Giaconda Milestones

Mapping the path forward for Myoconda through the next round of fund raising

In February Giaconda announced the beginning of a new round of fundraising. This fundraising is intended to procure the necessary funds to complete the regulatory and clinical development program for bringing Myoconda® to market in both Europe and the USA.

Over the past months both Prof. Tom Borody and Patrick McLean have been working with advisors in the US and Australia and hope to complete the fundraising in Q2 2008. This is a major step in the evolution of Giaconda and is one that will secure the path to market for Myoconda®, for the treatment of MAP *(Mycobacterium avium paratuberculosis)* infection in Crohn's Disease, in key territories. It will also allow Giaconda to retain a significantly higher portion of the future revenue from product sales. As the CEO is fond of saying "the patient is waiting", and this marks an important milestone in the Company's dedication to bringing this therapy to those patients who desperately need it.

Myoconda® Update

In February Giaconda announced the clinical Phase I pilot study results for its lead product Myoconda®. This pilot pharmacokinetic study was designed to optimize the formulation of Myoconda® by combining its three components into a single capsule in a unique formulation and processing method. It was planned following discussions with the US Food and Drug Administration (FDA). The study was included as part of the IND (Investigational New Drug Application) that was approved by the FDA last year. It compared two different formulations that had been developed by one of Giaconda's experienced consultant groups.

The study design used 24 normal, healthy, non-smoking male and female subjects under a randomized, open-label, single-dose design. Consistent with the previously reported clinical studies, there were no significant or serious adverse events reported in either arm.

The important finding was that in the unique 'all-in-one' formulation the blood concentrations of rifabutin and clarithromycin were better for both components by improving both the side effect profile and potentially improving efficacy. Previous studies indicated that the use of these two agents in combination can elevate the levels of rifabutin in the blood, increasing the potential for side effects, and can reduce the levels of clarithromycin, thus potentially reducing the efficacy of this important active ingredient. The new formulation has improved both the pharmacokinetic availability of both ingredients and reduced the side effect potential, providing a novel and significant improvement on previous formulations. Prof. Borody filed a new patent application to protect the novel formulation technique for an additional 20 years.

The study demonstrated that the new single capsule formulation has a good safety profile and is an important step in the development of a solid safety and efficacy profile for Myoconda®. It reflects the resourceful and innovative support Giaconda has received from its formulation consultants.

The next step in the development program for Myoconda® will be the commencement of the Phase III clinical trial in Europe and planning for this is at an advanced stage.

Intellectual Property Update

In Maintenance of Giaconda's patent portfolio is a critical ingredient to the Company's success. In December Giaconda received notice that the patent for Heliconda® for the treatment of resistant Helicobacter pylori infection was granted by the Canadian Intellectual Property Office. This patent is part of a wider PCT application (priority date 30 April 1998) that has already been granted in Australia, Europe, and the United States.

The issued patent covers the use of the unique combination of three compounds: rifabutin, amoxicillin and a stomach acid suppressant known as a proton pump inhibitor and will be valid in Canada until 2019. This represents another step in securing Giaconda's intellectual property in key territories and extends coverage for Heliconda® in the Company's target markets.

centre for digestive diseases

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Prof. Tom Borody
Archibald Entry

Professor Tom Borody this year joined the ranks of many famous Australians as the subject of (artist's name's) 2008 Archibald Prize entry, in this much celebrated exhibition of portraiture. Tom is proud to be hung as part of the exhibition at the Art Gallery of NSW.

