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ISSUE

# PHARMA INNOVATIONS

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**PHARMACY INSTITUTE**

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# MESSAGE FROM THE DESK OF THE EDITOR

The Pharmacy Institute has successfully published its past three issues of the e-magazine of, “Pharma Innovation” and presently is moving to publish the current issue. After achieving success, the Institute plans to bring forth the printed form of the e-magazine and circulate the same amongst its own students as well as the students of other institutes, so that the later can also participate in the process to gradually expand the horizon of this magazine and make it popular at national level. I convey my whole hearted support and best wishes to the future edition of Pharma Innovation.

**DR. R. MAZUMDER**

**PROFESSOR AND DEAN (R & D)**

**PHARMACY INSTITUTE**

**NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY**

**GREATER NOIDA**



# ASSOCIATE EDITOR'S SPEAK

I would like to express my heartiest pleasure to be a part of the ongoing magazine 'Pharma Innovations'.

I hope I will give all of my efforts to provide it as a package of ideas, words and images that a group of experts prepares for its readers. 'Pharma Innovation' is a highly accessible, learning-focused magazine which provides the perfect environment to communicate the changing new world of pharmacy. It comprises of a group of interdisciplinary areas of study involved with Pharmacy. The magazine provides a platform for students and faculty to express their professional innovations in recent development in drug discovery.

Editing and designing magazines is my passion. Still, it is due to the common effort of many people who helped me on the editorial side especially Dr. Sarojini Agarwal, Chairman, Dr. O. P. Agarwal, Managing Director, Dr. Neema Agarwal Additional Managing Director and Mr Raman Batra, Executive Vice-President of Noida Institute of Engineering & Technology, Greater Noida, for their constant motivation, cooperation and help to publish this Journal. I would like to thank my beloved students in particular.

**DR SANJITA DAS**

**PROFESSOR AND HOD (PHARMACOLOGY)**

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## Bioinformatics and Biomedicine: An Alternative Tool in Health Care

Since age old times the treatment of various ailments were carried out by the traditional methods which were lacking information about the exact cause of the disease and its treatment. Thus to rectify these problems they were overcome by modernization. The scheduling of treatment was done and by the use of computing and modeling techniques which were effective in understanding the cause and ease of diagnosis. So a combination of bioinformatics and biomedicine lead to the development of novel techniques, therapeutic monitoring of the disease and patient care in a very simplified manner. So a synergistic combination between the two was developed with various clinical applications which were focusing on the principles concerning to its applications. These invasions shared a greater influence on the health issues and its curing of diseases pertaining to individuals. Thus this information will provide an insight relation between the medical informatics and bioinformatics which will emphasize on the efforts and its application.

**DR. G. S. CHAKRABORTHY**  
**PROFESSOR & HOD (PHARMACOGENOSY)**  
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## EATING DISORDER AND OBESITY

Obesity and overweight are two terms mean that the persons weight is greater than what is consider healthy for his/her height .A better understanding of the relationships between obesity and lifestyle factor is necessary .For effective prevention and management of obesity in youth. The association between obesity measure and several lifestyle factor, including physical activity, sedentary behavior and dietary habit. Obesity is not something which has occurred overnight. In most people obesity is caused by eating too much and moving too little. If you consume high amount of energy from your diet but do not burn off the energy through exercise and physical activity, surplus energy will be turn into fat. The health problems associated with obesity include heart disease, B.P, breathing problem, asthma, joint problem mobility problem.

The principle for those who are overweight but not obese include a supervise diet and excessive problem. Diet include food like wholegrain, vegetables, fruits and nuts seem to have some advantage for weight loss, so have a high protein in diet, certain medication in the area include-REDUCTIL or SEBUTRAMINE and XENICAL or ORLISTAT. These medication shave to be offer under medical supervision. Now for those patients that have more than 40 kg over weight various surgical procedures are used. These are called gastric stapling, laparoscopy bending, gastric bypass.

**There is a conventional saying to prevent obesity-**

***"EAT LESS, EXERCISE MORE"***

**DEEPIKA TANWAR**  
**B. PHARM THIRD YEAR**



## SEVERE BACK PAIN

A common disease affects the mass now-a-days include painful condition affecting the lower portion of the spine. Back pain symptoms can range in intensity from mild to severe. Younger adults (30 to 60 year olds) are more likely to experience back pain from the disc space itself. Older adults (over 60) are more likely to suffer from pain related to joint degeneration (such as osteoarthritis or spinal stenosis) or from a compression fracture. This is due to the smaller nerves that supply the low back may be irritated. The large paired lower back muscles (erector spinae) may be strained. The bones, ligaments or joints may be damaged. The Intervertebral disc may be degenerating. Experts estimate that as much as 80% of the population will experience a back problem. Its symptoms starts from upper, middle and low back pain symptoms to low back strain. It is additionally diagnosed by tests and scans are X-rays, CT scan, Myelogram, MRI scan. Its treatment always needs adequate rest, heat and ice packs, exercise for lower back pain. Its medication include Oral tablets, topical pain medication(brands: Icy Hot, Arthricare, Zostrix, Ben Gay), Injections (like Epidural steroid injection, Selective nerve root block, Facet joint block, Facet rhizotomy, Sacroiliac joint block). In worst case there may be the requirement of surgery (Removal of a herniated disc or bone spurs, spinal fusion which can performed by microsurgery or open surgery). So stay healthy.

