



系統神經科學研究所 – 林郁婷老師實驗室

Institute of Systems Neuroscience – Dr. Yu-Ting Lin's Lab

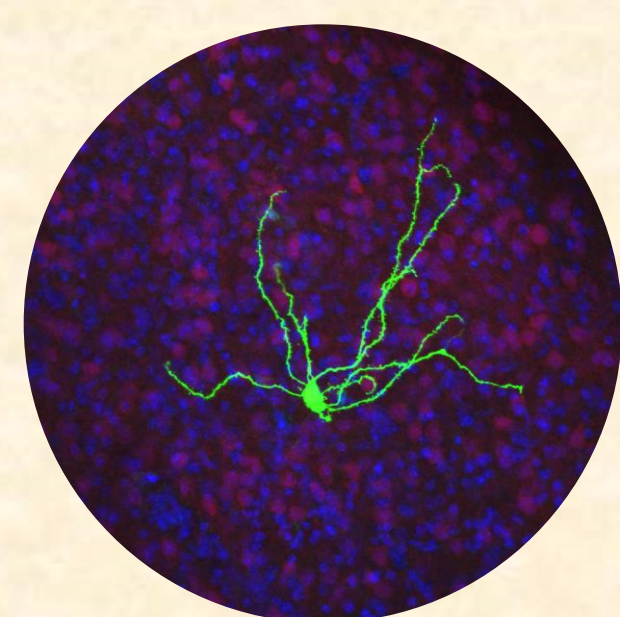
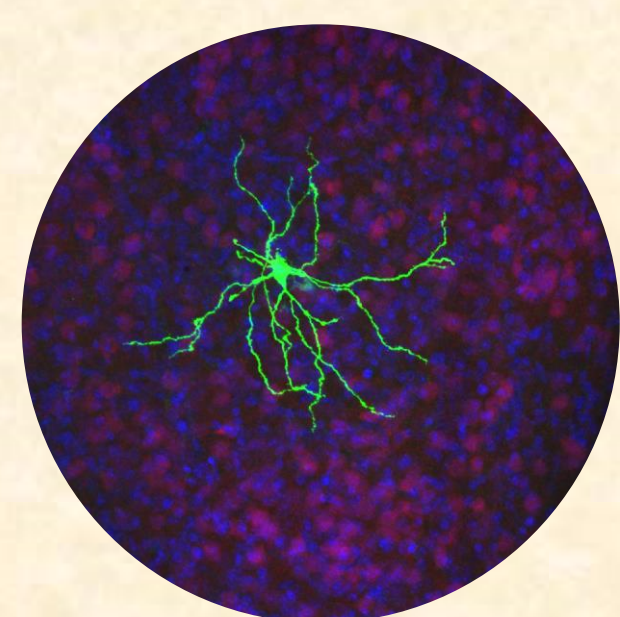
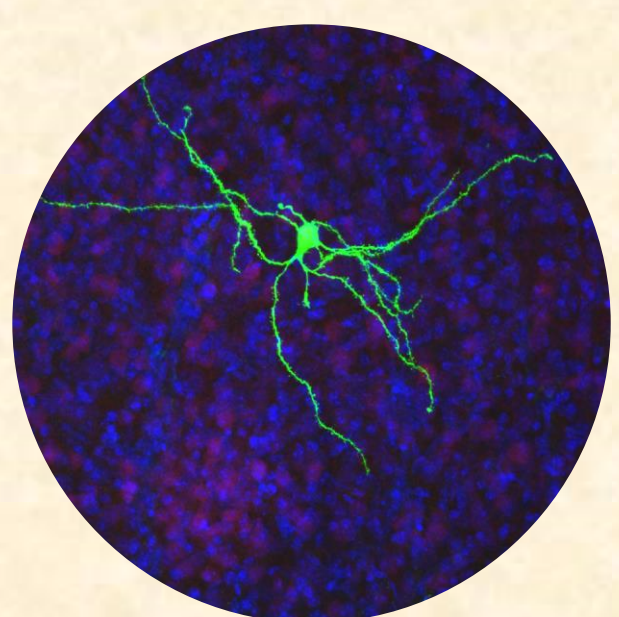
Research Focus

