



# CLEAN TECHNOLOGIES

Scion carries out research and development into novel technologies, processes and systems to overcome current and future environmental challenges, such as resource depletion, greenhouse gas emissions and waste disposal.

## BIOENERGY & BIOFUELS

Scion offers a unique national capability in bioenergy science. Our purpose is to increase renewable energy production and energy security by growing New Zealand's ability to produce sustainable bioenergy and liquid biofuels from forests.

We draw on capabilities from teams across the whole organisation to support this research.

Our core capabilities include:

- Resource and environmental analysis
- Energy systems analysis
- Heat energy product development (e.g. torrefaction)
- Technologies for biofuel production.

For more information visit  
[www.scionresearch.com/bioenergy](http://www.scionresearch.com/bioenergy)

## ENVIRONMENTAL TECHNOLOGIES

We specialise in developing new technologies based on renewable resources that reduce environmental impacts, use resources efficiently, improve energy efficiency and enable better waste management.

Our technology development capabilities include:

- Process and chemical engineering
- Bioreaction engineering
- Environmental biotechnology/molecular biology
- Organic and analytical chemistry
- Developing green catalysis
- Wastewater treatment technologies focused on the wood processing industry.

## INDUSTRIAL ECOLOGY

Scion works with clients to analyse and develop systems and processes for improved interactions between industry and the environment.

- Life cycle management and sustainability assessment
- Land application of biowastes
- Organic contaminants in soil
- Assessment of industrial wastewater.

## VERITEC ANALYTICAL SERVICES

Veritec is an analytical chemistry laboratory specialising in forestry and wood-related activities.

- Foliage analysis
- Soil analysis
- Water quality analysis
- Wood preservation
- Carbohydrate and lignin analysis
- Wood waste and wood pellet analysis.

For more information visit  
[www.scionresearch.com/veritec](http://www.scionresearch.com/veritec)



### CONTACT

Paul Bennett  
Private Bag 3020, Rotorua 3046, New Zealand  
Telephone: +64 7 343 5899  
[paul.bennett@scionresearch.com](mailto:paul.bennett@scionresearch.com)



## CLEAN TECHNOLOGIES STAFF

### General Manager Manufacturing & Bioproducts

**Elsbeth MacRae**

BSc (Hons) (Botany)  
PhD (Plant physiology)

### Science Leader

**Paul Bennett**

PhD (Chemistry)

### Team Manager

**Kim McGrouther**

Chemist  
MSc (Chemistry)  
Post Grad Dip (Pulp & paper  
technology)

**Gillian Todd**

Management assistant

### Bioenergy & Biofuels

**Ian Suckling**

Research leader  
Chemist  
PhD (Chemistry)

**Katharine Challis**

Research fellow  
BSc (Hons) (Physics)  
PhD (Theoretical physics)

**Martin Cooke-Willis**

Technical operator  
BSc (Marine biology/Ecology  
& biodiversity)

**Ferran de Miguel Mercader**

Research scientist  
PhD (Chemical engineering)

**George Estcourt**

Forestry engineer  
BE (Forestry)

**Muthasim Fahmy**

Energy systems engineer  
BEng (Hons) (Electrical &  
electronic engineering)  
MSc (Energy studies)  
PhD (Physics)

**Peter Hall**

Project leader  
Thermochemical  
Technologies & Biomass  
Resources  
NZCF  
AIMS I and II

**Phuong Nguyen**

PhD student (Theoretical  
biophysics)

**Suren Wijeyekoon**

Scientist  
BSc Eng (Hons) (Chemical  
engineering)  
PhD (Environmental  
engineering)  
Chartered engineer

### Environmental Technologies

**Daniel Gapes**

Research leader  
Environmental engineer  
MTech (Hons) (Environmental  
engineering)  
PhD (Chemical engineering)

**John Andrews**

Process engineer  
MSc (Chemistry)  
EngD (Environmental  
technology)

**Gerty Gielen**

Environmental scientist  
MAGSc (Molecular sciences)  
PhD (Biological sciences)

**Ben McDonald**

Process biotechnologist  
BAGSci (Oenology)

**Laura Raymond**

Research chemist  
PhD (Chemistry)

**Keryn Tutt**

Lab technician  
BSc Tech (Biology)

**Niken Wijaya**

Scientist, Chemical engineer  
BEng (Hons) (Chemical  
engineering)  
PhD (Chemical engineering)

### Veritec

**Kendra Newick**

Research leader (acting)  
Senior laboratory analyst  
BSc Hons (Biomedical  
sciences)  
BSc (Hons) (Biology)

**Kaye Eason**

Laboratory coordinator &  
technician

**Pat Gray**

Technician

**Sunita Jeram**

Laboratory analyst  
Dip App Science (Chemistry)

**Katrina Martin**

Senior laboratory analyst  
BSc (Chemistry)

**Murray Robinson**

Research chemist  
MSc (Chemistry)