

# The Golden Mortar



News from the Southern Gauteng Branch of the Pharmaceutical Society of South Africa  
and associated pharmaceutical sectors.

Edition 4 / June 2013



## The South African Pharmacy Council Elections

Only once every five years are all registered pharmacist in this country given the opportunity to elect colleagues to represent their professional and commercial interests on the S.A. Pharmacy Council.

Frequently in the past this opportunity has not been used to best advantage - the number of pharmacists actually taking the trouble to vote has been disappointingly small. This is probably typical of many similar groupings of individuals - we don't take the trouble to try to make a difference until the situation becomes dire and by that time it is usually too late.

At a time in our history when, by all accounts, the profession is being threatened from all sides, - lay ownership, an illogical medicine pricing system, an unfair and inappropriate professional fee and the medical scheme industry seemingly free to call the shots, we would like to encourage all our readers to sit up and take notice of this opportunity to participate in these elections and vote the pharmacists into place who they believe can possibly help to make a difference. The saying that, "you get the government that you deserve" applies here and if we don't all take the trouble to participate in this election then we should not complain too loudly when things don't seem to be going our way in the future.

Amazingly, there are fifty nominations for only nine

elected positions on the Council. To find out more about these fifty candidates we suggest that you go to the Council's website at [www.sapc.org.za](http://www.sapc.org.za) and view or download the list from there.

On the 24<sup>th</sup> June 2013 it is the intention of Council to send ballot packs to all those pharmacists entitled to vote and we would urge you to carefully consider your options before making your choice, but please - do exercise your right to vote.

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# IMPORTANT Announcement



A recent Newsletter from the PSSA National Office carried the following important announcement in regard to Community Service Pharmacists for 2014.

## CSP 2014

Due to a technical problem with the sending out of the forms, the NDoH has asked the PSSA to communicate with its members requesting them to pass this newsletter on to their Intern/s.

The application pack can be downloaded from the PSSA website ([http://www.pssa.org.za/E\\_News.asp](http://www.pssa.org.za/E_News.asp)) and contains the following:

- ◆ Application form – NB. The form should be printed in colour
- ◆ CS Letter

- ◆ Time schedule
- ◆ CSP 2014 Posts

Please note the following important facts:

- ◇ The application form MUST be couriered to the given address as it appears in the information letter on the specified date, with two copies of all attached documents.
- ◇ Foreign Applicants must attach the endorsement from Foreign Workforce. Do not apply to SAMHS and DCS.
- ◇ Academic interns that know they will not be finished by January 2014 – do not apply.
- ◇ Do not fax or post the forms, - it MUST be couriered.
- ◇ Closing date for application 15 July 2013 – no late applications will be considered.

## LETTERS

### To the Editor



After having worked in the pharmaceutical industry for a long time and now after retiring I work or help out so now and again in retail.

What surprises me is the old fashioned way of the dispensing requirements. They have not changed at all for a very long time. In fact from before the computerisation era and instead of writing it all up in a book, it only has been computerised.

When you go to a Government office or to a Bank or any such institution, you are asked for your ID book and that contains your unique ID number. No such thing as your address, usually a long story which can be anything or your ordinary phone number or cellphone number which changes quite often or a birth date. I know the big chains have already introduced their own computer cards, but it should be universal.

What I suggest is that the PSSA should approach the authorities to abolish all unnecessary requirements and introduce a system based on your ID and maybe special requirements for the higher scheduled drugs.

It seems time has stood still for certain sections of the public health service.

Kind regards  
Roelof Warris  
28 April 2013



*Ed: What are our reader's comments on this subject? – e-mail to [pssa@pssasg.co.za](mailto:pssa@pssasg.co.za)*



## USING 2D BARCODE COMMUNICATION

The Branch was requested by the National Executive Committee of the Society to investigate possible ways of promoting the Department of Health's Health Days including Pharmacy Week.

The Pharmacy Week promotions that the Branch undertook in 2008 and 2010 were very costly exercises indeed and included expensive consultants, massive printing and distribution costs that today just do not make economic sense. Consequently we have had to take a completely different approach.

Something that we have investigated has shown a lot of promise and we are about to put it to the test, namely, **2D bar coding**.

What is it?

