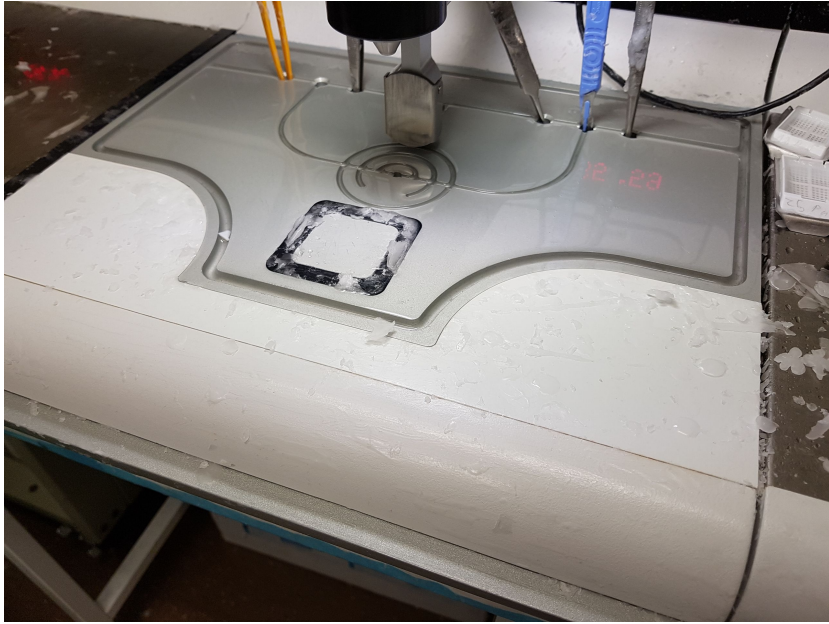 – The personal University of Basel badge, available on request

DIY Platform

- Free of charge for all DBM groups

- Training is mandatory

- Consumables are not provided

- 29 instruments that cover for all the basic histology methods

- 468 registered users (169 active during last year)

Training

- Aims at providing enough basic principles and a hands-on experience to start your experiments.

- After the training you are allowed to use all (and only!) the equipment you were trained for.

- It is convenient to be assisted by a lab member during the first working session(s) after the training.

  – To consolidate what you learn during the training.

  – To receive case specific tricks.

- The assistance should not replace/recapitulate the training.

- It should not happen for more that few working sessions.

- If you did not reach your working independence, you should consult the Facility staff.

- Introducing a training calendar, available on the Facility web page.

Despite the trainings….
Common issues
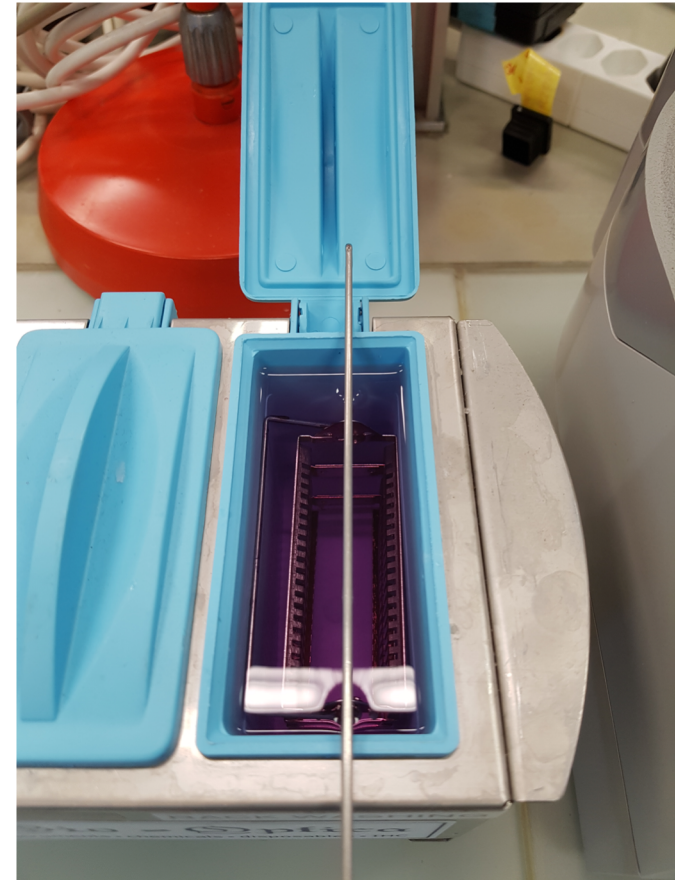
TES Valida (embedding station)

Linear stainer issues

Evaporation and oxidation
- Close the metal lids after use
- Close the glass windows during use

Cross-contamination
- Do not use racks for Safranin staining and H&E
- Do not use the linear stainer for anything else than the H&E staining

Coverslipper

- It showed to be a rather delicate equipment

- We do not provide training for this equipment as it is reserved for the service activities.

- In special cases we authorized the use for projects with a massive amount of slides.

- However, we had 4 service interruptions in the last year.

Slide scanner

- The slide scanner can be used for the acquisition of BF or FL slides, every day from 15.00 to 9.00 of the day after.

