

Involving patients in decisions about prescribed medicines and supporting adherence – NICE clinical guideline 76 - Jan 2009

In a new guideline NICE have stated that between a third and a half of all medicines prescribed for long term conditions are not taken as recommended and this may represent a loss to patients, the healthcare system and society. Adherence presumes an agreement between prescriber and patient about the prescriber's recommendations. Non adherence may limit the benefits of medicines, resulting in lack of improvement, or deterioration, in health.

Non adherence should not be seen as the patient's problem. It represents a fundamental limitation in the delivery of healthcare. A no blame approach is required to encourage patients to



discuss non adherence and any doubts or concerns they have about treatment. A patient centred approach encourages informed adherence. The treatment and care should take into account patients' needs and preferences.

In epilepsy the consequences of non-adherence can be significant. Part of the answer may be to use patient friendly options that allow a simple once daily night-time dose with an AED that is easy to swallow.

Further information on the use of Episenta (controlled release sodium valproate) may be obtained from Tel: 01892-506958. www.nice.org.uk/Guidance/CG76

Zeiss LSM 700 Confocal Microscope sets New Standard

Carl Zeiss has introduced the LSM 700 Laser Scanning Microscope, which uses proven modules from the world's largest range of fluorescence and laser scanning microscope systems to offer radical flexibility in both application and system structure. The LSM 700 may be combined with a large number of microscope stands to deliver innovative image analysis solutions with exceptional sensitivity and quality tailored to the personal requirements of each user.

The LSM 700 guarantees high efficiency in the detection even of weak fluorescence signals. Key elements of the optical system include the beam path design with its maximum optical precision and the uncompromising concentration on the essentials, the beam combiner system for extremely accurate beam coupling and superimposition, the beam splitter with continuous and loss-free splitting of the light spectrum, and an extremely stable pinhole.

The LSM 700 is ideally suited to both individual workstations and user groups. In addition, the system's small footprint makes it suitable for small rooms. Operation is simple and easy and the intuitive design allows even first-time users to image successfully unaided. The ZEN 2009 software allows users to set-up complex methodologies quickly and displays a clear overview of the experiment at all times.

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Elekta chosen to deliver sophisticated Brain Mapping Technology to The Mind Research Network

The Mind Research Network (MRN) will bring world-leading technology to Albuquerque, with the acquisition of an Elekta Neuromag® a device for non-invasive measurement of brain activity using Magnetoencephalography (MEG) technology.

MRN has been utilising MEG technology to study brain function and disorders for approximately the last five years; however, the organisation will upgrade to the Elekta Neuromag MEG system in early 2009, allowing researchers to record human brain activity better and more accurately than before.

"When looking to replace our current MEG system, we chose Elekta because we felt that their data collection software and analysis and



archiving of records would meet all of our research and clinical needs," says Michael Weisend, Ph.D., director of MEG/EEG Core at MRN, and expert in identifying and specifically defining the location of epileptic seizures.

"We are funded to study a variety of neuroscience areas that will exploit the Elekta Neuromag's capability," says Weisend. "Currently, we investigate the fundamental mechanisms of learning and memory in healthy individuals, as well as those with brain-based disorders such as

traumatic brain injury, epilepsy, drug addiction, and schizophrenia.

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Invitrogen develops new technology to promote safer stem cell therapies

Invitrogen, a division of Life Technologies, has announced a new technology to enable the development of safer stem cell therapies. Dynabeads[®] SSEA-4 addresses a key challenge in translational research, by separating undifferentiated stem cells from those that are differentiated. Scientists from Invitrogen and the Buck Institute for Age Research, located in Novato, California, collaborated in developing this solution that depletes greater than 99 % of undifferentiated human embryonic stem cells from differentiated populations.

Human embryonic stem cell research is one of the fastest growing areas in cell biology. A key issue for translational stem cell researchers is the ability to reliably identify and isolate undifferentiated hESCs, which are not considered

as suitable for transplantation as those which are differentiated, because of the potential of unregulated cell growth. Their objective is to obtain pure and homogenous cell populations, which will help to ensure the safe development and manufacturing of therapeutics.

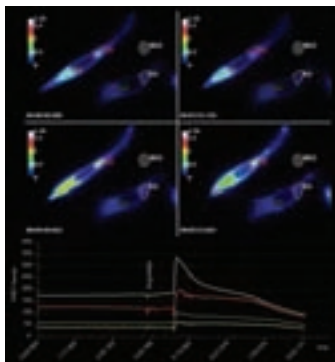
Dynabeads SSEA-4 achieves this by utilising magnetic beads that latch onto a common marker on embryonic and induced pluripotent stem cells, removing them from a culture in less than 45 minutes. This leaves behind highly pure and differentiated cells that are unaffected by the Process. This is a significant advancement over typical protocols, which leave a considerable amount of contaminating cells behind.

