

ANKUR

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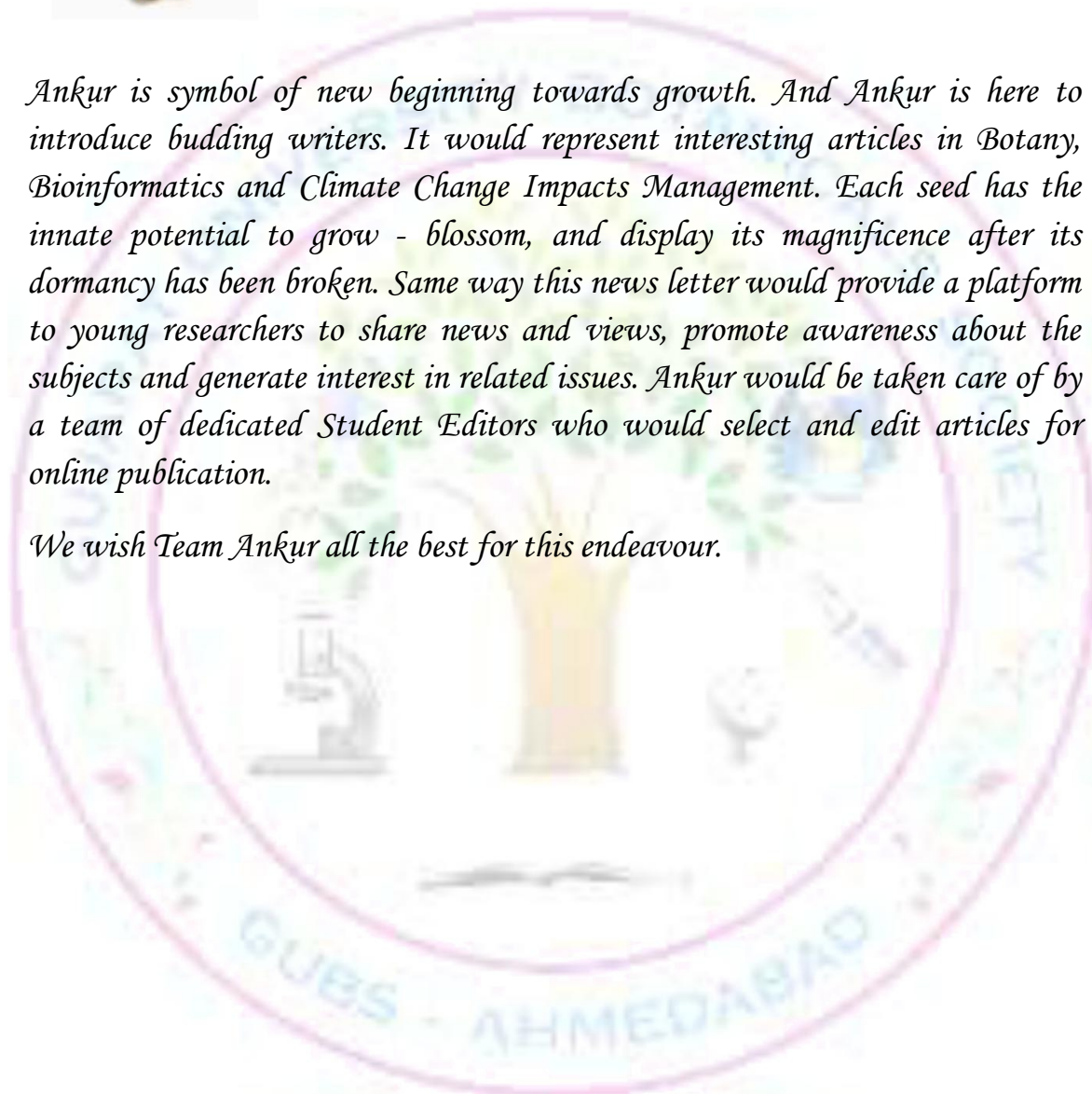


ANKUR

.....Sprouting of thoughts

Ankur is symbol of new beginning towards growth. And Ankur is here to introduce budding writers. It would represent interesting articles in Botany, Bioinformatics and Climate Change Impacts Management. Each seed has the innate potential to grow - blossom, and display its magnificence after its dormancy has been broken. Same way this news letter would provide a platform to young researchers to share news and views, promote awareness about the subjects and generate interest in related issues. Ankur would be taken care of by a team of dedicated Student Editors who would select and edit articles for online publication.

