# MONITORING FOLLICULAR FLUID FLOW USING IMAGE PROCESSING

## TECHNICAL FIELD

**[0001]** The present subject matter relates, in general, to follicular fluid flow monitoring and, in particular but not exclusively, to monitor follicular fluid flow using image processing.

## BACKGROUND

**[0002]** Invitro Fertilization (IVF) is a process of fertilization where male and female gametes are collected outside the body and are mixed together to allow fertilization in vitro (in a dish). The IVF process involves removing an ovum or ova from a woman's ovaries and letting sperm fertilize the removed ovum or ova in a liquid medium in a laboratory. During the IVF process, the woman's ovaries are stimulated to form multiple follicles. These follicles are randomly distributed inside the ovary or may be on the surface of the ovary. Further, each follicle contains follicular fluid carrying an ovum.

## SUMMARY

**[0002a]** In one aspect, the present disclosure refers to a method comprising: obtaining, in real-time, image frames pertaining to a pre-defined target area defined on a collection tube during an ovum pick-up (OPU) step of an in-vitro fertilization (IVF) procedure, wherein the target area corresponds to a region indicating entry of a follicular fluid into the collection tube; processing the image frames to detect occurrence of a flow of the follicular fluid; and upon detection of the occurrence of the flow of the follicular fluid, generating a first alert signal to notify a medical practitioner.

**[0002b]** In another aspect, the present disclosure refers to a system (100) comprising: a camera (100) to capture image frames; a processing engine (120), coupled to the camera (102), to obtain, in real-time, the image frames pertaining to a pre-defined target area defined for a collection tube during an ovum pick-up (OPU) step of an in-vitro fertilization (IVF) procedure, wherein the target area corresponds to a region indicating entry of a follicular fluid into the collection tube; and process the image frames to detect occurrence of a flow of the follicular fluid; and a notification engine (122) to generate a first alert signal to notify a medical practitioner, upon detection of occurrence of the flow of the follicular fluid.

## BRIEF DESCRIPTION OF DRAWINGS

**[0003]** The detailed description is provided with reference to the accompanying figures. It should be noted that the description and the figures are merely examples of the present subject matter and are not meant to represent the subject matter itself.

**[0004]** FIG. 1 schematically illustrates a block diagram of a system for monitoring follicular fluid flow, according to an example implementation of the present subject matter;

**[0005]** FIGS. 2A depicts a pre-defined target area on a collection tube for monitoring follicular fluid flow, according to an example implementation of the present subject matter;