Today, more consumers have access to mobile phones than they do to radio. In addition, 98 out of every 100 cellular phones sold worldwide have digital camera capability. Another amazing statistic is that the number of SIMs in South Africa actually exceeds the population of the country. Cellular literacy in Africa is high and basic internet data services are available wherever there is a cellular signal which pretty much covers the whole country.



We are all well acquainted with 1D bar coding - it has been on our products for years,



but, 2D barcodes are relatively new. You may have noticed examples of these in magazine adverts or on packaging and wondered what they were.

There are various codes available, such as QR Code and DataMatrix, but we have elected to go

with TrustaTag for a number of reasons, one of them being that it is backed by Microsoft.

These tags can be scanned by any smart phone, feature phone or i-pad - the only requirements are a camera, data access and an application to be loaded on the mobile phone or i-pad, which is free of charge.

We would like to encourage members to acquaint themselves with and actually experience the system first hand because it is the intention to use it more widely than simply promoting Health Days. For example the CPS Codeine Care Project, recently announced at the SAPC Conference, relies on the TrustaTag system for its success.

In order to test the system, you need to download the application to your particular phone or i-pad if it did not come with this software already pre-loaded.

Go to:

<http://trustatag.mobi> or to <http://gettag.mobi>

The system will detect the type of mobile phone and will prompt the user on how to download and install the application.

Once completed, you should scan this tag (example) to access the brochure that we have developed entitled "*What you should know about taking medicine*"

This will give you a good idea of how simple the system is to access and to use - and at no cost.

The possibilities are almost endless and we will provide more detailed information regarding Health Days and Pharmacy Week in the next edition of The Golden Mortar.





## RESEARCH WITHIN THE DEPARTMENT OF PHARMACY AND PHARMACOLOGY

By Ass. Profs. M.P. Danckwerts and R.L. Van Zyl

The research within the Department of Pharmacy and Pharmacology at the University of the Witwatersrand is wide and varied. We are a highly research active Department and are one of the highest producers of research articles in the Faculty of Health Sciences. Some of our research current areas include:

### PHARMACEUTICS

#### ***The Wits Advanced Drug Delivery Platform (WADDP)***

WADDP, directed by Professor Viness Pillay, together with his team (ASS. Prof. Yahya Choonara, MS. Lisa Du Toit, and many others from various Departments and institutions) is the heart of drug delivery research in South Africa with a dynamic foundation for the highest post-graduate scientific training and innovation in drug delivery. It is centered on the core principles which take into account the responsibility of maintaining a position of global competitiveness in drug delivery intellectual property generation. The WADDP currently has several superior patented technologies with an extensive technology pipeline and is well connected with various local and international institutions. Most of the research being conducted is patentable, so details of projects are confidential.

#### ***Sachet anti-TB formulation***

This latest research work by Ass. Prof. Danckwerts, involves a "patient friendly" anti-tuberculosis sachet formulation, which is taken with half a glass of water once daily. This new formulation reduces the large number of doses of tablets a patient has to take daily. They can now take a once daily, single spheroid filled sachet, as a pleasant tasting liquid. The formulation also takes into account the drug interaction that occurs with the two main anti-tuberculosis drugs, isoniazid and rifampicin, in the acidic conditions of the stomach. The isoniazid spheroids are coated with an enteric coating that resists being released in the acidic conditions of the stomach, and releases in alkaline conditions (as found in the intestine). Therefore the rifampicin is released in the stomach and the isoniazid is released in the intestine, thereby preventing the drug interaction that occurs with these two drugs. The formulation is a simple one that can be easily scaled up to a normal manufacturing procedure. This is an important feature, as it keeps manufacturing costs to a minimum.

### PHARMACOLOGY

#### ***Metal homeostasis in Malaria and cancer***

Ass. Prof. Robyn L. van Zyl, Mr. Chien-Teng Chen, and Ms. Natasha C. Jansen van Vuuren, are investigating the effect of

