



# The NGSMIPS Herald

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

**NITTE**

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## **Nutraceuticals: Let Food Be Your Medicine**

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### **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.

*'For Private Circulation Only'*

*From the Editor's desk*

Friends,

I wish all our readers a happy and prosperous 2013! The New Year comes with new challenges and opportunities.

The year 2012 was very productive. We introduced Pharm. D. course, published several scientific papers in reputed journals, organized an international conference on biomedical sciences, got recognized as grade A university by MHRD, got several research grants and strengthened the infrastructure. New premise for Pharmacy Practice division and state-of –the-art animal house facility have been completed.

Challenges ahead are aplenty – enhancing research output, improving the quality of research, adopting innovative practices, making the institution as a preferred destination of the students seeking pharmacy education- to name a few.

I am confident that we will be able to achieve our goals. Looking forward to your continued involvement and participation in the institution building process.



**C.S. Shastry, Editor in-Chief**

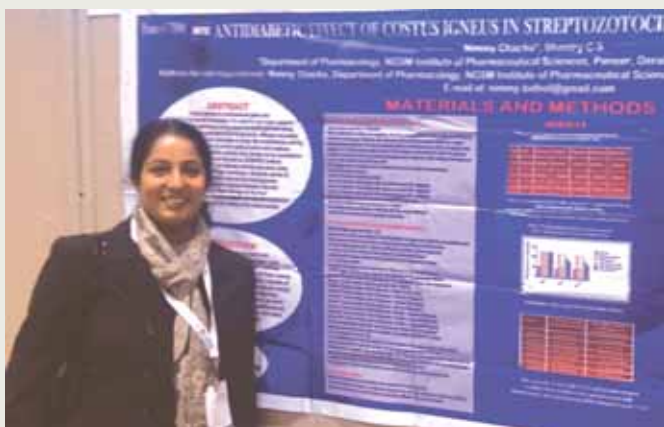


*Students of D. Pharm and Pharm D. with Mr. Gururaja MP, Mr. Himanshu Joshi and Mr. Abhishek Kumar at the All India level Pharmacy Quiz 2012 Preliminaries*

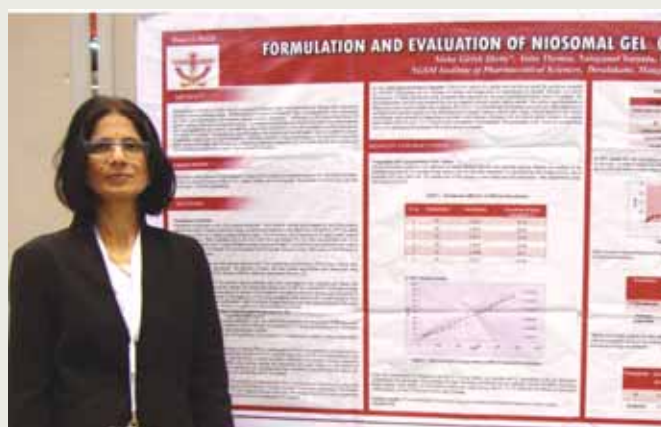


*Dr. C.S. Shastry speaks at the Dr.Sharada Subramaniam Memorial Workshop on Animal Handling and Experimentation in Pharmacology*

**NGSM IPS Faculty Presenting their Papers at the 2012 AAPS Annual Meeting and Exposition, October 14-18, 2012 in Chicago, Illinois, U.S.A**



*Mrs. Nimmy Chacko, Senior Lecturer  
Dept. of Pharmacology*



*Mrs. Nisha Girish Shetty, Senior Lecturer  
Dept. of Pharmaceutics*

## CAMPUS BUZZ

### Workshop on animal experimentation

The Department of Pharmacology, NGS MIPS organized the 'Dr. Sharada Subramaniam Memorial Workshop' on Animal Handling and Experimentation in Pharmacology on 1<sup>st</sup> November 2012 at the institution premise. This was a pre conference workshop leading to the 33<sup>rd</sup> Annual Conference of Indian Association of Biomedical Scientists and International Symposium on Recent Trends and Advances in Biomedical Research, hosted by the Nitte University, Derelakatte, 1<sup>st</sup> – 3<sup>rd</sup> November, 2012.

