

DSWC ACTIVITIES

Dolphin (P.G.) Institute join hands with Uttarakhand Police in De-Addiction drive

- Students Participated in De-Addiction program at Police Line on 17-02-2016
- SSP Dr. Sadanand Date appreciated Dolphin Institute for its effort for De-Addiction
- Main aim of DSWC is to develop leadership quality and a sense of social responsibility among the students

More than 100 Students of the Institute, participated in 'Say No to Drugs' youth carnival organized by Uttarakhand police in Police line, Race course, Dehradun. On 17th February, 2016. Chief Guest of the programme, Hon'ble Chief Minister of Uttarakhand Shri Harish Rawat told the students that the battle against drug will commence all over Uttarakhand very soon. He also said that definitely all of them have to win this war against drugs and the hard action against this kind of illegal trade would make a tremendous fear in the minds of the drug peddlers. He further said that society as well as parents should have to be aware against addiction, otherwise the habit will ruin a family. On this occasion the Chief Minister also launched the first anti addiction mobile app of the country.

In the programme the students of Dolphin institute presented their activities against drugs as a part of



Chairman Sri Arvind Gupta & Students with Sh. Harish Rawat Hon'ble Chief Minister of Uttarakhand at Police Line Dehradun

De-Addiction programme, NAI PAHAL started by the Institute. Shri Harish Rawat also visited the stall of Dolphin Institute and appreciated the activities of the students against drugs as well as slogans presented on the occasion. The students of Dolphin Institute also participated in Yoga, Sports, painting, music, writing and speech competitions organized on the occasion. Shri Harish Rawat, also interacted with the students of the Institute and took detailed information about the De-Addiction programme NAI

PAHAL. Chairman of the Institute Shri Arvind Gupta also graced the programme. He told the Chief Minister that Dolphin Institute has very clear vision that Drugs are very dangerous for a civilized and healthy society and the illegal trade of drug should be stopped in each and every manner. He assured his full cooperation against drugs to state government as well to the Uttarakhand Police. Mr. Vipul Garg, Dean Student's Welfare, along with Mr. Pankaj Gusain and Mr. Karan Bansal also participated in the programme.

Gandhi Ji remembered on his 69th Martyrdom day



On 31st January 2016, Dolphin Institute paid a floral tribute to Rashtra Pita Mahatma Gandhi on his 69th death

anniversary known as the Martyrs Day. On this occasion Director of the institute, Dr. Arun Kumar said that today when the whole world is in the grip of terrorism, racism, hate and intolerance, the path of satya, ahimsa & prem shown by Bapu is more relevant and effective then ever. Favorite bhajans of Bapu were sung by the students to pay homage to Bapu. DSWC Dean Mr. Vipul Gag, Coordinator IQAC Dr. Shruti Sharma along with teachers & students were present in the programme.

Students from NE secure first 3 positions in solo singing (Hindi)

Annual week (SRIJAN) provides a platform to all the students to show their talents pertaining to song, dance and other activities. There were many extra ordinary performances in sports & extracurricular activities but it was noteworthy to see that all the three prizes in solo singing (Hindi) were secured by the North Eastern students for which they were praised by one and all.

Monthly scholarship distributed for Jan to March 2016

Dolphin Students Welfare Committee distributed 232 monthly scholarships to the students from all departments of the institute for the months of January-March, 2016. The scholarship is awarded to two

students from each section of department, on the basis of their academic performance & discipline. On account of the above scholarship DSWC distribute a sum of Rs.150,000/-p.a.

Magic Show organized in the Institute in collaboration with Red Cross Society of India



Magician Samrat enthralling the students by his tricks

On 14th March 2016, a magic show was organized in the campus with collaboration of Red Cross Society of India, Dehradun chapter to help the poor and disabled children. Magician Samrat performed different amazing magical tricks in front of the students of the

institute. Audience was wonderstruck by the way he made things disappear with a touch of his magic-wand. Students enjoyed the magic show. The institute donated a sum of Rs. 15000/- to Red Cross Society for the welfare of needy children of the society.

Saraswati Puja (Basant Panchami) Celebrated in Dolphin Campus

On 12th February 2016 on the occasion of Basant Panchami students of the Institute paid their reverence by worshipping Ma Sarswati, the Goddess of learning and knowledge. It was celebrated under the aegis of Dolphin Students Welfare Committee to Basant Utsav i.e. the festival of new season. On this occasion many melodious prayers were sung by the students of the institute. Principal Dr. Shailja Pant, Director Dr. Arun Kumar, also participated along with Dean



Students & Faculty members celebrating Swarsati Puja

Shri Vipul Garg, Coordinator IQAC Dr. Shruti Sharma, others teachers and students were also present during the celebration.