iron and copper essential metals in numerous biochemical processes and their intracellular levels on cell survival. Withholding or binding these metals to chelating compounds can affect the tissue or pathogen. A lack of iron or copper in malaria inhibits DNA synthesis resulting in parasite death. With the advent of drug resistance, new antimalarial agents are required and as such a novel group of metal chelators, namely the 8-hydroxyquinoline (8-OH) derivatives have been investigated by the group. The 8-OH derivatives were shown to effectively chelate and reduce both iron and copper to varying degrees and to inhibit the in vitro growth of malaria with a comparable activity to that of quinine. The derivatives were found to have a direct effect on the intra-erythrocytic parasite and not on the host erythrocyte, but did not inhibit parasite growth by inhibiting haemozoin formation, a sensitive target. The toxicological properties of the compounds revealed no adverse effects on red blood cell (RBC) membrane integrity and were able to scavenge free radicals to protect the cells against oxidative stress. These protective effects were also observed when the RBCs were incubated in the presence of excess copper, which is beneficial in patients with Wilson's disease. Where a mutation affects copper regulation results in increased serum copper, inducing haemolysis. Based on structure-activity analysis, lead compounds have been identified and second generation compounds have been designed and synthesised to improve upon the required outcomes.

#### ***The in vitro effects of artificial sweeteners and novel compounds in human carcinoma cell lines.***

Dr. Armorel van Eyk and Mrs. Nurit Dahan-Farkas are investigating the use of several cell lines and cellular proliferation or cellular inhibition in these cells. The one project investigated the in vitro effects of novel azaindole compounds against two colon (HT-29 and Caco-2) cancer cell lines assessed using MTT, an assay commonly used to determine cell viability/proliferation. From the ten compounds that were screened, two compounds caused more inhibition of cell viability than the positive control camptothecin on both cell lines. The results from this study showed that there is potential for future development of these compounds into lead compounds for targeted cancer therapy.

...../continued on page 5



The other projects focused on sugar substitutes, studying the effect that these agents have on human cell lines and could provide some additional information on how common artificial sweeteners may affect cells and DNA within cells. The results indicated the possibility that some of these artificial sweeteners may have adverse effects on individual cells. Some consistent patterns have developed indicating that certain types of cancer cells are affected to a greater degree than others. These sweeteners were observed to accumulate in cells at higher concentrations and the cells present with a consistent altered morphology. Two of the artificial sweeteners, namely sucralose and sodium saccharin potentially induced strand breaks in the DNA of the tested cells. Preliminary studies on nutritive sweeteners indicated that fructose induced proliferation in cells while the new sweetener stevia, indicated a possible decrease in cell proliferation.

### Clinical Pharmacology research

There are many varied clinical pharmacology research projects being pursued in the Division of Pharmacology. These projects range in scope from the quantitative analysis of large datasets to establish drug utilisation; to a very patient-centred qualitative approach to investigate patient adherence to chronic medication regimens. Mrs. Shirra Moch's research into utilisation of antidepressants shows that the most frequently prescribed drug in the dataset was amitriptyline. The type of antidepressant used was significantly associated with ICD-10 code, psychiatric condition, and gender, whilst age was not associated with the type of drug used. We hypothesise that amitriptyline accounts for a majority of prescriptions because of its varied indications for use. Compared to earlier studies there is an increase in use of newer SSRI and SNRI agents for patients with psychiatric conditions, whilst unsurprisingly, patients with a pain condition were more likely to receive an older generation drug. In direct contrast with this approach, a qualitative study was conducted on factors affecting medication adherence in rheumatoid arthritis (RA) patients. A semi-structured interview schedule was used to interview twenty patients from a rheumatology clinic. The individual interviews were conducted in the home language of the participant and video-recorded. Thematic Content Analysis was used to identify the prominent issues raised in each interview. Three main themes were identified which included the patients' approaches to their illness, to their medication and to the healthcare system.

### PHARMACY PRACTICE

#### Community based rapid Participatory assessment.

The Central Drug Authority and Department of Social development hosted the 2nd Biennial Anti-Substance Abuse Summit in 2011. Preceding the summit Mr. David Bayever, investigated a rapid participatory assessment, using qualitative and quantitative methods in 8 provinces at a community level. The outcomes of the research helped to inform government and the summit of the communities concerns and opinions on how to address their needs to prevent substance abuse in communities. I presented the find-

ings of this door-to-door assessment at the opening session of the Summit in order to direct the 450 delegates discussions and resolutions to meet the needs expressed. The population surveyed comprised:

- 65% female and 35% male respondents;
- The age of the respondents was between 16 and 65;
- The respondents were African (49%) and Coloured (34%) and the remainder of 17% of other population groups.

