



# Autumn 2008 Microfocus



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## A New Aspect on Today's Microbiology



ASpecT is the new, fully automated inoculating and streaking device that rapidly and efficiently manages the processing of swabs. This robotic device de-caps, inoculates, labels, streaks and re-caps the container without operator intervention.

Liquid samples are easily processed together with swab samples collected using e-Swab.

The e-Swab automatically and spontaneously elutes the entire swab sample into liquid phase - so processing throat, nasal and wound swabs is as easy as urine samples. A variety of standard streak patterns are available or users can create their own. ASpecT fully integrates with LIMS or can operate as a stand-alone processor.

### Benefits of the ASpecT

- Releases MLAs to perform more specialised, productive tasks
- Frees up bench space
- Can work 24 hours a day if needed
- Can reduce the necessity to recall patients for repeat tests - as the liquid nature of the sample means there will be plenty of inoculum left to do repeat tests and PCR
- Processes 180 Urines per hour (using Bi-plates)
- A 324 plate carousel is available as an option

### Inoculating Loops

The ASpecT uses three metal loops to inoculate the plates. This trio set-up enables maximum speed for plate streaking and eliminates any cooling delay between sterilisation. This loop system is the ONLY consumable required for the ASpecT.

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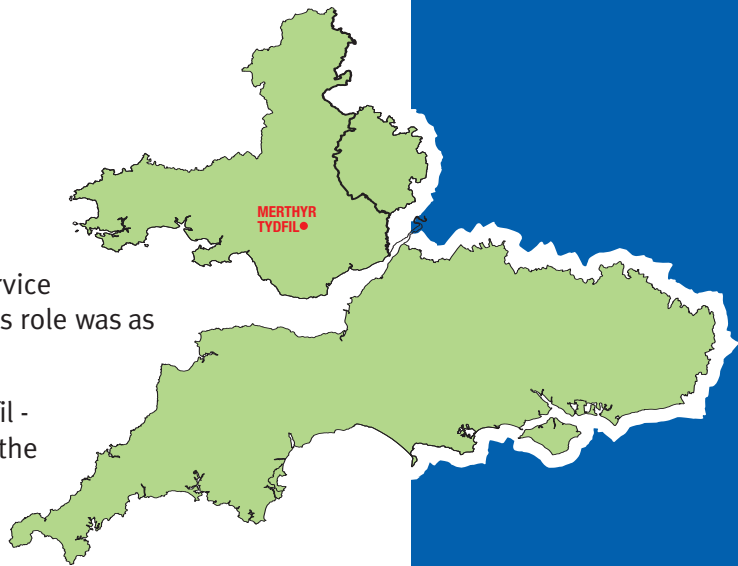
# Staff News

## New Service Engineer joins Don Whitley Scientific

Martyn Sullivan recently joined DWS as a service engineer. An electrician by trade, his previous role was as a service engineer for a soft drinks company.

Born and bred - and still living in Merthyr Tydfil - Martin's area encompasses south Wales and the south west of England. A popular character, he is already establishing a good rapport with our customers.

A rugby union fan, Martyn enjoys playing the occasional game when he has time.



## New Sales and Service Manager in Australia

Grant Shallcross joined us in August to head up our Australian operation. He brings considerable sales and management experience, as well as technical and engineering skills.

Grant was born in Melbourne, Australia and grew up on Queensland's Gold Coast. He moved to Sydney in 1986 and now lives in the seaside town of Chittaway Bay on the NSW Central Coast.

As Sales and Service Manager at DWS Australia, Grant will also be focusing on developing the DWS service offering and ensuring customers understand the importance of ongoing, programmed maintenance of their equipment to ensure trouble free operation for years to come. Grant will also oversee the training of our Australian service engineering team.

"After several years where my work required extensive international travel, I am really looking forward to working in my own country again. It will be great to spend more nights and weekends with my family. I look forward to a long relationship with DWS and meeting our old and new customers on my travels."



## NEW OFFICE FOR DWS AUSTRALIA

DWS Australia Pty moved to new premises in August. The new address is:

Unit 9, 31 Dwyer Street,  
North Gosford, NSW 2250  
Tel: + 612 4339 1029

# International Product News

## RABIT Goes to Dublin



A RABIT system has been installed at University College Dublin in the Veterinary Science Centre of the Centre for Food Safety. Dr Carol Iversen, whose research involves looking at the growth of food borne pathogens such as *salmonella*, *campylobacter* and *cronobacter*, was initially considering two competitor systems. With the RABIT system in place the team will be looking at growth rate curves and the effects of pH and certain types of inhibitory substances on these pathogens.

