

News Review: Once daily treatment for Parkinson's disease

Azilect 1mg (rasagiline) has been launched in the UK by Teva and Lundbeck for use as monotherapy in early Parkinson's disease (PD) and as adjunctive therapy in moderate to advanced disease. British and German doctors are the first in Europe to be able to prescribe Azilect, a potent, second-generation, highly selective, reversible inhibitor of monoamine oxidase-B (MAO-B).

In patients with early PD, Azilect alone significantly improves the cardinal symptoms of tremor and bradykinesia, and demonstrated significant quality of life benefits when compared to placebo.

Results from a 26-week, randomised, double-blind multi-centre Early Monotherapy for Parkinson's disease Outpatients (TEMPO) study, involving 404 patients, showed that patients taking Azilect maintained their baseline total Unified Parkinson Disease Rating Scale (UPDRS) score, while patients taking placebo experienced a 4.2 UPDRS decline in score. Furthermore, patients taking Azilect in the TEMPO study benefited from a 2.91 point PD-QUALIF (Parkinson's Disease QUALity of LIFe) score advantage over patients taking placebo.



When used as adjunctive therapy for patients with moderate to severe PD, who are optimised on levodopa and other PD treatments such as dopamine agonists and entacapone, Azilect provides significant additional therapeutic benefits by reducing 'off' and increasing 'on' time with most of the 'on' time without troublesome dyskinesias.

In another 26-week, randomised, double-blind placebo-controlled trial, involving 472 patients with more advanced disease, Azilect decreased 'off' time significantly: by 1.85 hours daily in patients treated with Azilect 1mg and by 1.41 hours in patients taking a daily 0.5mg dose. Patients enrolled in the PRESTO study (Parkinson's Rasagiline: Efficacy & Safety in the Treatment of Off) were

already optimised on levodopa and other concomitant anti-parkinsonian medications, but were nevertheless experiencing at least 2.5 hours of daily 'off' time.

The second of the adjunct studies, LARGO, compared Azilect 1mg and the catechol-O-methyl transferase (COMT) inhibitor entacapone (200 mg with every levodopa dose) with placebo. The results demonstrated that once-daily Azilect 1mg is as effective as multi-dose entacapone in reducing total daily 'off' time. The 687-outpatient LARGO (Lasting effect in Adjunct therapy with Rasagiline Given Once daily) study showed that Azilect and entacapone reduced mean 'off' time by 1.18 and 1.2 hours respectively compared with placebo.

Additional benefits of Azilect include its once-daily dosing, lack of titration and tolerability in patients of all ages. In particular, Azilect is associated with a low incidence of side-effects such as hallucinations, oedema, somnolence and orthostatic hypotension that often limit treatment with agents such as dopamine agonists.

For more information, contact Teva Pharmaceuticals Medical Information on 01296 719768 or use ACNR's reader enquiry service.

A Sideways Look at Life

Carl Zeiss is bringing a novel microscope system to the marketplace that will provide researchers with a fascinating new insight into imaging living organisms. The company has signed a licensing deal with EMBLEM Technology Transfer GmbH, the commercial entity of the European Molecular Biology Laboratory (EMBL) to commercialise a new technology called SPIM (Selective Plane Illumination Microscopy).

SPIM produces detailed three-dimensional films of the inner workings of living organisms by eliminating a traditional microscopy problem – vertical resolution along the lightpath. In SPIM, the specimen is passed through a thin sheet of light originating from the side of the

instrument and images captured layer-by-layer. The specimen may be rotated and viewed along different planes, eliminating the fuzzy and unwanted light that has prevented scientists from looking deep into tissues.

SPIM allows specimens to be imaged within a liquid-filled chamber. This means that specimens can be kept alive and enables researchers to track changes during developmental processes, such as organ formation in zebrafish or other model organisms. The imaging process is very rapid and post-processing software assembles one or more stacks of images into a high-resolution movie file.

For more information Tel: 01707 871233.

Somatom Sensation 40 reports initial results

The world's first Somatom® Sensation 40 computed tomography (CT) scanner was recently installed at the radiology department of Alamance Regional Medical



Centre (ARMC), U.S. Siemens z-Sharp™ technology is said to deliver, in the clinical routine, unprecedented image quality and the industry's highest isotropic resolution of below 0.4 millimetre voxel size for the 40 slices per rotation.

The proprietary z-Sharp technology utilises an accurately and rapidly deflect-

ed electron beam creating two alternating and overlapping X-ray projections reaching each detector element that doubles scan information without a corresponding increase in dose. The result is a

substantially enhanced spatial resolution and image quality, establishing z-Sharp technology as a new benchmark for diagnostic excellence, as proven by the 250 installations of the SOMATOM Sensation 64 systems.

