



# The NGSMIPS Herald

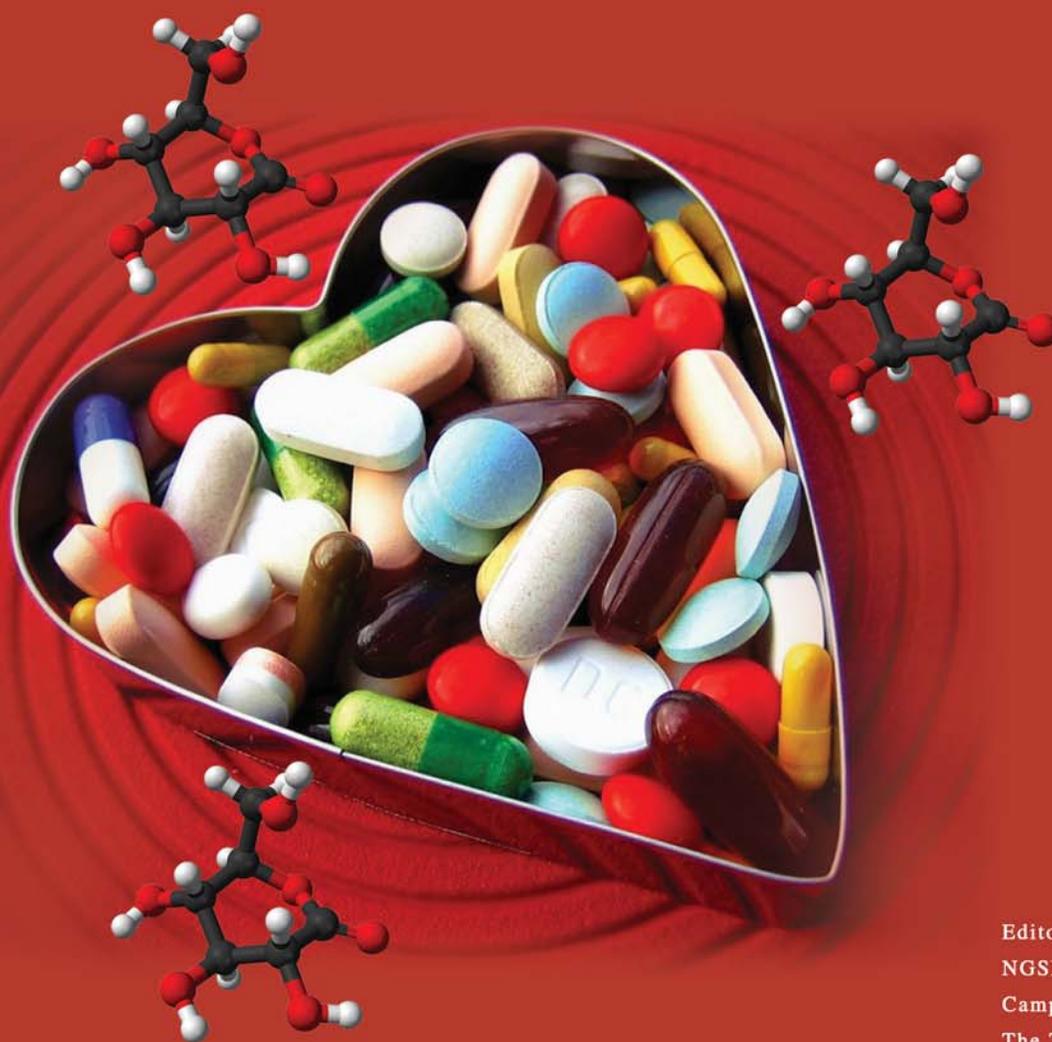
NITTE

The Official news letter of the Nitte Gulabi Shetty Memorial  
Institute of Pharmaceutical Sciences, Mangalore

Volume - 2

Issue - 2

April - June 2011



## Statins on the Heart - Are they safe?

### VISION

To build a humane society through excellence in education and health care.

### MISSION

To develop Nitte University as a centre of excellence, imparting quality education, generating competent, skilled manpower to face the scientific and social challenges with a high degree of credibility, integrity, ethical standards and social concern.