Online Voting by Dolphin students for smart city in Dehradun



Mussoorie Dehradun Vikas Pradhikaran (MDDA), an enterprise of Govt. of Uttarakhand in collaboration with Dainik Jagran and Hindustan Times started a campaign for voting to select the suitable place for smart city in Dehradun. Students from

Dolphin Institute took part in online voting to select the appropriate site. 15 members of Dolphin Student Welfare Committee were also nominated as coordinators to guide common people for online voting to choose the right place.

119th Birthday of Subhash Chandra Bose celebrated in Dolphin (PG) Institute



Chairman Shri Arvind Gupta lighting the lamp on 119th birth day of Netaji

Neta Ji Subhash Chandra Bose was a legendary freedom fighter whose contribution made India free is well known. To pay tribute to his contribution and to make the new generation aware of our

freedom movement, a programme was organized by Dolphin Students Welfare Committee on 23rd Jan. 2016. On this occasion Chairman and Dean, DSW also paid their tributes to Neta Ji.

Students participated in SEAL Programme in Nagar Nigam Town Hall, Dehradun

In an attempt to develop understanding between the local students with students from North Eastern States a programme, namely, SEAL was organized by AKHIL BHARTIYA VIDYARTHI PARISHAD (ABVP) all over the Country. In

connection with the same a programme was held on 15th January, 2016 in Town Hall, Dehradun. Around 100 students from North Eastern States studying in Dolphin (PG) Institute participated in the meeting.

Bharat Scout & Guides is now in Dolphin Institute

Bharat Scout & Guides approved 48 seats (24 RANGERS & 24 ROVERS) for Dolphin (PG) Institute, Dehradun. Dean DSW,

Mr. Vipul Garg informed that this is the mile stone for the institute and the inauguration of the same will be held soon.

Glimpses of "Srijan" 2016



Kho-kho (Boys) Forestry Department- Winner,
Microbiology Department- Runner up



Badminton Doubles (Girls) Forestry Department- Winner,
Mix Department- Runner up



Table Tennis Singles (Boys) Forestry Department- Winner,
Pathology Department- Runner up



4x50 Mtrs. Relay (Girls) Forestry Department- Winner,
Physiotherapy Department- Runner



4x80 Relay (Boys) Agriculture Department- Winner,
Physiotherapy Department- Runner up



Long Jump (Boys) Biotechnology Department- Winner,
Forestry Department- Runner up



Discus Throw (Girls) Agriculture Department-
Winner, Forestry Department- Runner up



Shortput (Girls) Physiotherapy Department-
Winner, Forestry Department- Runner up



Shortput (Boys) Physiotherapy Department- Winner,
Forestry Department- Runner up



Tug of War (Girls) Forestry Department- Winner,
Agriculture Department- Runner up



Tug of War (Boys) Forestry Department- Winner,
Pathology



Rangoli: Sonam & Sakshi (Physiotherapy Dept.) - Winner,
Pooja & Asha (Pathology Dept) - Runner up



Painting competition Ankpali Department of Biotechnology
Winner, Anirban Department of Microbiology Runner up



Mehandi: Shikha Microbiology Department - Winner,
Dimple Physiotherapy Department - Runner up



Flower pot arrangement: Ganesh K C & Sunita K C Pathology
Dept. -Winner, Chinara & Smriti Microbiology Dept. - Runner up



Skit & Drama: Rima & Group Physiotherapy Department -
Winner, Danish & Group Mix Department- Runner up



Face Panting: Gaurav Yadav & Akshit Tiwari Microbiology Dept. -
Winner, Chinara & Anjali Microbiology Dept. - Runner up



Group dance (Theme based): Rajvinder & Group Microbiology
Dept. - Winner, Dawa & Group Forestry Dept.- Runner up

Glimpses of “Udan” 2016



Beatifully Decorated Campus



Sh. Ashok Kumar being welcomed by Dr. Shailja Pant,
Principal Dolphin Institute



Dr. Alaknanda Ashok being welcomed by Mrs. Aarti Gupta,
OSD Dolphin Institute



Dignitaries lighting the Ceremonial Lamp



Gidda Dance



Kashmiri Dance



Western Dance



Classical Dance



Fashion Show



Lavni Dance



Solo Song & Dance from North East



Punjabi Folk Dance



Audiance



Tina Joshi, Department of Physiotherapy
receiving Scholarship



Thinley from Dept. of Forestry being awarded special
prize for extraordinary performance in Tug of War



