

Confocal microscopy

Objectives:

Confocal laser scanning microscopy is a technique developed for obtaining high-resolution optical images. This technique is particularly useful to examine double or triple immunofluorescent labelling, developed for example to examine the distribution and localization of different molecules (receptors, peptides, enzymes, etc...) on same tissues.

Summarized methodology:

Fluorescent immunocytochemistry using antibodies against molecules of interest is performed on slices of tissue. Then, high-resolution optical images are acquired using confocal laser scanning microscopy which allows the analysis and quantification of the labelling.

Endpoints:

- localisation of molecules of interest
- number and percentage of double or triple labeled positive cells

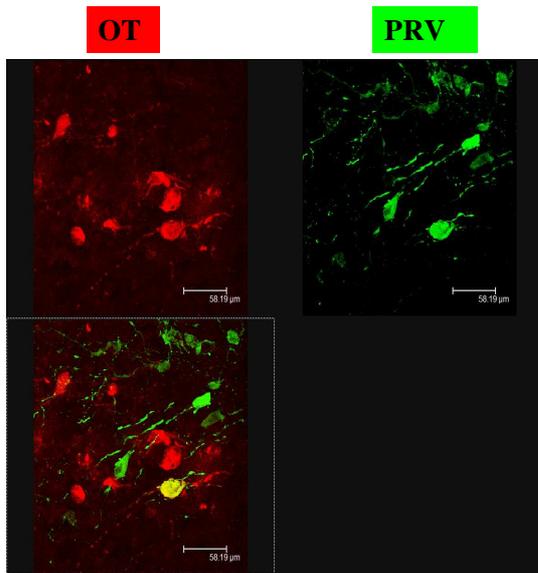


Figure 1: Double immunofluorescent labelling showing the brain neurons projecting to the vagina and the clitoris (evidenced by the retrograde tracer PRV injected in these organs) and expressing oxytocin (OT). (From Gelez, H. et al. *ESSM/ISSM conference*; 2008).

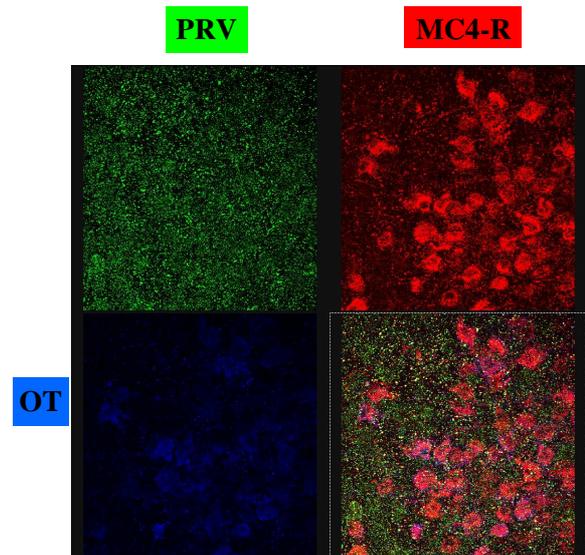


Figure 2: Triple immunofluorescent labelling showing the brain neurons projecting to the vagina and the clitoris (evidenced by the retrograde tracer PRV injected in these organs) and expressing oxytocin (OT) and the melanocortin-4 receptor (MC4-R). (From Gelez, H. et al. *ESSM/ISSM conference*; 2008).

(cf. [Links to applicable experimental skills : Neuro-anatomical tracing techniques](#))

Related Pelvipharm bibliography:

- Gelez, H et al. *J Sex Med* (2010) : 7(6):2056-2067
- Gelez, H. et al. *Oral presentation at ESSM/ISSM conference*, Bruxelles (2008).

Links to applicable therapeutic areas / targeted disorders:

- **Sexual pharmacology**
 - * ED (Erectile Dysfunction)
 - * Ejaculatory Disorders
 - * FSD (Female Sexual Dysfunction)
- **Lower urinary tract**
 - * BPH (Benign prostatic Hyperplasia)
 - * SUI (Stress Urinary Incontinence)
 - * SCI (Spinal Cord Injury)
 - * NDO (Neurogenic Detrusor Overactivity)
 - * OAB (Overactive Bladder)
 - * IC (Interstitial Cystitis)
- **Cardiovascular and metabolism pharmacology**
 - * Hypertension
 - * Metabolic syndrome
 - * Atherosclerosis
 - * Diabetes Mellitus
 - * Myocardial infarction