

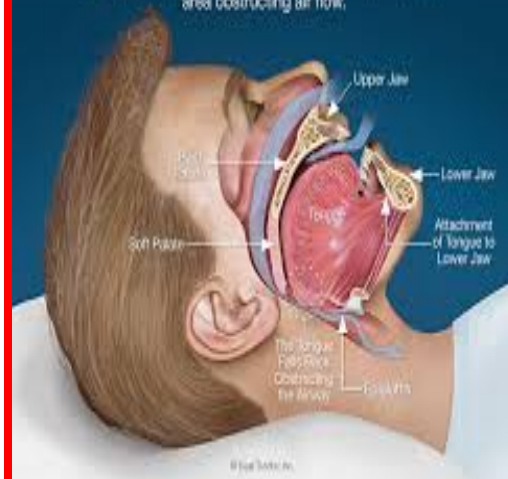
Vision

**TO GROW AS A CENTRE OF EXCELLENCE IN THE FIELD OF
PHARMACEUTICAL AND BIOLOGICAL SCIENCE**

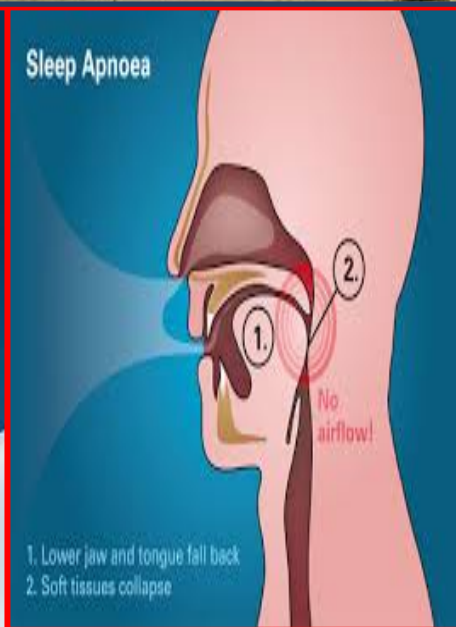


Obstructive Sleep Apnea

During sleep, gravity and muscle relaxation allows the tongue and surrounding soft tissues to fall back into the throat area obstructing air flow.



Sleep Apnoea



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EDITOR: Soumya Bhattacharya

**GURU NANAK INSTITUTE OF PHARMACEUTICAL SCIENCE AND
TECHNOLOGY**

MESSAGE FROM GNIPST

GNIPST BULLETIN is the official publication of Guru Nanak Institute of Pharmaceutical Science & Technology. All the members of GNIPST are proud to publish the 32nd Volume of "GNIPST BULLETIN". Over the last three years this bulletin updating readers with different scientific, cultural or sports activities of this prestigious institute and promoting knowledge of recent development in Pharmaceutical and Biological Sciences. Student's section is informing readers about some curious facts of drug discovery, science, sports and other relevant fields. We look forward to seeing your submission and welcome comments and ideas you may have.

NEWS UPDATE

△ **Common Asthma Medicines May Raise Sleep Apnea Risk** (28th February, 2014)

Medicines commonly used to control asthma may increase the risk of a potentially serious sleep problem in some people, a small, early study suggests. Inhaled corticosteroids may predispose to sleep apnea in some asthma patients. In the new study, the 18 men and women evaluated were taking 1,760 micrograms a day of inhaled fluticasone (Flovent). (Another inhaled corticosteroid is budesonide, or Pulmicort.) The researchers monitored the men and women for changes in the "collapsibility" of their upper airways during sleep and their tongue function. Three patients had the amount of fat in their soft palates measured with MRIs, which found a redistribution of fat to the neck area, which can narrow

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the airway. Teodorescu decided to study the effect of the corticosteroids after she said she found growing evidence that sleep apnea is more prevalent among people with more severe asthma. The current study is a pilot study. [For detail mail to editor](#)

△ **Obesity and birth control Pill' May Raise Risk of Multiple sclerosis** (27th February, 2014)