Respondents were drawn from Urban (42%); Peri-urban (20%); Rural (33%) and Semi-rural (5%) areas. They represented employed (63%); self-employed (10%) categories and approximately 45% reported an income of less than R1000 per month. The community indicated that alcohol and cannabis were the two primary substances of abuse. The communities' aspirations included; the development and applications of parenting skills in order for them to address abuse; a need for recreational facilities to occupy youth's spare time; control availability of alcohol and drugs; the application of policies, laws, protocols and practices to reduce the threat of drugs; the promotion of spiritual and religious observance; support eradication of unemployment and poverty to reduce dependence on substances of abuse.

### NATURAL PRODUCT RESEARCH

#### Antimicrobial viability studies

Ass. Prof. Van Vuuren has investigated the traditional use of medicinal plants in a remote area (Northern Maputaland) of South Africa where plants are used to treat diarrhoea, and respiratory and sexually transmitted diseases. The project involved, collecting the respective plants and thereafter testing them against related pathogens. Our findings have shown that in many instances plants are used in combination and that very commonly used plants do not always equate to the best activity.

- The investigation of novel antimicrobial compounds chemically synthesised has yielded promising results for the hexenylnonanoate analogues, where this novel essential oil compound has antimicrobial efficacies equivalent to popular essential oils.
- Recent essential oil composition and antimicrobial efficacy studies have shown the value of combining commercial oils.

A recent study on Lavender (*Lavandula angustifolia*) essential oil in combination with other aroma-therapeutic oils demonstrates promising in vitro effects and lends some credibility for combined use in aromatherapy for the treatment of infections.

#### HIV/AIDS

There are a number of researchers in the Department (Ms. Shirona Naidoo, Mrs. Neelaveni Padayachee, Ass. Prof. Paul Danckwerts, Prof. Viness Pillay, Dr. Neil Butkow, and others) working on HIV/AIDS projects into all aspects of HIV/AIDS, including but not limited to, pharmacovigilance, lactate side effects, novel drug delivery systems, natural product screening, etc.



## PENICILLIN AND THE BACTERICIDAL ANTIBIOTICS

By Ray Pogir, FPS  
Curator of the National Pharmacy Museum

The story behind the discovery and the development of penicillin reads like a science fiction novel.

It is regarded as the miracle which saved the lives of millions of people worldwide who would otherwise have died from bacterial infections.

On the 25<sup>th</sup> of October 1945 Dr. Alexander Fleming, Dr. Howard Florey, and Dr. Ernst Chain each received almost identical telegrams informing them that they had been jointly awarded the Nobel Prize for Physiology and Medicine for the discovery of Penicillin and its curative action in various infectious diseases.

Who were these three Nobel recipients and why the joint award?

Even more fascinating is the fact that Fleming published a paper in 1929 on his observation of a mold which had, by pure accident, landed on a Petri dish in his laboratory at St. Mary's Hospital in London. While studying the staphylococci which were known to cause death in infected patients, he observed that the bacteria in the dish were somehow being dissolved by the mold. He identified the mold as *Penicillium notatum*. Fleming realised that this was potentially a vital discovery. He experimented with the mold in an attempt to formulate a medicine, but found that it quickly lost its antibacterial activity when he attempted to isolate the antibacterial activity from the culture in which it grew. He stopped his experiments but published his observations in *The British Journal of Experimental Pathology* in 1929. It evoked little comment.

The three main characters in this amazing story, Dr. Fleming, Dr. Florey, and Dr. Chain came from different parts of the world. Fleming from Scotland, Florey from Australia and Chain from Germany. The common characteristic was that all three were brilliant scholars and researchers and their interests led them to England.

In 1929 Dr. Howard Florey was on the editorial board of the Journal that published Fleming's article and it must have left an impression on him.

In 1935 he was appointed Professor and head of the Sir William Dunn School of Pathology at Oxford University. In the same year Dr. Ernst Boris Chain, a biochemist who had done brilliant work on enzyme research in Germany, was appointed to the Dunn School as the demonstrator and lecturer in chemical pathology. He had left Germany in 1933 after the start of the Nazi persecution of the Jews.

Florey drew Chain's attention to Fleming's 1929 article on Penicillin.

Together, the two decided to re-investigate the properties of *Penicillium Notatum* and its antibacterial activity. They confirmed Fleming's findings but the major stumbling

block was the small quantities of the active Penicillin which could be extracted from the medium in which it was grown. The tests conducted with the small quantities showed that it definitely had antibacterial properties.

