

## Shareholder Newsletter

10 October 2013

### Dear Shareholder

Since joining Caldera, I have taken the opportunity to meet with a number of our shareholders. The purposed has been twofold, to introduce myself, and to add clarity to the strategic direction and priorities of our prostate cancer diagnostic programme.

I have also touched on the fact that by the nature of being a biotech early-stage company, Caldera continues to be reliant on the on-going shareholder funding to sustain its product development. Below I have provided an update in order that you remain current with our progress.

### New Staff

Dr Kristen Chalmet started work with Calder on October 2<sup>nd</sup> 2013 as Science Manager. Trained at the University of Ghent in Belgium, she worked there in the AIDS Reference Laboratory, Department of Clinical Biology, Microbiology and Immunology. From her AIDS research, Kristen brings valuable expertise in next generation sequencing and bioinformatics which is the backbone of our RBAS technology in our prostate cancer RNA biomarker programme.

After moving to New Zealand in 2011, Kristen worked as a Senior Analyst in Microbiology at Watercare in Auckland and developed modern techniques in water analysis before taking a job with us.

### Clinical Study 1

Our first Clinical Study, approved by an accredited Ethics Committee (Southern Health and Disability Ethics Committee), is progressing well. We are identifying RNA biomarkers in prostate cancer tissue and control healthy tissue. We do this by examining stored prostate tissue that has been removed from men by surgery, known as a prostatectomy. From each prostatectomy, tissues pieces have been fixed in formalin, and embedded in paraffin wax (paraffin blocks) in a histopathology laboratory. The tissue has been examined by a pathologist, who compiles a histology report that the patient and his doctor receive. The histopathology lab is then required by law to store the paraffin blocks for twenty years, in case a later review is required. The blocks have little other use, and most are discarded after twenty years, having never been re-used.

In Auckland and Hamilton we are working with urologists and medical oncologists to access patient's stored prostatectomy tissue blocks. First we obtain the consent of males who have had a prostatectomy to gain access to their stored paraffin blocks. Then, after donor consent is obtained, an expert histopathologist Dr Jonathan Zwi obtains each stored paraffin block, re-examines it and prepares thin slices from which we extract RNA. The blocks are returned to storage.

The objectives of this clinical study are twofold:

- To identify the Caldera biomarkers found in prostate tissue with known Gleason scores; and
- To build gene signatures that reflect the different Gleason scores

We are targeting completion of this study at the end of January 2014. By this time we aim to have examined 65 prostatectomy samples. We have increased our weekly throughput from one patient per week in August to 6 patients per week currently. Most of this is like refining Aotearoa in the Americas Cup – small changes in technique and learning to use our Miseq instrument for diagnostic purposes. Members of our scientific staff – Clare, Kay, Damian and Kristen are really advancing this technology.

After this study we will go on to the second study to see whether the gene signatures are also found in urine. From this we envisage developing a simple urine test for prostate cancer.

## Patents

We have been notified by the US Patent and Trademark Office that three of our patents have now been awarded to Caldera. These patents include those covering our ProscanZ and Auditor technology, and another describing a test aimed at determining whether a prostate cancer patient is likely to be responsive to particular drug treatments. This is a lengthy process as it has taken between 2 and 3 years from filing to award.

Two patent applications have been filed that cover our RNA biomarker technology. These applications have moved beyond the provisional stage and we expect to receive the first examination report before year end.

I trust this information is of value and I will continue to keep you updated. Please feel free to visit Calder to see the team at work.

Kind regards,

**Graham Watt**  
Managing Director  
Calder Health Limited

[www.calderahealth.com](http://www.calderahealth.com)