

**Project title:** Comparison Protocol for Human Semen Samples: SQA-V versus Microscopic Assessment

### **Research summary**

Semen analysis constitutes the initial and most essential step in the evaluation of male infertility. It is the foundation of the laboratory evaluation and is the first level diagnostic investigation of a couple. Both manual and automated semen analyzers are available for performing routine semen analysis. The three main semen characteristics examined are: sperm concentration ( $\times 10^6/\text{mL}$  of the ejaculate), sperm motility (percentage) and sperm morphology (percent normal forms) according to World Health Organization (WHO) guidelines (WHO, 1999). Strict quality control is important for a meaningful interpretation of the results. Both the accuracy and the efficiency of the individual performing these evaluations as well as the ease of use of the instrument are critical.

Most automated semen analyzers such as the computer assisted semen analysis are expensive and require additional software to be installed at additional cost. The SQA-V (semen analyzer) is an analytical medical device that combines electro-optics, computer algorithms and video microscopy to perform a complete quantitative evaluation of semen variables. The ease of the instrument is that it has the capability to calculate sperm morphology based on motility.

The objective of our study is to compare the results of semen analysis obtained by the instrument with those of an experienced observer for reproducibility of the 3 semen characteristics being examined (sperm concentration, motility and normal morphology). In addition, we will evaluate the efficiency and the sensitivity of this instrument as an alternative to the more expensive automated semen analyzers.