

# A centre for multisensory integration in Drosophila Larva



### Laura Lungu

Supervisor: Professor Albert Cardona

Advisor: Dr. Marco Tripodi

Department of Physiology, Development and Neuroscience University of Cambridge

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### **Declaration**

I hereby declare that except where specific reference is made to the work of others, the contents of this dissertation are original and have not been submitted in whole or in part for consideration for any other degree or qualification in this, or any other university. This dissertation is my own work and contains nothing which is the outcome of work done in collaboration with others, except as specified in the text and Acknowledgements. This dissertation contains fewer than 65,000 words including appendices, bibliography, footnotes, tables and equations and has fewer than 150 figures.

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### **Abstract**

Multisensory integration is cool, why not study it via the central complex, and it's the best thing to ever study, how great. TEST

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### **Methods**

- 2.1 Electron Microscopy Reconstructions
- 2.1.1 Seymour volume
- 2.1.2 Neurotransmitter Volumes

### **GABA**

### Acetylcholine

- 2.2 Connectomics
- **2.2.1** Sensory Iformation Flow
- 2.2.2 Lineage Matching
- 2.3 Finding for Dopaminergic Neurons
- 2.3.1 Stochastic Labelling of DANs via Multicolor FLP-out

The multi color flp out method. what happens if i write stuff here

4 Methods

- 2.3.2 Immunohistochemistry
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## **Results**

### 3.1 Connectomics

## **Discussion**

4.1 first part

## References

## **Appendix A**

## How to install LATEX

#### Windows OS

#### **TeXLive package - full version**

- 1. Download the TeXLive ISO (2.2GB) from https://www.tug.org/texlive/
- 2. Download WinCDEmu (if you don't have a virtual drive) from http://wincdemu.sysprogs.org/download/
- 3. To install Windows CD Emulator follow the instructions at http://wincdemu.sysprogs.org/tutorials/install/
- 4. Right click the iso and mount it using the WinCDEmu as shown in http://wincdemu.sysprogs.org/tutorials/mount/
- 5. Open your virtual drive and run setup.pl

or

### Basic MikTeX - TEX distribution

- Download Basic-MiKTEX(32bit or 64bit) from http://miktex.org/download
- 2. Run the installer
- 3. To add a new package go to Start » All Programs » MikTex » Maintenance (Admin) and choose Package Manager

4. Select or search for packages to install

### TexStudio - TeX editor

- Download TexStudio from http://texstudio.sourceforge.net/#downloads
- 2. Run the installer

#### Mac OS X

### MacTeX - TEX distribution

- Download the file from https://www.tug.org/mactex/
- 2. Extract and double click to run the installer. It does the entire configuration, sit back and relax.

### TexStudio - TEX editor

- Download TexStudio from http://texstudio.sourceforge.net/#downloads
- 2. Extract and Start

### Unix/Linux

### TeXLive - T<sub>E</sub>X distribution

#### **Getting the distribution:**

- 1. TexLive can be downloaded from http://www.tug.org/texlive/acquire-netinstall.html.
- 2. TexLive is provided by most operating system you can use (rpm,apt-get or yum) to get TexLive distributions

#### **Installation**

1. Mount the ISO file in the mnt directory

```
mount -t iso9660 -o ro,loop,noauto /your/texlive###.iso /mnt
```

- 2. Install wget on your OS (use rpm, apt-get or yum install)
- 3. Run the installer script install-tl.

```
cd /your/download/directory
./install-tl
```

- 4. Enter command 'i' for installation
- 5. Post-Installation configuration: http://www.tug.org/texlive/doc/texlive-en/texlive-en.html#x1-320003.4.1
- 6. Set the path for the directory of TexLive binaries in your .bashrc file

#### For 32bit OS

For Bourne-compatible shells such as bash, and using Intel x86 GNU/Linux and a default directory setup as an example, the file to edit might be

```
edit $~/.bashrc file and add following lines
PATH=/usr/local/texlive/2011/bin/i386-linux:$PATH;
export PATH
MANPATH=/usr/local/texlive/2011/texmf/doc/man:$MANPATH;
export MANPATH
INFOPATH=/usr/local/texlive/2011/texmf/doc/info:$INFOPATH;
export INFOPATH
```

#### For 64bit OS

```
edit $~/.bashrc file and add following lines
PATH=/usr/local/texlive/2011/bin/x86_64-linux:$PATH;
export PATH
MANPATH=/usr/local/texlive/2011/texmf/doc/man:$MANPATH;
export MANPATH
```

INFOPATH=/usr/local/texlive/2011/texmf/doc/info:\$INFOPATH;
export INFOPATH

#### Fedora/RedHat/CentOS:

```
sudo yum install texlive
sudo yum install psutils
```

#### **SUSE:**

sudo zypper install texlive

#### **Debian/Ubuntu:**

```
sudo apt-get install texlive texlive-latex-extra
sudo apt-get install psutils
```

### Appendix B

### Installing the CUED class file

LATEX.cls files can be accessed system-wide when they are placed in the <texmf>/tex/latex directory, where <texmf> is the root directory of the user's TeXinstallation. On systems that have a local texmf tree (<texmflocal>), which may be named "texmf-local" or "localtexmf", it may be advisable to install packages in <texmflocal>, rather than <texmf> as the contents of the former, unlike that of the latter, are preserved after the LATeXsystem is reinstalled and/or upgraded.

It is recommended that the user create a subdirectory <texmf>/tex/latex/CUED for all CUED related LATeXclass and package files. On some LATeXsystems, the directory look-up tables will need to be refreshed after making additions or deletions to the system files. For TeXLive systems this is accomplished via executing "texhash" as root. MIKTeXusers can run "initexmf -u" to accomplish the same thing.

Users not willing or able to install the files system-wide can install them in their personal directories, but will then have to provide the path (full or relative) in addition to the filename when referring to them in LATEX.