

# Manuscript Title

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## Abstract

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## Background & Summary

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We scanned a *lot* of different mouse strains and so-called hybrids, both male and female. One scan for each strain, each hybrid and each sex gives already 90 samples.

# Methods

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## Sample preparation

- Mice were euthanized and decapitated
- Mouse skulls were stored in EMA
- Separated into 4 batches of approximately 110 animals, labeled as B `batch_number` *animal number* A and B `batch_number` *animal number* B.

## Tomographic imaging

- SkyScan 1272 with sample changer
- All log files available here: <https://github.unibe.ch/david-haberthuer/InMice/tree/main/logfiles>
- Report scanning settings and reconstruction parameter data according to<sup>1</sup>
- Use a notebook to pull *all* the relevant data to report directly into the text here, or into a file that is loaded by `manubot`.

## QA

- Use a collection of logfile wrangling code<sup>2</sup> to go through *all* the log files of all the aquired scans
  - Use this to surface issues related to aquisition (wrong setting) and reconstruction
- Look at average and maximal brightness of (a subset of) all the projection images aquired
  - Use this to surface issues related to acqisiton, e.g. sometimes the x-ray source inadvertently shut down, or the counts were too low on the camera, etc.

## Image processing

- Jupyter<sup>3</sup> notebooks, available here: <https://github.unibe.ch/david-haberthuer/InMice/>, for reproducible research.
  - Ingest complete, uncropped reconstructions with `dask`<sup>4/</sup>
  - Crop, based on axial MIPs
  - Save cropped data out as `.zarr`-files, ready to be loaded with `n5-ij`<sup>5</sup> in Fiji<sup>6</sup>
  - Save in other formats, to either use 3D Slicer<sup>7/</sup>, [doi:10.1016/j.mri.2012.05.001](https://doi.org/10.1016/j.mri.2012.05.001) or Dragonfly<sup>8/</sup>

## Data Records

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## Technical Validation

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## Usage Notes

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## Code Availability

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- [Jupyter notebooks](#)

## References

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# Author Contributions

[Contributor Roles Taxonomy \(CRediT\)](#), as defined in<sup>9</sup>:

- [Conceptualization](#): Bernhard Voelkl, Hanno Würbel
- [Data curation](#): David Haberthür, Larisa Petra Kaija
- [Formal analysis](#): David Haberthür, Bernhard Voelkl
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- [Investigation](#): David Haberthür, Pui Ching Chu, Larisa Petra Kaija
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- [Writing – original draft](#): David Haberthür
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## Competing Interests

Author	Competing Interests	Last Reviewed
David Haberthür	None	2025-06-27
Pui Ching Chu	None	2025-06-27
Larisa Petra Kaija	None	
Bernhard Voelkl	None	2025-08-19
Hanno Würbel	None	2025-08-19

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