

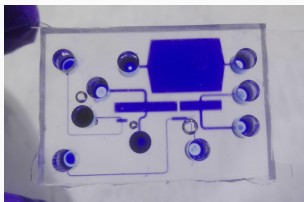
COMMENT LA RECHERCHE OPÉRATIONNELLE PEUT ELLE CRÉER DES CERVEAUX SUR PUCE

Luc Libralesso - GSCOP Days 2018

June 14, 2020

G-SCOP, 36 Avenue Félix Viallet

sous la supervision de THIBAUT HONEGGER, VINCENT JOST et FRÉDÉRIC MAFFRAY



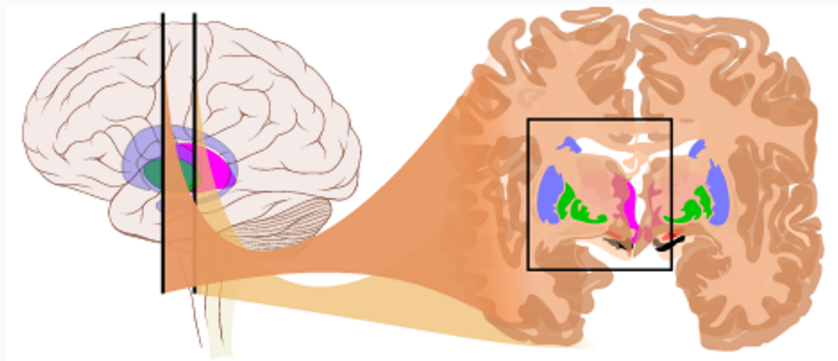
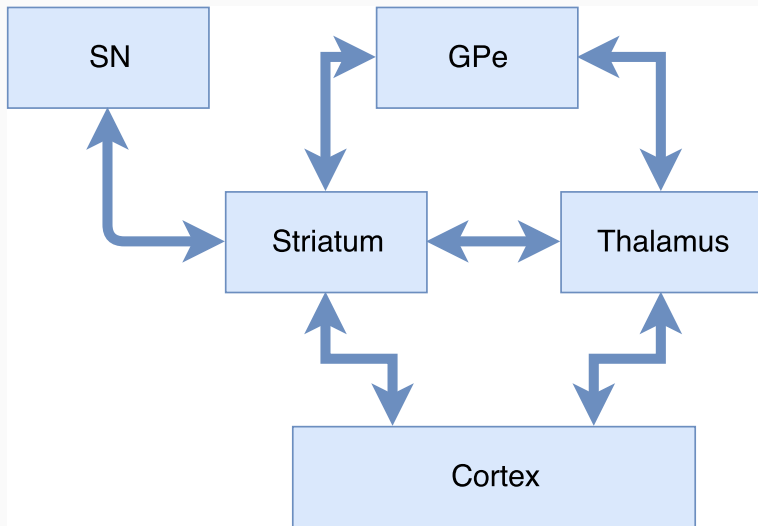