For more information Tel: 01344 396317.

New initiatives for better access to life-saving thrombolysis

At the recent European Stroke Congress, stroke specialists were introduced to new initiatives such as telemedicine and the ACT NOW 'Stroke Lysis Box' which are allowing an increasing number of acute stroke victims to receive life-saving thrombolysis treatment.



Only 30% of patients with acute ischaemic stroke arrive at hospital within the first three hours. However, studies have shown that thrombolysis with a clot-busting drug (rtPA - alteplase), administered within three hours of the onset of symptoms of ischaemic stroke, significantly improves clinical outcome at three months.

Telemedicine involves an expert stroke physician in a specialist stroke centre,

linked to non-specialist centres in a telemedicine network. The expert physician can support the caring physician in diagnosing a stroke and assessing acute stroke victims for treatment. Remote patient interviewing, data transmission and videoconferencing are available 24 hours a day to all hospitals in the telemedicine network.

The 'Stroke Lysis Box' helps in another way. It enables hospital emergency departments to provide rapid clot-busting treatment to appropriate acute stroke victims and is extending the availability of thrombolytic treatment to trained physicians in a wider range of hospitals than stroke centres.

For more information contact the ACT NOW secretariat on 020 7309 1029.

Neuroscience antibodies from Abcam

Abcam's neuroscience antibody range includes over 1500 reagents covering: neuronal markers, neurodegeneration, neurotransmission, growth & development, sensory pathways and more.



Online neuroscience resources

Abcam's Neuroscience 'abwire' (www.abcam.com/neuroscience) has been developed to help customers browse the entire antibody range. The 'abwire' is regularly updated with new neuroscience protocols, exclusive articles, conference information and improved data. You are also invited to explore Abcam's Neuroscience antibody locator to track down the synaptic, neuronal or neuronal environment products on offer.

Recent focus – new IHC data for key antibodies

Abcam's Neuroscience team have been hard at work testing many of their best selling neuronal marker antibodies in IHC. These reagents are now known to work well in a wide range of applications. For new images, revised working dilutions and the recommended protocols for many neuronal marker products go to the 'abwire' (www.abcam.com/neuroscience) for the IHC Galleries.

For more information contact Dr Rhian Hayward, Abcam Ltd, 332 Cambridge Science Park, Cambridge CB4 0FW, Tel: 01223 472030, Email: rhian.hayward@abcam.com

Instrumentation & equipment for life sciences research

Bilaney Consultants are based in the UK and Germany and supply quality pre-clinical research equipment



and software to life scientists and biomedical researchers in Europe.

Coulbourn Instruments: Habitest modular animal behaviour test systems and Graphic State control and data acquisition software. Animal Startle, Tru Scan Photo Beam Activity Monitoring, Modular systems for Psychophysiology and Human Startle.

Actimetrics: Video based behaviour acquisition/analysis systems - FreezeFrame, WaterMaze, LimeLight, and Big Brother. ClockLab circadian biology acquisition/analysis system.

Plastics One: Pre-clinical research components. Standard and custom made cannula and electrode systems.

Kopf Instruments: Stereotaxic systems and Pipette pullers.

ISI ResearchSoft Bibliographic Software: EndNote, Reference Manager and ProCite.

For more information, contact Bilaney Consultants Ltd, St Julians, Sevenoaks, TN15 0RX. Tel: 01732 450002, Email: info@bilaney.co.uk, www.bilaney.com

First dynamic examinations of the cervical spine

NeuroSwing is the new positioning and movement system for dynamic magnetic resonance (MR) imaging examinations of the cervical spine. The system was developed by Hightech Electronic GmbH in cooperation with Siemens Medical Solutions. The continuously variable, smooth movements of the NeuroSwing enables, for the first time, dynamic MR acquisitions of the cervical spine to be performed in anteflexion, retroflexion, lateral flexion and rotation, either separately or in combination.

Approximately 30% of all MR examinations are neurological and orthopaedic acquisitions of the cervical spine.

Acquisitions of the cervical spine in motion and functional examinations were



difficult to perform. Study results have shown that 50% of all lesions can only be displayed correctly in dynamic examinations, during motion or in multiple, varied positions. One of every ten static examinations produces no results.

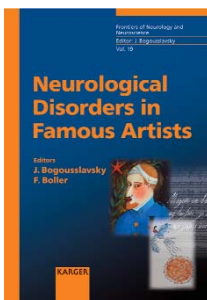
NeuroSwing provides the ability to perform dynamic imaging of the cervical spine in daily routine diagnostics. All cervical spine movements relevant to the examination can be realised with a single device, without retrofitting or repositioning the patient. As a result, lesions or functional limitations near the cervical spine can be detected quickly and easily.

