

# Newsletter 23

## Contents

Welcome note.  
Feature Article.  
Remedica news.  
Health matters.  
Environmental Issues.

Corporate Social Responsibility.  
The ABC of Pharmacy.  
Remedica people.  
Our Products.

## Welcome note



Welcome to the 23<sup>rd</sup> issue of our Newsletter where we begin with a feature article on the Christmas tree and continue with the presentation of our Health, Safety and Environment Officer and our product Bralix®.

In our Environmental Issues we report on sustainable tourism, whilst in Health Matters we have an article on stress and in the ABC of Pharmacy we continue with the term "Packing".

In Corporate Social Responsibility Remedica's provision of a scholarship for a student on an MSc Management degree course, and the potential offer of employment in the Company for the successful candidate stand out.

Top items in our News are the filing of Remedica's first patent application and the launch of our new anti-cancer product, Kapetral®.

Finally, may I wish you glad tidings for the Festive Season and a happy and healthy New Year. ■

## Feature Article: The tradition of the Christmas tree.

The tradition of decorating trees as part of a celebration dates back hundreds of years. In Ancient Rome the decoration of trees was a widespread custom during Saturnalia, the winter festival celebrated in honour of the God of Agriculture, Saturnus. Other ancient civilisations, including the Egyptians, the Chinese and Hebrews, decorated evergreen trees with wreaths and garlands as a symbol of eternal life, whereas during the Middle Ages, a 'Paradise Tree' was decorated with apples on December 24.

The modern tradition of the Christmas tree has its origins in Renaissance and in early modern Germany, and was most likely influenced by the devout Christians of the 16<sup>th</sup> century, who brought decorated trees into their homes. Traditionally, they were decorated with edibles such as apples and nuts and were also illuminated with candles. Christmas trees began to become popular in other countries during the second half of the 19<sup>th</sup> century.



In modern times, the tree, usually a spruce or pine, is decorated with a variety of ornaments including garlands and tinsel and illuminated with electric lights. An angel or a star symbolising the Star of Bethlehem is often placed at the top of the tree, whilst a nativity scene, a miniature Christmas village or a model train is placed underneath.

Since the early 20<sup>th</sup> century, it has become a common phenomenon for cities around the world to put up public Christmas trees in squares or next to popular landmarks, around which traditional Christmas festivities take place. Christmas trees are often given as commemorative gifts from one country to another, to serve as reminders of previous collaborations or help provided in times of need. For example, the imposing spruce tree that towers over Trafalgar Square in London every Christmas is provided by the city of Oslo, Norway, as a symbol of Norway's thankfulness to Great Britain for its support during the Second World War. Norway also gives a Christmas tree to Washington D.C. every year as a symbol of gratitude for the contribution of the United States in World War II. The public Christmas tree in the US city of Boston is provided by the province of Nova Scotia, whereas the tree that illuminates the city of Newcastle-upon-Tyne is an annual gift from the city of Bergen.

It is estimated that each year nearly 35 million Christmas trees are used in America and 50 to 60 million in Europe. Two of the most striking are the 33-metre-tall Christmas tree in Phoenix, Arizona, which holds the title as the tallest fresh-cut tree in America, and the one in Dortmund, Germany, which reaches a height of nearly 45 metres, although it is actually comprised of 1,700 individual red spruce trees. Yet, the Guinness World Record for the world's largest Christmas tree is held by Mexico City, for one which was 110.35 metres in height, 35 metres in diameter, and weighed 300 tons. A sight definitely worth seeing must have been the 2002 Christmas tree in Tokyo, Japan, which was considered by the Guinness Book of World Records to be the most expensive; it was adorned with 83 pieces of jewellery with a total value of 1,357,785,000 Japanese Yen, or, approximately 12 million Euros! ■

