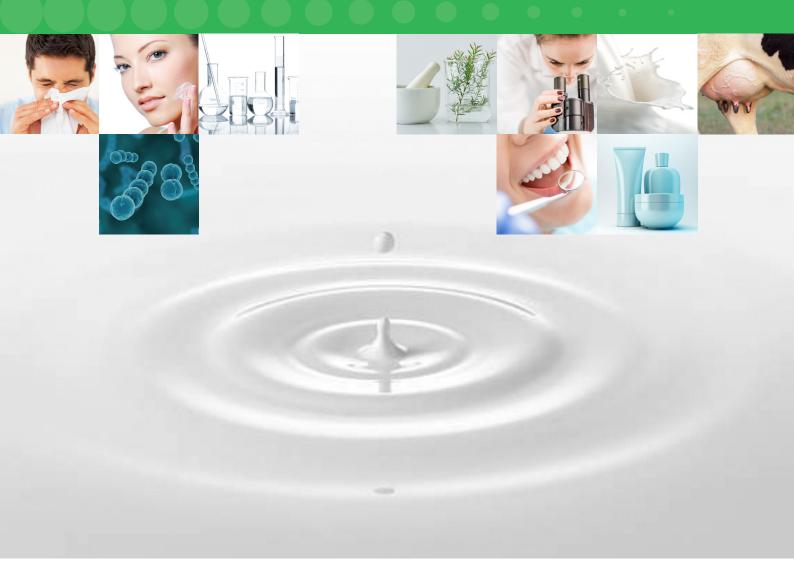
Harnessing Nature's Solutions







Quantec Limited is a New Zealand-based company specialising in high-value bioactives from natural products, which are backed by solid science. These bioactives are then developed into proprietary ingredient formulations for use in finished product applications such as human health and animal health. Quantec discovered and patented IDP® its novel milk fraction, which has proven antimicrobial and anti-inflammatory properties. As part of a proprietary selective broad-spectrum antimicrobial, anti-inflammatory, and immune modulating ingredient, this formulation can be used in a variety of applications such as foods, supplements, personal care, cosmetics and animal health remedies.

Quantec has proven expertise to commercialise bioactive-based products globally in the human and animal health sectors, either through sub-contracting or joint venture relationships. Quantec is based at the Waikato Innovation Park in Hamilton, New Zealand. The Waikato Region is home to over a third of New Zealand's dairy farms. New Zealand's dairy production is almost exclusively grass-fed, pastoral grazing-based production, resulting in some of the highest content of milk solids in the world from a relatively low-stress environment.

Quantec maintains a committed and highly talented group of scientists, engineers and sales and marketing experts in both animal and human health. With decades of experience in chemistry, microbiology, animal science, physiology and engineering, this team has a proven track record of taking novel, world-first products to market.

Quantec Awards

Year 2009

Science Entrepreneur Award (Dr. Rod Claycomb)



Year 2018

Natural Health Products NZ Supreme Award Fernmark License Programme Growth Award





Year 2019

Natural Health Products NZ Supreme Award Cawthron Institute Innovation Award (New Zealands first ever back to back winner)





Company History

1940's - 1960's

Alex Harvey Industries (AHI)

- Plastics Manufacturing
- World's First Herd Recording Milk Meter

1960's

Carter Holt Harvey (CHH)

- Plastic Products Division
- Relationship with world famous Ruakura Research
- Growing portfolio of milking machine products

1970's - 1980's

CHH Plastic Products Growth

- Established Waikato Milking Systems
- Developed Eazi-Breed CIDR device for controlling animal reproduction
- Expansion into US market through Dairy Express

1990's

DEC International (NZ) Ltd

- Vision to all value to dairy through on farm technology (sensors, automation, fractionation)
- Patented on-farm separation of lactoferrin from cow's milk using membrane technology

1999

DEC International (NZ) Limited

- Hired Dr Rod Claycomb to build R&D division
- Focal points were (1) milk sensing and (2) on-farm fractionation

2001

Sensortec Limited

- World's first company focussed on milk sensing
- Greenfield Project world's first pastoral robotic milking project (partnership with NZ dairy industry)

2003 - 2005

Milk Fractionation Project

- World's first on-farm milk fractionation robot (University of Waikato collaboration)