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'For Private Circulation Only'

### From the Editor's desk



Every year a batch of M.Pharm students pass out from NGSM IPS, full of zeal to launch their own successful careers. Most of them venture into the Pharmaceutical Industry and fortunately many of our post graduate students do find jobs there but usually in areas far removed from their specialization. It is no secret that very often the industry has very little use for research projects carried out in institutions since they don't consider them as commercially viable. This is primarily due to the reason that the bulk of academic research is novel drug delivery based which requires expensive technology not amenable for large scale production or have poor reproducibility. To ensure that none of the institutional research projects go in vain, it is necessary to bridge the gap between academics and the Pharma Industry. There exists a strong feeling, at least in the academic circles, that unless technology driven initiatives find a surer place in the industrial sector in this country, the academia-industry interaction is likely to remain confined to developmental activities with limited exploratory or research-based content. There is a need to create avenues for a close academia and industry interaction through all the phases of technology development, starting from conceptualization down to commercialization. Efforts in this direction can be made with inputs from both the institution and industry. This will include academic intervention to solve specific industry problems, laboratory utilization by the industry, participation by the industry in technology development and industry support to basic research.

Such interactions will be mutually beneficial to the Pharma Industry and Academia since it provides the industry an opportunity to grow its business by using the results of academic research and the academic institution is in the need of a partner that can take its discoveries to the market place.

**Marina Koland, Executive Editor**

### NGSMIPS Celebrates Annual Day

The institution celebrated its Annual Day on 6<sup>th</sup> May, 2011 at the K.S Hegde Auditorium, Derelakatte. Sri. Raghuram Bhandary, Additional Drugs Controller, Bangalore was the Chief Guest and Dr. S.Y Kulkarni, Principal of NMAMIT, Nitte consented to be the Guest of Honour at the function. In his address, Sri Raghuram Bhandary spoke about the rapid development of the Pharmaceutical Industry in India in recent years and the increase in exports. He said that Karnataka was one of the largest contributors towards export of generic drugs. Dr. S.Y Kulkarni shared with the audience his experiences in the field of research and advised the students on the wisdom of being well prepared to face the challenges when it comes to starting a career. During the function, the College Magazine, "Memorabilia" was released by Sri Raghuram Bhandary.

It was truly a night of awards and entertainment. Letters of appreciation for obtaining Ph.D degrees in the year 2010-2011 were awarded to Dr. Marina Koland, Dr. Prabhakara Prabhu and Dr. Prerana Shetty. Besides the presentation of prizes and trophies to students in various literary and sports competitions, toppers in B.Pharm and M.Pharm for the year 2009-2020 were also recognized for their academic achievements. The Sri. K. Sriharsha Memorial Gold Medals were awarded to Ms. Shruti Vijaykumar Patel and Mr. Patel Hardik Kumar for the best outgoing students in B.Pharm and M.Pharm respectively for the year 2009-2010. Mr. Malli Ravi who topped M.Pharm in Pharmaceutics in the same year was also awarded a gold medal sponsored by the Department of Pharmaceutics, NGSM IPS. The formal function was followed by a two hour long entertainment programme in which students showed off their talents in dance, music etc.



Sri Raghuram Bhandary lights the lamp at the Annual Day Celebrations. Also in the picture are : Dr. S.Y Kulkarni, Dr. C. S. Shastry, Principal, Dr. D. Satyanarayana, Director of PG Studies & Research and Mr. Adithya Rao, Student President.



Release of the College Magazine "Memorabilia". seen in the picture from Left to Right are : Mr. Abhishek Kumar, Dr. Jane Jacob, Dr. Marina Koland, Dr. D. Satyanarayana, Dr. S.Y. Kulkarni, Sri Raghuram Bhandary, Dr. C. S. Shastry, and Mr. Adithya Rao

## Campus Buzz

### Nitte University Inter Collegiate T20 Cricket Trophy won by NGSMIPS

In the Nitte University Inter Collegiate T20 Cricket Tournament held from 15<sup>th</sup> to 17<sup>th</sup> April, 2011, the NGSMIPS cricket team played against A.B Shetty Dental College, MLT and K.S Hegde Medical Academy. Our boys did us proud by winning the Finals against the KSHEMA team and bagging the trophy. The Man of the Match was awarded to Margesh Patel (III B.Pharm) and the Man of the Tournament award was won by Shishir Prabhu (III B.Pharm).



