

Bioactive Peptide Discovery Unit

The Bioactive Peptide Discovery Unit at Teagasc Food Research Centre, Moorepark is a world class facility, equipped to purify and characterise bioactive peptides produced by microorganisms, protein hydrolysis or fermentation. This facility and related capabilities can be accessed by research institutes, SME's, national and multinational companies with an interest in purifying, identifying, analysing or synthesising bioactive peptides for food or biomedical applications.

Background

Many dietary proteins contain 'encrypted' peptides, released upon enzymatic cleavage, identified as having specific bioactivities of commercial interest. Examples include peptides that can influence blood pressure (anti-hypertensive), inhibit undesirable microorganisms (antimicrobial) and prevent infection (anti-infectives). The bioactive peptides associated with these biological properties may be developed as functional food ingredients or for pharma/biomedical preparations. The identification and characterisation of these molecules is the first step in their path to commercialisation.

Competitive Advantage

The Bioactive Peptide Discovery Unit is a unique facility offering a one stop shop for those interested in any aspect of peptide identification, purification, analysis or synthesis.

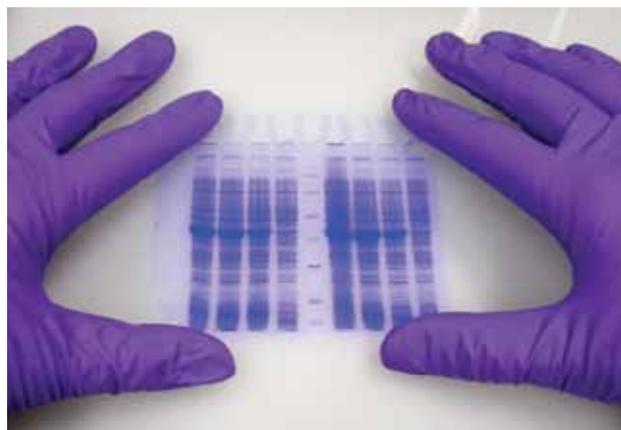
Facility and Service Details

The unit is equipped with:

- Nano, analytical and semi prep HPLCs.
- MALDI TOF mass spectrometer.
- Peptide synthesiser.
- Amino acid analyser.
- DIGE and 2D electrophoresis units.

Areas of Expertise Include:

- Reverse phase, ion exchange, hydrophobic interaction and gel filtration chromatography.
- Molecular mass determination of peptides, and proteins, protein identification via peptide mass fingerprinting and peptide sequence confirmation via MS/MS using MALDI TOF mass spectrometry.
- Microwave Fmoc synthesis of peptides 6-50 amino acids long at 0.25 mM scale.



- Free amino acid analysis of biological samples and compositional analysis of proteins.
- Whole cell protein profiling using Difference In Gel Electrophoresis.

Service Interest to

This facility is primarily of interest to research institutes, SME's, national and multinational companies with an interest in purifying, identifying, analysing or synthesising bioactive peptides for food or biomedical applications.

How to Proceed

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