After many experiments and with the invaluable assistance of Dr. Norman Heatly, a brilliant biochemist and talented innovator of makeshift equipment, they eventually had enough Penicillin to do a controlled trial on mice in their laboratories. The results were spectacular. All the mice which were treated by the Penicillin remained alive despite being infected with Staphylococci. The unprotected control group all died. Heatly was now charged with the task of growing larger quantities of the mold. The fermentation process required large containers holding hundreds of gallons from which only small quantities of the active Penicillin could be purified.

The lives of millions of people would be saved if this discovery could be mass produced as a safe medicine. But the problems in the way of producing enough were immense. The main difference in their approach to that of Fleming was that Fleming used the broth in which the mold grew while the Dunn researchers managed to extract a purer form. From this Chain was able to do work on the chemical structure of the mold. Once identified it would be possible to make it synthetically.

By then World War 2 had started. England faced the imminent blitz from the air. Resources for further research and development of Penicillin were almost non-existent. The USA had entered the war and their scientists had read about the Penicillin research results. It was decided that Florey and Heatly would secretly take samples of the mold to America. There the pharmaceutical industry had large resources and the researchers of well-known companies such as Merck, Pfizer, Squibb and Eli Lilly all showed interest in Penicillin.

The urgency of producing enough Penicillin for use on injured soldiers of the armies who were now fighting the enemy resulted in the deployment of large resources by the pharmaceutical companies to produce the medicine. The miracle cure of the century was finally available. Penicillin has saved the lives of millions of people.



Penicillin Solution Tablets  
(S. A. National Pharmacy Museum)  
Manufactured November 1944.  
Therapeutic Research Corporation of  
Great Britain Limited  
Comprising: Boots Pure Drug Co. Ltd., Glaxo  
Labs Ltd.,  
May & Baker Ltd., The British Drug Houses Ltd.,  
The Wellcome Foundation Ltd.



## SAAPI EMBARKS ON AN EXCITING NEW TRAINING PROGRAM



Earlier this year SAAPI held a very successful conference at the CSIR on "Science Revisited" and since then has embarked on an exciting new series of training programmes which are "hands on" training sessions. To date three such sessions have been held, two of which on "Quality Management Principles" were given by Dr Andre van Zyl who was previously a member of the MCC Inspectorate and has spent a number of years in Geneva at the WHO where he served on specialist committees. The third was on "How to be 'Responsible' in Responsible Pharmacist". This was a course for entry level professionals but had the assistance of some experienced Responsible Pharmacists who offered valuable guidance and mentorship to those entering the field.

All of the courses were oversubscribed and from the participants comments it was clear that the courses offered good value. SAAPI is of the opinion that there is a demand for this kind of training and are planning a number of similar courses.

In addition to the series of training programmes SAAPI is launching a "Breakfast Club". The objective of this initiative is to provide members with the opportunity of having discussion meetings and to share best practices. The intention is that the meetings will take place after a light finger breakfast and will last for about two hours so that members do not have to spend an entire day out

of the office but can still meet and interact with colleagues on a regular basis.



**How to be a responsible pharmacist function held at Glen Hove Conferencing**



**Some of the attendees at the new SAAPI Training Program**

**ComplienZ**  
for optimal drug usage



## Getting to know the Chairman of CPS Southern Gauteng Branch

### Christine Venter



**Christine Venter**

"Hubby – Eric, my parents, brother and sister. My two dogs are also important to me."

Psychometric tests pointed her in the direction of pharmacy as a career which she studied at the University of Pretoria and completed her degree in 1994. At that time community service was not a requirement, so Christine immediately undertook her internship year at Sancardia Pharmacy in Pretoria. Furthering her studies is part of her life - Christine completed her Masters in Business Leadership at UNISA Business School in 2006 and started studying for a PhD in 2011 in "Entrepreneurship". This has been put on ice due to her work commitments.

Christine worked as a Pharmacist for just more than one year after completing her internship. She then had the opportunity to become an Operations Manager for the S Buys Pharmacy Group, where at one point in time she managed 16 Pharmacies for them. In 2006 Christine joined Water Tower Pharmacy Group, situated in the NHC Medical Centres, based in Johannesburg. She was subsequently appointed as CEO of the group, and held that position until she started the Pharmacy Development Academy (PDA) in 2011. Christine has been involved in Pharmacy Operations and Management for the best part of ten years.