Figure: Position des ganglions de la base dans le cerveau

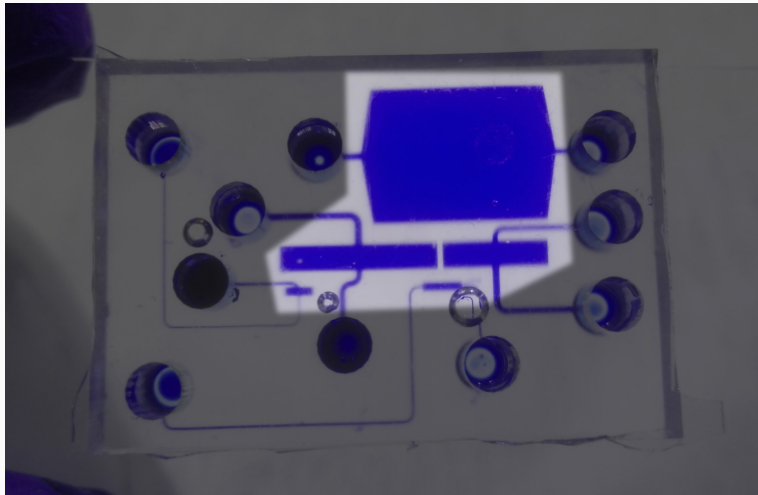
PATTERN À REPRODUIRE



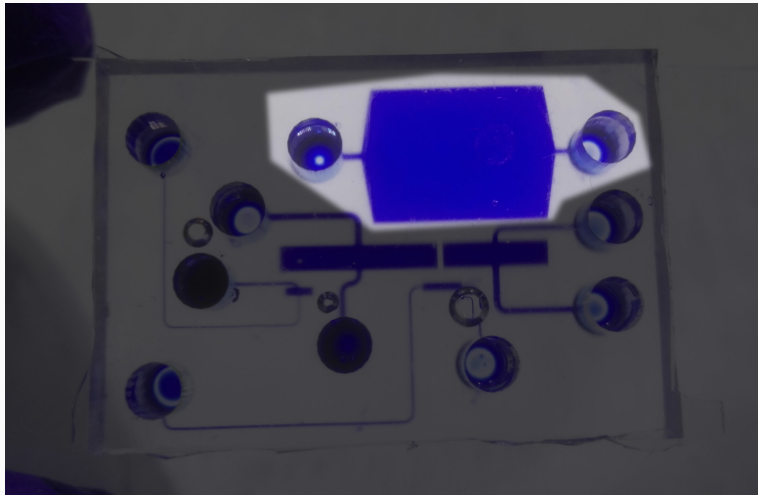
Permet de comparer plusieurs médicaments

Solution: Simulation in-vitro

PUCE MICROFLUIDIQUE (PARTIE FONCTIONNELLE)



PUCE MICROFLUIDIQUE (PARTIE CHARGEMENT)



SOLUTION TECHNIQUE (ÉTAPE 1/3)

chip width (mm): 31

chip height (mm): 21

Nodes

A

x

neurons: 10000

surface: 5

mm²

B

x

neurons: 5000

surface: 2

mm²

ADD

Channels

A -> B

x

connectivity: 2

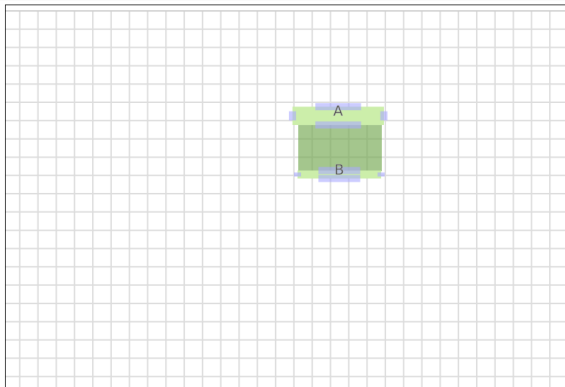
ideal length: 3

mm

width 4 mm

ADD

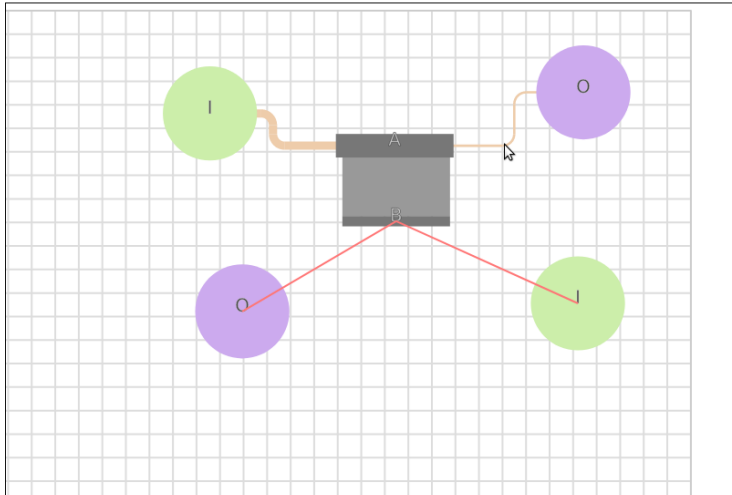
SOLUTION TECHNIQUE (ÉTAPE 2/3)



Channel scores

A-B: 2.49 mm (-0.51 mm)

SOLUTION TECHNIQUE (ÉTAPE 3/3)



☐ graph in

☐ graph out

☐ channel lines

[show IG instructions](#)

QUESTIONS?