Quantec Highlights

Discovered IDP® (Immune Defense Proteins)

- On-farm fractionation prototype completed
- IDP[®] milk protein patent filed

Quantec Limited

- Established to commercialise on-farm fractionation technology and milk protein technology.
- Started working on Animal Health pharmaceutical applications; non-antibiotic, nil milk-withhold mastitis treatment

- Drs Bragger and Claycomb bought the business from DEC
- Explored expansion into Human Health

Mastitis Treatment patent filed

IDP® launched in USA

2011

China IDP® product launched

IDP® launched in Taiwan and Japan

EPIOLOGY® Skincare launched in New Zealand

EPIOLOGY® Skincare launched in Mexico

Microbiome patent filed

- IDP® Oil Emulsion patent filed
- Launched EPIOLOGY® Skincare in Guatemala

Milk Bioactivity patent filed





John Birch

John is Quantec's chairman and an investor in the company. Until recently John has also assumed the role of Executive Chair primarily taking responsibility for the establishment of the Chinese subsidiary.

John's background is in the dairy industry, specifically, the construction of large dairy production factories. In recent years he has focussed on corporate governance and managing a number of diverse investments. He has a passion for companies such as Quantec who have a technical nature, a heavy focus on establishing strong IP positions and a primary goal of building commercially viable products.

At a board level John brings strong commercial skills together with a wide experience in a number of different industries.



Intellectual Property Strategist, Registered Patent Attorney (AU, NZ)

Kate Wilson has in-depth knowledge of the dairy industry. She grew up in the Waikato, the heart of New Zealand's dairy industry and before entering the field of intellectual property worked in research at Ruakura Agricultural Research Centre - establishing strong links with worldclass researchers in the dairy industry. Her links to dairy strengthened through her professional law career as a patent attorney and IP strategist where she worked closely with iconic dairy companies nationally and internationally.

Kate's involvement with Quantec began at its inception when she was involved in drafting their original patents and providing IP advice while at her firm James & Wells – which she left as Managing Partner in 2016. She was delighted to be asked to join the Board as an independent director in 2017 and has enjoyed being able to contribute at Board level and being able to learn from the other Board members.





Earl Rattray

Earl Rattray's professional career began as an Agricultural Economist prior to entering the dairy industry in the 1980's, progressing from share-milking to multiple farm ownership, and senior dairy industry leadership roles. He was a founding board member of Fonterra, New Zealand's largest commercial entity, and was the founding Chairman of the New Zealand Dairy Companies Association. He retains interests in several medium and large-scale dairy farming companies, in New Zealand, Chile, USA, Australia and India.

Earl is a Fellow of both the Institute of Directors in New Zealand, and the New Zealand Institute of Primary Industry Management. He has previously served as an external member of the Reserve Bank of New Zealand Official Cash Rate Review Committee, and currently manages his own dairy industry consultancy, Dairy Link Ltd, specialising in New Zealand and Asian dairy sector insight and analysis.

As a professional director, Earl currently holds several senior Governance roles in the Agribusiness, Infrastructure and Agri-tech sectors. He is Chairman of Animal Breeding Services (NZ) Ltd, Maclon Ltd and Binsar Farms Pvt Ltd (India), He is currently an independent director of NZ Food Innovation (Waikato) Ltd, Inframax Construction Ltd and Dairy Farms NZ Ltd.

Dr Rod Claycomb PhD

Dr Rod Claycomb is Quantec's Co-Founder and Innovation Director. He has an extensive background in the dairy industry, filling roles from pure and applied research through commercialisation. Prior to Quantec, he was the founding CEO of Sensortec Ltd, a company set up to develop and commercialise sensor technologies for the measurement of biological components in fluids, particularly milk. His areas of expertise include bioactives, biosensors, agritechnology and R&D business management.









Raewyn McPhillips MBA, PGDipMgtSt, PGDipBusAdmin, BSC

Chief Executive Officer

Raewyn McPhillips took over the role of Quantec CEO in 2018, joining the company after several years as International Trade Manager at Tatua Dairy Co-operative. Prior to that she held leadership roles in strategy and operations, supply chain and business improvement at Waikato District Health Board and multinational dairy co-operative Fonterra.