# Remedica News

## 1) Remedica files its first patent. (photo 1)

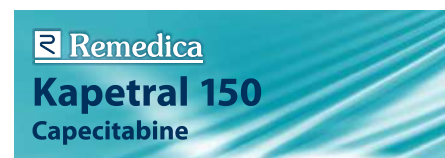
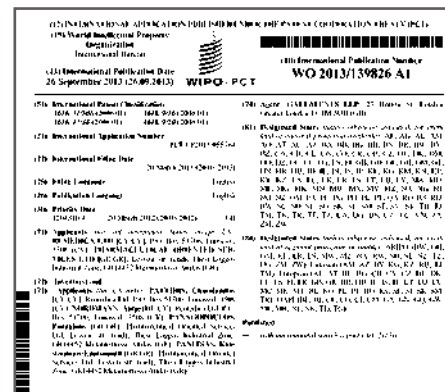
Following considerable development work on Imatinib, Remedica, together with its associates Pharmaceutical Oriented Services (PharOS), recently filed a patent (WO2013/139826) describing novel tablet and capsule compositions of either Imatinib, or one of its salts, and methods for manufacturing the dosage forms. Imatinib is a protein tyrosine kinase inhibitor which is especially useful in the treatment of various types of cancer. The currently marketed product is a film coated tablet which contains either 100 or 400mg of imatinib mesylate and the patent (WO 03/090720) which covers this product states that between 30 and 80% of the drug can be accommodated in the formulation which is manufactured by wet granulation. However, the patent also discloses that it is difficult to produce acceptable tablets which were prone discharge particles from their brittle surfaces. Also, because the tablets had to contain a high dose of the drug (typically 51 or 52%), there was little opportunity to vary the excipients in the formulation.

It was therefore desirable to design a formulation that was able to carry the required dose of the drug in a range of excipients since this would not only produce good tablets but would also allow the composition to be varied so that other dosage forms could be produced. The research carried out by Remedica led to an invention which allows the 100 and 400mg tablets to be made containing as little as 27 – 29% of Imatinib as the free base and gives the opportunity to vary the excipients so that acceptable tablets can easily be made. This freedom also means that the drug can be presented in the form of a hard gelatin capsule which offers another choice for the patient. The new patent describes the formulation and manufacturing processes in detail. The excipients that can be used in the formulation include such things as fillers, binders, disintegrants, glidants and lubricants all of which are essential for the production of a quality product. It is also extremely important to be able to vary the amount of these various excipients in order to ensure the effective absorption of the drug by the body.

The filing of this patent represents another major contribution by Remedica towards a healthier world and it is hoped that other similar advances will follow.

## 2) Launch of Capecitabine (Kapetral®). (photo 3)

Remedica's long-anticipated anticancer drug Capecitabine (Kapetral®) was launched in early December. Remedica has also out-licensed Capecitabine to many other companies in Europe and other parts of the world and, in total, the product was launched in more than 25 countries.



## 3) Remedica passes ANVISA inspection. (photo 4)

Remedica has recently passed a GMP inspection by the Brazilian Health Surveillance Agency (ANVISA), thus allowing the company to begin exports to Brazil. It is expected that this will further boost the rapid growth experienced by Remedica over the past few years. Generics have become increasingly trusted by the population and doctors in Brazil and today the country is the largest generic pharmaceutical market in Latin America with sales in 2011 of BRL 8.7 billion (€ 2.7 billion) representing a growth of more than 41% over the previous year. However, the use of generic products in Brazil represented only 26% of prescribed medicines (compared with 66% in Germany and 60% in the United Kingdom and the USA), so there is ample scope for increase.



## 4) Clavomid 625 launched in Oman. (photo 2)

Two lectures which qualified as part of the Continuous Medical Education (CME) program for Omani doctors on "Antibiotic resistance - A problem for the prescriber, pharmacist and patient" were given by Professor Christopher Marriott. These meetings had been organized by Remedica's agent in Oman, Al-Hashar Pharmacy. Remedica was represented in Muscat by its Commercial Manager Mr. Stelios Vassiliou and the Middle East Area Manager Mr. Panagiotis Miltiadou. More than 150 doctors attended the meetings and the local agents were delighted with what they considered to be an impressive turnout. The Medical Society of Oman welcomed the launch of Clavomid 625 and paid tribute to Remedica for providing quality medicines in Oman for more than 30 years.