For more information see www.invitrogen.com

Carl Zeiss introduces Dual Camera Module to capture Fast Intracellular Processes

Carl Zeiss has launched a Dual Camera Module for its AxioVision image analysis software to improve the imaging of fast intracellular processes. The new software is aimed at life scientists, such as cell biologists, virologists and physiologists, and allows the simultaneous acquisition of images from two cameras and their synchronisation within nanoseconds.

Combined with two identical cameras, the Dual Camera Module will control all aspects of their operation and enable camera parameters, such as exposure time or contrast, to be set independently. Due to the simultaneous capture of two separate images, the software allows users to capture more images in any given timeframe. Furthermore,



artifacts that can occur in the sequential capture of double-stained structures using a single camera are prevented, as are errors in ratiometric measurements of two emission channels.

The capture of two different wavelengths in two channels will be especially valuable in the measurement of emission ratio imaging (Indo-1), fast FRET examinations, and the imaging of cellular transport processes in cell cultures, tissues or organisms. It will also be an important asset in the simultaneous imaging of tissue and cell structures using infrared transmitted-light techniques, such as IR-DIC and fluorescence excitation. The latter is a key requirement for electrophysiological work in neurobiology.

For more information E. micro@zeiss.co.uk

Streamlining microbiology workflows with PREVI™ Isola

The PREVI Isola automated specimen and agar plate management system from bioMérieux offers clinical microbiology laboratories new flexibility for routine processing of samples, allowing resources and expertise to be concentrated where they are needed most.

The PREVI Isola features revolutionary streaking technology which maximises colony isolation through pressure-controlled contact with the agar surface during inoculation, and uses the same quantity of inoculate every time to standardise results.

The PREVI Isola can process different sample and container types at a rate of up to 180 plates per hour, saving time and increasing throughput and



integrating effortlessly into your laboratory's workflow. The PREVI Isola also assists with clinical pathology accreditation by eliminating cross-contamination between samples, and provides traceability through automated barcode labelling.

It is particularly suited to high throughput applications where negative results are prevalent, such as MRSA or urine specimen screening. Automation of these essential, yet tedious, front-end processes will change your laboratory workflow, offering the flexibility to improve patient care while containing costs.

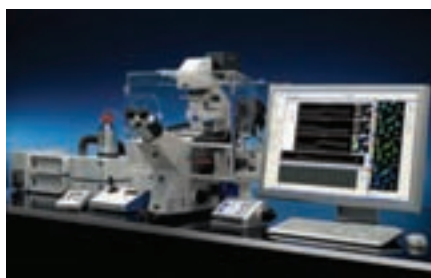
For more information see www.biomerieux.com

Real-time Measurement of Physiological Parameters in Living Cells

A new software module from Carl Zeiss enables real-time image capture and measurement of physiological parameters in living cells both during microscopic observation (online) and afterwards (offline). The AxioVision Physiology software captures the images and measurement data together with any changes in experimental parameters.

The AxioVision Physiology Module is ideal for cell biologists, neurobiologists, physiologists and electrophysiologists. Applications include the determination of calcium concentrations or pH values through ratiometric calculation of fluorescence images after the addition of indicators, such as Fura-2 or Indo-1. The software also offers users an easy and reliable way to measure the change in fluorescence intensity over time of fluorescent proteins and for FRET analysis of protein interaction.

The Physiology Module integrates totally



with Zeiss microscopes, enabling users to plan highly flexible experiments. In addition to the monochrome AxioCam cameras from Carl Zeiss, cameras from other manufacturers such as Hamamatsu or Roper are supported. Two synchronously controlled AxioCam cameras are also supported when combined with the Carl Zeiss Dual Camera Module.

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Elekta And Nucletron combine forces to market leading software

Elekta and Nucletron have reached an agreement to market and license Elekta's software system MOSAIQ®. Nucletron's existing Oncentra® Visir and Oncentra® Information Management customers will be offered a high-quality solution with excellent future prospects of continued innovation from the world's largest supplier of oncology software.

The business arrangement was reached in response to Nucletron's recent decision to cease development, sales, and marketing of its Oncentra Visir and Oncentra Information Management product lines. Nucletron will focus efforts on innovations in brachytherapy and treatment planning for external beam.

MOSAIQ is an Oncology Information Management system that features an image-enabled electronic medical record fully integrated with comprehensive administrative management functionality that provides workflow automation designed specifically for the oncology specialty. Supporting multi-vendor, multi-disciplinary, and multi-site organisations, it unites diverse systems and ensures that all information about a cancer treatment is easily accessible throughout the entire treatment process.

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