For more information, visit www.siemens.co.uk/medical

Fascinating insights into the relationship between brain disease and creativity

Neurological Disorders in Famous Artists: Frontiers of Neurology and Neuroscience, Vol. 19 has been published by Karger.

The study of how a neurological disorder can change the artistic activity and behaviour of creative people is a largely unexplored field. This publication looks closer at famous painters, writers, composers and philosophers of the 18th to the 20th centuries who suffered from neurological diseases such as stroke, epilepsy, brain trauma and dementia. The diseases of Van Gogh, Ravel, Poe, Kant, Haydn and many more are diagnosed in retrospect and



treatment options according to modern medical technologies are discussed.

Presenting fascinating insights into the relationship between brain disease and creativity in famous minds, this publication is highly recommended to neurologists, psychiatrists, physicians as well as to everybody interested in art,

music and literature.

Editors: J. Bogousslavsky; F. Boller; ISBN 3-8055-7914-4, CHF 109.50/EUR 78/USD 99.75

For more information Email: a.gasser@karger.ch or see www.karger.com

Flexible dosing with Lyrica® is effective in relieving chronic peripheral neuropathic pain

Tailoring of Lyrica® dosage to suit patients' individual needs may help to achieve an optimal efficacy/tolerability balance. Flexible dosing with Lyrica® (pregabalin) is as effective as fixed dosing in reducing the pain experienced by patients with painful diabetic peripheral neuropathy (PDN) and post-herpetic neuralgia (PHN), according to research published in Pain.

Results from the patients' pain scores demonstrated that the mixed group of PDN and PHN patients responded well to both fixed and flexible dosing regimens. Approximately 50% of patients experienced a $\geq 50\%$ pain score reduction on either treatment regimen, a clinically significant improvement, compared with 24% of the placebo group. The study also demonstrated that both the fixed and flexible dose regimens were significantly superior to placebo in improving sleep-interference.

Dr Barbara Hoggart, a Consultant in Pain Management at the Heart of England NHS Foundation Trust, commented, "As demonstrated by this study, not all patients need high doses of pregabalin to achieve meaningful improvement in their pain. With tailored, flexible dosing the incidence of adverse events and discontinuation of therapy may decrease."

For more information contact Pfizer Ltd on Tel: 01737 331264.

Consensus statement backs the use of Abilify in treating schizophrenia

The atypical antipsychotic, Abilify® (aripiprazole) is efficacious and well tolerated in the treatment of schizophrenia, according to new guidelines on best practice prescribing.

The guidelines, published in the International Journal of Clinical Practice, were drawn up by a number of leading UK psychiatrists.

Lead author Dr Mike Travis from the Institute of Psychiatry in London said, "Abilify was launched in the UK last June. These guidelines provide practical guidance on how to optimise outcomes in patients using Abilify and recommend its use in clinical practice, particularly as a choice for patients for whom potential side effects such as weight gain may be barriers to long-term treatment and for patients or clinicians who are dissatisfied with current treatment."

Abilify is the first available antipsychotic of a new generation. It is effective in long-term treatment of both positive, negative and cognitive symptoms of schizophrenia.

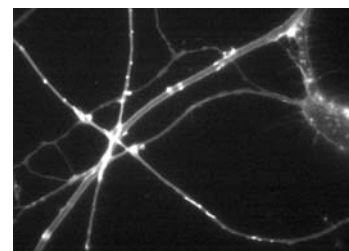
The new guidelines, drawn up by the Schizophrenia Innovation Working Group, provide a summary of the efficacy and tolerability of Abilify as seen in clinical trials and a naturalistic study.

For more information contact Bristol Myers Squibb Pharmaceuticals on 020 8754 3519.



Seeing living cells in a whole new light

Nikon have launched three new illumination options for the TE2000 inverted microscope. TIRF2, W-TIRF and PA-GFP attachments create scope to



undertake an even wider range of research level fluorescence applications - including the unique Surface Reflection Interface Contrast (SRIC) to study the surface condition of a specimen.

Unifying the TIRF and epi-fluorescence systems in a single layer, TIRF2 provides more flexibility for combination with other equipment such as optical tweezers. TIRF2 widens the range of application bases for the TE2000 from simple epi-fluorescence to intricate observation of living cells at the molecular level. Single molecular activity in contact with the surface of the coverglass can easily be captured.

Researchers using W-TIRF can achieve high performance epi-fluorescence using the TIRF illumination technique more affordably than ever. Utilising mercury, xenon, metal halide or high intensity halogen, illumination costs can be kept to a minimum without compromising quality, thanks to the superior quality of Nikon's optics.