## 5) Medical conferences. (photo 5, 6)

Remedica's local sales team took part in medical conferences and day-events where participants (doctors and other healthcare professionals) had the opportunity to be briefed on Remedica's new and existing products. Specifically the team took part in the Pancyprian Orthopaedics Conference, the Greece-Cyprus Surgery Conference, and the day-events of the Cyprus Podiatric Association of the Pancyprian Ear, Nose and Throat Association and the Pancyprian Pharmacists' Association.

## 6) Radio programme on drug safety.

Remedica's Head of Safety and Pharmacovigilance, Mr. Andreas Vassiliou was a guest on a radio programme dedicated to European affairs along with the Head of Pharmacovigilance of the Pharmaceutical Services (Ph. S.) of the Cyprus Ministry of Health, Mrs Andri Andreou. The topic of discussion was drug safety in the European Union. Mr. Vassiliou and Mrs Andreou discussed many topics such as the strict protocols that need to be adhered to with respect to the testing pharmaceutical products in humans, the role and importance of pharmacovigilance, the dangers of counterfeit pharmaceuticals and those bought over the internet but also the strict controls carried out by the Pharmaceutical Services based on European and international regulations on pharmaceuticals.



# Health Matters:

## Stress

Stress is the body's automatic response to any physical or mental demand for change which threatens or upsets our mental balance in some way. In short, it's what we feel when we think we've lost control of events. Stress primarily depends on whether we believe situations around us are worthy of anxiety and after that it's down to how our body reacts to our thought processes.

When we refer to stress most of the time we mean something negative but in fact, up to a certain level stress improves motivation, performance and efficiency. When a person is exposed to a stressful situation the brain initiates the release of chemicals into the blood which rouse the body for emergency action. The heart beats faster, muscles tighten, blood pressure rises, breathing quickens, and senses become sharper. These physical changes increase strength and stamina, speed reaction time, and enhance focus-preparing the individual to either 'fight' (in an attempt to survive the danger) or 'flight' (to try to escape it). However, if a person is continually exposed to stress then the mind and body pay the price and beyond a certain point, stress stops being helpful and starts causing major damage to health which manifests itself as changes in, for example, mood, productivity, the ability to form and maintain relationships, and, finally, the quality of life.

The first stage in management of stress is to identify and understand what is causing it. Anything that imposes high demands or forces change can be stressful, including, for example, even positive events such as getting married, going to a university or receiving a promotion. Causes of stress can be separated into external such as work pressure, relationship difficulties, financial problems, illness, children and family or other major changes and internal such as perfectionism, pessimism, unrealistic expectation and, lack of assertiveness. However, what causes stress depends, at least in part, on its perception by each individual, as something that is deemed stressful by one person may not faze others.

The effects of stress can vary from mild to severe. It can cause physical symptoms like rapid heartbeat, fast breathing or shortness of breath, sweating, tight muscles, high blood pressure, dry mouth, stomachache and headache and mental ones such as bad judgment and decisions, lack of concentration, frustration, isolation, anxiety and paranoia. Long-term stress or high density traumas can have an even greater effect on the body and mind by changing appetite (eating either less or more), sleeping habits (sleeping too much or not sleeping enough), increasing vulnerability to illness, affecting sex life and performance, causing fatigue and burnout. It can also encourage nervous

behaviour, causing mood changes such as depression and anger. Typical changes in personality due to overreaction, include impatience with important things in life such as family, work and school, and negligence of personal appearance. More extreme symptoms are the development of irrational fears to such things as illness, heights and small spaces.

Some might say that we should not be stressed by things that something can be done about and, paradoxically, for something that nothing can be done about. However as stress is inevitable in life and since too little stress may result in boredom and too much stress may cause an unproductive anxiety level up to a panic attack or breakdown, we need to find a way of managing in order to strike a satisfactory balance.