Ms McPhillips has a strong background in both business and science, beginning her career as a laboratory technician before moving on to technical and programme management roles at Kiwi Co-operative Dairy Company (now Fonterra). She has held positions in both the public and private sectors across key business areas including strategy and operational functions, international trade, business improvement, policy management, knowledge management, supply chain, and sales and marketing.



Dr Judy Bragger is Quantec's Co-Founder and emeritus Senior Scientist, before retiring after nine years with Quantec. Dr Bragger led Quantec's research into the properties and commercial applications of natural bioactives. Her extensive research experience is in biochemistry and microbiology, having worked for more than 12 years at the University of Waikato studying thermophilic organisms isolated from hot springs for thermostable enzymes useful for commercial applications, and working on a collaborative project with research groups at Fonterra Research, Massey University and IRL.



Dr Colin Ogle PhD

Dr Colin Ogle is Quantec's Technical and Regulatory Manager for regulatory affairs. Dr Ogle has been involved with R&D and registration of animal health products in New Zealand, Australia and United States through his entire career and has worked in technical support of the manufacture and quality control of these products. He has also specialized in analytical laboratory support for leading research institutes such as HortResearch and NIWA Ecosystems, and has an interest in medical applications of chemistry. His key role at Quantec is to lead the animal and human health technologies from feasibility through to global registrations.



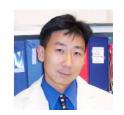
Dr Katharine Adam PhD

Katharine Adam is a Microbiologist at Quantec Ltd. Katharine's role involves researching the properties of Quantec's Immune Defence Protein (IDP) and developing new applications for it. Believing there is always more to know, Katharine holds four degrees, three in science and one in psychology (just in case the microbes start getting ideas). Katharine has a lifelong interest in food and small things, she once won a prize in a fishing competition for the smallest fish, it was 17 mm long. Katharine has served on the organising committee for the New Zealand Microbiological society's annual conference and recently finished her third term as a Board Member for Wondernauts early childhood education centre. Outside work, Katharine enjoys baking with her daughter, and eating with her husband.



Kirin Tsuei

Kirin stands at the forefront of fastest growing segment trend: Preventative health and wellness in US, New Zealand, Taiwan and China. He's spent the last 14 months in China as General Manager of Quantec's Chinese subsidiary. Prior to enetering the Chinese market, he spent five years with New Zealand Trade & Enterprise in Taiwan where he helped numerous New Zealand biotech companies enter the Taiwan market. He also has experience with global pharmaceutical and consumer health with Mead Johnson and Novartis. Kirin is a US registered dietitian and graduated from University of California in Davis. A pragmatic thinker with deep life science knowledge, he understands various market opportunities in product development. Kirin has a large and professional network of experts from different specialized backgrounds in FMCG, medical nutrition and cosmeceuticals.



Jon Curran BMS, MAF

Jon Curran started with Quantec in March 2019. Jon has practised as a Chartered Accountant and has held financial management roles in commercial, not-for-profit and Council-controlled organisations. Jon has recently returned to the Waikato after spending seven years working in Wellington, New Zealand. Prior to working for Quantec, Jon held the positions of Chief Financial Officer for Waikato Regional Airport Limited and Chief Financial Officer for H. G. Leach & Company Ltd, a company with activities in waste management, quarrying, transport and contracting. Jon was also a Director for H G Leach Fiji Ltd. during his time with that company. Jon enjoys time in the outdoors and has competed in many multisport and triathlon events.

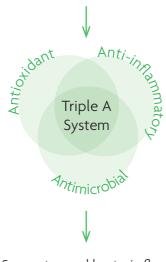






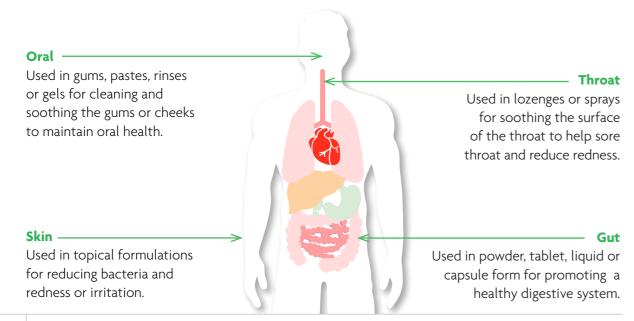
IDP® is a patented formulation based on milk bioactive proteins, that is extracted from pure natural milk. IDP® is produced as an innate immune complex by the cow as a defensive shield against infection and inflammation, protecting both the mother and the calf.