Obesity and birth control pills may play some role in the development of multiple sclerosis (MS), two new studies suggest. One team of researchers found that people who were obese at age 20 had double the risk of developing MS in their lifetime. The researchers suspect a hormone called leptin, which influences appetite, may be causing inflammation that somehow triggers MS. [For detail mail to editor](#)

△ **Vitamin E, Selenium Supplements Might Double Chances of Prostate Cancer** (21st February, 2014)

A new study suggests that Men taking selenium or vitamin E supplements might double their risk of prostate cancer, depending on the levels of selenium already in their bodies. Men who already have high concentrations of selenium in their bodies nearly double their risk of aggressive prostate cancer if they take selenium supplements, said lead author Dr. Alan Kristal, associate head of the Cancer Prevention Program at the Fred Hutchinson Cancer Research Center in Seattle. [For detail mail to editor](#)

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△ Promising results with local hyperthermia of tumors (28th February, 2014)

Combined use of iron oxide nanoparticles and an alternating magnetic field can induce local hyperthermia in tumors in a controlled and uniform manner. The results Induced anti-tumor immune response that reduced the risk of recurrence and metastasis. Standard cancer care involves surgery, but surgeons have few tools to guarantee the removal of every cancer cell, especially when there is unrecognized metastases in other anatomic locations. An approach like local hyperthermia one day might be used to kick start the immune system to ward off any cancer cells not removed by surgery to increase the chances of treatment success. [For detail mail to editor](#)

△ FDA and European Medicines Agency Strengthen Collaboration in Pharmacovigilance Area (19th February, 2014)

The U.S. Food and Drug Administration and the European Medicines Agency (EMA) have set-up a new 'cluster' on pharmacovigilance (medicine safety) topics. Clusters are regular collaborative meetings between the EMA and regulators outside of the European Union, which focus on specific topic areas that have been identified as requiring an intensified exchange of information and collaboration. [For detail mail to editor](#)

△ Robotic-assisted prostate surgery offers better cancer control (28th February, 2014)

An observational study from UCLA's Jonsson Comprehensive Cancer Center has found that prostate cancer patients who undergo robotic-assisted prostate surgery have fewer instances of

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cancer cells at the edge of their surgical specimen and less need for additional cancer treatments like hormone or radiation therapy than patients who have traditional "open" surgery. [For detail mail to editor](#)

△ **Poor sleep quality linked to reduced brain gray matter in Gulf War vets** (28th February, 2014)

A new study of Gulf War veterans found an association between poor sleep quality and reduced gray matter volume in the brain's frontal lobe, which helps control important processes such as working memory and executive function. Results show that poorer subjective sleep quality was associated with reduced total cortical and regional frontal lobe gray matter volumes after controlling for potentially confounding variables such as posttraumatic stress disorder, depression, Gulf War Illness, trauma exposure and psychotropic medication use. The study may help explain the link between poor sleep quality and impaired psychosocial, physical and occupational functioning. [For detail mail to editor](#)

HEALTH AWARENESS

Sleep apnoea

Obstructive sleep apnoea (OSA) is a condition that causes interrupted breathing during sleep.

There are two types of breathing interruption characteristic of OSA:

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- **apnoea** – the muscles and soft tissues in the throat relax and collapse sufficiently to cause a total blockage of the airway; it is called an apnoea when the airflow is blocked for 10 seconds or more
- **hypopnoea** – a partial blockage of the airway that results in an airflow reduction of greater than 50% for 10 seconds or more

Sleep apnoea is associated with being overweight, and other risk factors. Read more about the causes of sleep apnoea.

Because of the episodes of hypopnoea that occur during OSA, doctors sometimes refer to the condition as 'obstructive sleep apnoea-hypopnoea syndrome'.

The term 'obstructive' distinguishes OSA from rarer forms of sleep apnoea, such as central sleep apnoea, which is caused by the brain 'forgetting' to breathe during sleep.

Sleep is driven by natural brain activity. You need to have a certain amount of deep sleep for your body and mind to be fully refreshed. Having only limited episodes of deep sleep will leave you feeling very tired the next day.

In order to function properly, most adults need seven to eight hours of sleep. Around 15-25% of that time should be spent in the deepest phase of sleep, known as slow wave sleep.