**Avoid the stressor and breathe:** One of the most immediate and easiest ways to deal with stress is by responding to your body's physical symptoms. Sometimes this can be as easy as stepping back from what is stressing you and taking a few deep, relaxing breaths to slow your heart beat and, thereby, reducing tension and anxiety.

**Laugh:** Nothing relieves the tension in your body, or your mind, like a little humour.

**Avoid unhealthy ways of coping with stress:** Smoking, alcohol or drugs are not the solution

to your problem rather they are problems for your solution.

**Nutrition:** Make sure you eat a healthy and balanced diet. Well-nourished bodies are better prepared to cope with stress, so be mindful of what you eat. Always start your day with a sensible breakfast, and keep your energy up and your mind clear with balanced, nutritious meals throughout the day.

**Get enough sleep:** Adequate sleep fuels your mind, as well as your body. Feeling tired will increase your stress because it may cause you to think and act irrationally.

**Exercise:** Exercise has been proven to have a beneficial effect on a person's mental and physical state. For many people exercise is an extremely effective stress buster.

**Time:** Find time to organize your life, relax, and pursue your own interests. Make time for fun and relaxation: Reduce stress in your life by nurturing yourself. If you regularly make time for fun and relaxation, you'll be in a better place to handle life's stressors when they inevitably come along. Nurturing yourself is a necessity, not a luxury.

**Reduce the intensity of your reactions:** Should you be reacting so strongly to the situation? Accept the things you cannot change and the fact that no one is perfect, including your parents, co-workers, teachers, children and



EXERCISE-RELAX-LAUGH

yourself. Step back and ask yourself if what is bothering you really deserves all your attention and energy.

**Talk:** Develop emotional supports and use them. Talk to you family, friends, work colleagues and your boss. Having someone you can share both the good and bad with is important. Express your thoughts and worries and learn to accept help.

**Seek professional help:** If the stress is affecting the way in which you function seek assistance from professionals who are experienced and have been trained in giving support.

To sum up, you must remember that life can never be stress free (if it was, it would be pretty boring). Managing stress is all about taking charge of your thoughts, your emotions, your schedule, your environment, and the way you deal with problems. You must accept that there are some stresses in life that cannot be avoided but you can learn to manage by changing your reaction to them, you also should learn to avoid the stress whenever possible. Remember, you always have a range of options for dealing with stress and it is up to you to decide which fits your character and the situation. It may take a little experimentation, a little time, and a little practice, to find which strategy works best for you. Just keep trying but try 'not to get stressed' about it. ■



# Environmental Issues: Sustainable Tourism.

Tourism plays a vital role in the development of local economies around the world. It has been argued, that the flow of foreign income has driven many local economies to new investments and to the creation of new jobs. Due to its nature, tourism remains a driving force for economic development due to the fact that it generates the need for additional accommodation, catering and leisure providing at the same time, income for other sectors of the economy such as the construction and services sectors. In order for these needs to be satisfied, numerous development projects have been taking place to construct and operate hotels, resorts, roads, airports, marinas, restaurants, cafes and shops. As a result, more jobs are being produced, leading to beneficial outcomes for the hosting communities and the state in which they operate.

Despite the benefits of tourism, as with any industry, it can create adverse effects to the local environment, society and even the long term economy. According to the United Nations Environment Programme, mass tourism has the potential to put enormous pressure on the hosting area leading to increased soil, water, marine and air pollution. In addition, these pressures could lead to soil erosion and destruction of habitats, thus driving indigenous endangered fauna and flora species to extinction.

It should be noted that pollution and landscape alteration in particular, could even have a major impact on tourism itself. This is due to the fact that, by polluting or altering the natural landscape, the quality of the tourist product is being dramatically forced into decline, leading to its self-obliteration. Mismanagement of mass tourism however, can also lead to the alteration of local culture and their ability to access or enjoy natural resources. This is due to the fact that in order to

accommodate and cater for mass tourism, fast track developments may be implemented. Due to their nature, these kinds of development may not take into consideration the local natural heritage or the increased need for food and water resources.