Dr. Thippeswamy BS, Professor and Head, Dept. of Pharmacology, Sri Siddaganga College of Pharmacy, Tumkur was the resource person who demonstrated several techniques on animal experimentation. More than 45 delegates participated in the hands on training of animal handling and experimental pharmacology

### NGSMIPS hosts the All India level Pharmacy Quiz 2012 Preliminaries.

The Institution hosted the all India level Pharmacy Quiz preliminary exam, which was conducted by the College of Pharmacy, Madras Medical College, Chennai on 3<sup>rd</sup> November 2012. The Coordinators for the quiz competition were Dr. C.S Shastri, Principal; Dr. Himanshu Joshi, Sr. Lecturer; Dr. Gururaja M.P, Sr. Lecturer and Mr. Abhishek Kumar, Lecturer.

### Inauguration of the new Student Council

NGSMIPS inaugurated the new student council for the year 2012 -2013 and celebrated Freshers Day on November 10, 2012. The event was held at the K.S. Hedge Auditorium, Derelakatte. Dr. Rajendra Prasad, Dean of A.B Shetty Memorial Institute of Dental Sciences, Derelakatte was the Chief Guest.



*Dr. Rajendra Prasad lights the inaugural lamp in the presence of Dr C. S. Shastri, Principal, Dr. D. Satyanarayana, Director of PG Studies, Mr. Praveen Agarwal, Past Student President and Ms Rehab Tonse*

In a short ceremony when the new members of the Student Council took over charge from their predecessors, the efforts done by the latter during their tenure was also warmly appreciated. The entertainment that followed also included programs presented by the Freshers from B.Pharm and Pharm. D courses.



*Mr. Praveen Agarwal hands over the Student President badge to Ms. Rehab Tonse, incumbent Student President.*

### Members of the Student Council

- President** : Ms. Rehab Tonse, III B.Pharm  
**Vice President** : Mr. Saurabh Upadhyaya, III B.Pharm  
**General Secretary** : Ms. Jessica Fernandes, II B.Pharm  
**Cultural Secretaries**: Ms. Flancita D'Souza, II B.Pharm  
 Mr. Anil Kumar, II B.Pharm  
 Ms. Khadeeja Nasseba, III B.Pharm  
**Sports Secretaries** : Ms. Trupti Shetty, II B.Pharm  
 Mr. Kamran Khan, III B.Pharm  
**Literary Secretaries & College Magazine**  
**Student Editors** : Ms. Raina Aiman II B.Pharm  
 Ms. Sophiya Sunny, II B.Pharm  
 Mr. Vishak Joisa III B.Pharm  
 Mr. Subhash Nayak, IV B.Pharm  
 Mr. Lenson Paul D'Souza, IV B.Pharm



*Members of the Student Council, 2012-2013.*

### M.Pharm student wins second prize in IPA National Elocution competition



Ms. Neethu Fathima Umar, I Year M.Pharm student from the Dept. of Pharmacy Practice bagged the second prize in the IPA National Elocution Competition 2012 conducted by the Indian Pharmaceutical Association during 64<sup>th</sup> Indian Pharmaceutical Congress held at SRM University, Chennai on 8<sup>th</sup> December 2012.

## DEPARTMENT ACTIVITIES

### DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

#### Research Publications

**DR. D.SATYANARAYANA**, *Professor*

One pot synthesis of 3-(substituted Phenoxyethyl)-6-phenyl substituted phenoxyethyl-1,2,4-triazolo[3,4-B][1,3,4] thiadiazole derivatives as antimicrobial agents, *Int J Pharm Bio Sci*, 2012 3(4),183-192.

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

Anti-inflammatory and anti-tumor activities of ethanolic bark extract of *Bauhinia variegata*, *Asian Pacific Journal of Tropical Biomedicine*, 2012, 1-3

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

Estimation of Rizatriptan in bulk and pharmaceutical formulation, *Asian J Res Chem*. 5(9) September 2012, 1104-1107

#### PAPERS PRESENTED AT CONFERENCES

The following faculty and Research Scholars presented their research papers at the 33<sup>rd</sup> Annual Conference of Indian Association of Biomedical Scientists and International Symposium on Recent Trends and Advances in Biomedical Research, hosted by the Nitte University, Derelakatte, 1<sup>st</sup> – 3<sup>rd</sup> November, 2012.

**Ms. Jainey P. James**, Lecturer presented as oral presentation her paper entitled, “Conventional and microwave techniques for the synthesis of 3-(anthracenyl-9-yl)-1-(arylsubstituted) prop-2-en-1-ones as antitumour and anti-tubercular agents”. The paper was coauthored by **Dr. K. Ishwar Bhat**.