> A uniquely powerful and synergistic Triple-A Action (anti-inflammatory, antioxidant, antimicrobial).



Supports good bacteria flora Selects to kill bad bacteria

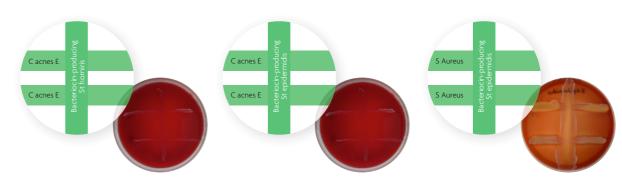
IDP® Barrier Function



IDP Global Patents

| Family | Platform | Patents | Status |
|--------------------------|----------|------------------------------|---------|
| Cationic Fraction | IDP | NZ547859, NZ565229, NZ574229 | Granted |
| | | AU207255983 | Granted |
| | | US12/304108 | Granted |
| | | CA2687890 | Granted |
| | | UK547859 | Granted |
| | | GE547859 | Granted |
| | | FR547859 | Granted |
| | | NE547859 | Granted |
| Microbiome Support | IDP | NZ719276 | Filed |
| | | PCT/NZ2017/050043 | Filed |
| Milk Bioactivity Testing | IDP | NZ742157 | Filed |
| IDP Oil Emulsion | IDP | NZ744458 | Filed |

Microbiome Support – Skin Microbiome



- Bacteriocin-producing S epidermidis inhibits pathogenic S aureus strains extremely well.
- Non-selective antimicrobials, such as benzoyl peroxide, effectively kill both commensal and pathogenic organisms, thereby taking away the skin microbiome's ability to support healthy skin function.
- Ideal antimicrobial activity combines a selective approach and a supplementary antimicrobial functionality.
- Such microbiome support is true for any surface of the body, even internal surfaces of the mouth, throat or gut.



8



biotech company about to take step up with 'woofie'

writes Andrea Fox

Quantec to put years of China business lessons to the test

Doing business in China for six years has taught Waikato dairy biotechnole Quantec a textbook of lessons, now it's taking that learning to the wire.

Quantec, which specialises in high-value bioactives from natural products proprietary ingredients for use in finished human and animal health appli moving from selling product into China to setting up shop in the vast mar

Following its own advice that a Kiwi company venturing into China should destiny - which means avoiding joint ventures - Quantec has registered a business slang for a Wholly Foreign-owned Enterprise (WFOE), one of just Zealand dairy companies to do so.

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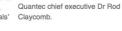
DAIRYNEWS

NATIONAL WORLD OPINION AGRIBUSINESS MANAGEMENT FARM HEALTH MOTORING RURAL LIFE

Natural health a winner for firm

The Hamilton dairy biotech company Quantec won the supren award at the recent Natural Health Products NZ annual awards in

The event recognised the successes of New Zealand companies developing, manufacturing and exporting natural products, functional 'cosmeceuticals' and 'nutraceuticals' Claycomb.



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The supreme award acknowledged Quantec as the best overall entrant in the four awards categories open at this year's event.

Quantec chief executive Dr Rod Claycomb says it's great to be recognised.

"We've experienced sustainable growth over the past nine years - a factor I magine played a part in us receiving this award.



experiencing commercial ccess here in New Zealand and in several key markets

"We're a relatively young company: we started our natural dairy-based ingredient activities in 2009. It's been a challenging road to get to this point and heartening to be recognised by the industry for our successes along the way," says Claycomb.

Quantec also won the Fernmark License programme growth award and was recognised as highly commended in the Cawthrown Innovation Award

Gut health at heart of biotech success



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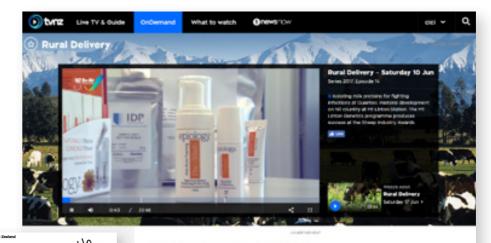
umers' understanding of the brain-gut health axis is paying dividends for Hamilton biotech firm Quantec following the launch of an award-winning nutrition drink. Co-founder Dr Rod Claycomb and chief executive Raewyn McPhillips spoke to Richard Rennie about the exciting potential of some of the company's patented ingredients.