### Campus Interviews and Placement

Campus interviews were conducted on different occasions which were attended mostly by M.Pharm students.

Ms.Bina Patil, Director, Human Resources, and Ms.Vinaya V., Associate Manager of Indegene Life Systems Pvt. Ltd, Bangalore, visited the campus on 30<sup>th</sup> March, 2011 for recruitment. The interview was attended by 30 M.Pharm students out of which 5 were short listed who were:

#### Pharmaceutical Chemistry

1. Mr. Chetan Seetharam Harekal
2. Ms. Lekha Merin Varghese

#### Pharmacology

3. Mr. Sapnil Kumar Patel
4. Ms. Merlin James

#### Pharmaceutics

5. Ms. Deepika Uchil

The salary offered was Rs. 3.00 lakhs per annum



Dr.Ravi Shankar, Director SDM Centre R&D for Ayurveda and Allied Sciences and Dr..Muralidhar Ballal, SDM Ayurveda Pharmacy, Udupi, were also invited to organize an interview. About 15 students attended and 7 were selected who were

#### Pharmacology

1. Mr. Rajesh K.S
2. Mr. Aboobakar Shafeeque A
3. Mr. Mohammad Ibrahim

#### Pharma Chemistry

1. Ms. Sangeetha.B
2. Ms. Rajalekshmi.M
3. Mr. Chethan Seetharam Harekal
4. Ms. Lekha Merin Varghese

The salary offered was Rs.1.20 – 1.80 lakhs per annum

A campus interview was organized by Win-Medicare Pvt. Ltd., Goa, represented by Mr. Srikanth, District Sales Manager, Mr. Shankar Dongre, Regional Sales Manager and Mr. Fayaz Hussain, Professional Service Representative on 7<sup>th</sup> April, 2011 for positions in Pharma Marketing. The interview was attended by 47 B.Pharm students and the salary offered was Rs. 1.20 lakhs per annum with allowances and incentives. The students short listed for appointment is yet to be intimated.



### Promotions

**Dr. Marina Koland**, Associate Professor, Department of Pharmaceutics has been promoted to Professor with effect from May 2011.

# THE TRUTH ABOUT STATIN DRUGS

Compiled by: **Dr. Prabhakara Prabhu**, Assoc. Professor  
Department of Pharmaceutics

If you haven't already heard, cholesterol-lowering statin drugs are among the world's most popular. Unfortunately, this popularity doesn't translate into their efficacy for heart disease prevention. Before we detail why one should avoid cholesterol-lowering statin drugs, let's first discuss why cholesterol is not something to fear in the first place. Cholesterol is like the air we breathe - without it we cannot exist. Relative to most things, cholesterol is produced by the body in large quantities. In fact, all tissues make it and all cells contain it.

## The essential role that cholesterol plays in the body

- Cholesterol is necessary for the synthesis of all steroid hormones, and without it there would be no testosterone, no estrogen, and no progesterone or any of the remaining metabolites.
- The brain contains vast quantities of cholesterol, and without it, there is no memory.
- Every cell membrane is made up of cholesterol, allowing flexibility and integrity
- Cholesterol ensures optimal nutrition by enhancing the permeability-barrier properties of the secondary fat layer off the cell, keeping nutrients in and keeping toxins out.
- Cholesterol surrounds the nerve fibers, comprising insulation called the myelin sheath.
- Cholesterol is needed for the production of bile acids, which are required for the digestion of essential fats. Bile acids are crucial for the assimilation of fat soluble vitamins such as vitamins A, D, E & K.
- Synthesis of vitamin D through the skin is not possible without cholesterol, and some research suggests that any reduction in inflammation from cholesterol lowering drugs is the increased activity of the vitamin D receptor, not the cholesterol-lowering effect.
- Cholesterol retains water for proper hydration and without it we would be bone dry. In fact cholesterol is required to naturally moisturize the skin.