What happens during OSA?

During the night, people with OSA may experience repeated episodes of apnoea and hypopnoea.

During an episode, lack of oxygen causes the person to come out of deep sleep and into a lighter state of sleep, or a brief period of wakefulness, in order to restore normal breathing. However, after falling back into deep sleep, further episodes of apnoea and

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hypopnoea can occur. Such events may occur more than once a minute throughout the night.

Most people with OSA snore loudly. Their breathing may be noisy and laboured and it is often interrupted by gasping and snorting with each episode of apnoea.

The repeated interruptions to sleep caused by OSA can make the person feel very tired during the day. A person with OSA will usually have no memory of breathlessness, so they are often unaware that they are not getting a proper night's sleep.

How common is OSA?

OSA is a relatively common condition that affects more men than women. In the UK, it is estimated that around 4% of middle-aged men and 2% of middle-aged women have OSA.

The onset of OSA is most common in people aged 35 to 54 years old, although it can affect people of all ages, including children. The condition often goes undiagnosed. It is estimated that up to 5% of adults have undiagnosed OSA.

OSA is a treatable condition and there are a variety of treatment options to reduce the symptoms.

Lifestyle changes, such as losing excess weight, can often help mild cases of sleep apnoea to resolve. In more severe cases, the use of breathing apparatus while sleeping may be necessary.

Left untreated, OSA can increase the risk of:

- high blood pressure (hypertension)
- heart attack
- stroke
- obesity
- type 2 diabetes

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Untreated OSA also increases a person's risk of developing heart failure and irregular heartbeats, and it can lead to poor performance at work and at school.

Complications of sleep apnoea

Obstructive sleep apnoea is associated with high blood pressure.

High blood pressure, in turn, can raise your risk of a range of other health conditions.

High blood pressure

Many people with obstructive sleep apnoea (OSA) develop high blood pressure (hypertension).

If you have high blood pressure, your risk of developing cardiovascular diseases, such as a heart attack or stroke, is also increased.

Currently, it is uncertain whether people develop hypertension as a direct response to OSA, or whether it is the result of an underlying cause of OSA, such as obesity. However, maintaining a healthy weight, taking regular exercise and eating a healthy, balanced diet is the best way of preventing hypertension.

Other medical conditions

If OSA is left untreated, hypertension also increases your risk of developing other serious conditions, including:

- **heart attack** – a serious condition that is caused by a blood clot blocking the supply of blood to the heart
- **stroke** – a serious medical condition that is caused by a disturbance in the blood supply to the brain

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- **obesity** – a condition in which a person is carrying too much body fat for their height and sex
- **type 2 diabetes** – a long-term condition that is caused by too much sugar (glucose) in the blood

Obstructive sleep apnoea (OSA) is diagnosed by observation of your sleep.

If you have symptoms of excessive daytime sleepiness, such as feeling drowsy, a lack of energy and poor memory, ask a partner, friend or relative to observe you while you are asleep. If you have OSA, they may be able to spot episodes of breathlessness.

Physical examination and tests

Your General Physician (GP) will ask you a number of questions about your symptoms, such as whether you regularly fall asleep during the day against your will.

Your GP will also carry out a physical examination and some tests, including a blood pressure test. A blood test is also likely to be arranged.

A physical examination and tests are carried out to rule out other conditions that could explain your tiredness, such as hypothyroidism (an underactive thyroid gland).

The next step is to observe you while you are asleep. To do this, you may be asked to spend a night at a sleep centre so that any events that indicate OSA can be monitored. This is known as polysomnography .

Alternatively, you may be given a monitoring device to wear at night while you sleep at home (a home sleep study). The device is returned to the sleep centre the following day so that the recorded information can be downloaded by staff.

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Testing at a sleep centre

Sleep centres are specialist clinics or hospital departments that help treat people with sleep disorders.

Typically you will be referred for an overnight stay in a sleep centre, during which your sleep will be observed.

Polysomnography

The main investigation into your sleep is polysomnography. This investigation will enable sleep specialists to decide what is the best treatment for you.

During polysomnography, specialist nurses will place a series of electrodes on the surface of your skin (this is painless) and bands on other areas.