**Mr. Abhishek Kumar**, Lecturer presented orally the paper entitled, “Synthesis and characterization of some novel derivatives of Quinoliny chalcones”. The paper was coauthored by **Dr. Jennifer Fernandes** and **Mr. Pankaj Kumar**.

**Mr. Pankaj Kumar**, Lecturer presented orally the paper entitled, “Synthesis of novel oxazolidinones having benzo thiazinen moieties”. The paper was coauthored by **Dr. Jennifer Fernandes** and **Mr. Abhishek Kumar**.

**Ms. F Nikhat**, Ph.D scholar presented as oral presentation her paper entitled, “Investigation of phytoconstituents from *Momordica charantia* Linn roots and screening them for antidiabetic activity”. The paper was coauthored by **Dr. D. Satyanarayana**.

**Mr. K. C. Chalubaraju**, Ph.D scholar presented a poster on the paper entitled, “Acetic acid induced Schiff’s base formation in a 51 residue peptide: Mass spectrometry based identification”. The paper was coauthored by **Santhosh Kumar**, **Krishnappa Mane**, **Amaranth Chatterjee**, **Dr. Ishwar Bhat. K**, **Jayaprakash Natarajan** and **Mutyalasetty**

**Mr. B. Shyam Kumar**, Ph.D scholar presented a poster on the paper entitled, “Anti inflammatory, antifungal and phytochemical investigation of *Clitoria ternatea* Linn roots”. The paper was coauthored by **Dr.K. Ishwar Bhat**.

#### STUDENT ACTIVITIES

**Mr. M. Mumtaz Mohammed Hussain** presented a paper as poster entitled, “Synthesis and pharmacological evaluation of a novel series some substituted pyrazolines”. The paper was coauthored by **Dr. K. Ishwar Bhat**, **Dr. B. C. Revanasiddappa**, and **Mr. G. R. Nataraj**

### DEPARTMENT OF PHARMACEUTICS

#### Research Publications

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

1. Design and Characterization of novel transdermal therapeutic systems of felodipine, *Journal of Drug Delivery and Therapeutics* 2012, 2(6), 13-20
2. Design and Evaluation of buccoadhesive compacts of selective antihypertensive agents, *Int J Drug Dev Res* 2012, 4(3), 208-219
3. Design of Minocycline Hydrochloride Microspheres as local delivery in treatment of periodontitis, *Intl J Adv Pharm Biol Sci* 2012; 2(4), 245-249

**DR. MARINA KOLAND**, *Professor*

Asymmetric Membrane Osmotic Capsules for Terbutaline Sulphate, *Indian J Pharm Sci* 2012; 74: 69-72.

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

A Study on Stability and *In Vivo* Drug Release of Naphazoline and Antazoline *In Situ* Gelling Systems for Ocular Delivery *Int J Pharm Bio Sci*. 4(1): 2012; 161 – 171.

#### PAPERS PRESENTED AT CONFERENCES

**Mrs. Nisha Girish Shetty** presented a paper as poster entitled, “Formulation and evaluation of niosomal gel of betamethasone valerate” at the 2012 AAPS Annual Meeting and Exposition, October 14-18, 2012 in Chicago, Illinois, U.S.A

**Mrs. Nisha Girish Shetty** has also presented a paper as poster entitled, “The effects of iontophoresis on transdermal delivery of aceclofenac from films in rats” at the 2012 AAPS Annual Meeting and Exposition, October 14-18, 2012 in Chicago, Illinois, U.S.A. This paper was authored by **Dr. Marina Koland**.

#### STUDENT ACTIVITIES

**Mr. Ravivarma Vinayak Das**, II M.Pharm, presented a paper as poster entitled, “**Design and characterisation of an unfolding film type drug delivery system of famotidine for gastroretention**” at the 64<sup>th</sup> Indian Pharmaceutical Congress, Chennai, 7<sup>th</sup> – 9<sup>th</sup> December 2012. This paper was co-authored by **Dr. Marina Koland**.

**Mr. Ravivarma** has also presented a paper as poster entitled, "Itraconazole mucoadhesive buccal patches for the treatment of oral candidiasis" at the 33<sup>rd</sup> Annual Conference of Indian Association of Biomedical Scientists hosted by the Nitte University, Derelakatte, 1<sup>st</sup> – 3<sup>rd</sup> November, 2012. This paper was coauthored by **Ms. Santy Koshy** and **Dr. Marina Koland**.

