

Mende Biotech.

TOTAROL™



Ancient Maori custom demanded that when a totara tree was felled for timber a young seedling had to be planted in its place in order to appease Tane, the god of the forest, for removing one of his 'children'

Totarol™ – not run of the mill.

Entry for the 2016 Gold Awards, Global Gold category.



The mighty Totara is one of the largest trees in New Zealand forest. Prized by Maori for the remarkable qualities of its timber - the wood could be readily split and shaped and was highly resistant to rot, those same properties made it a valuable timber to the first European settlers. And now, what makes totara timber so strong, durable and impervious to rot has been extracted and refined - Mende Biotech is the first company in the world to develop, commercialise and trademark Totarol™.

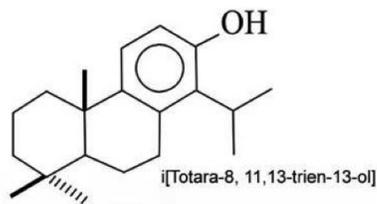
**Totarol™ can only be manufactured in New Zealand and Mende
Biotech has the only patent**

Mende Biotech Ltd, operating from Carterton, was established in 1999 to research and develop the manufacture of Totarol™. Doug Mende is Managing Director and Chairman, with overall responsibility for the running and development of the company. Director Reinhard Hueber is responsible for International Marketing. The company is committed to research and development of natural, active compounds based on New Zealand's native flora with its unique ecological history and isolation.

“There is a wealth of natural raw materials with special characteristics to be found in this country and combined with the use of the most modern supercritical extraction facility in the southern hemisphere, we are well equipped to meet the demands of the industry and supply ingredients based on nature's resources. It also provides us with a combination of potent, unique products with full traceability and assured integrity, which allow us to commit to the long-term strategies of our customers.” Doug Mende



Today, following over 17 years of extensive bio-medical science R&D and rigorous product and process testing, Totarol™ has wide spread application across the cosmeceutical and dental sectors, and is making big extensive developments in the animal health areas particularly Bovine and pet markets to the human medical advances in replacement antibiotics that are also being very effective against super bugs. Totarol™ is an effective antibiotic replacement.



Speaking clinically, Totarol™ is a naturally occurring plant extract with potent anti-bacterial activity in both, gram positive and gram negative bacteria. Totarol™ has also potent anti-oxidant

properties. Totarol™ is active against acne and tooth decay bacteria, and is one of the rare phytochemicals active against penicillin and methicillin resistant strains of Staphylococcus aureus.

Sold predominantly in powder form, Totarol™ fetches between \$1350 and \$1700 a kilogram on the market. But as the amount needed to give health and beauty products a strong boost of health giving properties is minuscule – around 0.2% into formula - a little bit of Totarol™ goes a VERY long way. The company has also developed a liquid formulation for customers who require the ingredient for water soluble product ranges but Totarol™ powder is still the preferred option for customers.

“In the end because the product is just so incredibly active, it is reasonably cost effective and, of course, a valid alternative to the nasties used at the moment.” Reinhard Hueber

Totarol’s naturally occurring preservative qualities make it a perfect organic alternative to chemical, synthetic preservatives, commonly loaded into everyday cosmetic and health products marked as “natural” yet which are potentially hazardous to health.

2015 – a very good year:

Mende Biotech is a fine example of a Kiwi company riding the wave of the increasingly lucrative and growing natural health sector, while slowly but surely growing a high profit potential company – Pure Advantage, February 2016

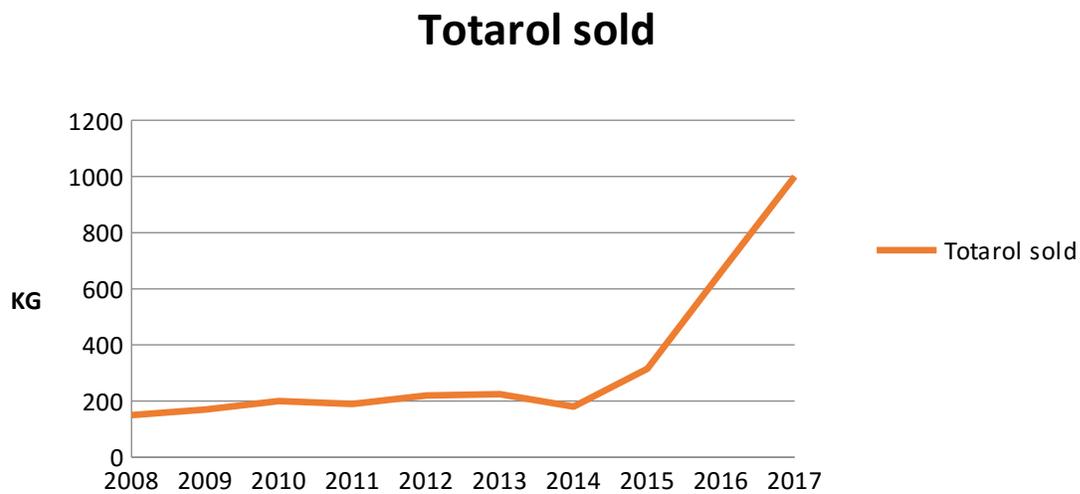


L'Oréal is one of the company's biggest customers and other premium global cosmetic manufacturers specialising in natural botanical-based personal care and cosmetics in the US, France and Australia are among Mende Biotech's steadily growing customer base.