You will then be provided with a room in which you can sleep for the night. While you sleep, specialist sleep nurses will monitor the signals from the electrodes.

Electrodes and bands are placed on the following areas:

- electrodes on your face and scalp
- electrodes above your lip
- bands around your chest
- bands around your abdomen (tummy)

Sensors will also be placed on your legs, and an oxygen sensor will be attached to your finger.

The tests that are carried out during a polysomnography include:

- **electro-encephalography (EEG)** – this monitors your brain waves
- **electromyography (EMG)** – this monitors your muscle tone

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- recording thoracoabdominal movements (movements in your chest and abdomen)
- recording oronasal airflow (the airflow in your mouth and nose)
- pulse oximetry – this measures your heart rate and blood oxygen levels
- electrocardiography (ECG) – this monitors your heart
- sound and video recording to record your breathing and snoring, and your behaviour during the night

Polysomnography must be done by experienced technicians in a hospital or sleep centre.

If OSA is diagnosed during the early part of the night, you may be given continuous positive airway pressure (CPAP) treatment. CPAP involves using a mask that delivers constant compressed air to the airway and stops the airway from closing, which prevents OSA.

Read how sleep apnoea is treated for more information about CPAP treatment.

Once the tests have been completed, staff at the sleep centre should have a good idea about whether or not you have OSA. If you do, they can determine how much it is interrupting your sleep and recommend appropriate treatment.

Apnoea-hypopnoea index (AHI)

The severity of OSA is determined by how many episodes of apnoea and hypopnoea you experience over the course of an hour. These episodes are measured using the apnoea-hypopnoea index (AHI).

The severity of OSA is measured using the following criteria:

- **mild** – an AHI reading of 5 to 14 episodes an hour
- **moderate** – an AHI reading of 15 to 30 episodes an hour

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- severe – an AHI reading of more than 30 episodes an hour

An AHI reading of less than 10 is unlikely to be linked to a clinical problem or sleep disorder.

Home study

A home sleep study is a possible option. However, you will still need to visit a specialist sleep centre during the day to learn how to use the home study equipment.

You will need to learn how to use portable recording equipment, which includes:

- a breathing sensor
- sensors to monitor your heart rate
- oxygen sensors that are put around your finger and bands around your chest

The equipment records levels of oxygen, breathing movements, heart rate and snoring.

After you have used this equipment overnight, you will need to take it to the sleep centre, where the information will be analysed by sleep specialists.

If more information about sleep quality is required by the sleep centre, a polysomnography will be required, which will be carried out at the sleep centre.

Common treatments for obstructive sleep apnoea (OSA) include advice on lifestyle changes, and use of breathing apparatus while you are asleep.

Lifestyle changes

Mild cases of obstructive sleep apnoea (OSA) can usually be treated by making lifestyle changes, such as:

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- losing weight (if you are overweight or obese)
- stopping smoking (if you smoke)
- limiting your alcohol consumption

Men should not regularly drink more than 3 to 4 units of alcohol a day. Women should not regularly drink more than 2 to 3 units of alcohol a day. If you've had a heavy drinking session, avoid alcohol for 48 hours.

'Regularly' means drinking these amounts every day or most days of the week.

One unit of alcohol is equal to half a pint of normal-strength beer, a small glass of wine or a pub measure (25ml) of spirits.

Stopping smoking can also help sleep apnoea to resolve. See quitting smoking for more information, support and advice about giving up smoking.

Sleeping on your side, rather than on your back, may also help to relieve the symptoms of OSA, although it will not prevent the condition.

Continuous positive airway pressure (CPAP)

Moderate to severe cases of sleep apnoea may need to be treated using a type of treatment called continuous positive airway pressure (CPAP). This involves using breathing apparatus to assist with your breathing while you are asleep.

CPAP is used when you are asleep. A mask is placed over your nose, which delivers a continuous supply of compressed air. The compressed air prevents the airway in your throat from closing.

Earlier versions of CPAP often caused nasal dryness, nosebleeds and a sore throat. However, the latest version includes a

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humidifier (a device that increases moisture), which helps to reduce these side effects.