Students enjoying jam session



HOD & Students, Department of Forestry with
Runners Up Trophy



Members of DSWC Team

‘SRIJAN-2016’ - Annual Week of the Institute

- Inter-department sports and extra-curricular competitions with March-Past.
- Mesmerizing Shahnai recital by Shri Sanjeev Shankar and Ashwani Shankar from Banaras Gharana courtesy by SPIC.MACAY.
- Keen competitions in Interdepartmental events.
- Students participated/with full vigour and zeal in cultural activities.

Dehra Dun, 22-26 February 2016

Annual Week was organized under the aegis of Dolphin Students' Welfare Committee (DSWC). The week began with March Past by the students of various depts. Shubham Negi, Sports Captain led the students in taking oath of participating in the sports activities with full sportsman spirit. Garima and group performed Ganesh Vandana and a mesmerizing patriotic dance.

Sh. Arvind Gupta in his inaugural address said that curricular and co-curricular activities are an integral part of the curriculum and necessary for the all round development of the students. He advised the students to participate whole heartedly in these activities. He took the salute of March Past and also declared open the annual week “SRIJAN-2016”. Colourful balloons were released to mark the beginning of the occasion.

The Shahnai exponents Sh. Sanjeev & Ashwini Shankar of Banaras Gharana regaled the audience by their Shahnai recital under the aegis of SPIC.MACAY. They were supported by



Shahnai recital by Shri Sanjeev and Ashwini Shankar

tabla maestro Sh. Uday Mazumdar. Enthusiasm was in peak among students in the various sports and cultural competitions organized during the Annual Week at the campus in which students from

Hrithik & Seerat declared as best anchors

Anchors played an important role to connect the audience with the programme. Hrithik Sharma & Seerat Maqsood both from B.Sc. Biotech II Sem. were selected as best anchor male & female respectively for their exceptionally good anchoring during Annual Week. Both were awarded for their splendid performance.



Special prize given to Jagdish Chandra in painting competition

Jagdish Chandra, student of B. Sc. MLT made a wonderful portrait of Chairman Sh. Arvind Gupta in painting competition during Annual Week. He was praised by everyone for his painting and awarded a special prize and certificate on the recommendation of OSD.



SPORTS & CULTURAL ACTIVITIES RESULTS OF SRIJAN 2016

SPORTS ACTIVITIES EVENTS

Badminton Singles (Girls) Forestry Department- **Winner**, Physiotherapy Department- **Runner up**
Badminton Singles (Boys) Forestry Department- **Winner**, Pathology Department- **Runner up**
Badminton Doubles (Girls) Forestry Department- **Winner**, Mix Department- **Runner up**
Table Tennis Singles (Girls) Agriculture Department- **Winner**, Physiotherapy Department- **Runner up**
Table Tennis Singles (Boys) Forestry Department- **Winner**, Pathology Department- **Runner up**
Table Tennis Doubles (Girls) Agriculture Department- **Winner**, Physiotherapy Department- **Runner up**
Table Tennis Doubles (Boys) Forestry Department- **Winner**, Physiotherapy Department- **Runner up**
Chess (Boys) Physiotherapy Department- **Winner**, Mix Department- **Runner up**
Chess (Girls) Physiotherapy Department- **Winner**, Agriculture Department- **Runner up**
Cricket Forestry Department- **Winner**, Agriculture Department- **Runner up**
Basketball (Boys) Agriculture Department- **Winner**, Forestry Department- **Runner up**
Basketball (Girls) Forestry Department- **Winner**, Physiotherapy Department- **Runner up**
Kho-Kho (Boys) Forestry Department- **Winner**, Microbiology Department- **Runner up**
Kho-Kho (Girls) Microbiology Department- **Winner**, Physiotherapy Department- **Runner up**
Volleyball (Boys) Pathology Department- **Winner**, Agriculture Department- **Runner up**
Volleyball (Girls) Biotechnology Department- **Winner**, Agriculture Department- **Runner up**
Football (Boys) Forestry Department- **Winner**, Pathology Department- **Runner up**