The medical community has become so frightened of cholesterol it's forgotten that every cell regulates its own level internally.

## Other important facts about cholesterol

Consumption of cholesterol-laden foods does not translate into higher blood cholesterol levels unless your body is currently deficient. In fact, the body will produce very significant quantities of cholesterol regardless of diet - because it must in order to thrive.

There is no clear correlation between blood cholesterol levels and the risk or even the advancement of heart disease. When the heart surgeon, Dr. Michael DeBakey, analyzed medical histories for 1,700 of his patients with existing heart disease, more were found to have cholesterol levels below 250 than between 300 and 400 or higher.

Physiologically speaking, cholesterol levels are almost completely meaningless with regard to heart disease.

## The Real Culprits in Heart Disease

### Arterial Calcification

In a five-year study of 950 men and women, researchers from Johns Hopkins University found that 95% of all heart attacks, strokes and other cardiovascular-related events occurred in patients with high levels of arterial calcification.

The missing link in that regard is most likely a vitamin K2 deficiency, not high levels of cholesterol. In a study of 4,500 people it was found that the greater the vitamin K2 (menaquinone) deficiency, the greater the aortic calcification.

Vitamin K2 has an essential role in calcium metabolism, ensuring that calcium goes where it belongs, on the bones, not in the arteries.

### Homocysteine

Heart disease is not limited to calcification of the arteries. One important indicator of potential arterial damage can be measured by homocysteine levels.

Homocysteine is an essential protein that, when elevated, causes low density lipoprotein (LDL) to become aggregated, or sticky. Beyond that, it actually damages the arterial lining, causing blood clots to be formed while further stimulating the growth of arterial muscle cells which form fibrous tissue.

The good news is that homocysteine can be converted into harmless amino acids by insuring the four following nutrients are taken: Choline, Folate, Vitamin B6 and Vitamin B12. All of these nutrients can be found in eggs.

### Diet

It isn't the saturated fat that we need to worry about, it's structurally-damaged fats and oils we consume every day in the form of processed vegetable oils and hydrogenated oils (trans-fatty acids).

Another important dietary factor is refined carbohydrates and sugars. They raise insulin levels and in turn, raise inflammation. Current research shows that reducing inflammation is one of the most important factors in arterial health.

### Other Factors

Other heart disease risk factors include deficiencies in Magnesium, Selenium, Iodine, Vitamin D and essential fatty acids.

### What's Wrong with Cholesterol-Lowering Statin Drugs?

They Don't Prevent Heart Disease. There are perhaps dozens of sound reasons to avoid a cholesterol-lowering drug, especially statin drugs, but the biggest is that there's actually no evidence they prevent heart disease.

The folks at AstraZeneca are even kind enough to mention that fact while they're trying to sell us on the benefits of their statin drug.

That's right, the manufacturer says it up-front that their drug will NOT prevent heart disease with the disclaimer "Drug has not been shown to prevent heart disease or heart attacks." So then why should we buy it again?

## Muscle Damage

Cholesterol-lowering statin drugs are certain to cause muscle damage. Your doctor might tell you that this side-effect is rare but that's not really the case.

If a patient reports muscle pain, also called myalgia, the doctor will test for muscle damage (myopathy) by measuring their levels of creatine phosphokinase (CPK), an enzyme associated with muscle damage. Assuming those levels are normal, the doctor will assume that there's no muscle damage and encourage the statin drug to be continued.

Unfortunately, a normal CPK reading doesn't mean they're in the clear. In a study published in the Canadian Medical Association Journal, the researchers found that patients with normal CPK levels can have microscopic damage to their muscles.

Adding to that, the researchers from Boston's Tuft's University and Switzerland's University of Bern looked at 44 patients who were suffering muscle pain from statin use, and they found that 57% of those patients had microscopic evidence of muscle pain. Yet only 2% of the patients who exhibited real evidence of muscle pain had elevated CPK levels.