For more information Email: discover@nikon.co.uk



DR. ALOIS ALZHEIMER

Aricept
Significantly
Improves
Behavioural
Symptoms¹⁻³

Compared to untreated AD patients

 **Aricept.**
donepezil hydrochloride

BEFORE HIM,
THE DISEASE DIDN'T HAVE A NAME

BEFORE ARICEPT,
IT DIDN'T HAVE A REALISTIC TREATMENT

 **Aricept.**
donepezil hydrochloride

CONTINUING COMMITMENT TO ALZHEIMER'S

ABBREVIATED PRESCRIBING INFORMATION
ARICEPT® (donepezil hydrochloride)

Please refer to the SmPC before prescribing ARICEPT 5 mg or ARICEPT 10 mg.

Indication: Symptomatic treatment of mild to moderately severe Alzheimer's dementia. **Dose and administration:** **Adults/elderly;** 5 mg daily which may be increased to 10 mg once daily after at least one month. No dose adjustment necessary for patients with renal impairment. Dose escalation, according to tolerability, should be performed in patients with mild to moderate hepatic impairment.

Children; Not recommended. **Contra-Indications:** **Pregnancy.** Hypersensitivity to donepezil, piperidine derivatives or any excipients used in ARICEPT. **Lactation:** Excretion into breast milk unknown. Women on donepezil should not breast feed. **Warnings and Precautions:** Initiation and supervision by a physician with experience of Alzheimer's dementia. A caregiver should be available to monitor compliance. Regular monitoring to ensure continued therapeutic benefit, consider discontinuation when evidence of a therapeutic effect ceases. Exaggeration of succinylcholine-type muscle relaxation. Avoid concurrent use of anticholinesterases, cholinergic agonists, cholinergic antagonists. Possibility of vagotonic effect on the heart which may be particularly important with "sick sinus syndrome", and supraventricular conduction

conditions. There have been reports of syncope and seizures - in such patients the possibility of heart block or long sinus pauses should be considered. Careful monitoring of patients at risk of ulcer disease including those receiving NSAIDs. Cholinomimetics may cause bladder outflow obstruction. Seizures occur in Alzheimer's disease and cholinomimetics have the potential to cause seizures and they may also have the potential to exacerbate or induce extrapyramidal symptoms. Care in patients suffering asthma and obstructive pulmonary disease. As with all Alzheimer's patients, routine evaluation of ability to drive/operate machinery. No data available for patients with severe hepatic impairment. **Drug Interactions:** Experience of use with concomitant medications is limited, consider possibility of as yet unknown interactions. Interaction possible with inhibitors or inducers of Cytochrome P450; use such combinations with care. Possible synergistic activity with succinylcholine-type muscle relaxants, beta-blockers, cholinergic or anticholinergic agents. **Side effects:** Most commonly diarrhoea, muscle cramps, fatigue, nausea, vomiting, and insomnia. Common effects (>1/100, <1/10): common cold, anorexia, hallucinations, agitation, aggressive behaviour, syncope, dizziness, insomnia, diarrhoea, vomiting, nausea, abdominal disturbance, rash, pruritis, muscle cramps, urinary incontinence, headache, fatigue, pain, accident.

Uncommon effects (>1/1,000, <1/100): seizure, bradycardia, gastrointestinal haemorrhage, gastric & duodenal ulcers, minor increases in serum creatine kinase. Rare (>1/10,000, <1/1,000): extrapyramidal symptoms, sino-atrial block, atrioventricular block, liver dysfunction including hepatitis. **Presentation and basic NHS cost:** Blister packed in strips of 14. ARICEPT 5 mg; white, film coated tablets marked 5 and Aricept, packs of 28 £68.32. ARICEPT 10 mg; yellow, film coated tablets marked 10 and Aricept, packs of 28 £95.76. **Marketing authorisation numbers:** ARICEPT 5 mg; PL 10555/0006. ARICEPT 10 mg; PL 10555/0007. **Marketing authorisation holder:** Eisai Ltd. **Further Information from/Marketed by:** Eisai Ltd, Hammersmith International Centre, 3 Shortlands, London, W6 8EE and Pfizer Limited, Walton Oaks, Dorking Road, Tadworth, Surrey KT20 7NS. **Legal category:** POM **Date of preparation:** January 2002.

References: 1. Gauthier S, Feldman H, Hecker J, *et al.* *Curr Med Res Opin* 2002; 18 (6): 347-354. 2. Holmes C, Wilkinson D, Dean C, *et al.* *Neurology* 2004; 63: 214-219. 3. Cummings JL, Donohue JA, Brooks RL. *Am J Geriatr Psychiatry* 2000; 8:2: 134-140.