Athletics Track Events

50 Mtrs. Race (Girls) Physiotherapy Department- **Winner**, Microbiology Department- **Runner up**
80 Mtrs. Race (Boys) Forestry Department- **Winner**, Forestry Department- **Runner up**
4x50 Mtrs. Relay (Girls) Forestry Department- **Winner**, Physiotherapy Department- **Runner up**
4x80 Relay (Boys) Agriculture Department- **Winner**, Physiotherapy Department- **Runner up**
800 Mtrs. Race Girls Physiotherapy Department- **Winner**, Forestry Department- **Runner up**
1500 Mtrs. Race (Boys) Forestry Department- **Winner**, Physiotherapy Department- **Runner up**

ATHLETICS FIELD EVENTS

Long Jump (Boys) Biotechnology Department- **Winner**, Forestry Department- **Runner up**
Long Jump (Girls) Pathology Department- **Winner**, Physiotherapy Department- **Runner up**
Discus Throw (Boys) Physiotherapy Department- **Winner**, Biotechnology Department- **Runner up**
Discus Throw (Girls) Agriculture Department- **Winner**, Forestry Department- **Runner up**
Shortput (Boys) Physiotherapy Department- **Winner**, Forestry Department- **Runner up**
Shortput (Girls) Physiotherapy Department- **Winner**, Forestry Department- **Runner up**
Tug of War (Boys) Forestry Department- **Winner**, Pathology Department- **Runner up**
Tug of War (Girls) Forestry Department- **Winner**, Agriculture Department- **Runner up**

CULTURAL ACTIVITIES

Poster presentation (Topic- A smart city): Chiranjivi & Mohsin (Mix Department) - **Winner**, Rupaj & Yamini (Physiotherapy Department) - **Runner up**
Rangoli: Sonam & Sakshi (Physiotherapy Department) - **Winner**, Pooja & Asha (Pathology Department) - **Runner up**
Mehandi: Shikha (Microbiology Department) - **Winner**, Dimple (Physiotherapy Department) - **Runner up**
Face Painting: Gaurav Yadav & Akshit Tiwari (Microbiology Department) - **Winner**, Chinara & Anjali (Microbiology Department) - **Runner up**
Debate (English) (Topic- Are the developing countries responsible for global warming): Kumar Ashu Karan (Agriculture & Horticulture Departments) - **Winner**, Ritik (Biotechnology Department) - **Runner up**
Debate (Hindi) (Topic- Make in India: Vaishwik Arthvyawshtha me varchswa ki disha me ek kadam): Kumar Gurav (Microbiology Department) - **Winner**, Anjali Singh (Physiotherapy Department) - **Runner up**
Salad Making: Jopi Siram & Bonipesh (Forestry Department) - **Winner**, Shruti & Chandani (Biotechnology Department) - **Runner up**
Cartoon Making: Yamini Bhandari (Physiotherapy Department) - **Winner**, Rupaj (Physiotherapy Department) - **Runner up**
Painting: Aankpali (Biotechnology Department) - **Winner**, Anirban (Microbiology Department) - **Runner up**
Flower pot arrangement: Ganesh K C & Sunita K C (Pathology Department) - **Winner**, Chinara & Smriti (Microbiology Department) - **Runner up**
Quiz: Pate Talo & Kyoda Rama (Agriculture & Horticulture Departments) - **Winner**, Sanjay Pal & Brahmnarayan (Pathology Department) - **Runner up**
Antakshari: Gunjan & Manish (B. Ed. Department) - **Winner**, Km. Ashu Karan & Mukesh Chand (Agriculture & Horticulture Department) - **Runner up**
Collage (Topic- India v/s World 2015): Anuja Pant & Vidushi (Microbiology Department) - **Winner**, Surabhi & Punita (Physiotherapy Department) - **Runner up**
Mime acting: Mmhayilo T Kikon, Adminsanaingrbee & Gora Palang (Agriculture Department) - **Winner**, Ajay & Group (Microbiology Department) - **Runner up**
Skit & Drama: Rima & Group (Physiotherapy Department) - **Winner**, Danish & Group (Mix Department) - **Runner up**
Group song: Thupten & Group (Mix department) - **Winner**, Imliyangar Jamir & Group (Forestry Department) - **Runner up**
Solo song (Western): Thupten (Mix department) - **Winner**, Pakge Bushar (Agriculture Department) - **Runner up**
Group dance (Western): Mathew & Group (Forestry Department) - **Winner**, Saini Lofa & Group (Agriculture & Horticulture Departments) - **Runner up**
Solo dance: Rupaj (Physiotherapy Department) - **Winner**, Priyal (Physiotherapy Department) - **Runner up**
Group dance (Theme based): Rajvinder & Group (Microbiology Dept.) - **Winner**, Dawa & Group (Forestry Dept.) - **Runner up**
Two minutes to fame: Vishal Jatav (Microbiology) - **Winner**, Shradha (Biotechnology) - **Runner up**
Group discussion: Sargam (Physiotherapy Department) - **Winner**, Soham Banerjee (Forestry Department) - **Runner up**
Make out from waste (recycle use): Thupten Sheering & Kham (Mix department) - **Winner**, Shweta Nautiyal & Sonia (Forestry Department) - **Runner up**