If CPAP causes you discomfort, inform your treatment staff because the device can be modified to make it more comfortable. For example, you can try using a CPAP machine that starts with a low air pressure and gradually builds up to a higher air pressure as you fall asleep.

As CPAP can feel peculiar to start with, you may be tempted to abandon the treatment. However, people who persevere with it quickly get used to wearing the mask, and their symptoms improve significantly.

CPAP is available on the NHS and it is the most effective therapy for treating severe cases of OSA. It reduces blood pressure and the risk of stroke by 40%, and lowers the risk of heart complications by 20%.

Possible side effects of CPAP include:

- mask discomfort
- nasal congestion, runny nose or irritation
- difficulty breathing through your nose
- headaches and ear pain
- stomach pain and flatulence (wind)

If you have any of these side effects, discuss them with your sleep specialist who may be able to recommend an alternative treatment.

Mandibular responding splint (MRS)

A mandibular responding splint (MRS) is sometimes referred to as a mandibular advancement device or MAD. It is a dental appliance, similar to a gum shield, and is used to treat mild sleep apnoea. It is not recommended for more severe sleep apnoea.

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An MRS is worn over your teeth when you are asleep. It is designed to hold your jaw and tongue forward to increase the space at the back of your throat and reduce the narrowing of your airway that causes snoring.

‘Off-the-shelf’ MRSs are available from specialist websites, but most experts do not recommend them, as poor-fitting MRSs can make symptoms worse. It is recommended that you have a MRS made for you by a dentist with training and experience in treating sleep apnoea.

If you have an MRS, avoid using hot water to clean it because this will damage it. Use cold water and a soft brush. A MRS may not be suitable treatment for you if you do not have many (or any) teeth. If you have dental caps, crowns or bridgework, consult your dentist to ensure that they will not be unduly stressed or damaged by an MRS.

Surgery

Surgery to treat OSA is usually not recommended because evidence shows that it is not as effective as CPAP in controlling the symptoms.

Therefore, surgery for OSA is usually considered as a last resort when all other treatment options have failed and if OSA is severely affecting your quality of life.

Surgery may be considered to correct sleep apnoea if you have any of the following:

- **deviated nasal septum** – this is where the tissue in the nose that divides the two nostrils is bent to one side, often as a result of a sports injury
- **enlarged tonsils** – which can obstruct the airway

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- **small lower jaw** – a small lower jaw with an overbite (when the upper teeth overlap over the lower teeth) can make the throat narrow

A range of surgical treatments can be used to treat OSA. These include:

- **Tracheostomy** – a tube is inserted directly into your neck to allow you to breathe freely, even if the airways in your upper throat are blocked.
- **Uvulopalatopharyngoplasty** – this involves removing excess tissue in the throat to widen your airway. It is the most common type of surgery for treating sleep apnoea in adults. Some patients with particular anatomical abnormalities may benefit from this type of surgery.
- **Tonsillectomy** – the tonsils are removed if they are enlarged and blocking your airway when you sleep.
- **Adenoidectomy** – the adenoids (small lumps of tissue that are located at the back of the throat, above the tonsils) in children are removed if they are enlarged and are blocking the airway during sleep. This is often the first treatment for children with sleep apnoea as enlarged adenoids and tonsils are the main cause of sleep apnoea in children.
- **Bariatric surgery** – this is for weight loss. It involves removing part of the stomach or using a device to reduce the size of the stomach. You may consider this type of surgery if you are severely obese (if you have a body mass index of 40 or more) and it is making your sleep apnoea worse.

Soft-palate implants

Soft-palate implants make the soft palate (part of the roof of the mouth) stiffer and less likely to vibrate and cause an obstruction. The implants are thin and are inserted into the soft palate under local anaesthetic.

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The National Institute of Health and Clinical Excellence (NICE) has said that soft-palate implants are safe, but they are not recommended for treating OSA because there is a lack of evidence about their effectiveness. However, in exceptional cases, this form of treatment is recommended for treating snoring that is associated with sleep apnoea.