More locally, New Zealand's own Red Seal, Snowberry, Living Nature and Ozospa, a new player on the block, are transforming the global personal care and oral care sector with Totarol's natural and holistic alternatives across their respective natural product ranges.

And thanks to growing global market demand for organic and natural alternatives to chemical ingredients and extraction methods, interest in Totarol™ is steadily on the rise. For 2016 sales forecasts for Totarol™ rose 130 per cent due to increased demand, and for the first time oral care will overtake cosmetics as the biggest use for Totarol. Mende Biotech has a sizeable number of international companies, examining Totarol™, including one of Korea's leading cosmetic manufacturers who are presently in the testing process.

The figures:



The lengthy lead in is due to the huge cost in time and money getting registrations and safety, toxicity, efficacy and proof of concept work completed for product investment to be made. This is now all done, and this is the difference in high growth. We expect having an 80% export market by 2018.

The figures show only the sales of Totarol™ in its ingredient form. None of this this accounts for potential finished product, like wound treatments, pet sprays, mastitis treatments etc.

2016 – looking even better

With momentum gaining on the international stage, the company is now looking at new ways of using Totarol™ to shake up the animal health industry – another huge market starving for natural alternatives backed by world first science and technology.

Reports by Animal Health Global Analysis indicate the animal health sector in 2014 alone had a valuation of US\$ 32.08 billion and by 2020 this is projected to reach US\$ 43 billion.

Seeing this potential value, the company is currently busy undertaking significant new research in the animal health sector and is partnering with Masterton based veterinary organisations and surgeons to develop a range of Totarol™ based animal products to treat mastitis and metritis infections in cattle.

New Zealand has huge challenges for treating mastitis and Totarol™ offers an alternative to traditional antibiotics for both animal and eventually human use.

So far the research partnership has yielded promising results., trialling the new product, is singing its praises and its efficacy over traditional antibiotics.

“Antibiotics acting in the body can have a lot of side effects. Totarol™ is a bio active and acts in a different way in the body than antibiotics do. Totarol™ is anti- inflammatory and antimicrobial – but it’s also antigenic. It speeds up the way the body heals the tissues.” Leading Masterton Veterinary Orthopaedic surgeon, Dr Heidi Ward-McGrath.

Clients trialling the product also say the beauty of using Totarol™ in natural treatments for livestock with skin infections contracted from the paddock, lies in the fact that applications provide an effective long lasting barrier against and treatment for infection, even in the smallest of quantities, since the product doesn’t degenerate.

“I believe that’s where the product needs to be heading. It’s one thing to fix eczema in small animals. But if we can provide a solution for mastitis that is organic, that is a natural new product and that acts in a completely different way, without relying on antibiotics, then that’s got to be a winner for NZ”. Reinhard Hueber

If Totarol's preliminary results in animal health are anything to go by, then the potential for the company to also gain a foothold in the human health biopharma space is huge. A German company has recognised already that Totarol™ is an alternative to antibiotics, as it is safe, stable and non-toxic and they are making very good progress with their testing program. It might just be the logical and profitable next step the company needs to sky rocket its growth and success.

Investment Ready

Totarol™ is a promising case of Biotech meets natural health. But like any small business on the path to growth, Mende Biotech's further market expansion is currently being stifled by growing pains, namely lack of capital. The company is now actively seeking investment to ramp up R&D in new industry verticals and secure additional capital-intensive milling machinery it needs to transform old Totara fence posts into Totarol™.

With the biotech, human health and cosmeceutical industries continuing to boom, securing the right investor has the potential to take the company and NZ's economy to new levels and reap rich rewards for the right investor. Not to mention help to completely redefine the conventional animal and human health care paradigms. A beautiful, profitable and healthy outcome for all, in more ways than one.

The Best Bit.

The secret is safe with Mende Biotech. Why?

The totara - podocarpus totara – grows only in New Zealand. There's a limited supply of the timber, but sustainable supply if used correctly. Raw native timbers cannot by law be exported and then would need to be fumigated, which would destroy the active ingredient, Totarol™. And Mende Biotech holds the patent.

The Team:

Doug Mendes – Director, chief scientist and bottle washer

Reinhard Hueber - Director and International Marketing

Lorraine Maloney - accounts

Carol Mende - freight and dispatch.

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