## DEPARTMENT OF PHARMACOLOGY

### Research Publications

**DR. C.S. SHASTRY**, *Professor*

Antivenom activity of ethanolic extract of *crecidentia cujete* fruit, *International Journal of Phytomedicine*, 4(1), 2012

**MR. PRASANNA SHAMA K**, *Sr. Lecturer*

1. Evaluation of Antidiabetic Activity of *Bauhinia purpurea* Linn in Streptozotocin Induced Diabetic Rats. *International Journal of advances in Pharmacy, Biology and Chemistry* 2012, Vol. 1(4): 536-539
2. Evaluation of Hepatoprotective Activity of *Bauhinia purpurea* Linn. *Advance Research in Pharmaceuticals and Biologicals*, 2012, Vol 2 (III)

### PAPERS PRESENTED AT CONFERENCES

**Mrs. Nimmy Chacko**, Sr. Lecturer presented a poster entitled "Antidiabetic activity of *Costus igneus* extract against streptozotocin induced diabetes mellitus" at the 2012 AAPS Annual meeting and Exposition October 14-18, 2012 in Chicago, Illinois, U.S.A

## STUDENT ACTIVITIES

The following students have presented papers at the 33<sup>rd</sup> Annual Conference of Indian Association of Biomedical Scientists hosted by the Nitte University, Derelakatte, 1<sup>st</sup> – 3<sup>rd</sup> November, 2012.

**Mr. Rajesh K. S**, Ph.d Scholar has presented a poster entitled, "A study on Antivenom property of root extract of *Coix lachrymajobi* for the Treatment of Indian Snake Venom". The paper was coauthored by **Dr. C. Vaman Rao** and **Dr.K. Ishwar Bhat**.

**Mr. Prince Thomas** has presented a poster entitled, "Antidiabetic effect of the leaves of *anacardium occidentale* Linn" The paper was coauthored by **Mr. Dahake Akash P**, **Dr. D. Satyanarayana**, **Jinesh EJ**, **Dr. Gururaja M.P**, **Dr. Himanshu Joshi** and **Dr. C. S Shastry**. This paper also won the best paper award under poster presentations at the conference.

**Mr. Vinod K.H** has presented a poster entitled, "Antioxidant potential of *tabernaemontana divaricata* Linn root extract". The paper was coauthored by **Mr. Prasanna Shama Khandige**.

**Mr. Jinesh EJ** has presented a poster entitled, "Analgesic activity and anti inflammatory potential of the plant *Ervatamia coronaria* (stapf.). The paper was coauthored by **Dr. Arun Joshi**, **Dr. D. Satyanarayana**, **Prince Thomas**, **Dr. Himanshu Joshi**, **Dr. Gururaja M.P** and **Dr.C.S Shastry**.

## DEPARTMENT OF PHARMACOGNOSY

### Research Publications

**MR. ATANU BHATTACHARJEE**, *Lecturer*

Phytochemical and Ethno-Pharmacological profile of *Crutaeva nurvala* Buch-Ham (Varuna): A review. *Asian Pacific Journal of Tropical Biomedicine* 2012, S-673-678

# STUDENT FORUM

Student Editor, Lenson D'Souza posed these questions to his class mates, students of IV B.Pharm and received some predictable as well as surprising answers!

### Question 1:

**Why are people unaware of B.Pharmacy?**

1. There is a lot of 'hype' about Engineering and Medicine and people think that these two professions are the only ones that matter in society.  
- Stephanie
2. For the common man, B.Pharm is a degree required to run a medical store!  
- Meghana
3. People who give career guidance programs do not stress or mention this course.  
- Shanon
4. People think medicine is given by doctors.  
- Ananth
5. Most people are unaware of the B.Pharm course because the Pharmacist does not have an important role to play in Indian Society  
- Avril

### Question 2:

**What steps do you want the Government to take to make pharmacy profession better?**

1. Pharmacists are always less paid in private sectors, so the government should increase job opportunities.  
- Avril
2. Government should make such laws that each hospital must have 5-6 pharmacist jobs to solve the job problem.  
- Ananth
3. Government should take necessary actions against corrupt drug inspectors, government officials involved in the enactment of pharmacy laws.  
- Bharath
4. The government should create laws to implement Pharmacy practice in Hospitals and administrative bodies to monitor them.  
- Shanon

# NUTRACEUTICALS: LET FOOD BE YOUR MEDICINE

Compiled By: **Ashwini. M**

II M. Pharm, Dept. of Pharmaceutics

Nutraceuticals is any substance that is part of food, provides medical or health benefits, including the prevention and treatment of disease. It is a portmanteau of the words “nutrition” and “pharmaceutical”. The term nutraceutical was originally defined by Dr. Stephen L. DeFelice, founder and chairman of the Foundation of Innovation Medicine (FIM), Crawford, New Jersey. They can be helpful in possibly preventing cancer, heart disease, or other chronic diseases.