## Poor Muscle Recovery

A study presented at the American Physiological Society meeting showed that taking a statin drug hinders the repair of muscle damage. This probably explains why so many statin drug users usually find their road to recovery very long, and in some cases there is no recovery.

In fact one statin drug was dropped from the market in 2001 because of a high incidence of rhabdomyolysis, a breakdown of skeletal muscle tissue.

## Co-enzyme Q10 (CoQ10) Deficiency

Statin drugs "work" by inhibiting the enzyme HMG-CoA reductase, in turn lowering cholesterol levels along with the production of CoQ10.

CoQ10 is vital for the production of energy, and without it, the heart will not pump an ounce of blood. CoQ10 deficiency has been associated with congestive heart failure, and in my observation has shown that CoQ10 helps immensely with heart failure patients. This may explain the rise of congestive heart failure in conjunction with widespread statin use.

Many physicians realize CoQ10's importance and have been recommending supplemental CoQ10 to compensate for statins but this is not always practical.

## Lowered Testosterone

According to the Journal of Sexual Medicine, researchers in Italy have found that statin drugs double the risk of low-testosterone. This was determined after analyzing 3,484 men who reported sexual problems.

The study authors believe that the reason may be that statin drugs disrupt the pituitary gland regulation, so that no additional testosterone is produced. In other words, the body can no longer detect a testosterone shortage, so it stops testosterone production.

Symptoms of low testosterone include depression, fatigue, irritability and obesity.

## Other Problems

In the AstraZeneca-sponsored JUPITER study it was found that users of the statin drug Rosuvastatin (Crestor) had a 27% greater risk of developing diabetes than patients who took a placebo.

Statin drugs are associated with a 1400% increase in peripheral neuropathy, which affects at least 20 million people in the United States and is especially prevalent in diabetes. Peripheral neuropathy is a condition that results in often severe, crippling pain in the limbs.

Statin drugs have also been linked to cataracts, dementia, depression, erectile dysfunction, heart failure, kidney failure, liver dysfunction, and memory loss.

Lowering Cholesterol has nothing to do with the "Benefits" of Statin Use

For quite some time, researchers have recognized that inflammation is a major factor in heart disease, NOT cholesterol. For this very reason, any benefit the cholesterol-lowering statin drugs do possess has to do with lowering inflammation. That's correct, statin drugs "work" by lowering inflammation, not by lowering cholesterol.

Even the authors in the famous Jupiter study admitted this fact and that study was sponsored by a statin drug manufacturer.

## A Natural Fix

A popular way to measure inflammation is testing C-Reactive Protein levels (CRP). The higher the level of CRP, the more inflammation that exists. But why use a statin drug to lower inflammation when you can lower your CRP level (or inflammation) by taking a few grams of vitamin C per day?

The actual dose of vitamin C depends on body weight, sex, and possibly other factors. Try starting out with two to three grams of vitamin C and testing your CRP level to determine if you're taking enough.

Beyond that, there are many other protective, naturally occurring compounds that have better anti-inflammatory effects and are far safer than statin drugs. Some examples include curcumin, quercetin, cocoa polyphenols, green tea, and pomegranate extract.

## The Bottom Line about Cholesterol

Sadly, the entire cholesterol theory of heart disease, more accurately referred to as the lipid (fat) hypothesis was founded on very shaky science. It is now widely recognized that chronic, low-grade inflammation is the real cause of heart disease.

Today, more than ever, many forward thinking physicians are no longer interested in lowering a patient's cholesterol levels - instead, they question whether their levels are high enough.

## REFERENCES

1. Michael W. King, PhD / IU School of Medicine.& Bruce Alberts, Ph.D. et al. *Molecular Biology of the Cell* (3rd Edition). Garland Publishing, New York, 1994. p.481.
2. Geleijnse JM, Vermeer C, Schurgers LJ, Grobbee DE, Pols HAP, Witteman JCM. *Thromb. Haemostas. (Suppl July)* P473, 2001.
3. *N Engl J Med* 2008; 359:2195-2207
4. *Am J Epidemiol.* 2009 Aug 15;170(4):464-71

## DEPARTMENT ACTIVITIES

### DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

#### Research Publications

**DR. K. ISHWAR BHAT**, Professor

Antimicrobial studies of synthesized azetidinone derivatives from sulfamethoxazole moiety. *J. Chem.Pharm.Res.*, Vol 3(3), (2011), 114-118.