Intra departmental Activities



Students & teachers at Intra departmental activities of Department of Biotechnology

Department of Biotechnology

Intra departmental debate competition was organized by the department of biotechnology on 20th February 2016. The motion for the debate was 'Biotechnology is a boon to the society'. A good number of students from the UG and PG courses have participated in the debate competition with great zeal. The winner of the debate competition was Hritik Sharma from B. Sc Biotechnology 1st year; Devirupa Chakraborty and Bashir Ahmed from M. Sc 2nd year were 1st and 2nd runners up respectively.

Refurbishing Microbiology- 2016

Department of Microbiology organized different Intra departmental activities like Cartoon Making, Poster-Environment & Microbiology, Debate- Genetically Modified Organisms: a curse or boon, Collage Presentation, Nukkad Natak between 27th January to 6th February 2016.



Microbiology students performing different intra departmental activities

Department of Pharmaceutical Chemistry

Poster Presentation: Department of Pharmaceutical Chemistry organized a poster presentation on “Drug Awareness” on 06th February 2016. The Poster presentation was judged by eminent academicians, Dr. Anjana Srivastav, Professor, Department of Chemistry, G. B. Pant University, Pant Nagar, Uttarakhand and Dr. Geeta Joshi Pant, Professor, HNBGU, Srinagar, Uttarakhand. The winner of 1st prize was Navneet Kaur (M. Sc Pharmaceutical Chemistry 2nd Year), 2nd prize was won by Zaki-ur Rahman (M. Sc Pharmaceutical Chemistry 2nd Year) and the 3rd prize was given to Neha Chauhan (M. Sc Pharmaceutical Chemistry 1st Year).



Dr Geeta Joshi Pant & Dr Anjana Srivastava at the Poster Presentation

Cartoon Competition:

Department of Pharmaceutical Chemistry organized a Cartoon

Competition on 17th February. The Cartoon Competition was judged by Dr. G. N. Sinha, Head, Department of Education, Dr. Aditi Chauhan, Department of Education and Dr. S. K. Sheel, Associate Professor, Department of Biostatistics. The winner of 1st prize was Poonam Bisht (M. Sc. Pharmaceutical Chemistry 1st Year), the 2nd prize was won by Néeraj Singh Negi (M. Sc. Pharmaceutical Chemistry 2nd Year) and the 3rd prize won by Mohd. Danish (M. Sc Pharmaceutical Chemistry 1st Year).



Poonam Bisht receiving the first prize

Enriching Chemistry

In order to enhance the interest of students in the field of chemistry, department of Chemistry organized following activities under the theme 'Enriching Chemistry'

Debate Competition (10th Feb.)

Topic: 'Polymers-Good or Bad'

First Prize was won by Surbhi Slathiq

Quiz (15th February,)

Topic: Chemical Sciences

First Prize was won by Heena, Priya



Participants with the faculty

Poster Competition (18th Feb.)

Theme was a) Green Chemistry, b) Spectroscopy, c) Nano chemistry.

First Prize was won by Takio Nene.

Cartoon Making (19th Feb., 2016)

Topic: Recent Advancement in Chemistry. First Prize was won by Ovice Saboor.



Judges judging Cartoon making competition

Pathology Department

Department of Pathology organized three day intra departmental activities on “Health Awareness” from 8th to 10th February, 2016 in the campus of the Institute. The theme of the above program was “Health through the awareness”. The program comprised Guest Lectures, Poster Presentation, Collage, Painting, Quiz & Extempore & Nukkar Natak etc. Winners of the different activities



Scientific Advancements

New species of bird discovered

A new species of bird has been discovered from NE India and adjacent parts of China by a team of scientists from Sweden, China, the U.S., India and Russia.

The bird, described in the current issue of the journal *Avian Research* (2016), has been named **Himalayan Forest Thrush** *Zoothera salimalii*. The scientific name honors the great Indian ornithologist Sálím Ali, in recognition of his contributions to the development of Indian ornithology and conservation biology.