The main types of nutraceuticals are phytochemicals and antioxidants. The two are parts of foods, as well as being whole foods themselves. The question to ask yourself is, “How do I know which foods contain these beneficial components?” The answer is simple. Phytochemicals are easy to spot when shopping—they are the compounds that give color to fruits and vegetables. These phytochemicals are combined with the benefits of powerful antioxidants, chemical components that help prevent oxidative damage, possibly helping to avoid the occurrence of some chronic diseases and inflammation, and reduce the effects of aging. Aging can literally be brought on by a lack of fruits and vegetables because without the benefits of antioxidants, brain cells are more susceptible to damage, and damaged brain cells cannot be replaced. The prevention of oxidative damage will also reduce harmful effects to cellular carbohydrates, proteins, lipid and genetic material.

Here is a delicious example. Carrots and butternut squash taste great and contain beta-carotene. The active component of carotenes is both a phytochemical and antioxidant. Their orange color is bright and attractive, but it's a tip-off that there are also some fabulous health benefits that include but are not limited to improving the health of your eyes and skin. The carotene element is transformed into vitamin A. and If you are trying to lose weight and want to do it in a healthy way, u can include green tea in your diet

### **Market potential of nutraceutical**

India is an ideal location for manufacturing Nutraceuticals products because of availability of natural products, good quality fruits and vegetables. And also has advantages like qualified human resources, world-class R&D facilities and varied raw material aspects that give our country a leading edge.

A ray of “cure preference” in the mind of common patients revolves around nutraceuticals because of their false perception that “all natural medicines are good.” Also, the high cost of prescription pharmaceuticals and reluctance of some insurance

companies to cover the costs of drugs helps nutraceuticals solidify their presence in the global market of therapies and therapeutic agents.

| Brand name         | Components             | Function            |
|--------------------|------------------------|---------------------|
| Betatene           | Carotenoids            | Immune function     |
| Xangold            | Lutein esters          | Eye health          |
| Lipoec             | $\alpha$ -lipoic acid  | Potent antioxidant  |
| Generol            | Phytosterol            | CHD reduction       |
| Premium probiotics | Probiotics             | Intestinal disorder |
| Soylife            | Soyabean phytoestrogen | Bone health         |

### **NUTRACEUTICALS AVAILABLE IN MARKET**

The use of nutraceuticals, as an attempt to accomplish desirable therapeutic outcomes with reduced side effects, as compared with other therapeutic agents has met with great monetary success. The preference for the discovery and production of nutraceuticals over pharmaceuticals is well seen in pharmaceutical and biotechnology companies.

However, with all of the aforementioned positive points, nutraceuticals still need support of an extensive scientific study to prove “their effects with reduced side effects.” This can be achieved by the enactment Nutraceutical Research and Education Act (NREA). The NREA includes the creation of a Nutraceutical Commission (NUCOM) specifically for the review and approval of nutraceuticals and the creation of a nutraceutical research

grants program specifically for clinical research. As per FIM, the key elements of NREA should include a mechanism to create the exclusive rights to claims necessary for private investment in research and development, and the creation of appropriate channels for the review, approval, and regulation of new products and claims. thus believe that in so doing the NREA should keep in check the cost of nutraceuticals and thereby assure access for everyone



### **References**

- [www.jbclinpharm.com](http://www.jbclinpharm.com)
- <http://www.pharmsci.org>
- [FnBnews.com](http://FnBnews.com)

# POWER HOUSE OF HEALTH

Compiled by: **Dr. Jane Mathew**, Assoc. Professor  
Dept. of Pharmaceutical Chemistry

One of the oldest known fruits, found in writings and artifacts of many cultures and religions, the pomegranate (*punica granatum*) is an original native of Persia. This little red fruit recently made its way back into the news after some spectacular clinical results showing significant health benefits.