**ROHIT BARUA**  
**M. PHARM FIRST YEAR**





# TOBACCO AWARENESS CAMPAIGN FOR STUDENT

It is a very crucial matter to discuss and to create awareness against the use of tobacco among the youth and students. The youth has sophisticated thinking and have broad mindset but still it is very ironical to confer that though today's youth is updated with all sorts of knowledge but still then they cant be able to distinguish between good and bad deeds as far as human health is concerned. Therefore an awareness program on tobacco has been conducted last month by Amity University Noida for students.

In this programme various renowned personalities from various social and technological fields were actively participated in the campaign and share their valuable opinion and experiences with the students. Members of Parliament & Union minister for Health and Family Welfare Mr. Dinesh Trivedi addressed the students and enlighten them with his knowledge regarding various issues and disadvantages of using tobacco and also discussed the present scenario of college students associated with addiction of tobacco.

Though chewing of tobacco or cigarette addiction is the popular entertainment mode but it is always advisable for students to choose healthy life and healthy way of living rather than to adapt a cancerous hobby, and quitting such addiction is upto individual's . strength, strong mindedness and least succumbness to nicotine addiction. A medical survey suggest that about 42% of cancer death in India is dut to tobacco every year and billions of rupees are spent on the treatment. It basically harm the victim's family as well. As per the report of Dr. Vedant Kabra (Director of Fortis memorial institute, Gurgaon), every year 13 lakh person saved from such addiction every year which clearly indicates person's strong will to deadest from lethal tobacco consequences.

A cancer survivor shared his experience regarding his tobacco addiction, victimised with mouth cancer and survival along with its successful and painful treatment.

**ROHIT BARUA**

**M. PHARM FIRST YEAR**





# Using a rabbit virus to treat multiple myeloma (blood cancer)

The particular strain strengthened the animals' immune systems, allowing them to specifically target and destroy blood cancer cells. Rabbits could be used as a treatment for fatal blood cancer in future, new research suggests treating multiple myeloma (MM) with myxoma virus (MYXV) eliminated a majority of malignant cells in preclinical studies, report investigators at the Medical University of South Carolina (MUSC).

Multiple myeloma is a cancer of plasma B cells, a cell type within the body's immune system. MM is the second most common blood cancer. However, using myxoma virus (MYXV) - which is only found in rabbits - during this process was successful in eradicating MM cells. This prevented the relapse of the disease, the researchers from the Medical University of South Carolina and University of Oslo, Norway found. They also assessed whether using MYXV could have a benefit on the disease outside of the stem cell transplant.

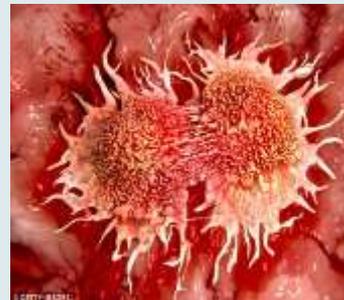
Multiple myeloma (MM), which is difficult to treat, is the second most common form of blood cancer. 'One unique advantage of treating MM with MYXV is that the response rate observed in this study is not mediated by the virus. It is actually mediated by the patient's own immune system. 'What I thought was really interesting here was that we could actually get rid of disease and it didn't appear to ever come back.

'I think the major next question is "How do you get that response rate from 25 per cent to 100 per cent?"' Because MYXV doesn't replicate in humans, it is believed it instead has an effect on their immune system. The researchers found that the bone marrow remained unaffected during treatment, allowing for the body to fight the cancerous cells and another advantage of using MYXV is that MM cells would be unlikely to ever develop a resistance to it.

The virus could be especially helpful to patients who have recurring cancer but cannot find a suitable bone marrow donor. But they were keen to point out that there are many hurdles that need to be overcome before the treatment becomes a reality.

During laboratory testing on human cells, the process worked this way: The myxoma virus is attached to a type of white blood cell known as a T-cell. The virus-laden white blood cells can then be delivered as part of a bone marrow transplant from a donor. That's when the virus gets activated and goes to work.

**KAMAL SINGH BANI**  
**M.PHARMA FIRST YEAR**





# HEART CARE

## What is Heart Disease ?

When people talk about heart disease, they are usually talking about coronary heart disease (CHD). It's also called coronary artery disease (CAD). This is the most common type of heart disease. When someone has CHD, the coronary arteries (tubes) that take blood to the heart are narrow or blocked. This happens when cholesterol and fatty material, called plaque ("plak"), build up inside the arteries.

## What Causes Heart Disease?

- **Smoking**, including secondhand smoke
- High amounts of certain fats and cholesterol in the blood
- High blood pressure
- High amounts of sugar in the blood due to insulin resistance or diabetes
- Blood vessel inflammation

Plaque may begin to build up where the arteries are damaged. The buildup of plaque in the coronary arteries may start in childhood.

## Ways To Keep Heart Healthy

- ✓ **Control your cholesterol and blood pressure.**
- ✓ **Get your blood pressure checked**
- ✓ **Eating Healthy**
- ✓ **Stay Young a heart**
- ✓ **Balanced diet**
- ✓ **Adequate rest**
- ✓ **Proper Exercise**

*Get heart-healthy tips for dining out* For example, ask for a side salad instead of chips or french fries.

Get active.

Stay at a healthy weight.

Manage Stress

**ALCHENDRA SINGH**  
**B.PHARM THIRD YEAR**

