



## Method developed to diagnose overtraining syndrome



The prevalence of human and equine stress-related illnesses, such as overtraining syndrome, is increasing. Until now, no diagnostic test has been available to determine overtraining syndrome with certainty.

Researchers of the Utrecht University in The Netherlands have succeeded in diagnosing equine overtraining syndrome by measuring nocturnal growth hormone secretion. The results of this study offer the prospect for an improved treatment method for comparable stress-related syndromes in humans, such as burnout.

Overtraining syndrome entails reduced performance despite the same or an increased level of training. The secretion of the nocturnal growth hormone is an indicator for overtraining syndrome. This hormone plays a role in both growth and stress. The researchers were able to diagnose overtraining syndrome by measuring the amount of hormone present in the horse's blood. The focus can now be placed on determining effective prevention and treatment methods.

Among the more than 200 symptoms described for overtraining syndrome among athletes, not a single one has yet been determined to be specific to the disease's clinical picture. As a result, it is still difficult to diagnose overtraining syndrome with certainty at an early stage.

**Utrecht University**

## USP-NF compliant recombinant human albumins

Novozymes Biopharma has announced that its Recombumin and albuicult products comply with the new excipient monograph standard for recombinant human albumin, published in the United States Pharmacopoeia — National Formulary (USP-NF). The monograph was first published in November 2008 and became official on 1 May 2009. As these products comply with the monograph, their use eases the regulatory process for users and sets the industry benchmark for recombinant human albumin.

Recombumin offers the stabilising and formulation benefits of human derived albumin in a GMP compliant and regulatory friendly package. Derived from Novozymes' yeast expression technology, it is an animal-free, commercially available recombinant human albumin for use in the manufacture of licensed and developmental human therapeutics in the US and European markets.

Albuicult is also a yeast-derived recombinant albumin, targeted for use in specialised cell culture and as a bulk drug manufacturing raw material, such as in peptide or small molecule drug chemical coupling for delivery or half-life extension.

The monograph refers to recombinant human albumin as rAlbumin Human NF listed as a 'sterile vehicle', meaning that it is intended for injection into humans alongside the active ingredient, and as such needs to be of the highest safety and quality. The monograph is available to USP-NF subscribers and can be accessed at <http://www.uspnf.com/uspnf/login>.

**Novozymes**

Contact info and more items like this at [wf.net.au/A631](http://wf.net.au/A631)

## Benchtop LC-MS

The Thermo Scientific Exactive benchtop LC-MS system is designed for high-throughput and high-performance screening and compound identification applications. The system leverages the company's Orbitrap mass-analyser technology to provide precise data analysis. It is fast and easy to use with workflow-driven software, making it suitable for new users in routine analytical laboratories.

The system improves laboratory efficiency and throughput by streamlining many of the technical steps that normally require specialised set-up and operation. An intuitive software interface makes the system easy to use in both expert and 'walk-up' mode, while ensuring precise mass identification of target compounds over a wide concentration range.

Simple to operate, the system provides LC-MS performance at resolutions of up to 100,000 with high single-scan mass accuracy in positive and negative modes, making it suitable for accurate, high-throughput screening and compound identification. The system's Pathfinder software allows experienced users to tune and optimise the system, develop methods and perform a wide range of experiments. New users and non-mass spectrometrists can easily follow developed methods to get analytical answers automatically.

**Thermo Fisher Scientific**

Contact info and more items like this at [wf.net.au/A768](http://wf.net.au/A768)

**Kartell**  
Labware division

Distributors in every State in Australia

Visit [www.kartell.com.au](http://www.kartell.com.au) to see the range

**Paying too much?**

Up to **50% off\***

**NATA Calibration on:**

- Autoclaves
- Ovens & Furnaces
- Balances, Scales & Verification masses
- Hydrometers

(\*Conditions apply) Discount Only Applies to Equipment Calibration Work

Our expert technicians provide a second to none repair service that helps you keep your valuable equipment performing at its best. If your business requires accurate equipment then speak to CI Sales and Service for a NATA or Traceable calibration quote today.

**C. I. SALES & SERVICE PTY. LTD.** EST. SINCE 1969  
There's always a solution

To Order Now go to [www.labsales.com.au](http://www.labsales.com.au) or  
Telephone (02) 9621 8900 Fax (02) 9621 8933  
Email: [sales@cisalesandservice.com.au](mailto:sales@cisalesandservice.com.au)