This document is intended to help you to navigate this dataset.

During the course of this study several types of files have been produced:

* **.lsm** or **.czi** files are confocal images obtained using the Zeiss LSM710 confocal microscope. The free microscope software package ZEN lite can be used to visualize these files. ZEN lite is available for download from <https://www.zeiss.com/microscopy/int/products/microscope-software/zen-lite.html>
* **.txt** files are text files detailing which colour channels display staining for which mRNAs/proteins in accompanying confocal image files
* **.dat** files were generated by analysis of confocal images using Neurolucida for Confocal software
* **.xlsx** files are Excel files containing compilations of data acquired (e.g. Neurolucida analyses, behavioural experiments, etc.)
* **.pzfx** files are generated by GraphPad Prism statistical analysis software
* **.abf** files are electrophysiological recordings generated by Clampex software and are readable using Clampfit (both Molecular Devices)
* **.evt** files are electrophysiological analysis files generated by MiniAnalysis (Synaptosoft)
* **.mp4** video files of recordings made for analysis of itch behaviour prior to and following injections of chloroquine (CQ)
* **.boris** files were generated as a result of behavioural data analysis, using the free open-source event-logging software BORIS (available to download at <http://www.boris.unito.it/pages/download.html>)

The folder names are truncated versions of the headings that are used in the “Results” section of the paper, due to limitations on the length of the directory path:

