MEDIA RELEASE

New biomarkers show promise for new blood test for bowel cancer in Australia

**Friday November 2, 2012.** Health campaigns that reduce the impact of bowel cancer by identifying people at elevated risk look set to be revolutionised with a team of Australian scientists identifying new genes that show identifiable changes in the blood of people with bowel cancer.

An effective, reliable, affordable blood based test for bowel cancer has been the ultimate aim for many scientists working in molecular diagnostics around the world. It now seems that an Australian team has made a major advance in that regard.

The test - based on research1 presented to healthcare professionals earlier this year - is the result of over five years of scientific collaboration between Australian biotech company Clinical Genomics, CSIRO and the Flinders Centre for Innovation in Cancer at Flinders University in Adelaide.

The team identified a two gene combination called “Gemini” which was able to detect bowel cancer 76 per cent of the time with an accuracy of 93 per cent in normal patients. The two genes, BCAT1 and IKZF1, were discovered and validated in cancer tissue specimens before research moved to blood testing late last year. While the initial study reported on a group of 251 patients, a larger study of more than 2,500 patients is presently underway and will be complete in early 2013.

Dr Lawrence LaPointe, the Chief Executive Officer of Clinical Genomics, said the two gene Gemini panel has shown a promising detection rate for bowel cancer in studies while also demonstrating a low false positive rate in samples drawn from a high-risk population.

“These clinical results are the first step towards a commercial blood based test for bowel cancer,” said Dr LaPointe. “We look forward to seeing how this development can help improve the effectiveness of bowel cancer prevention programs in Australia.”

*Bowel Cancer Australia* chief executive Mr Julien Wiggins said that the current screening tool for bowel cancer in Australia is a FOB (Faecal Occult Blood) test which detects invisible blood in bowel movements.

“Another screening option for bowel cancer is an exciting development. We’d expect a routine blood test will appeal to many, providing a much needed boost to participation rates for bowel cancer screening.” said Mr Wiggins.

He says the test could potentially save thousands of lives and improve five year survival rates which languish at 66 per cent for bowel cancer. However, until a new blood based test is widely available, FOB tests remain a proven, simple and effective screening tool for bowel cancer.

Professor Graeme Young from Flinders University in Adelaide says that faecal tests are a genuine barrier to better uptake of bowel cancer screening. “Research conducted by Flinders University shows that people of screening age prefer the idea of a blood test to a
faecal test at a rate of 3 to 1,” said Professor Young.

According to Dr Trevor Lockett, leader of the Colorectal Cancer and Gut Health Theme in CSIRO’s preventative Health Flagship the discovery of these biomarkers is a fantastic demonstration of the strengths of multidisciplinary research.

"By combining CSIRO’s cutting edge technology and “knowhow” in genomics and epigenetics with internationally recognised thought leadership in gastroenterology and bowel cancer screening from Flinders University and the commercial perspective, discipline, focus and support of Clinical Genomics, we have been able to develop exciting technology with the potential to deliver translational health benefits for colorectal cancer both in Australia and worldwide," Dr Lockett said.

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For more information, a copy of the abstract, presentation or interviews please contact Lauren Sharkey (lauren@palin.com.au; +61 439 404 200) or George Anderson (george@palin.com.au; +61 404855758) at Palin Communications (612 9412 2255) in Chatswood, NSW Australia.

References: