

Media Release, 12 March 2008

10<sup>th</sup> World Congress on Endometriosis, Melbourne March 11-14

## Protein signature of endometriosis provides hope of new diagnostic tool

Australian scientists have developed a pathfinding technique that may lead to new diagnostic tools and treatment programs for the one in ten women with endometriosis.

Researchers at Prince Henry's Institute in Melbourne, in collaboration with Monash IVF, have studied the structure of proteins in endometrial tissue to identify new biological markers of the disease, which can cause infertility in about 30 per cent of cases.

The research is being presented at the World Congress of Endometriosis at the Melbourne Convention Centre.

Dr Andrew Stephens, a Senior Research Officer at Prince Henry's Institute, said the study involved a comparison of proteins in the endometrium, or membrane lining the uterus, of women with endometriosis and other healthy subjects.

Using an analytical technique known as mass spectrometry, the researchers identified 60 proteins that were expressed at lower levels in the endometrial tissue.

"By contrast, only 10 proteins demonstrated increased expression," Dr Stephens said.

"Proteins are vital components of living organisms, and our interest is in why they appear to be biologically modified in the tissue of women with endometriosis.

"To date, we have been able to use the study of proteins to develop a disease signature for endometriosis.

"Our research focus is on identifying the proteins that are expressed in different levels and to establish their involvement in endometriosis.

Media Release

“The research is at an early stage, but it does provide encouragement that it may enable the development of new diagnostic tools, or even better therapeutic approaches to the disease.”

The research is supported by the Australian national Health and Medical Research Council and by Bayer Schering Pharma AG.

Endometriosis is a disease where tissue, similar to the lining of the uterus, is found in other parts of the body, usually the abdominal cavity. It causes acute pain:

- in the abdominal area, back or pelvis;
- immediately before and during the monthly period;
- during and after sexual intercourse;
- when opening bowels or having a full bladder.

Dr Luk Rombauts, a member of the Australian Gynaecological Endoscopy Society and the clinical coordinator on the study at Monash IVF, said there was currently little certainty about the cause of the condition, and no known cure.

However, it can be managed primarily through surgery, but also through pain medication, hormonal treatment, or a combination of each treatment.

The internal damage caused over time by endometriosis can lead to infertility. When surgery cannot restore the anatomy, a patient may need to be referred to an IVF clinic for fertility treatment.

**Further information contact Ian Muchamore, PHI Science Communications on 0415 551705**

Media Release