A defining moment in Christine's career was the realisation, during her studies in 2011, that entrepreneurship and leadership are important characteristics required of pharmacists who own independent community pharmacies. To quote Christine "I realised that if I started with a training Academy I could address the shortages and needs of independent community pharmacists. PDA's core focus is to develop pharmacy staff and pharmacists in important ways, including their knowledge and skills, assisting them to continue developing themselves".

Christine's daily tasks at PDA are hectic and involve the development of (i) short courses for staff working

in independent community pharmacies; (ii) short courses for pharmacists, such as immunisation and vaccination and a value adding CPD platform for pharmacists. She also conducts these courses. "As a result of my experience in Pharmacy Operations I realised the challenges that community pharmacists faced, and thus I develop all these courses to assist pharmacists and pharmacy staff to provide a better health care service to their patients" said Christine.

Through PDA, Christine provides consultation services on operational matters to the franchise group Leading Pharmacy and other independent community pharmacies. She currently holds the position of Chairman of the Leading Pharmacy Board of Directors. She is also an examiner, evaluator, assessor, moderator and facilitator on pharmacy related subjects.

Christine uses her time for relaxation to catch up on Pharmaceutical Society issues, but also she "loves reading, scuba diving and shopping; my most favourite vacation spot is Sakatia Island at Nosy Be, Madagasca".

When asked what the two most important lessons she had learned, she responded, "The first is that the only constant in life is change, and the second is to keep information confidential when you are told to do so. The best advice I can give is that it is more important to keep your focus on the path ahead than to ponder on the past. The best advice I received is to just be myself and not to pretend to be what I'm not."

To confirm her love of reading she quoted the authors of books she enjoys reading, namely, Robin Sharma, Malcolm Gladwell, John Grisham; "magazines that I prefer are the Harvard Business Review, Succeed and "The Entrepreneur".

One of Christine's objectives is to complete her PhD studies. Whenever possible she attends product launches and CPD evenings; "it is very important for me to stay up to date with developments within the pharmaceutical fraternity".

When asked to provide a brief outline of her pharmacy "politics" involvement and goals, and positions held, Christine replied, "I am currently Chairman of CPS Southern Gauteng Branch, and Vice President of CPS National. During my term in office I would like to add value to the fraternity by applying my mind to the core aspects and challenges which community pharmacists face on a daily basis.



# LAYOUT AND MERCHANDISING IN A PHARMACY

By Dave Sieff

On 16th April 2013 the Southern Gauteng branches of the CPS and the PSSA hosted a joint workshop for members and staff who have an interest in learning more about this aspect of community pharmacy promotion and marketing.

The layout of a pharmacy and the merchandising of goods for sale in it are important factors which contribute to the image that is projected to its clients, and contributes to its successful operation.

This topic was expertly presented by Dr Richard Botha, who has a Masters degree in Pharmacology and an MBA, in a well illustrated and logically explained presentation, emphasising that managing the space available should always be a priority, as space is an expensive resource.

The interior design, and the merchandising function, especially of the front shop, influence the purchasing behaviour of customers, and can add significantly to the turnover of a pharmacy, and can define a successful retail operation.



Christine Venter thanking Richard Botha for his informative presentation.

The large audience was treated to many fascinating and fundamentally important aspects of retail merchandising, including colour schemes, lighting, window displays, floor layout and traffic flow, and various methods of display of the merchandise.

Dr Botha concluded by answering pertinent questions from the floor, and was thanked by Christine Venter, Chairman of the CPS Branch.

## Attendees at the CPD session on 16 April



Marie Botha and Len Smith



L to R Marinda Steyn, Elise du Plessis and Danie Botha

## CPD - AN UPDATE ON OSTEOPOROSIS

By Dave Sieff

On 8th May 2013, a capacity audience of pharmacists attended the CPD presentation "An Update on Osteoporosis" given by Dr. Stanley Lipschitz, the well known specialist in geriatric and related conditions.

He showed, with the aid of a number of illustrative slides, the structure of normal bone, how it is formed, and the process of deterioration due to various causes, and the natural "re-modelling" which occurs continuously in healthy bone.