Now that the RABIT system is fully installed and in regular use in Dr Iversen's laboratory, she comments:

"This system will really make a difference to our work. It opens up a whole new world of possibilities in terms of looking at the growth of these microbes, and so much more quickly than we could do with conventional methods. The high throughput possible with the RABIT will enable us to carry out many more tests. In choosing RABIT, the team involved in the purchase was not only impressed by the product itself but also with the level of support offered by Don Whitley Scientific."



## New Flat-Pack Workstation Trolley

A new flat-pack trolley has been designed for the Whitley Workstation range. Our overseas distributors are particularly delighted as the freight costs for shipping our previous trolleys abroad was high. Our disassembled new trolley, actually fits into the same package as the workstation - so there is no additional freight cost at all.

Easy to assemble, the kit comes complete with full instructions.

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## TOMKEY – NEW TEMPERATURE MONITORING USB KEY

TomKey is an innovative USB key for recording and displaying temperature. The device can be used to monitor the transportation of heat-sensitive clinical or medical samples and to monitor cold-chain food transportation.

Ensuring continuous traceability of temperatures between  $-40$  and  $+80^{\circ}\text{C}$ , TomKey is a simple, cost-effective device. Current temperature, minimum and maximum levels reached and a threshold-exceeded alarm are displayed directly on the integrated LCD screen.

An IP67 rating, means that it is guaranteed to perform reliably even under dusty or wet conditions.

Two models are available, storing up to either 8,000 or 16,000 readings. Avoiding the need for cables, data is directly transferred using the built-in USB 2.0 connector and all information on the device is retained even if the battery fails. A calibration certificate is supplied as standard, along with software for recording and processing collected data.

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# Campylobacter Research

As reported in our Spring newsletter, Don Whitley Scientific has maintained a close relationship over many years with Sheffield University's Molecular Microbiology department. The team has a Mk3 workstation and three Whitley VA500s in their laboratory, all of which are used for growing *Campylobacter jejuni*. We are currently sponsoring PhD student, **Andrew Hitchcock**, shown at right, in his work on *Campylobacter jejuni* and here is Andrew's explanation of his work.



“As a PhD student in the Laboratory of Professor Dave Kelly at Sheffield University, I am working on the function of novel oxygen-regulated genes in *Campylobacter jejuni*. *C. jejuni* is a major food-borne pathogen in the UK and is among the leading causes of human enteric disease worldwide. It is also implicated as the causative agent of Guillain-Barré syndrome (GBS), a severe post-infection neurodegenerative disorder.

*C. jejuni* is a microaerophilic bacterium, meaning it requires oxygen for growth but atmospheric oxygen levels are toxic. We therefore rely heavily on the use of our three Whitley VA500 Microaerobic Workstations to culture *C. jejuni* at defined oxygen tensions below atmospheric levels. The Workstations also provide carbon dioxide, which is necessary for optimal growth. During its life cycle *C. jejuni* encounters highly variable oxygen conditions and must be able to survive periods of high environmental oxygen tensions as well as adapting to oxygen-limiting conditions in the host gut. This paradoxical relationship between *C. jejuni* and oxygen is thus one of the defining features of the biology of the bacterium, it is one of the least studied and least understood. In our work, we aim to study the functions of specific genes and proteins associated with the use of alternative electron acceptors to oxygen and how expression of these genes is regulated in response to low oxygen tensions.

Target *C. jejuni* genes are being mutated and the growth phenotypes of these mutants are being examined under both microaerobic and oxygen-limited conditions in the Whitley Workstations. Mutants demonstrating a growth defect at low oxygen are likely to be important to *C. jejuni* in the host environment and are studied further. We accommodate small shakers in our workstations so that we can study the growth of *C. jejuni* in liquid cultures and compare growth curves of our mutants with their wild-type parent strains. In the long-term, our work will hopefully contribute to understanding growth of *C. jejuni* in vivo in avian and mammalian hosts and its survival in the food chain.”

## PAUL AND FERGUS SING THE BLUES

It's amazing the things people get up to when they are not at work. For our Managing Director, Paul Walton, and our Product Engineering Manager, Fergus Murray, music is an important part of their lives. Their band, The Alligators, plays at pub venues throughout Yorkshire and has a loyal following. Fergus is lead singer and plays lead guitar, and Paul plays bass guitar.

They have been singing and playing together in the band's various guises for 30 years. As to their style of music, Paul explains:

“It's a mixture of blues and rock 'n' roll. Our influences are many, but include such diverse talents and styles as Robert Johnson, BB King, Chuck Berry, Stevie Ray Vaughan and Robert Cray.”



