



Comvita NZ Ltd is a natural health-care company that sources ingredients principally from NZ, innovates and adds value to raw materials by using these materials in manufacturing tailor-made natural-type products designed for particular niche markets to fit consumer needs. The company produces an extensive range of functional foods, medical devices and cosmetic products, and is committed to investigating products scientifically.

Comvita NZ Ltd's has an important set of applied core values, and they are about creating **NEW PERSPECTIVES** to change perceptions of natural health by applying science and innovation to new and existing products; being **PASSIONATE** about the quality of the products made believing nature holds the key to a better quality of life; **RESPECTING** the future of people and nature by applying integrity and sustainable principles in everything done: and **PERFORMING** by adopting a process of continuous improvement and pursuing excellence in everything done.

Comvita NZ Ltd has a strong relationship with the University of Auckland, being a co-locator company in the **Institute for Innovation in Biotechnology at the School of Biological Sciences**, is located on the **4th floor of IIB extension in Thomas building** with a modern laboratory, and has scientific staff permanently located at the University.

The following research projects are for 10 week summer positions which come with a good break over the Christmas/New Year holiday period, a good summer scholarship, and most importantly the opportunity for the successful candidates to advance their scientific learning and career.





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Project #1

Examining the stability of glucose oxidase and hydrogen peroxide in cosmetic formulations

Supervisor 1 Dr Kerry Loomes
Email Address: k.loomes@auckland.ac.nz
UoA office extn: 88372

Supervisor 2 Dr Jonathan Stephens
Email Address: Jonathan.Stephens@comvita.com
Phone: MB 021 386 923; UoA office extn 84560

Key Techniques: Examining the enzymatic activity of glucose oxidase by measuring product accumulation using the established Amplex Red assay technique, and also quantifying the stability of that product using same technique.

Aim of Project: This is a lab-based position. The assay method is published and relatively straightforward; this study is an examination of enzyme kinetics and product decay where enzyme and product are subjected to a number of treatments.

Preferred prerequisites: Enthusiasm and commitment, 2nd and/or 3rd year molecular biology or biochemistry an advantage and a general knowledge of laboratory techniques, full training provided for technique



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Project #2

Development of fluorescence screening as a technique for quantifying bioactive compounds in olive leaf extract and propolis

Supervisor 1 Dr Kerry Loomes
Email Address: k.loomes@auckland.ac.nz
UoA office extn: 88372

Supervisor 2 Dr Ralf Schlothauer
Email Address: Ralf.Schlothauer@comvita.com
Phone: MB 021 386 135; UoA office extn 84560

Key Techniques: Developing a quantitative fluorescence method to quantify bioactive in natural products, involving initial selection of applicable wavelengths, screening of a range of samples, and some moderate level validation

Aim of Project: This is a lab-based position. The fluorescence method is relatively straightforward; this study is an examination of fluorescing compounds in solutions to determine whether a correlation can be drawn with known concentrations of bioactives which have been established by analytical techniques

Preferred prerequisites: Enthusiasm and commitment, 2nd and/or 3rd year molecular biology or biochemistry would be an advantage and a general knowledge of laboratory techniques useful, full training provided for this technique



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Project #3

An examination of phenolic acid partitioning in NZ honeys using HPLC technique

Supervisor 1 Dr Kerry Loomes
Email Address: k.loomes@auckland.ac.nz
UoA office extn: 88372

Supervisor 2 Dr Jonathan Stephens
Email Address: Jonathan.Stephens@comvita.com
Phone: MB 021 386 923; UoA office extn 84560

Key Techniques: Examining the partitioning of phenolic acids as markers for the moderately hydrophobic compounds in honey, using RP C18 HPLC technique to quantify.

Aim of Project: This is a mostly lab-based position with some field collection. The HPLC quantification method is published and has been used in our lab so will be relatively straightforward; this study will explore the fractionation of compounds when subjected to various treatments

Preferred prerequisites: Enthusiasm and commitment, 2nd and/or 3rd year molecular biology or biochemistry/organic chemistry would be an advantage and a general knowledge of laboratory techniques useful; full training provided for technique



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Project #4

ELISA protocol development for examining NZ honeys for an unusual, unique and interesting carbohydrate/peptide

Supervisor 1 Dr Kerry Loomes
Email Address: k.loomes@auckland.ac.nz
UoA office extn: 88372

Supervisor 2 Dr Ralf Schlothauer
Email Address: Ralf.Schlothauer@comvita.com
Phone: MB 021 386 135; UoA office extn 84560

Key Techniques: Developing a quantitative ELISA assay using available antibodies and screening a number of honeys for the compound of interest

Aim of Project: This is a lab-based position. Initially the project involves optimising an ELISA assay by principally altering concentrations of reagents, then some screening of samples and moderate-level validation

Preferred prerequisites: Enthusiasm and commitment, 2nd and/or 3rd year molecular biology or biochemistry/organic chemistry would be an advantage and a general knowledge of laboratory techniques useful, full training provided for technique

**Please see application form below/Student Resource Centre
COMVITA SUMMER STUDENTSHIPS 2011-12**

APPLICATION FOR SUMMER STUDENTSHIP

Closing date: Monday 22nd August 2011 (4.00pm)

Please hand your completed form to the SBS Student Resource Centre counter

1. Name of applicant.....
I.D. Number:
2. Email address: Telephone.....
3. Degree enrolled for:
4. From the list of Projects (above or listed on the SBS website <http://www.sbs.auckland.ac.nz>) select up to three projects you would like to work on, and list these in **order of preference**:
 1. (Project number/Name of supervisor)
 2. (Project number/Name of supervisor)
 3. (Project number/Name of supervisor)

Note: Students may find it helpful to contact Project supervisors to discuss the research project in more detail before completing the application form.

5. Have you applied to any other organisation for a similar studentship (eg, Plant & Food Research, Landcare Research)?
If so give details:
.....
6. Any other relevant information e.g. previous Summer Studentships, academic awards and research experience.
.....
.....

Signature of Applicant Date

ATTACHED: (1) Academic record (2) CV