The new species is separated out from the **Plain-backed Thrush** *Zoothera mollissima* with which they were formerly lumped, on the basis of phylogenetic studies that suggest that that the population diverged from the common ancestor at least 3 million years ago (estimates vary from 3-6 mya). The **Alpine Thrush** (*Zoothera mollissima* in the restricted sense) breeds above



Himalayan Forest Thrush

the tree line whereas the Himalayan forest thrush breeds in forested habitats. The species breeds from Sikkim and Darjeeling in India and extends into northwest Yunnan in China through Arunachal Pradesh. The species differs in its song from that of the alpine thrush. The Himalayan forest thrush has a more musical call while that of the Alpine thrush is raspy and grating. Professor Per Johan Alstrom, a former member of the Uppsala University in Sweden, first noticed the distinctive call of the Himalayan Forest Thrush back in

1999, during a trip to Arunachal Pradesh. One set of the bird sang a harsh tune sitting above tree line of the forest, while the other set of the bird churned out a tuneful call sitting below the tree line.

Unable to find any physical distinction between the two sets of birds, Alstrom spent several years defining the difference. The study of birds also included DNA tests that confirmed the difference between the two species. The two species evolved differently to adapt with the different conditions of the peaks and the mountain forests.

New bird species are rarely discovered nowadays. In the last 15 years, on an average approximately five new species have been discovered annually, mainly in South America. The Himalayan forest thrush is only the fourth new bird species described from India since 1949.

Compiled by: Dr. Arun Kumar

Common Painkiller May Also Be A Powerful Cancer Killer

Diclofenac, a common painkiller used to treat migraine, fever and rheumatoid arthritis, may hold significant anti-cancer properties, according to new research conducted at Belgium and the United States in January. The drug's potential use for cancer is based on its effect on the immune system and on angiogenesis, which plays a role in the growth of cancer (Diclofenac as an anti-cancer agent. *ecancermedicalscience*, 2016; 10 DOI: 10.3332/ecancer.2016.610).

New Way To Kill Cancer Cells: Get them Addicted To Drugs

Scientists in the UK have found a promising new class of cancer drugs developed to specifically kill tumour cells. BH3-mimetics target a family of proteins called BCL-2, which function to keep cancer cells alive. BH3-mimetic anticancer drugs are showing promise in late-stage clinical trials, particularly in the treatment of chronic lymphocytic leukaemia. The technique called "mitopriming" can be used to rapidly screen for new BH3-mimetics and other anti-cancer drugs (*Nature Communications* 7; 10538 doi:10.1038/ncomms 10538).

Microbial Heat Islands Found in The Desert

New research conducted in January in Arizona State University revealed how microbes can significantly warm the desert surface by darkening it, much in the same way that dark clothes makes us feel warmer in sunlight. These



desert-darkening organisms make a living basking in the sun and form a mantle that covers the landscape. Such mantles, called biological soil crusts, or biocrusts, provide important

ecosystem services, like fighting erosion and preventing dust storms, or fertilizing the ground with carbon and nitrogen (*Nature Communications* 7; 10373 doi:10.1038/ncomms10373).

Premature Assault?

According to a study published in January, Tino Krell and colleagues from the Spanish National Research Council in Granada found that plants produce rosmarinic acid, which mimics a bacterial molecule that indicates the population density. Bound to RhlR, a transcriptional regulator, the plants' rosmarinic acid tricks bacteria into thinking their population is bigger than it actually is, prompting the microbes to invade too early, when the plant will be better able to fend them off (*Sci. Signal.* 05 Jan 2016; Vol. 9, Issue 409, pp. ra1 DOI: 10.1126/scisignal.aaa8271).

Too Much Sugar? There's an Enzyme For That

According to a study published in January, scientists at the University of Montreal Hospital Research Centre have discovered an enzyme that can stop the toxic effects of sugar in various organs of the body. This enzyme, named glycerol 3-phosphate phosphatase (G3PP), plays a central role in controlling glucose and fat utilization. The research team demonstrated that G3PP is able to detoxify excess sugar from the cells, and their discovery should lead to the development of therapeutics for obesity and type 2 diabetes (*PNAS*, 2016; 201514375 DOI: 10.1073/pnas.1514375113).