The pomegranate is a nutrient dense food source rich in phytochemical compounds. Pomegranates contain high levels of flavonoids and polyphenols, potent antioxidants offering protection against heart disease and cancer. Compounds found only in pomegranates called punicalagins are shown to benefit the heart and blood vessels. Punicalagins are the major component responsible for pomegranate's antioxidant and health benefits. They not only lower cholesterol, but also lower blood pressure and increase the speed at which heart blockages (atherosclerosis) melt away.

Recent medical research studied heart patients with severe carotid artery blockages. They were given an ounce of pomegranate juice each day for a year. Not only did study participants' blood pressure lower by over 12 percent, but there was a 30 percent reduction in atherosclerotic plaque. Just as astounding, participants who did not take the pomegranate juice saw their atherosclerotic plaque increase by 9 percent.<sup>1</sup>

In other studies, potent antioxidant compounds found in pomegranates have shown to reduce platelet aggregation and naturally lower blood pressure, factors that prevent both heart attacks and strokes.<sup>2</sup>

**Prevents Cancer:** Not only are pomegranates good for your heart and blood vessels but they have been shown to inhibit breast cancer, prostate cancer, colon cancer, lung cancer, leukemia and to prevent vascular changes that promote tumor growth in lab animals.<sup>3</sup> Several in vitro studies have shown this remarkable anti-cancer effect.

**Prevention of Osteoarthritis:** Several studies indicate that pomegranate juice may prevent cartilage deterioration.

**Alzheimer's disease prevention:** It may prevent and slow Alzheimer's disease. In one study, mice bred to develop Alzheimer's disease were given pomegranate juice. They accumulated significantly less amyloid plaque than control mice and they performed mental tasks better.

**Lowers Cholesterol:** According to a research study stated in American Journal of Clinical Nutrition, pomegranate being rich in antioxidants can prevent the oxidization of LDL 'bad' cholesterol. Pomegranate syrups are useful in treating the cartilage damage and protect babies from brain damage during their birth.

**Stomach Disorder:** Pomegranates peel, bark and leaves are used to calm the disorder of the stomach or diarrhoea caused due to any kind of digestive problems. Drinking tea made from the leaves of this fruit helps in curing your digestive problems. Pomegranate juice is also used for handling problems of dysentery and cholera.

**Dental Care:** The best benefit of pomegranate is that its juice, along with its antibacterial and antiviral properties, helps to reduce the effects of dental plaque.

**Osteoarthritis:** Pomegranate helps to reduce the illness caused in various forms, like atherosclerosis and osteoarthritis. The damages that are caused due to the thickening and hardening of the arterial walls and in cartilage and joints can be cured by eating this fruit. Also, pomegranate is capable of preventing the creation of enzymes that are liable for breaking down the connective tissues.

**Anaemia:** Healthy blood flow can be maintained in the body by taking this fruit in any form. Pomegranate supplies iron to

blood and thus, help to reduce the anaemic symptoms including exhaustion, dizziness and weakness.

Many studies show that pomegranate is one of the most powerful, nutrient dense foods for overall good health.

## References:

1. Aviram M, Rosenblat M, Gaitini D, et al. Pomegranate juice consumption for 3 years by patients with carotid artery stenosis reduces common carotid intima-media thickness, blood pressure and LDL oxidation. *Clin Nutr* 2004;23(3):423-33.
2. Aviram M, Dornfeld L, Rosenblat M, et al. Pomegranate juice consumption reduces oxidative stress, atherogenic modifications to LDL, and platelet aggregation: studies in humans and in atherosclerotic apolipoprotein E-deficient mice. *Am J Clin Nutr* 2000;71(5):1062-76. Aviram M, Dornfeld L. Pomegranate juice consumption inhibits serum angiotensin converting enzyme activity and reduces systolic blood pressure. *Atherosclerosis* 2001;158(1):195-8.
3. Kim ND, Mehta R, Yu W, et al. Chemopreventive and adjuvant therapeutic potential of pomegranate (*Punica granatum*) for human breast cancer. *Breast Cancer Res Treat* 2002;71(3):203-17. Kohno H, Suzuki R, Yasui Y, et al. Pomegranate seed oil rich in conjugated linolenic acid suppresses chemically induced colon carcinogenesis in rats. *Cancer Sci* 2004;95(6):481-6.
4. [www.healthdiaries.com](http://www.healthdiaries.com)



# Student Council Inauguration and Freshers Day, November 10, 2012



Book Post