Dr. Lipschitz revealed the latest developments in this field of research, and showed the results of new methods of study of this condition, the factors leading to Osteoporosis, and

the treatment options available and "in the pipeline."

He compared the efficacy of older and newer pharmacological treatments, and urged pharmacists to ensure that their patients are compliant with their medication regimes, with special emphasis on dietary and supplementary Calcium and vitamin D intake.

Dr. Lipschitz answered questions from the floor to conclude an informative and interesting update on this common condition.

This CPD presentation was kindly supported by MSD.





## ZINC – THE ESSENTIAL ELEMENT FOR THE COMMON COLD

Lynn Lambert (B.Pharm)  
Amazeza Information Services

### INTRODUCTION

Zinc is an essential trace element and is of key importance in many biological processes, acting as an antioxidant and strengthening the immune system. Although the mechanism of action is not completely known, zinc supplementation may be used to increase immunity against viruses or may interfere with the replication of certain viruses, including the virus responsible for the common cold.

The common cold is often caused by the rhinovirus. It is one of the most widespread illnesses and is a leading cause of visits to the doctor and absenteeism from school and work. Complications of the common cold include otitis media (middle ear infection), sinusitis and exacerbations of reactive airway diseases. There is no proven treatment for the common cold. However, medication that is even partially effective in the treatment and prevention of the common cold could markedly reduce the severity and duration of this illness.

The common cold comprises a mixture of viral upper respiratory tract infections (URTIs). Although colds are self-limiting, many people choose to buy over-the-counter (OTC) medicines for symptomatic relief. Some of the ingredients of OTC cold remedies may interact with prescribed therapy, occasionally with serious consequences. Therefore, careful attention needs to be given to taking a medication history and selecting an appropriate product. Studies have been conducted to support the value of zinc in reducing the duration and severity of symptoms of the common cold.

#### **The role of zinc**

Although the exact mechanism of zinc treatment for the common cold is not fully known, it has been found that zinc inhibits the replication of the rhinovirus. Zinc is beneficial in reducing the duration and severity of the common cold in healthy people and they are also less likely to have persistence of their cold symptoms beyond seven days of treatment. Since the majority of replication of the rhinovirus occurs within one day of symptom onset, this is the time interval for which intervention might be most beneficial. Studies have demonstrated that administration within 3 days of symptom onset may still have benefit. As there are no studies in participants in whom common cold symptoms might be troublesome (for example, those with underlying chronic illness, immunodeficiency, asthma, etc.), the use of zinc currently may not be recommended for them.

A number of zinc supplements are available. However, a

significant decrease in the duration of symptoms of the common cold is seen when adults take zinc gluconate or zinc acetate providing between 9 and 24 mg elemental zinc per day. Treatment is most effective when administered within 24 hours of the onset of common cold symptoms. Using zinc oral lozenges may help decrease the duration of the common cold in adults. Lozenges should be taken every two hours while awake, starting within 48 hours of symptom onset. People taking zinc lozenges are more likely to experience adverse events, including a bad after-taste and/or nausea.

#### **Prevention is better than cure**

A daily dose of a zinc-based supplement such as Vital Zinc Complex®, Natrodale Zinc 15 mg®, Bettaway Zinc®, Fit Health Chela Zinc® of 15 mg per day may help prevent viral infections. Zinc supplementation for at least five months reduces incidence and prescription of antibiotics in patients with the common cold.

#### **Conclusion**

Effective symptom control is most often what patients with colds and flu require. Zinc plays important roles in growth and development, the immune response, neurological function, and reproduction. Since numerous aspects of cellular metabolism are zinc-dependent, adequate zinc intake is essential in maintaining the integrity of the immune system, and zinc deficient individuals are known to experience increased susceptibility to a variety of illnesses including the common cold. Treatment with zinc within 24 hours of the onset of a cold reduces the duration and severity of the illness and has been shown to boost immune function.