Directing The Body's Fight Against Flu

In February, a team from Cardiff University's Systems Immunity Research Institute discovered a new molecule which could help better target and kick-start the body's natural fight against common infections like influenza. The molecule in the body – known as L-selectin –

directs the body's killer T cells to the site of a virus. By manipulating this 'homing molecule' the team are planning on increasing the number of killer T cells at a site of infection and so boost the killing of viruses (*Cell Reports*. Volume 14, Issue 4, p760–771, 2 February 2016).

Light-activated Nano Particles Prove Effective Against Antibiotic-Resistant “Superbugs”

In findings published in January, researchers at the Department of Chemical and Biological Engineering and the BioFrontiers Institute described new light-activated therapeutic nanoparticles known as “quantum dots.” The dots, which are about 20,000 times smaller than a human hair and resemble the tiny semiconductors used in consumer electronics, successfully killed 92% of drug-



resistant bacterial cells in a lab-grown culture (*Nature Materials* (2016) doi:10.1038/nmat4542).

Save Sparrow, Save Environment

World Sparrow Day was celebrated on Sunday 20th March 2016

The house sparrow was once the most common bird in the world, but in the past few years, this bird has been on the decline over much of its



natural range, both in the urban and rural habitats. The decline of the house sparrow is an indicator of the continuous degradation of the environment around us. It is also a warning bell that alerts us about the possible detrimental effects on our health and wellbeing. We need to know the health risks of the increasing amount of microwave pollution and what is decimating the population of the house sparrow, which co-existed with us, so that we can estimate the effect on all

forms of life, including ours. The rationale for celebrating World Sparrow Day on 20th March every year is not only to commemorate the event for a day but to use it as a platform to underscore the need to conserve sparrows as well as the urban biodiversity. It will also help in attracting the attention of government agencies and the scientific community to take notice of the need for the conservation of the common bird species and urban biodiversity.

Intra Departmental Activities.....bf page 10

were Heena Perween and Arzoo Khan in Poster Presentation, Prince and Sanjay Pal in Collage competition, Jagdish Chandra in Painting, Amit Dhami & Brahm Naryan in Quiz, Arzoo Khan in Extempore and Rima Jha and group in Nukkar Natak respectively. All the winners were given prizes and certificates.

Department of Biochemistry

Intra departmental debate

competition was held by Department of Biochemistry on 10th February, 2016 on the topic “Metabolism interference with drugs Good or Bad” in which Mohisin & Israr won the first prize.

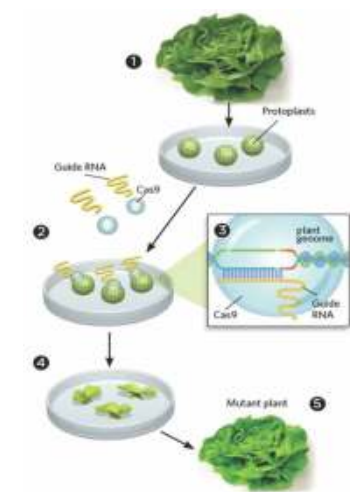
Intra departmental Quiz competition was held on 11th Feb., 2016 on “General Aspects of Biochemistry” in which Fozia and Iqra won the first prize.



Students engrossed in Debate Competition

Gene Editing Without Foreign DNA

To mutate a specific gene of interest in lettuce, Choe and colleagues of Seoul National University prepared protoplasts. Pre-assembled CRISPR complexes, including a tailor-made stretch of guide RNA and the nuclease Cas9, were introduced into the protoplasts. The complex homes in on the target gene and cuts the DNA at a locus specified by the guide RNA. Protoplasts are then grown in clumps called calli, which are regenerated into a mature, genetically modified



specimen (Nature Biotechnol, 33:1162-64, 2015).

Endangered Rauvolfia serpentina (Sarp Gandha)

Red Data Books on endangered animals, birds and flowering plants have been prepared by the Survival Service Commission of the International Union for Conservation of Nature and Natural Resources (IUCN). In that it is mentioned that out of 18,000 to 20,000 species of flowering plants in India, about 1,000 species fall into the conservation category (rare, endangered, vulnerable or depleted) and need adequate conservation. One of

the plants like *Rauvolfia serpentina* (Sarp Gandha), has been decimated and is being threatened with extinction in their original habitat.