In order to avoid the risks described above, sustainable tourism has been viewed by the international community as a new approach which should be capable of sustaining the beneficial effects of tourism without compromising the environment or the local culture. According to the European Commission, *"the long term sustainability requires a balance between sustainability in economic, socio-cultural and environmental terms"*. In order for this to be achieved at a European level, the European Commission has developed the Agenda for Sustainable and Competitive European Tourism.

The Agenda is based on principles that aim to provide an holistic and integrated approach to the management of the tourism industry. This requires planning for the long term, adoption of an appropriate pace of development and involvement of all stakeholders, especially local communities. These objectives can be achieved by using the best available knowledge in economic, social and environmental terms and minimising and managing the risks related to them.

Taking all of the above into consideration, sustainable tourism remains the most attractive approach to safeguard the tourist industry whilst not infringing the rights of local communities to satisfy and control their own needs. ■





# Corporate Social Responsibility: Remedica Cares

## 1) Remedica announces scholarship.

Remedica is pleased to announce the Pattihis Family Scholarship for the MSc Management Degree in the Department of Management Science and Innovation at University College London (UCL), UK. As well as covering the fees totalling £14,250, the Scholarship includes an offer of employment with Remedica (subject to successful completion of the degree) and the successful candidate will be expected to develop and progress their career in management with Remedica, but this is not a binding obligation.

Interested candidates should visit the following web pages:  
[www.ucl.ac.uk/msi/study/msc-management/scholarships](http://www.ucl.ac.uk/msi/study/msc-management/scholarships)  
[www.ucl.ac.uk/msi/study/msc-management/how-to-apply](http://www.ucl.ac.uk/msi/study/msc-management/how-to-apply)

## 2) Remedica sponsors International Nanotheranostics Conference. (photo 1, 2)

As part of its support for the international scientific community in research and development areas, Remedica was the main sponsor of the First International Nanotheranostics Conference which was held recently in Cyprus. The Conference attracted many top scientists from Cyprus and another 12 countries. Hospital doctors, biologists and engineers had the opportunity to exchange ideas and discuss important issues focusing on diagnostics, therapeutics and patient monitoring, with the aim of solving some of the most difficult challenges of modern medicine. The ultimate goal is the creation of a new prototype of nanomedicine that will have a high impact on public health improving invasive diagnostic and therapeutic strategies which could contribute significantly to emerging concepts in the super-scientific field of personalised medicine. The Conference was under the auspices of the Speaker of the House, Mr. Yiannakis Omerou.



## 3) Open Access Week. (photo 3, 4, 5)

As a contribution to Open Access Week (21<sup>st</sup> – 27<sup>th</sup> October 2013) the Cyprus University of Technology (TEPAK) together with Remedica held a press conference during which a two year financial cooperation programme was agreed whereby Remedica will sponsor the University's library so that it can offer open access. In practical terms this means that, Remedica has undertaken to finance the Cyprus University of Technology Open Access Author Fund for the next two years. The University's Dean, Professor Elpida Keravnou, mentioned, amongst other things that in the difficult economic times in which we live in, such gestures constitute a significant aid to educational institutions.



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## 4) Radiomathon.

In spite of the economic crisis, for the sixth year running Remedica Volunteers took part in the activities of the Radiomathon and the Company also contributed financially towards the charity bazaar organised to raise funds.

## 5) Struggle against hunger.

Despite the difficult year that Cyprus is going through, Remedica also stands by the side of fellow human beings in other countries who are in need. In this framework the company contributed pharmaceutical aid towards the medical missions to Kenya and Madagascar of the Pancyprian Association for Famine Relief.

