

# Speculum-Free Diagnostic Probe for Optical Assessment of the Cervix

## Summary

A new approach for obtaining less invasive optical measurements of the cervix has been developed that does not require the use of a speculum exam. This technology can visualize the cervix in vivo to find unique biomarkers that indicate various conditions such as preterm labor, cancer, human papillomavirus (HPV), and dysplasia.

## Addressed Need

- ◇ Optical information collection from the cervix in vivo can show changes in the cervix during pregnancy, as well as other conditions such as cancer, HPV, and dysplasia
- ◇ This technology eliminates the use of a speculum to measure optical signals from the cervix in vivo, thus reducing the invasiveness of the procedure and patient discomfort
- ◇ Greatly simplifies use of optical technologies in the clinic

## Technology Description

In order to analyze the changes of the cervix in vivo, especially for high risk patients during pregnancy, a minimally-invasive approach is required. Using this technology, an optical probe can spectrally analyze the cervix without a speculum exam, resulting in minimal disruption to the tissue or the patient. The optical instruments can be used to identify unique biomarkers that would alert the physicians to various medical conditions.

## Unique Features

- ◇ Speculum-free access to the cervix for optical assessment of biomarkers
- ◇ Data processing and analysis for optical detection of preterm labor, cancer, HPV, and/or dysplasia
- ◇ Integration of multiple optical assessment protocols into a single device

## Intellectual Property Status

- ◇ Patent application has been filed

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