我們實驗室主要利用小鼠模式，探討與認知行為及酬賞行為相關之神經迴路的活性變化。

主要的實驗方法，包括：

- 神經電生理
- 動物組織學
- 光學影像分析
- 生物化學分析
- 動物行為

我們希望透過了解與動物神經心理相關疾病之分子機制與細胞內訊息傳遞路徑，可用於未來開發相關疾病之臨床治療方式。



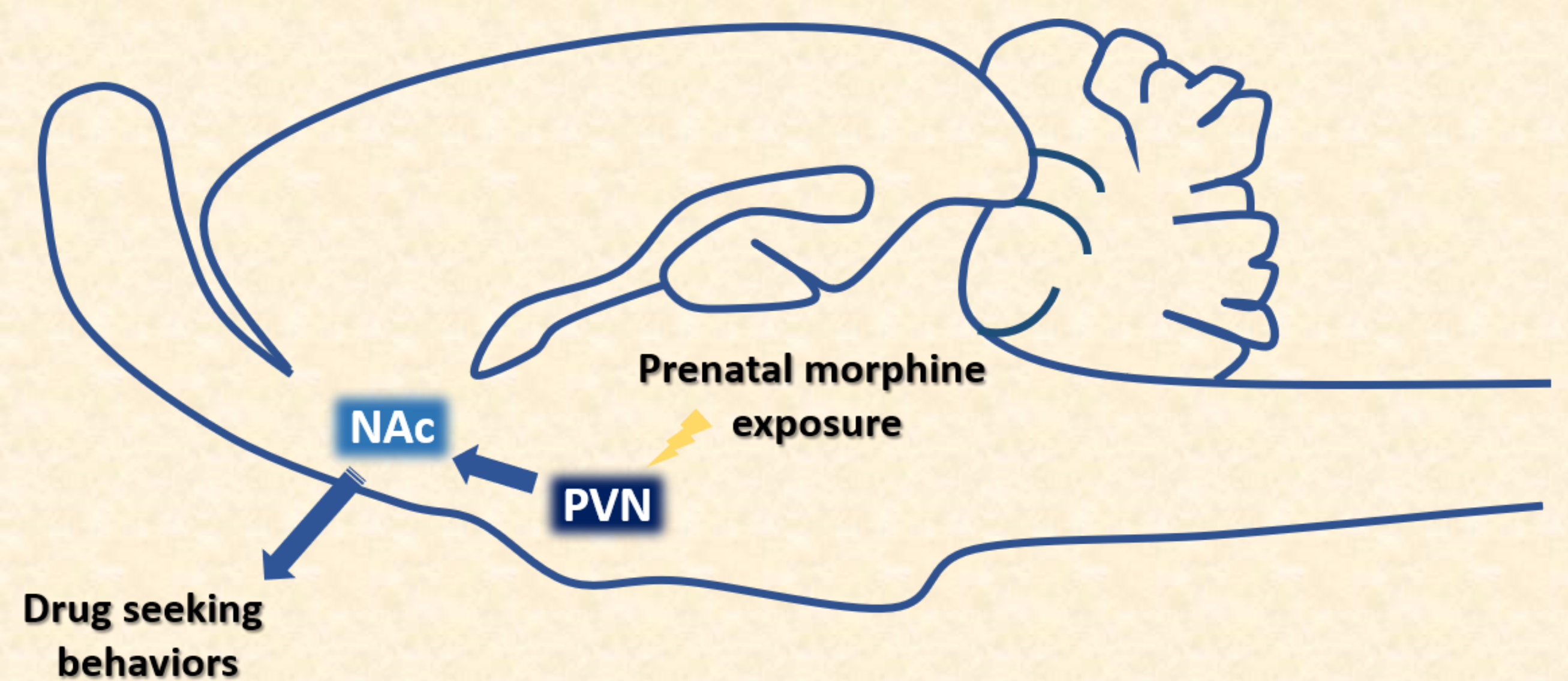
The main focus of our lab is to dissect the systemic neuronal circuits regulating cognitive function and motivation behaviors in the mouse model.

We are taking advantage of laboratory methods, including:

- Electrophysiology
- Histology
- Light microscopy
- Biochemistry
- Animal behaviors

With examining molecular mechanism and cellular signaling pathway, we hope to identify the underlying mechanism of neuropsychological disease and provide novel opportunities for the development of more effective intervention strategies.

Current Project



催產素目前已普遍被認為對於神經發育及心理疾病，具有正面影響之功能。我們將利用催產素促進神經發育的特性，探討其是否可用已改善孕期嗎啡類藥物，所造成異常之早期神經發育。已知，孕期鴉片類藥物使用，除了可能影響母體神經系統調節功能以外，亦會對未出生的子代產生未知的風險，包括可能增加其成年後藥物成癮行為的發生率。為了瞭解早期神經發育與成年時期藥物濫用行為的關連性，我們將著重於探伏隔核（酬賞迴路之一重要腦區）的神經發育。透過了解催產素對於早期神經發育的研究，將有助於了解藥物成癮的神經迴路機制，及用以開發更適用的臨床治療方法。

Oxytocin has emerged as a promising neuropeptide which is potential for treatments on the neurodevelopmental and psychiatric disorders. We will further identify its role in prenatal opioid exposure induced abnormal neurodevelopment. Opioid use during pregnancy may interfere maternal neuromodulation and present serious risks for the unborn babies which has been shown to enhance the likelihood of substance use disorder (SUD) in adulthood. To bridge the gap between early neurodevelopment and drug seeking behaviors, we will focus on the neurodevelopment in the nucleus accumbens (NAc). A better understanding the effects of oxytocin on the neuronal development may help to improve deeper insight of subsequent drug addiction disorders and be beneficial for the optimization of therapeutic strategies.

Principal Investigator



林郁婷博士 Dr. Yu-Ting Lin

[Email: ytlin@life.nthu.edu.tw](mailto:ytlin@life.nthu.edu.tw)

辦公室：生科二館212室

Office: Room 212, LS BLDG II

CONTACT US



Lab Website



國立清華大學
NATIONAL TSING HUA UNIVERSITY