We wish Team Ankur all the best for this endeavour.





FROM EDITOR'S DESK....

Ankur is now two years old. It has grown and established its branches. The concentrated and consistent efforts of all involved with Ankur have been really praiseworthy. The growth and development of Ankur is a reflection of the growth and progress of the students of the department. This is a platform for positive academic deliberations and we are happy that we have been getting appropriate inputs by our members. We extend our heartiest gratitude to TEAM ANKUR and all involved in the process of completing this task.

The journey began two years ago and now Ankur has blossomed and is spreading the fragrance to everyone around with the message of eat health, think healthy, stay healthy. In this issue, we focus on Food, Health and Nutrition.

Editorial Team

Dr.Archana Mankad

Dr.Hitesh Solanki

Dr.Himanshu Pandya

Ms.Shirin Qureshi



PATRON'S MESSAGE

A wise man considers health as the greatest of human blessing and knows how to derive benefit from it. Actually health is wealth and the irony is that we normally realise it only when it is lost. Thomas

Edison has said "The doctor of the future will no longer treat the human frame with drugs, but rather will cure and prevent disease with nutrition." A balanced life and a balanced diet paves the way to a balanced human being. This issue is an attempt to highlight the urgency of focusing on our health.

Ankur is two years old. I wish Team ANKUR all the best.



Dr. Archana Mankad
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FOOD FOR OUR MOOD

Archana Mankad



Feeling low and depressed? Take a break and indulge in your favorite chocolate and see how your mood changes. Believe it or not chocolates are mood enhancers, they have the magic to make us happy. The most popular food preparation of *Theobroma cacao* seeds is **CHOCOLATE**. The seeds of the cacao tree have an intense bitter taste and must be fermented to develop the flavor. After fermentation, the beans are dried, cleaned, and roasted. The shell is removed to produce cacao nibs, which are then ground to cocoa mass, pure chocolate in rough form. The cocoa mass is also called chocolate liquor and is processed into two components: cocoa solids and cocoa butter. Unsweetened baking chocolate (bitter chocolate) contains primarily cocoa solids and cocoa butter in varying proportions. Much of the chocolate consumed today is in the form of sweet chocolate, a combination of cocoa solids, cocoa butter or other fat, and sugar. Milk chocolate is sweet chocolate that additionally contains milk powder or condensed milk. White chocolate contains cocoa butter, sugar, and milk, but no cocoa solids. Cocoa solids are a source of flavonoids and alkaloids, such as theobromine, phenethylamine and caffeine. Chocolate has become one of the most popular food types and flavors in the world, and a vast number of foodstuffs involving chocolate have been created. Dark chocolate has been promoted for unproven health benefits. Processing is followed with blending and conching that ends with tempering. Once finished the chocolate is stored. Unconstrained consumption of large quantities of any energy-rich food, such as chocolate, without a corresponding increase in activity, increases the risk of obesity. The various types of products from chocolate are Chocolate bars, Chips, Biscuits, cakes, syrups, mousse, cookies, crackle, pudding, coins, fudge, icecreams, fondues, choco lava to name a few. Indian companies are equally competing in the world market with Cadbury being the second largest after Wrigley.

A 28 gm Cadbury Dairy milk chocolate bar contains 148 calories. While 100 gms of dark chocolate contains 546 calories. Besides calories chocolates have sodium, potassium, caffeine, magnesium, iron, calcium, carbohydrates and fats.



	serving size (g)	calories	total fat (g)	saturated fat (g)	trans fat (g)	cholesterol (mg)	sodium (mg)	total carbohydrate (g)	dietary fibre (g)	sugars (g)	protein (g)	vitamin A (%)	vitamin C (%)	calcium (%)	iron (%)
chocolate	110	460	22	13	1	85	220	62	2	42	4	14	0	4	45



AN APPLE A DAY KEEPS A DOCTOR AWAY

Dr. Himanshu Pandya



Apple, botanically *Malus domestica* grows readily from seeds and are ordinarily propagated asexually by grafting. It grows best in temperate conditions and produces beautiful white flowers in cymes. Apples are self-incompatible so cross-pollination is done with the help of Honey bees to develop the pome fruit.