* **01. Cre-dependent AAV injections in young adult NPYCre mice**
  + Subfolder ‘FISH assessment in NPYCre mice’ contains **.dat** and related **.lsm** files for each animal and section analysed for the data shown in Fig 1A & B, a **.txt** file with channel colour information, and an **.xlsx** file with the data extracted from the Neurolucida analyses. Note that, although not reported in the paper for reasons of brevity, the FISH assessment included a probe against the inhibitory marker *GAD1*, and this confirmed that the vast majority of total *NPY*-expressing(91.4%) and *NPY*-positive cells that also expressed *Cre* (96.9%) were inhibitory.
  + Subfolder ‘ICC assessment of AAv.flex.FPs in NPYCre mice’ contains **.dat** and related **.lsm** files for each animal and section analysed for the data shown in Fig 1C-D, a **.txt** file with channel colour information, and an **.xlsx** file with the data extracted from the Neurolucida analyses.
  + Subfolder ‘ICC assessment of AAv.flex.eGFP in NPYCre;Ai9 mice’ contains **.dat** and related **.lsm** files for each animal and section analysed for the data shown in Fig 1F-I and Fig 1 figure supplement 1A-C, **.txt** files with channel colour information, and **.xlsx** files with the data extracted from the Neurolucida analyses.
  + Subfolder ‘ICC assessment of AAv.flex.hM3Dq-mCh in NPYCre mice’ contains **.dat** and related **.lsm** files for each animal and section analysed for the data shown in Fig 1 figure supplement 1D-F, **.txt** files with channel colour information, and **.xlsx** files with the data extracted from the Neurolucida analyses.
* **02. Activation of inhibitory NPY interneurons reduces activity in dorsal horn circuits**
  + Subfolder ‘ICC assessment of chemogentic activation of NPY-INs’ contains **.dat** and related **.lsm** files for each animal and section analysed for the data shown in Fig 1 figure supplement 2, a **.txt** file with channel colour information, an **.xlsx** file with the data extracted from the Neurolucida analyses, and a **.pzfx** file with relevant statistical comparisons.
  + Subfolder ‘Fos expression following heat stimulation’ contains **.dat** and related **.lsm** files for each animal and section analysed for the data shown in Fig 2A, C & E, a **.txt** file with channel colour information, an **.xlsx** file with the data extracted from the Neurolucida analyses, and a **.pzfx** file with relevant statistical comparisons.
  + Subfolder ‘Fos expression following CQ stimulation’ contains **.dat** and related **.lsm** files for each animal and section analysed for the data shown in Fig 2A, C & E, a **.txt** file with channel colour information, an **.xlsx** file with the data extracted from the Neurolucida analyses, and a **.pzfx** file with relevant statistical comparisons.
  + Subfolder ‘oIPSCs in AAV.flex.ChR2.eYFP-injected NPYCre mice ‘ contains **.abf** and **.evt** files generated during electrophysiological recordings for the data shown in Fig 2G-I and Fig 2 figure supplement 2.
* **03. Activation of inhibitory NPY interneurons increases acute nocifensive reflex thresholds**
  + Subfolder ‘Chemogenetic activation of NPY-INs behavioural analyses’ contains an **.xlsx** file with raw data and a **.pzfx** file with relevant statistical comparisons for the behavioural analyses shown in Fig 3, as well as **.mp4** video files recorded for the chloroquine-induced itch analysis.
  + Subfolder ‘CNO injections in WT mice behavioural analyses’ contains an **.xlsx** file with raw data and a **.pzfx** file with relevant statistical comparisons for the behavioural analyses shown in Fig 3 figure supplement 1.
* **04.** **Activation of NPY interneurons blocks mechanical and thermal hypersensitivity**
  + Subfolder ‘CFA inflammatory model’ contains an **.xlsx** file with raw data and a **.pzfx** file with relevant statistical comparisons for the behavioural analyses shown in Fig 4A-C
  + Subfolder ‘SNI neuropathic model > von Frey & Hargreaves tests’ contains an **.xlsx** file with raw data and a **.pzfx** file with relevant statistical comparisons for the behavioural analyses shown in Fig 4D-F
  + Subfolder ‘SNI neuropathic model > DRG hM3Dq-mCh expression analysis’ contains **.dat** and related **.lsm** files for each animal and DRG analysed for the data shown in Fig 4 figure supplement 1
  + Subfolder ‘SNI neuropathic model > CPP & acetone tests’ contains **.xlsx** files with raw data, **.mp4** video files of CPP testing and **.pzfx** files with relevant statistical comparisons for the behavioural analyses shown in Fig 4 G-J and Fig 4 figure supplement 2
* **05. Toxin-mediated silencing of NPY interneurons causes spontaneous itch and enhances pruritogen-evoked itch**
  + Subfolder ‘ICC assessment of GFP vs NPY expression in AAV.flex.TeLC.eGFP-injected NPYCre mice’ contains **.dat** and related **.czi** files for each animal and section analysed for the data shown in Fig 5 figure supplement 1F & G, a **.txt** file with channel colour information, and an **.xlsx** file with the data extracted from the Neurolucida analyses.
  + Subfolder ‘TeLC silencing of NPY-INs behavioural analyses’ contains an **.xlsx** file with raw data and **.pzfx** file with relevant statistical comparisons for behavioural analyses shown in Fig 5A & B and Fig 5 figure supplement 1A-E, as well as **.mp4** video files recorded for the chloroquine-induced itch analysis.
  + Subfolder ‘TeLC silencing of NPY-INs skin lesion analysis’ contains a **.pzfx** file with relevant statistical comparisons for data shown in Fig 5D & E.
* **06. Increased itch caused by silencing NPY-INs operates through GRPR-INs**
  + Subfolder ‘TeLC silencing of NPY-IN+GRPR-INs behavioural analyses’ contains an **.xlsx** file with raw data and **.pzfx** file with relevant statistical comparisons for behavioural analyses shown in Fig 5A & B, as well as **.mp4** video files recorded for the chloroquine-induced itch analysis.
  + Subfolder ‘TeLC silencing of NPY-INs skin lesion analysis’ contains a **.pzfx** file with relevant statistical comparisons for data shown in Fig 5D & E
  + Subfolder ‘Ephys recordings from GRPR-INs’ contains **.abf** and **.evt** files generated during electrophysiological recordings for the data shown in Fig 5F-H and Fig 5 figure supplement 2.
  + Subfolder ‘ICC assessment of NPY-IN input to GRPR-INs’ contains **.dat** and related **.lsm** files for each animal and section, a **.txt** file with channel colour information, an **.xlsx** file with the data extracted from the Neurolucida analyses and a **.pzfx** file with relevant statistical comparisons for the data shown in Fig 5I-K.
* **07. Toxin-mediated silencing of dynorphin interneurons enhances pruritogen-evoked itch**
  + Subfolder ‘TeLC silencing of Dyn-INs behavioural analyses’ contains an **.xlsx** file with raw data and **.pzfx** file with relevant statistical comparisons for behavioural analyses shown in Fig 6A & B, as well as **.mp4** video files recorded for the chloroquine-induced itch analysis.
  + Subfolder ‘ICC assessment of Dyn-IN input to GRPR-INs’ contains **.dat** and related **.lsm** files for each animal and section, a **.txt** file with channel colour information, an **.xlsx** file with the data extracted from the Neurolucida analyses and a **.pzfx** file with relevant statistical comparisons for the data shown in Fig 6C-E.
  + Subfolder ‘AAV.flex.TeLC.eGFP in WT mice CQ analysis’ contains an **.xlsx** file with raw data and a **.pzfx** file with relevant statistical comparisons for the behavioural analyses shown in Fig 6 figure supplement 1, as well as the videos recorded for chloroquine-induced itch analysis with associated .**boris** analysis files and **.xlsx** data export files