## 6) Sponsorship of the Cyprus Heart Association. (photo 6)

In order to provide support for patients with heart conditions, Remedica sponsored the road-side collection appeal carried out by the Cyprus Heart Association in Limassol. Heart conditions are a modern-day menace in Cyprus and are the number one cause of death, with one in every two deaths being attributed to this condition. ■



# The ABC of Pharmacy:

## Packaging of medicinal products.



Whilst it might seem that the functions of the packaging for most marketed products is to attract the purchaser in the store and then frustrate their attempts to extract the product at home, packaging for medicines has a much more important role. It comprises two important elements, a container for the dosage form(s) and a carton into which multiple units can be placed: these are known as the primary and secondary packaging respectively. Apart from presenting the patient with a product which they can use conveniently and safely, packaging, especially the primary one, serves to protect the medicines during handling and storage thus maintaining the quality of the product from the time of its manufacture to being taken by the patient. The selection of the packaging material may have to take into consideration that the active ingredient needs to be protected from light or moisture or even the oxygen in the air, and it could even be that it forms the system which delivers the drug such as a spray or cream. In contrast, the secondary packaging plays an important role in identification of the product thus contributing to the avoidance of dispensing errors whilst also bearing important safety information.

Most medicines are manufactured as tablets or capsules and these are best packed either in strips made from laminated aluminium foil or blisters formed in a layer of a polymer such as polypropylene or polyvinylidene chloride (PVC) which is then covered over with aluminium foil. The space that will hold the tablet or capsule is formed either on a strip-packing or blister-packing machine by pressing a cavity of an appropriate size and shape to accommodate the dosage form in a double sheet of aluminium or a sheet of plastic and aluminium. These packs are the most favoured for tablets and capsules nowadays since they give excellent protection to the product and are child and tamper resistant. They also have the advantage that one part of the packaging can be transparent which may help the patient to identify the medicine visually without having to remove it from the container. The all-aluminium (alu-alu in short) strip or blister offers the most protection but has the disadvantage of being large. The PVC-Aluminium blister is smaller and, if necessary, the PVC, which is the more permeable material, can be combined with a layer of PVDC to create a double layer film or a Polyethylene (PE) and a PVDC layer to create a triple layer film that will provide even better protection against moisture.

The more traditional form of container, the glass or plastic bottle, which is used to hold a number of individual dosage units and are thus not protected from one another, is packed on a counting or a

weighing machine and is then fitted with a child resistant closure or cap: a labelling machine then affixes a label to each bottle containing important information. However, making these tamper proof often creates problems of removal for elderly patients. As a result, they are often tempted to leave the top off the container between doses and this jeopardises not only the quality of the product but also the safety of young children. The caps are usually made from polypropylene with a PE liner which as well as preventing leakage, stops gas and moisture ingress both of which can bring about detrimental changes in the quality of the product.

Glass bottles, which can also be used for powders that have to be reconstituted with water before dispensing (quite commonly used for antibiotic medicines for children) as well as liquid preparations, can be made from borosilicate or soda lime glass, the former being of the highest quality and is used when the contents are likely to exhibit instability on storage. This high quality glass leaches less of its components into the medicine which, if the active ingredient is sensitive to any of them might, cause it to breakdown. Because of the presence of water in the formulation, liquid products often have shorter shelf-lives than tablets which are essentially dry and consequently present less packaging problems. Powders are filled into glass bottles

by an auger-type filling machine. Liquids are filled into glass bottles on a liquid filling machine, which can have many filling-heads for increased output. In both cases the bottles then pass into a capping machine that places the screw-top cap by rotating them and applying a specific downward pressure. A label is the affixed to each bottle as above.

High quality glass will also be used for injectable (parenteral products) since it may be necessary for it to withstand the stresses of sterilisation by heat. These products will often be fitted with a natural or synthetic rubber stopper held in place by an aluminium ring: this arrangement allows the syringe needle to be inserted and a number of doses withdrawn sequentially with the stopper resealing after each withdrawal.