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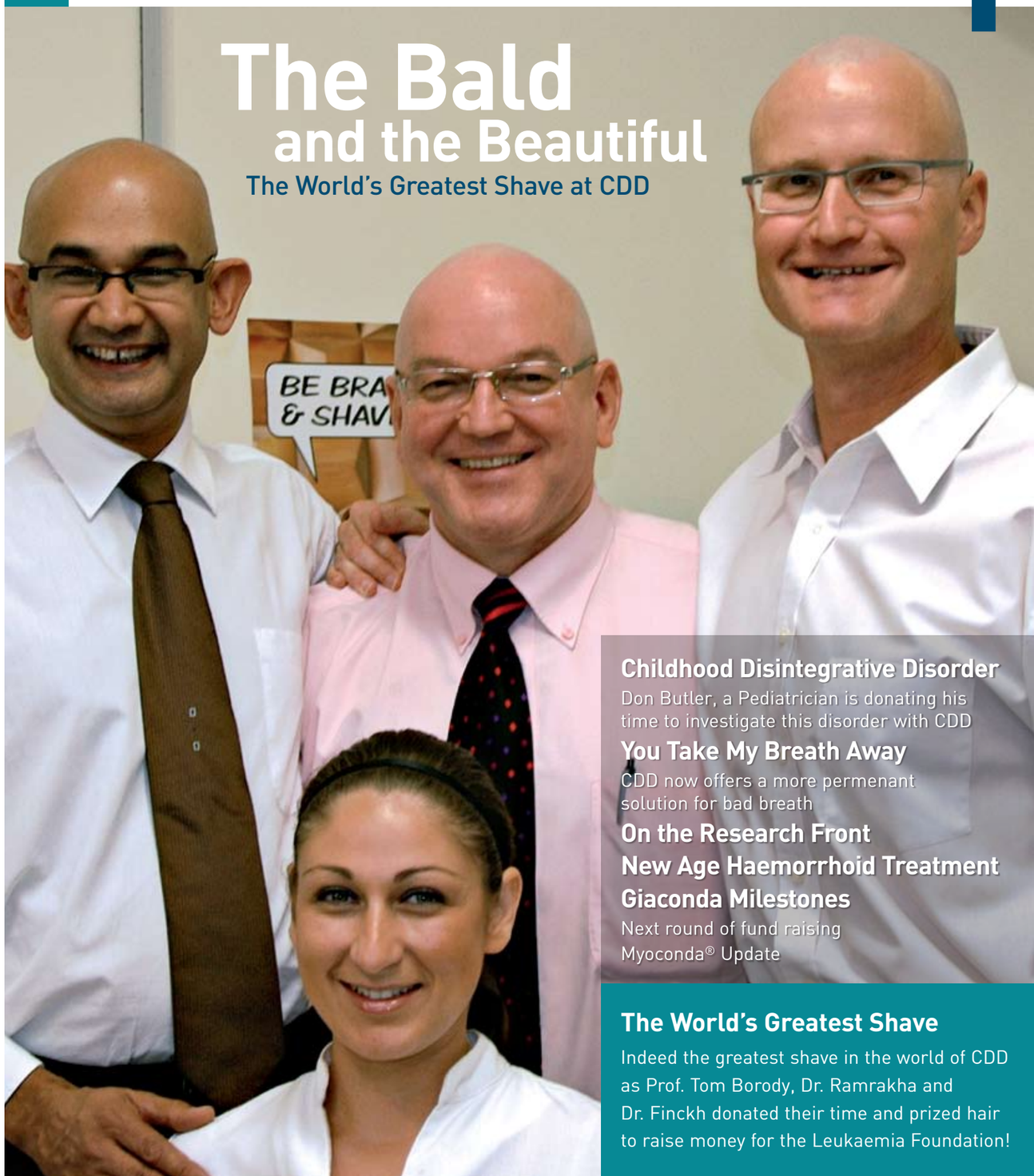


The Bald and the Beautiful

The World's Greatest Shave at CDD

Childhood Disintegrative Disorder
Don Butler, a Pediatrician is donating his time to investigate this disorder with CDD

You Take My Breath Away
CDD now offers a more permenant solution for bad breath

On the Research Front

New Age Haemorrhoid Treatment

Giaconda Milestones
Next round of fund raising
Myoconda® Update

The World's Greatest Shave

Indeed the greatest shave in the world of CDD as Prof. Tom Borody, Dr. Ramrakha and Dr. Finckh donated their time and prized hair to raise money for the Leukaemia Foundation!

Digestive Illnesses
and Childhood Developmental Disorders

In association with paediatrician Dr Donald Butler CDD is interested in exploring the suggested link between digestive illnesses and childhood development disorders, including Autism.

While there are many theories as to the cause of these disorders, they are a varied group of conditions with both hereditary and environmental factors. Some children have symptoms that suggest inflammation of the gut is a contributing or primary cause of the disorder. This inflammation may be due to allergy, an infectious agent or an environmental toxin.

While many children benefit from a strict elimination diet, it does not explain why the disorder initially developed. There are children who develop normally for one to three years and then have a severe personality change, usually with a regression of their milestones such as eye contact, language, social awareness and motor skills. Often this change is accompanied with gastrointestinal symptoms, such as food intolerance, diarrhoea and abdominal pain.

some children have symptoms that suggest inflammation of the gut

Dr Butler is interested in seeing how frequently there is an association between the personality changes and the development of gastrointestinal symptoms. He is studying whether there are features that may suggest a cause in some patients, particularly a digestive illness and whether this fits in with the symptoms the children are displaying.

If you have a child who has both these changes and are interested in participating in research into this area please ring the CDD Research Department on 9713 4011 (prompt #3).

Please note that this is research and the CDD is not offering treatment at this time, but may in the future. We are investigating to determine if there is evidence to support some of the theories as to why some children have gastrointestinal symptoms and impaired brain development.