Preventing sleep apnoea

You can reduce your risk of obstructive sleep apnoea (OSA) by making a few key lifestyle changes.

Lifestyle changes

Lifestyle changes that reduce the risk of OSA include:

- losing weight if you are overweight or obese
- limiting your alcohol consumption and avoiding alcohol during the evening
- quitting smoking if you smoke
- avoiding the use of sleeping tablets and tranquillisers
- not sleeping on your back because this can make snoring worse

Improving overall sleep quality

Other changes you can make to improve the quality of your sleep include:

- reducing the amount of light and noise in your bedroom
- not reading or watching television in bed
- keeping work-related activities outside of the bedroom
- relaxing before going to bed

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DISEASE OUTBREAK NEWS

△ Human infection with avian influenza A(H7N9) virus (18th February, 2014)

On 14, 15 and 16 February 2014, the National Health and Family Planning Commission (NHFPC) of China notified WHO of nine additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus, including one death. [Read more](#)

FORTHCOMING EVENTS

△ National Symposium on Organic synthesis and Advanced Materials will be held in BHU, from 1-2 March, 2014. [Read more](#)

△ **DRUGS UPDATES**

△ FDA approves Northera to treat neurogenic orthostatic hypotension (18th February, 2014)

The U.S. Food and Drug Administration approved Northera capsules (droxidopa) for the treatment of neurogenic orthostatic hypotension (NOH). NOH is a rare, chronic and often debilitating drop in blood pressure upon standing that is associated with Parkinson's disease, multiple-system atrophy, and pure autonomic failure. [Read more](#)

△ CAMPUS NEWS

△ Reminiscence, 2014 (GNIPST Reunion) was held in College campus on 2nd February, 2014.

△ 1st Annual Sports of GNIPST was held on 3rd February, 2014 in College campus ground.

△ An industrial tour and biodiversity tour was conducted in Sikkim for B.Pharm and B.Sc. students under the supervision of Mr. Asis Bala, Ms. Jeentara Begum and Ms. Moumita Chowdhury.

△ B.Pharm 3rd year won the GNIPST Football Champions trophy, 2013. B.Pharm 3rd year won the final match 1-0 against B.Pharm 2nd year. Deep Chakraborty was the only scorer of the final.

△ Students of GNIPST organized pre puja celebration programme, 'Saaranya' on 7th October, 2013 in college Auditorium.

△ GNIPST organized a garment distribution programme on 28th September, 2013 at Dakshineswar Kali Temple and Adyapith, Kolkata. On this remarkable event about hundred people have received garments. More than hundred students and most of the faculties participated on that day with lot of enthusiasm.

△ GNIPST celebrated **World Heart Day (29th September)** and **Pharmacist's Day (25th September)** on 25th and 26th September, 2013 in GNIPST Auditorium. A seminar on 'Violence against woman' and 'female foeticide' was held on GNIPST Auditorium on

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25th September organized by JABALA Action Research Organization. On 26th September an intra-college Oral and Poster presentation competition related to World Pharmacist's day and Heart day was held in GNIPST. Ms. Purbali Chakraborty of B.Pharm 4th year won the first prize in Oral Presentation. The winner of Poster presentation was the group of Ms. Utsa Sinha, Mr. Koushik Saha and Mr. Niladri Banerjee (B.Pharm 4th year). A good number of students have participated in both the competition with their valuable views.

STUDENTS' SECTION

❖ WHO CAN ANSWER FIRST????

- ✓ *Which waterbody was called Chola Lake during the Chola Dynasty?*
- ✓ *Anfield Stadium is the home to which English Football club?*

Answer of Previous Issue's Questions:

- A) 28th February B) Fostering Scientific temper

Identify the person



Answer of Previous Issue's Image:

C.V.Raman

- *Send your thoughts/ Quiz/Puzzles/games/write-ups or any other contributions for Students' Section& answers of this Section at gnipstbulletin@gmail.com*

 **EDITOR'S NOTE**

I am proud to publish the 4th issue of 32nd Volume of **GNIPST BULLETIN**. GNIPST BULLETIN now connected globally through *facebook account 'GNIPST bulletin'*

I want to convey my thanks to all the GNIPST members and the readers for their valuable comments, encouragement and supports.