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# New Pharmacy syllabus 2013



***An update from Prof. Paul Danckwerts, Associate Professor, Department of Pharmacy and Pharmacology on the Faculty of Health Science Campus, Wits University.***

There have been a number of new initiatives to the syllabus in Pharmacy which are to be implemented in 2013. The South African Pharmacy Council together with the Higher Education Quality Committee (HEQC) decided that in the past two decades, the roles of the community and institutional pharmacists have changed and developed to meet the needs of the rapidly changing health care environment. The dispensing of prescribed medicines and the provision of advice and self-medication remain vitally important parts of the service provided by pharmacists. An equally important role however, is to advise other health care professionals on the rational and safe use of medicines. They also accept the responsibility for ensuring that medicines are accessible and are safely and effectively used by patients for an optimal therapeutic outcome of the treatment. The changing role thus requires practicing pharmacists to make a contribution to appropriate prescribing of medicines and to advise patients on how to use medicines effectively, as well as to educate the community on disease prevention measures and health promotion in general. The new guidelines are a little more rigid in that the Council has now required Departments/Schools of Pharmacy to allocate the amount of time in the form of HEQC points to core and basic sections of the syllabus. As well as being more prescriptive on the presentation of Good Pharmacy Practice, Good Clinical Practice and Good Laboratory Practice guidelines.

The role of the industrial pharmacist is to ensure that medicines are available in South Africa and are of the required quality, safety and efficacy.

Although we always were in line with the new qualification framework, (we have had Pharmacotherapy as one of the main subjects in our syllabus for the last ten years) we have adjusted the syllabus to contain more research in each year as well as increase the depth of some of the topics in Pharmacy Practice. All have been minor changes.

Upon the suggestion of the South African Pharmacy Council, a professional specific Pharmacy course implemented at a first year level. The amendment of the curriculum has involved the replacement of Psychology (PSYC 1008) with the new Pharmaceutical Practice (PACY 1000) course. The Pharmaceutical Practice course is a fundamental course that assists in introducing students to the profession of Pharmacy as well as serves as an effective method of introducing important professional specific concepts, which are relevant to the students from the very beginning of their studies. It has been designed to harness desirable skills and thought processes that the students will need as potential future pharmacists and it will provide a solid foundation to prepare them for the commencement of their experiential learning. It will strengthen an essential link between the first year students on main campus and the Department of Pharmacy and Pharmacology on the Faculty of Health Science Campus.



# THE PSSA ANNUAL GENERAL MEETING



Members of the PSSA were advised earlier in the year that the Society would not be holding its traditional annual conference due the fact the Pharmacy Council would be hosting a similar event in June and readers were provided with the reasons why it was felt that two such similar conferences could not be supported.

However, in terms of the Constitution, the Society is obliged to hold an Annual General Meeting in order to deal with the formalities such as approving Minutes, receiving the reports of the President and the Honorary Treasurer, considering Motions, appointing Auditors for the following year and of course electing the Honorary Officers.

The scaled down version of our normal AGM was held on the 14th May 2013 in Pretoria at which the above formalities were handled.

The results of the elections were as follows;  
President. Dr. Johan Kruger  
Deputy President. Professor Sarel Malan  
Honorary Treasurer. Mr. Danie Brink

In addition to these the Branches and the Sectors made their individual nominations for members to represent their interests on the National Executive Committee.

The Golden Mortar congratulates all these members and wishes them success during their term of office.

In addition to this two motions were presented for consideration at the AGM.

The first was to confer Honorary Life Membership of the Society on Mr. Clive Stanton and the second was to confer Fellowship of the Society on Mr. Stavros Nicolaou. Both of these members were considered to be fully deserving of such recognition and the Motions were passed unanimously. The Golden Mortar also congratulates these two members on achieving these thoroughly deserved honours for their outstanding contributions to the profession as well as to the Society.



The Chairman of the Editorial Board is David Sieff and the members are Cecil Abramson, Johan Bothma, Liezl Fourie, Doug Gordon, Neville Lyne, Trevor Phillips, Ray Pogir and Miranda Viljoen. All articles and information contained in The Golden Mortar of whatsoever nature do not necessarily reflect the views or imply endorsement of the Editorial Board, the Branch Committee, the PSSA, its Branches or Sectors. The Editorial Board and the aforesaid cannot therefore be held liable. Every effort is made to ensure accurate reproduction and The Golden Mortar is not responsible for any errors, omissions or inaccuracies which may occur in the production process. We welcome controversial contributions and as space permits, these will be published, abridged if necessary

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For more information on the Southern Gauteng Branch and classified advertisements visit the PSSA website on [www.pssa.org.za](http://www.pssa.org.za)