- The PC is reserved from 9.00 to 15.00 for the image analysis activities.

- The digital slide files must be transferred to the D:\Scan\"personal folder", and from there to the Transfer$ server within a few days.

- Local permanent data storage is not allowed.

- The "D:\Scan" folder is regularly cleaned up every 3 months or whenever the amount of unclassified data exceeds 100 + files.

  The Facility staff will inform the users in advance, but we are not responsible for data lost after the regular equipment maintenance.

Image analysis

- The users can store data locally on the workstation for the image analysis for a limited time.

- He/she must commit to conclude the analysis in a reasonable time and **export** the data afterwards.

⚠️ **WARNING**

- Do not export the CSV file only, this does not contain the analysis settings.

- Use the "export advanced" function and export the annotation, classification and analysis settings.

⚠️ **WARNING**

- Digital slide files should not be moved from their original location after importing them into Halo. If a digital slide file is moved from the original folder, and you did not export your settings/results form Halo, you will loose your analysis.
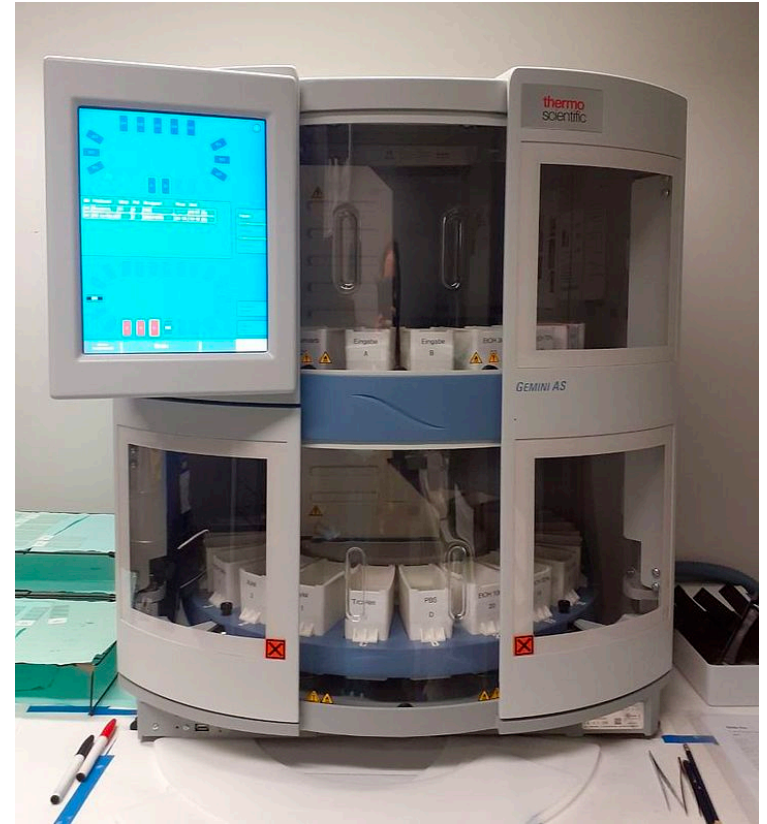
General rules

- Keep the work station clean and neat

- Follow the protocols explained during the training

- Consult the staff for new protocols

- Ask if you have doubts. If necessary it is not a shame to get a second training

- Respect the reservation timing

- Do not watch movies or listen music at high volume at the Facility (use headsets)

- Do not use the Facility as your personal office

- Do not try to change parameters or repair any equipment that showed an error or a strange performance. Please inform immediately the staff that will try to support you.

Regular and Maintenance

	2019	2020	2021 (Jan.-Apr.)
	426 hours	767.65 hours	233 hours

New equipment and services 2021

- Gemini autostainer (replaces the linear stainer)

  - 31 solution baskets

  - Multiple staining programmable

  - Water connected (no need to change water anymore)

  - Compatible with the coverslipper

  - **Free of charge service 2-3 times per week**

- Semi-automatic microtome (3rd unit)

Service Platform

Every established histology protocol including imaging analysis is offered by the HCF on a fee-based service platform.

- Roche Ventana IHC/IF service

- Manual ISH service

- Other services

Roche Ventana Discovery Ultra

How to use the service platform?

For development of new assays

- Provide us with at least a positive control and possibly a negative one

- Provide us with the primary antibody (with the digital datasheet)

- Provide us with preliminary information (if available)

We will run a protocol development procedure based on max 4 slides

- If signal is not present, we stop, as further development is unlikely to end up with satisfactory results

- If signal is present we proceed with optimization and routine work

For routine work

- Provide us with:

  - The optimized protocol number (on the slide label as "μXXX")

  - The antibody ref. and the dilution used (lower right corner of the label data)

What you pay for?

The Ventana Service price covers only the reagents' price and the income is reinvested in reagents for the Facility

2022 equipment proposal

- The TPC15 is more than 10 years old…

- A tissue microarray robot ?? (https://www.3dhistech.com/research/tissue-microarrayers/tma-master-2/)

- A service contract for Halo

- Additional modules for Halo

Your proposal are more than welcome!

Questions and answers