

Flypi - An open source, modular, affordable tool for imaging experiments.

Initially developed by [Trend in Africa](#) and published in [Plos Biology](#).

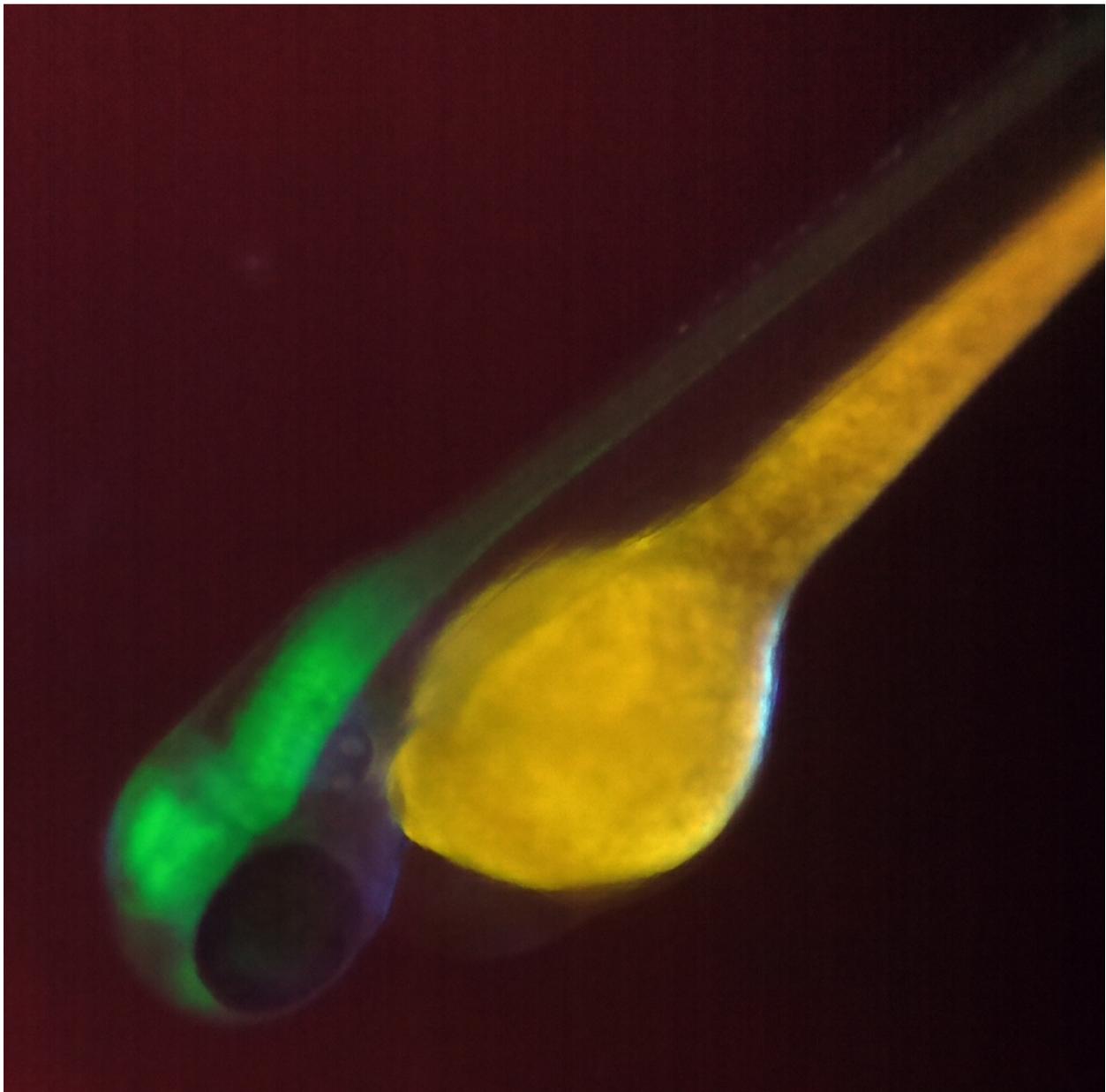
Version 1.0 was released with the paper and can be found [here](#).

The system can be used for optical microscopy, fluorescence, behavioural tracking, optogenetics, calcium imaging and thermogenetics.

Further development is being done by [Prometheus Science](#)

Some samples imaged with the device:

![[Fluorescence ZebraFish GFP expressed in heart tissue]
(example_samples/PLOS_Paper/Zebrafish heartbeat GFP.gif) |



| test2

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4 | 5 | 6

10 | 11 | 12

We've created a Forum for users to posts questions and suggestions too! Please take a look [here](#)

Custom PCB

You can order the PCBs and buy the parts to assemble them through the [Kitspace page](#).

Necessary Libraries:

LED Ring from Adafruit:

https://github.com/adafruit/Adafruit_NeoPixel

LED Matrix from Adafruit:

<https://github.com/adafruit/Adafruit-LED-Backpack-Library>

gpac library:

```
sudo apt-get update
```

```
sudo apt-get install gpac
```

libav library:

```
sudo apt-get update
```

```
sudo apt-get install libav-tools
```

update pyserial library:

```
sudo pip3 install --upgrade serial
```

***.h264 conversion to *.avi:**

is done via avconv (which is installed with libav-tools).

SD Card image containing Raspian image with all things installed:

<https://www.dropbox.com/sh/bibhy2sgadq30dm/AACD2Rdhmad2QdBi9q-pQfd6a?dl=0>