Semi-solid dosage forms such as creams and ointments are presented in metal tubes which are supplied by the manufacturer with one end open whilst the other is usually sealed and has a screw-top with a spike that can be used to pierce the sealing in order for the product to be dispensed. The contents are filled on a cream-filling line into the inverted tube through the bottom opening which is then sealed by folding over and then crimping. Thin metal sheets lend themselves well to this process and also have the advantage that when the tube is squeezed to expel the

contents it does not return to its original shape thus making it easier to extract all of the product without sucking air into the tube. Metal is also ideal in that it offers a high degree of protection to the contents due to its high degree of impermeability. The inner surface of the tube can be coated with resins if there is danger of the contents reacting with the metal and the outside can be given a coloured coating which can in turn be printed.

Metal (mainly aluminium) can be used to produce the container for aerosols and sprays which are formulated as solutions or suspensions in liquefied gases and filled on specialised filling and crimping machines. Because these containers (cans) are under pressure, the wall of the container needs to be thicker. The valves used to measure and deliver the dose are also made from aluminium with other components made from plastic whilst the seals are rubber.

The secondary pack or retail box is most typically made of cardboard and needs to be large enough to hold the product plus any delivery device, such as a spoon, and information sheets. The product in its primary pack is inserted into the secondary packaging by means of cartoning machines that are usually operated in-line with the primary packaging machine.

Nowadays there are many regulations which, amongst other provisions, make it compulsory for both the primary and secondary packaging to contain certain information about the product like batch number and expiry date. On the secondary packaging, it is also mandatory in the EU to have a Data Matrix Code (see Remedica Newsletter 12 for more details) which is basically a combination of a black and white squares that contain specific information about the product and the particular batch, in an encrypted form. Some countries also have additional requirements like the application of a vignette or bollini, which is a label that is used to keep track of prescriptions by state health systems.

On many occasions, the boxes then pass through a banding machine, which bundles them into tens (or whatever other configuration is desired) in order to make counting and handling easier.

Finally, in order to protect the product during transportation and to make handling easier, individual boxes or bundles are placed in corrugated cartons that then pass onto a strapping machine where they are sealed and wrapped with a rigid plastic strap that prevents the carton from being partially opened or otherwise tampered with. By all of these means, a patient is ensured that the product that they receive will be of good quality, safe and effective. ■

## Remedica people

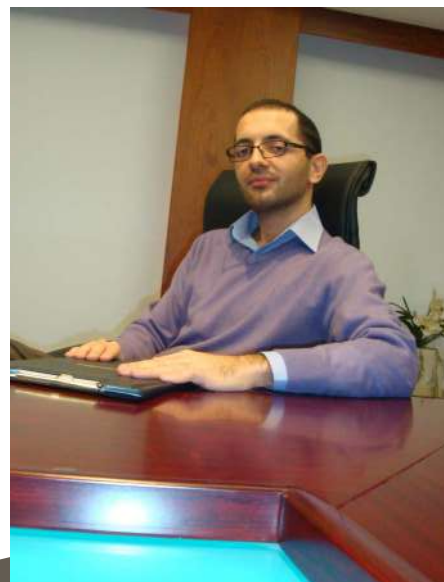
In this edition we wish to introduce our Health, Safety and Environment Officer Mr. Sofianos Kyriakidis.

After completing his studies in Environmental Science at the University of the Aegean, he continued his academic education at the University of Surrey in England where he was awarded with a Master's Degree in Sustainable Development. After the completion of an industrial placement with a leading British food company, he returned to Cyprus where he worked as a researcher for an Environmental NGO.

Soon after, he joined Remedica as a Health, Safety and Environment Officer. During his service in Remedica he has been awarded an International General Certificate in Occupational Health and Safety by the National Examination Board in Occupational Safety and

Health of United Kingdom. His appointment as a Health and Safety Officer has also been recognised by the Labour Inspection Department of the Cyprus Ministry of Labour and Social Insurance.