I am thankful to **Dr. Abhijit Sengupta**, Director of GNIPST for his valuable advice and encouragement. Special thanks to **Dr. Prerona Saha** and **Mr. Debabrata Ghosh Dastidar** for their kind co-operation and technical supports. An important part of the improvement of the bulletin is the contribution of the readers. You are invited to send in your write ups, notes, critiques or any kind of contribution for the forthcoming special and regular issue.

 **ARCHIVE**

△ **Teacher's day** was celebrated on 5th September, 2013 by the students of GNIPST in GNIPST Auditorium.

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△ *Azalea (exotic flower)* , the fresher welcome programme for newcomers of GNIPST in the session 2013-14 was held on 8th August in GNIPST Auditorium.

△ One day seminar cum teachers' development programme for school teachers on the theme of “Recent Trends of Life Sciences in Higher Education” organized by GNIPST held on 29th June, 2013 at GNIPST auditorium. The programme was inaugurated by Prof . Asit Guha, Director of JIS Group, Mr. U.S. Mukherjee, Dy Director of JIS Group and Dr. Abhijit Sengupta, Director cum Principal of GNIPST with lamp lighting. The programme started with an opening song performed by the B.Pharm students of this institute. The seminar consists of a series of lectures, video presentations and poster session. On the pre lunch session 4 lectures were given by Dr. Lopamudra Dutta, Mr. Debabrata Ghosh Dastidar, Ms. Swati Nandy and Ms. Tamalika Chakraborty respectively. On their presentation the speakers enlighten the recent development of Pharmacy, Genetics and Microbiology and their correlation with Life Sciences. On the post lunch session, Ms. Saini Setua and Ms. Sanchari Bhattacharjee explained the recent development and career opportunities in Biotechnology and Hospital Management. The programme was concluded with valedictory session and certificate distribution.

About 50 Higher secondary school teachers from different schools of Kolkata and North& South 24 Parganas district of West Bengal participated in this programme. A good interactive session between participants and speakers was observed in the seminar. The seminar was a great success with the effort of faculties, staffs and students of our Institute. It was a unique discussion platform for school teachers and professional of the emerging and newer branches of Life Science.

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- The following B.Pharm. final year students have qualified, GPAT-2013. We congratulate them all.

Amanpreet Kaur, Mohua Das,

Sourav Bagchi, Uddipta Ghosh Dastidar,

Siddarth Shah, Prapti Chakraborty,

Subhradip Roychoudhury, Soumyajit Das,

Mounomukhar Bhattacharjee.

- **GNIPST is now approved by AICTE and affiliated to WBUT for conducting the two years post graduate course (M.Pharm) in PHARMACEUTICS. The approved number of seat is 18.**

- The general body meeting of APTI, Bengal Branch has been conducted at GNIPST on 15th June, 2012. The program started with a nice presentation by Dr. Pulok Kr. Mukherjee, School of Natural Products, JU on the skill to write a good manuscript for publication in impact journals. It was followed by nearly two hour long discussion among more than thirty participants on different aspects of pharmacy education. Five nonmember participants applied for membership on that very day.
- GNIPST is now approved by AICTE and affiliated to WBUT for conducting the two years' post graduate course (M.Pharm) in PHARMACOLOGY. The approved number of seat is 18.
- The number of seats in B.Pharm. has been increased from 60 to 120.

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- AICTE has sanctioned a release of grant under Research Promotion Scheme (RPS) during the financial year 2012-13 to GNIPST as per the details below:
 - a. *Beneficiary Institution:* Guru Nanak Institution of Pharmaceutical Science & Technology.
 - b. *Principal Investigator:* Dr. Lopamudra Dutta.
 - c. *Grant-in-aid sanctioned:* Rs. 16,25,000/- only
 - d. *Approved duration:* 3 years
 - e. *Title of the project:* Screening and identification of potential medicinal plant of Purulia & Bankura districts of West Bengal with respect to diseases such as diabetes, rheumatism, Jaundice, hypertension and developing biotechnological tools for enhancing bioactive molecules in these plants.