DR. Donald Butler MBBS FRACP Paediatrician

Dr. Butler graduated from the UNSW in 1973 and undertook Paediatric training at POWCH Randwick and Camperdown Children's Hospital. He was a senior lecturer in Paediatrics at The Westmead Hospital helping to establish that unit. Clinical interest at that time was in paediatric health education and the "new morbidities" of behavioural conditions and their impact on health. Dr. Butler is now a general paediatrician with an interest in behavioural paediatrics.

Dr Donald Butler
MBBS FRACP

On the Research Front

The Department of Research and Innovation and the CDD physicians submitted abstracts for publication on research work completed in 2007. Three abstracts have been accepted for publication AND for presentation at the upcoming international conference called Digestive Disease Week (DDW) held in San Diego this coming May! Congratulations to all involved!

Abstracts to be presented at DDW include; the results of the Heliprobe™ and Twinguard™ studies we reported on in the December edition of 'The Inside Story', and an observational report on the aggravation of symptoms in patients with active Crohn's disease when infected with the gastrointestinal parasite *Clostridium difficile*.

Back in 2004, CDD conducted a clinical trial assessing the two marketed bowel preparations used for cleansing the bowel prior to colonoscopy. These were compared with a capsule version of a preparation, and the capsule with a salt solution. It was aimed at determining if a preparation in capsule form would be more palatable and if drinking a salt solution at the same time would improve patient compliance and reduce side effects. This study found that patients prefer to take the preparation in capsule form, rather than drinking 2-3L of preparation. In addition, the salt solution was found to reduce the side effects reported by patients, although its taste was not pleasant. From this study considerable time and effort has been spent in improving the delivery of the preparation and salt components. CDD is now in the process of assessing a new capsule in clinical practice, in anticipation of commencing a formal clinical trial in the near future. This new capsule can be made available to patients undergoing colonoscopy at CDD if they have previously undergone such a procedure.

We need more Hepatitis C (genotype 1) patient volunteers for the HREC* approved Hepaconda® trial! Patients must have received and failed to respond, or relapsed after, previous treatment with pegylated-interferon/Ribavirin combination therapy. Hepaconda® is for the treatment of chronic Hepatitis C (genotype 1) infections. The trial is ongoing with several patients having completed active treatment. Hepaconda® has a 3-step treatment method; reduce viral copies, eliminate liver stress, and protect the liver by allowing the growth of new liver cells. Thank you to Dr Simon Benstock, our resident gastroenterologist and hepatologist for his valued contribution to this project.

If you would like more information or to register your interest in any clinical trial please contact CDD on 02 9713 4011 and press '3' for Research or email clinical_trials@cdd.com.au. For a list of clinical trials currently recruiting at CDD please keep an eye on the Research page of the CDD website http://www.cdd.com.au/html/expertise/research.html

*The Human Research Ethics Committee is an independent committee that reviews all clinical trials under consideration to be conducted at CDD. Without their approval a clinical trial cannot be conducted at CDD. For more information on the CDD HREC, please go to the Research page of the CDD website and follow the links. **The committee is currently seeking a volunteer for the position of "Minister of Religion".** If you are interested or would like more information please email the committee Secretary on secretary_hrec@cdd.com.au.

You Take My Breath Away

Halitosis, or bad breath, can be a chronic problem for some people, greatly impacting on their social and professional life. Standard dental treatments and mouthwashes often provide only temporary relief but a more permanent solution is possible at the Centre for Digestive Diseases.

Whilst all causes of halitosis are currently unknown, volatile sulphide compounds (VSCs) specifically hydrogen sulphide, methyl mercaptan and dimethyl sulphide have been implicated. Sulphite-reducing bacteria in the colon produce these VSCs, which may be re-absorbed from the colon and expired in the breath. The Halimeter® test is a 10 minute test which can detect VSCs in the mouth air, determining the levels of VSC-producing bacteria in the colon.

In conjunction with Prof Terry Bolin who developed the technology, Prof Tom Borody has recently begun treating patients suffering from halitosis by using the bactericidal treatment Bismuth subsalicylate - widely used in the U.S. to treat various gastrointestinal diseases. Patients are given tablets of bismuth subsalicylate to take daily and are asked to return every 4 weeks for a Halimeter® test to monitor their progress. Since it is not absorbed by the body, side effects of the treatment are minimal.

To date eight patients are being treated. Two patients cured their halitosis and have normal Halimeter® readings after three months of treatment. Both have since ceased treatment with no return of halitosis after two months follow-up. The remaining six patients are currently undergoing treatment; have so far reported a significant improvement in their halitosis; and their Halimeter® readings have greatly decreased.