The *Rauvolfia serpentina* (Sarp Gandha) is large herb some time twining or climbing shrub, found in the tropical Himalayas and plains near to foot hills. It occurs



up to 4000 feet an elevation. The Sarp Gandha is most fascinating plant. It is mentioned in literature of Charaka (1000-800 B.C.) where it is described its sanskrit name

Sarp Gandha-useful antidote against snake bite and insect stings-

Compiled by Dr. KP Tripathi

A Newly Discovered Form of Immunity Helps Explain How Bacteria Fight Off Viruses

When seeking to protect themselves from viruses, some bacteria wait until the invading virus has already begun to replicate. In February, research at The Rockefeller University showed how two newly identified

enzymes, Csm3 and Csm6, which are part of a bacterial immune system known as CRISPR-Cas, swing into action during the late phase of infection when they cut up viral RNA (cell/abstract/S0092-8674(15) 01717-1).

Scientists Have Finally Figured Out How Herpes Tricks The Immune System

Herpes simplex 1 virus tricks the immune system by outsmarting the body's regular response that allows immune cells to recognize and destroy foreign invaders. Once this virus enters the body, it never leaves. It jams TAP: a transporter that helps alert the

immune system that the virus is hiding within a cell. This jamming has two effects. One, it precludes the regular protein from binding. Two, it makes the transporter stuck in this conformation (Nature, 2016; 529 (7587): 537 DOI: 10.1038/nature16506).

Genetic Link Found Between Type 2 Diabetes & Mental Disorders

Researchers from the University of Massachusetts showed that a gene called 'DISC1' - which is believed to play a role in mental health disorders such as schizophrenia, bipolar disorder and some forms of depression-influences the function of pancreatic beta cells, which produce insulin to maintain normal blood glucose levels. Researchers hope that this genetic association will uncover mechanisms to improve therapies for both type 2 diabetes and mood disorders (The FASEB Journal, 30 (2): 983 DOI: 10.1096/fj.15-279810).

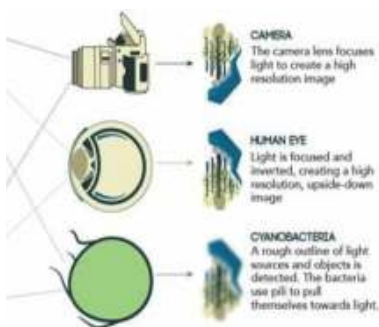
Turning Tumor Cells Against Cancer

In a research published in February, scientists at the Memorial Sloan Kettering Cancer Center in New York City showed that circulating tumor cells (CTCs) could both colonize new metastases and travel back to their tumors of origin. Taking advantage of this bidirectional

CTC movement, researchers injected mice with CTCs that were genetically modified to express an anticancer cytokine and found that these GM CTCs were able to home to tumors and release the cytokine, leading to decreased tumor growth (PNAS, doi:10.1073/pnas.1525697113, 2016).

Sighted Microbes

A cyanobacterial cell acts like an eye, refracting light onto the cell membrane in a similar way to how the lens of a human eye refracts light onto the retina, according to a study published in February, in eLife. The focusing of light on photoreceptors in the cytoplasmic membrane then triggers the cyanobacterium to move towards the light source. The findings contradict previous suggestions that the bacteria



achieve phototaxis by sensing light gradients (http://dx.doi.org/10.7554/eLife.12620).

Scientists Develop Very Early Stage Human Stem Cell Lines For The First Time

According to a research published in March, scientists at the University of Cambridge have for the first time shown that it is possible to derive from a human embryo 'naïve' pluripotent stem cells - one of the most flexible types of stem cell, which can develop into all human tissue

other than the placenta. As well as a potential source of stem cells for use in regenerative medicine, the technique could open up new avenues of research into disorders such as Down's syndrome (Stem Cell Reports; e-pub 3 March 2015. DOI: 10.1016/j.stemcr.2016.02.005).

Bread Mold Might Be The Key To Better Rechargeable Batteries

In March 2016, researchers for the first time showed that the fungus *Neurospora crassa* can transform manganese into a mineral composite with favorable electrochemical properties. The findings suggest that *Neurospora*

crassa, which is present in red bread mould, could be the key to producing more sustainable electrochemical materials for use in rechargeable batteries (Current Biology, 2016; DOI: 10.1016/j.cub.2016.01.068).

Link Between Zika Virus and Fetal Brain Damage Confirmed

A study at the University of Helsinki, Finland, has found that small amounts of genetic material from the Zika virus can be detected from blood sample taken from pregnant woman even weeks after the acute rash caused by the infection has passed, when the development of brain damage

in the fetus is underway. Severe brain abnormalities can be detected through neuroimaging already at this early stage (Zika Virus Infection with Prolonged Maternal Viremia and Fetal Brain Abnormalities. NEJM, March 30, 2016 DOI: 10.1056/NEJMoa1601824).



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