Sofianos has also published a number of articles relating to environmental management in the Cyprus newspaper with the largest circulation. He is also a co-author of a European Commission funded policy document. In addition, he has attended a number of professional seminars on Health and Safety, and he is a member of Terra Cypria (the Cyprus Conservation Foundation), Bird Life Cyprus and the Cyprus Safety and Health Association. ■



## Our Products: Bralix®

Bralix® Tablets contains the active substances Chlordiazepoxide and Clidinium Bromide.

Chlordiazepoxide hydrochloride is a versatile therapeutic agent of proven value for the relief of anxiety, tension and apprehension and is used when these symptoms are significant components of the clinical profile. Clidinium bromide is a synthetic anticholinergic agent which has been shown in experimental and clinical studies to have a pronounced antispasmodic and antisecretory effect on the gastrointestinal tract.

Chlordiazepoxide is a well-tolerated benzodiazepine with properties that are characteristic of this class of drugs: -

- Reduction of anxiety and aggression.<sup>1</sup>
- Sedation and induction of sleep.<sup>1</sup>
- Reduction in muscle tone and coordination.<sup>1</sup>
- Anticonvulsant activity.<sup>1</sup>
- Ability to induce amnesia.<sup>1</sup>

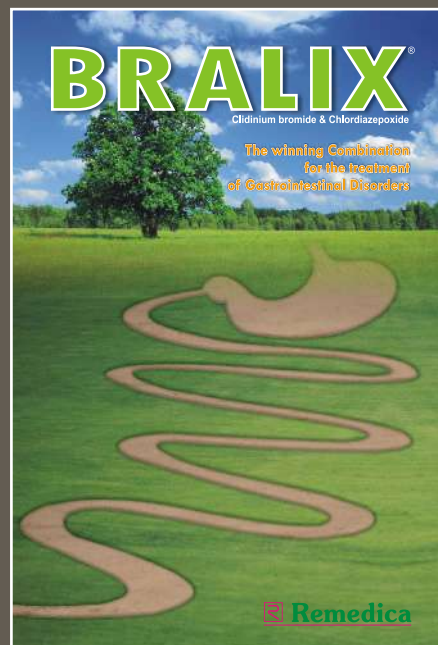
These effects are associated with a specific agonist action on a central receptor forming part of the "GABA-OMEGA macromolecular receptor complex" (also known as BZ1 and BZ2) modulating the opening of the chlorine channel. Like all benzodiazepines pharmacodependence has been observed in animals and humans.<sup>2</sup>

Bralix® is indicated for the symptomatic treatment of severe and/or incapacitating signs of anxiety accompanied by digestive function disorders with a spasmodic component.<sup>2</sup>

Bralix® is available as a sugar-coated tablet, containing clidinium bromide 2.5mg and chlordiazepoxide 5mg. ■

### References:

1. Data on File.
2. Rang HP, Dale MM, Ritter JM, Moore PK. Pharmacology. 5<sup>th</sup> ed. Edinburgh: Churchill Livingstone; 2003.







Remedica is pleased to announce the  
**Pattihis Family Scholarship**

**for the MSc Management degree in the department of  
Management Science and Innovation at  
University College London (UCL).**

**As well as covering the fees totalling £14,250, the Scholarship includes  
an offer of employment with Remedica  
(subject to successful completion of the degree).**

**Applications:**

Interested candidates should visit the following web pages:

[www.ucl.ac.uk/msi/study/msc-management/scholarships](http://www.ucl.ac.uk/msi/study/msc-management/scholarships)

[www.ucl.ac.uk/msi/study/msc-management/how-to-apply](http://www.ucl.ac.uk/msi/study/msc-management/how-to-apply)

It is strongly recommended that applications for admission are submitted  
no later than four weeks before the scholarship deadline of 1<sup>st</sup> April 2014.

Remedica is a European-based (Cyprus) group specialising in the development,  
production and marketing of high quality, safe and efficacious pharmaceutical  
products and is dedicated towards a healthier world.

Remedica's 450+ products are marketed in over 100 countries  
(Europe, Asia, Africa, Australasia, South America, and North America).