QUANTEC took out this year's supreme award from the natural health products industry for the second time in as many years, making it the only company to do so. It is a reflection of the recent success the company has

enjoyed following the launch of its milk protein and flax seed oil drink on the Chinese market. Chief executive Raewyn McPhillips said the award was

hard-earned with a product posing significant technical challenges.

Everything from packaging, which is a state-of-the-art, high-value squeeze container, to the tricky science behind combining an oil (flax seed) with an aqueous milk protein took the development to a new level in terms of complexity.



Rural Delivery Episodes





BUSINESS NEWS Global market growing for award-winning Waikato firm The awards keep coming for a Waikato firm that has a growing presence in China and is eyeing Latin America for its natural health products. the second year in a row, also adding the Cawthron Institute Innovation award. Milk Protein & Flaxseed Oil Laitap quickly sold out its first 90,000 run in China, and a second run will soon be ready to go Established in 2009, Quantec specialises in extracting high-value bioactives from natural products. Its patented IDP product is used by its customers to make products such as dietary



IDP® Milk Protein Powder Drink

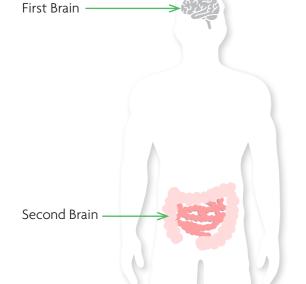
- Rebalances healthy gut flora
- Strengthens immune function
- Supports digestive health



Flaxseed Oil and IDP® Bioactive Milk Protein Immune Gel

- Boosts immune health
- Supports gut comfort
- Supports joint health and mobility

A product for both brains







IDP® Makes EPIOLOGY® Distinctive

- Protects the skin
- Clinically proven to reduce acne blemishes (equal to the one of the leading OTC indications)
- Proven to decrease skin's redness and irritation
- Supports the skin's microbiome
- Patented and natural bioactive complex
- Free from harsh synthetic active ingredients
- Gentle enough for sensitive skin (no synthetic chemicals and minimal ingredients)
- Ideal "first step" for mild to moderate indications
- Improvement in redness and irritation makes it an ideal complement to prescription remedies for more severe indications.









EPIOLOGY® Anti-Acne Foaming Cleanser

EPIOLOGY® Anti-Acne Foaming Cleanser is an SLS-free foaming cleanser. Designed to work as a pre-wash cleanser before applying EPIOLOGY® Advanced Anti-Acne Cream. Assists in the prevention of acne by gently cleansing the skin, removing the build-up of excessive oils and killing acne causing bacteria. The EPIOLOGY® Anti-Acne Cleanser contains moisturisers and is pH balanced to minimise stress on the skin.



EPIOLOGY® Advanced Anti-Acne Cream

EPIOLOGY® Anti-Acne Cream contains the patented anti-bacterial ingredient IDP®, a uniquely powerful natural defense shield shown to eliminate the spread of acne bacteria, reduce skin redness and irritation and promote wound-healing. EPIOLOGY® Advanced Anti-Acne Cream naturally soothes the burning and itching associated with acne, leaving the skin clearer.



EPIOLOGY® Spot Gel

EPIOLOGY® Spot Gel is a discreet colour and fragrance-free formula containing double the strength of the patented natural ingredient IDP®, which has powerful anti-bacterial, antioxidant and antiredness activities. Dermatologist recommended and suitable for all skin types the powerful gel formula penetrates deeply to prevent formation of pimples and reduce scarring.



EPIOLOGY® Advanced Recovery Mask

EPIOLOGY® Advanced Recovery Mask is a revitalising mask containing the patented ingredient IDP®, which rescues and restores troubled skin caused by acne breakouts. It is designed as both a preventative solution and a recovery solution that can be used weekly for a more time-intensive solution, in combination with daily use of the EPIOLOGY® Cleanser, Cream and Spot Gel.









Known around the world for its high quality dairy products, New Zealand has earned a reputation for clean, safe products that comply with rigorous health and safety standards. The country is also widely regarded as leading the international farming community in animal welfare and agricultural sustainability.



Contact

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