New Age Haemorrhoid Treatment

Haemorrhoids (commonly known as 'piles') are one of the most common human ailments, affecting more than half the population over the age of 30 years. They are engorged and swollen veins which arise beneath the lining of the upper anal canal. Initially the major symptom is painless bleeding from rupture of these fragile vessels but as they grow larger and stretch the overlying tissue, they can protrude during bowel movements which leads to discomfort, aching, seepage and itch.

What causes haemorrhoids?

An exact cause is unknown, however, the upright posture of humans alone forces a great deal of pressure on the rectal veins, which sometimes causes them to bulge. Other contributing factors include aging, chronic constipation or diarrhoea, pregnancy, straining during bowel movements, faulty bowel function due to overuse of laxatives and spending long periods of time (eg. reading) on the toilet.

There is no relationship between haemorrhoids and cancer. However, the symptoms of haemorrhoids, particularly bleeding, are similar to those of colorectal cancer and other diseases of the digestive system. Therefore it is important that a proper bowel examination is performed.

How are haemorrhoids treated?

Mild symptoms can frequently be relieved by increasing the amount of fibre (fruits, vegetables, breads and cereals) and fluid in the diet. Eliminating excessive straining reduces the pressure on haemorrhoids and helps prevent them from protruding.

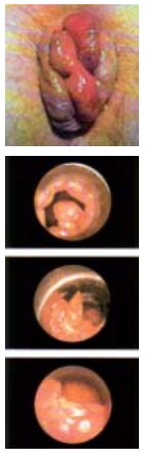
But persistent haemorrhoids require special treatment. These can be performed on an outpatient basis here at the Centre for Digestive Diseases:

• Infra-red coagulation is be used for bleeding haemorrhoids that do not protrude. This is performed under sedation through a proctoscope (an instrument used to inspect the anal canal.) The abnormal blood vessels are ablated, causing the haemorrhoid to shrivel up. There is little post-procedure discomfort.

• Rubber band Ligation is used for larger haemorrhoids, particularly those which protrude with bowel movements. Using the protoscope, a small band is placed over the haemorrhoid, cutting off its blood supply. The haemorrhoid is grabbed through the proctoscope and the bands are advanced over the haemorrhoid to secure the base; the haemorrhoid and the band fall off after several days and the wound usually heals in a week or two. This procedure can be followed by discomfort and sometimes minor bleeding. The patient is asked to return in six weeks as sometimes the procedure needs to be repeated to eliminate multiple and large haemorrhoids.

• Surgical haemorrhoidectomy is now only infrequently required when there is too much external protruding tissue to be dealt with by rubber band ligation.

Thank you to all patients who have participated in any of our trials/ clinical observations. Without your positive attitude and help, such new innovative treatments and tests may never have eventuated!



This shows the haemorrhoid immediately after banding, then at three days and then at seven days.

your team

- Prof Thomas Borody is the founder and Medical Director of CDD (1984). He graduated with honours in Medicine from the UNSW. He is a Fellow of the Royal Australian Society of Physicians, Fellow of American College of Gastroenterology and Fellow of American College of Physicians.
- Dr Andrew Finckh is a senior staff specialist at St Vincent's Hospital, Sydney. He holds degrees in both Bachelor of Arts from Macquarie University and Medicine from the University of Sydney. He is a fellow of the Australasian College for Emergency Medicine.
- Dr Sanjay Ramrakha is a staff specialist at RPA and Liverpool Hospitals. He graduated from UNSW in 1986 and is a fellow of the Royal College of General Practitioners and the Australasian College for Emergency Medicine.
- Dr John Saxon graduated from the University of NSW in 1985 and has been the Senior Sedationist at CDD since 1995, with some 10,000 patients to date.
- Dr Antony Wettstein is a graduate with Honours from the University of NSW. He is a Fellow of the Royal Australian Society of Physicians.
- Dr Simon Benstock is a graduate in Medicine from the University of NSW. He is a Fellow of the Royal Australian Society of Physicians
- Dr Ori Ashman is a Registered Psychologist in NSW and holds dual Masters and PhD degrees in Human Development.
- Dr Warwick Adams became a Fellow of the Royal Australian College of Surgeons in 1989. He completed his Master of Surgery Degree in 1995. He has been a specialist consultant in Colorectal Surgery since 1995.
- Dr Nisha Kendall graduated from UNSW and became a Fellow of the Royal Australasian College of General Practioners in 1997.

your say

We would love to hear from you about your experiences from CDD. Please send your comments to info@cdd.com.au.

Selected experiences will be published in the next issue.