# Product Focus

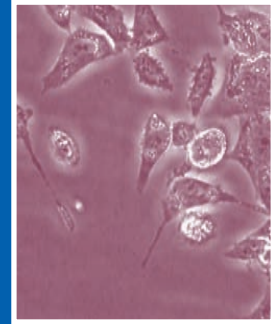
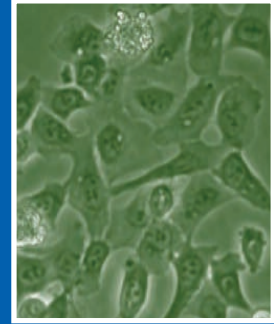
## Hypoxystation – Lab Tests Show Excellent Results

Manufacturing workstations for nearly 30 years has taught us a few important lessons, one being that our customers appreciate the scientific back-up we can provide by having our own on-site laboratory. To ensure that the same support is available for our new Hypoxystation, we have invested heavily in research and development, service capabilities and in training and staffing our laboratories. We will ensure that our new workstations deliver the results promised and continue to be a valuable addition to any cell culture research laboratory.

With this in mind, we introduce our Biomedical Scientist, Jacqui Key, who is currently using the Hypoxystation in some test research examining HCT116 human colon carcinoma cell lines. She is working closely on this project with Dr Roger Phillips, a reader in cancer pharmacology at the University of Bradford, who kindly supplied the cells for our work. One cell line contains the P53 gene/transcription factor, which acts as a tumour suppressor, and the other cell line does not contain the P53 gene. The experiments were conducted to assess any morphological differences between the two cell lines at varying O<sub>2</sub> levels from 5% to 0.1%.

It was determined that the P53+ cell underwent apoptosis (programmed cell death) at 0.5% O<sub>2</sub>. This was due to cell stress and irreversible DNA damage. The P53 gene is known to initiate this event. The P53- cell line grew to a level of 0.1% O<sub>2</sub> before cell death occurred as it does not contain the tumour suppressor gene.

The Hypoxystation is essential for this research as a normal CO<sub>2</sub> incubator or Whitley VA cannot provide O<sub>2</sub> levels below 1%. A level of 1% or below is crucial as it is a replication of O<sub>2</sub> levels in tumours.



A close up view of Hypoxystation



Jacqui at work in our laboratory

# And Finally...

## Labelmaster II®

Want to say goodbye to the tedious, labour-intensive task of labelling and sorting Petri dishes? LabelMaster II could be the answer to your prayers.

This new equipment from Don Whitley Scientific fully automates the process of labelling, marshalling and organising your Petri dishes as a LIMS-linked or stand-alone operation. Simply load LabelMaster II with plates, press the button and labels printed with the information you have selected will be applied. LabelMaster II also organises plates by sample.



The LabelMaster II will ensure complete traceability and reproducibility. It has a speed of up to 1000 plates per hour and operates with 1075 plates at a time as standard. This device can even be extended with a store for an additional 1900 plates to keep up with the workload of any busy laboratory.

LabelMaster II makes it easy to customise your own labels via the touch screen interface (medium type, dilution/strain, inoculum volume, patient name and bar code).

Isn't it time you left the task of labelling Petri dishes to a LabelMaster II and used your staff to perform more specialised, productive tasks?

## Cycle Marathon Raises £300 for Charity

In our last edition of Microfocus, we reported that Steve Robertson would be participating in an epic cycle race through the hills and dales of the Lake District. Steve would like to thank everyone for their generous sponsorship - he managed to raise £300 for charity.

He completed the 112 mile challenge in a very admirable 7 hours ... and 11 seconds!



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## SOME 2008 DATES FOR YOUR DIARY

Don Whitley Scientific has already confirmed attendance at a number of exhibitions/conferences. If you are attending any of these events, come and visit our stand and get the latest news on our product range. Other events will be added to the 'Exhibitions' section of our website as we confirm our attendance. Log on to: [www.dwscientific.co.uk](http://www.dwscientific.co.uk) for updated exhibition information.

- **Microbe 2008,** 26-28 Sept, Sheffield
- **Biotechnica 2008,** 7-9 October, Hannover
- **WMA,** 14 October, Cardiff
- **EORTC-NCI-AACR,** 21-24 October, Geneva
- **Tumour Microcirculation Meeting,** 26 November, London
- **Society for Anaerobic Microbiology Meeting,** 12 December, Colindale

For more information on any of the products featured in this newsletter, please contact us:  
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