**DR. JANE JACOB**, Assoc. Professor

Analytical methods for the estimation of paliperidone. *Int. Journal Res. Pharm. Sci*, 2011, 2(2), 158-161

#### Papers Presented at Conferences

**Dr. K. Ishwar Bhat** presented a research paper on "Synthesis, Characterization and comparative pharmacological studies of thiophene containing chalcones and their corresponding 2-hydroxy pyrimidines" as poster at the International Conference of Indian Council of Chemists (ICC) from 11<sup>th</sup> to 15<sup>th</sup> June 2011 held at Bangkok, Thailand.

### DEPARTMENT OF PHARMACEUTICS

#### Research Publications

**DR. R. NARAYANA CHARYULU**, Professor

A pseudo-randomised clinical trial of in situ gels of fluconazole for the treatment of oropharyngeal candidiasis. *Trials*. 2011, 12:99.

**MRS. NISHA GIRISH SHETTY**, Senior Lecturer

Formulation and evaluation of self microemulsifying drug delivery system of carbamazepine. *Int J Res Pharm Sci*, 2011; 29(2):162-9.

### DEPARTMENT OF PHARMACOLOGY

#### Papers Presented at Conferences

**Dr. C.S Shastry**, Professor presented a paper entitled, 'Synthesis, Characterization and Biological Activity Studies of Some Substituted Pyrazolines Derivatives Derived from Chalcones' at the International Conference of Indian Council of Chemists (11<sup>th</sup>- 15<sup>th</sup> June 2011) held at Bangkok, Thailand.

Dr. C.S. Shastry has chaired a scientific session during a three day national conference on 'Management of Alzheimer's disease: Role of Herbal Pharmacotherapy' at Sharada Vilas College of Pharmacy, Mysore from 22<sup>nd</sup> - 24<sup>th</sup> June 2011.

#### Research Grants

**DR. C.S SHASTRY**

1. A research grant of Rs. 14,14,883 was awarded for the project entitled, "Evaluation of Radio Protective Potential of Some Indigenous Medicinal Plants of Western Ghats of Karnataka Having Phytochemicals Containing Thiol Moiety" by the Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy, Government of India.
2. Financial assistance of Rs. 25,000 was granted by the Indian Council of Medical Research (ICMR) for organizing a workshop on "Conservation of medicinal plant and preservation of traditional Medicinal Plant Knowledge Base" in July 2011.

### DEPARTMENT OF PHARMACOGNOSY

#### Research Publications

**MR. SANTANU SAHA**, Lecturer

1. Phytochemical studies of aerial parts of the plant *Leucas lavandulaefolia*. *Der Pharma Chemica*. 2010; 2(5): 434-437.
2. Analgesic Activity of *Phyllanthus lawii* Extract in Swiss Albino Mice. *Pharmaceutical Crops*. 2011; 2: 8-10.

#### Chair Person at Conferences

**Mr. Santanu Saha** has chaired a session at the Third Annual Conference KMLA-2011 on "Advances in Health Sciences Librarianship" in association with Nitte University and Rajiv Gandhi University of Health Sciences conducted at A. B. Shetty Memorial Institute of Dental Sciences, Derelakatte, Mangalore on 28<sup>th</sup> and 29<sup>th</sup> January, 2011.

