Laser Doppler Flowmetry (rat/guinea pig/rabbit)

**Objectives:**

Laser Doppler Flowmetry (LDF) is established as an effective and reliable method for the measurement of blood perfusion in the microcirculation. This method allows the demonstration of the effect of a compound on bladder regional blood flow without affecting the integrity of the tissue.

**Summarized methodology:**

Bladder regional blood flow is measured in anesthetized animals as described in figure 1. The carotid artery and bladder are catheterized to record blood pressure (BP) and vesical pressure respectively. The jugular vein is catheterized to allow intravenous injections. A Laser Doppler flow probe is placed in contact with the bladder wall in view of establishing measurements of regional blood flow.

**Endpoints:**

- Bladder Blood flow (4-6 sites per measurement) evaluated in empty and filled bladder
- Concomitant Blood pressure and vesical pressure recording

Since this method does not affect the integrity of the bladder tissue, it could be envisaged to evaluate bladder contractility by performing cystometry experiments following the evaluation of Bladder blood flow

**NB:** Pelvipharm will gladly study the feasibility of evaluating regional tissue blood flow in other organs to meet its client's need.

**Related Pelvipharm bibliography:**

Non disclosable for confidentiality reasons

**Links to applicable therapeutic areas / targeted disorders:**

- Lower urinary tract
  - BPH (Benign prostatic Hyperplasia)
  - SCI (Spinal Cord Injury)
  - NDO (Neurogenic Detrusor Overactivity)
  - OAB (Overactive Bladder)