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## FIVE DON'T'S AFTER MEALS

By **Mohammed Afsal**, III B.Pharm

- |                                  |   |
|----------------------------------|---|
| ③ DON'T SMOKE :                  | Experiments by experts prove that smoking a cigarette after meals is comparable to 10 cigarettes.   |
| ③ DON'T EAT FRUITS IMMEDIATELY : | This causes the stomach to be bloated with air.   |
| ③ DON'T SLEEP IMMEDIATELY :      | The food we take will not be able to digest properly, leading to indigestion  |
| ③ DON'T DRINK TEA :              | Because tea leaves contain a high content of acid. The substance will cause protein present in the food to be hardened, thus difficult to digest. |
| ③ DON'T TAKE BATH :              | Bathing will cause increase in blood flow to the hands, legs & body. Thus the amount of blood around the stomach will therefore decrease.         |

Courtesy: Reader's Digest

## 7 TIPS TO SLOW DOWN AGING

Anti-aging creams and pills may stop fine lines and wrinkles from appearing on your face but more than what is seen from the outside, organs and different systems in the body become less functional as a person grows older. Although aging is inevitable, there are steps that people can take in order to let the aging process pass gracefully, or if not slow it down. One can start by employing these seven simple habits:

1. **Get adequate sleep** - Having a good night's sleep on a regular basis has many long-term health benefits like slowing down the aging process.
2. **Drink lots of water** - Water helps to delay the aging process since dehydration will result in the formation of wrinkles and fine lines by the accumulation of toxins in the skin.
3. **Stop Smoking and Stop Being around Smokers** - Smoking significantly reduces a person's life expectancy and secondhand smokers experience similar, if not far worse, health related adversities.
4. **Learn to Cope with Stress** - Stress can take a toll on your appearance, health and relationship with other people.
5. **Eat Fresh Fruits and Vegetables** - Their high essential nutrient and mineral content not only keeps the body functioning properly, but they also maintain the skin's elasticity.
6. **Avoid fatty, sugary and salty foods** - These foods are associated with the development of different diseases like cardiovascular disease and diabetes which lead to aging.
7. **Get plenty of Vitamin D** - Supplementation of vitamin D can inhibit the development of different health conditions that leads to premature aging like organ and skin atrophy, immunological deficiency, atherosclerosis, osteoporosis, and a generally shorter lifespan.



From Frank Mangano's *Natural Health on the Web*: <http://www.naturalhealthontheweb.com>

## GOLD MEDALLISTS 2009-2010



**Shruti Vijaykumar Patel**  
B. Pharm

Winner of Sri. K Sriharsha  
Memorial Gold Medal for  
the best outgoing student of  
B Pharm (2009-10)



**Patel Hardik Kumar**  
M. Pharm (Pharmaceutical Chemistry)

Winner of Sri. K Sriharsha  
Memorial Gold Medal for  
the best outgoing student of  
M Pharm (2009-10)



**Malli Ravi**  
M. Pharm (Pharmaceutics)

Awarded a Gold Medal sponsored  
by the Dept. of Pharmaceutics, for  
excellence in academic performance  
in M Pharm (Pharmaceutics 2009-10)

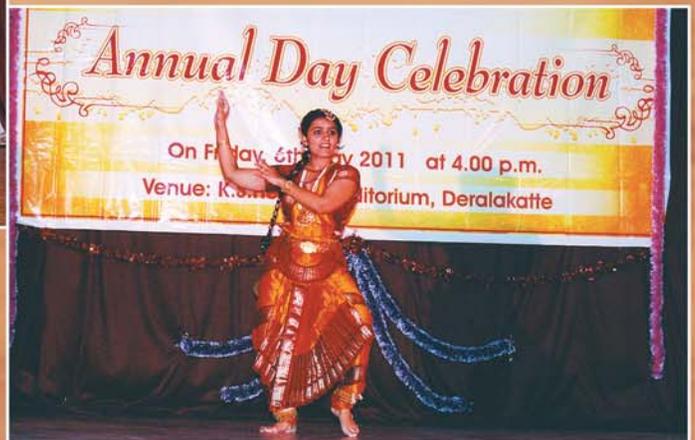
## CONFERENCE AT BANGKOK

*Dr. K. Ishwar Bhat at the International Conference of Indian  
Council of Chemists (ICC), 11<sup>th</sup> to 15<sup>th</sup> June 2011 held at  
Bangkok, Thailand.*



# Annual Day Celebrations

## 6th May 2011



Book Post