Commercially, apples can be stored for some months in controlled-atmosphere chambers to delay ethylene-induced ripening. They may also be stored in chambers with higher concentrations of carbon dioxide and high air filtration. This prevents ethylene concentrations from rising to higher amounts and preventing ripening from occurring too quickly. Ripening continues when the fruit is removed from storage. For home storage, most varieties of apple can be held for approximately two weeks when kept at the coolest part of the refrigerator.

A typical apple serving weighs 242 grams and contains 126 calories with significant dietary fiber and modest vitamin C content, with otherwise a generally low content of essential nutrients. Apple peels contain various phytochemicals with unknown nutritional value, including quercetin, epicatechin, and procyanidin B2. Ideain (cyanidin 3-O-galactoside) is an anthocyanin, a type of pigment, which is found in some red apple varieties. Preliminary research is investigating whether nutrients and/or phytochemicals in apples may affect the risk of some types of cancer.

Apples are often eaten raw, but can also be found in many prepared foods (especially desserts) and drinks. Many beneficial health effects are thought to result from eating apples; however, two types of allergies are attributed to various proteins found in the fruit. Generally sliced apples turn brown due to oxidation of the natural phenols into melanin. Genetically engineered Arctic apples, however, do not brown on slicing.



THE CUP THAT CHEERS

Dr. Hitesh Solanki



Green tea is made from *Camellia sinensis* leaves that have undergone minimal oxidation during processing. Green tea originated in China and now is popular everywhere. Green tea contains a variety of enzymes, amino acids, carbohydrates, lipids, sterols, related compounds, dietary minerals, and phytochemicals such as polyphenols, flavanols, and caffeine. Polyphenols found in green tea include but are not limited to epigallocatechin gallate (EGCG), epigallocatechin, epicatechin gallate, and epicatechin. Flavanols such as kaempferol, quercetin, and myricetin are also found in green tea. The mean content of flavonoids and catechins in a cup of green tea is higher than that in the same volume of other food and drink items that are traditionally considered to promote health,

Daily consumption of green tea has been associated with a lower risk of death from cardiovascular disease. In a 2015 meta-analysis of observational studies, an increase in one cup of green tea per day was associated with a 5% lower risk of death from cardiovascular causes. Green tea consumption may be associated with a reduced risk of stroke. A 2013 Cochrane review of randomized controlled trials concluded that green tea consumption for 3–6 months appears to lower systolic and diastolic blood pressures a small amount (about 3 mmHg each). Additional analyses examining the effects of long-term green tea consumption on blood pressure have reached similar conclusions. Green tea consumption lowers fasting blood sugar.

Drinking green tea or taking green tea supplements decreases the blood concentration of total cholesterol (about 7 mg/dL), LDL cholesterol (about 2 mg/dL), and does not affect the concentration of HDL cholesterol. Daily consumption of green tea is significantly associated with a lower risk of death from any cause; an increase of one cup of green tea per day is linked with a 4% lower risk of death from any cause. A separate analysis found an increase of three cups of green tea per day was associated with a lower risk of death from any cause. However, there is no conclusive evidence that green tea aids in weight loss for obese people. Moderate, regular, and habitual consumption of green tea is safe, however, there are reports of liver toxicity in humans after consuming high doses (10–29 mg/kg/day) of green tea extract dietary supplements. High doses of epigallocatechin gallate (EGCG), an abundant catechin found in green tea, have also been found to cause oxidative stress in mice.



PEPPER TO PEP UP OUR HEALTH

Shirin Qureshi



Spices are an important constituent of Indian curries. Used since time memorial, the spices have been very important as antibacterial, antifungal, antiviral and antioxidant properties. Black pepper is one such spice used in day to day preparations in Indian Kitchens. Tiny seeds of black pepper have been miracle seeds having excellent medicinal properties. Black pepper is obtained from the pepper plant. *Piper nigrum* belongs to family Piperaceae. At various stages of development the colour changes from green, red to black and the peppercorns without seed coats are white. The sun drying of peppercorns forms the black dried peppers. The popularity of pepper in culinary dishes is because its pungency could spice up bland foods and also as a means of preservation. Pepper became an important spice, it also led to the exploration of undiscovered lands and development of major cities like Europe and the Middle East. Today the major commercial producers of Pepper are India and Indonesia. Black pepper corns have been used in traditional medicines mentioned in Ayurveda, Siddha and Unani. They are used as an appetizer and to treat problems associated with the digestive system, particularly to eradicate parasitic worms. Black pepper has also been used as a remedy for cholera and syphilis, sometimes combined with other substances. It has also been used in tooth powders for tooth ache and also as a remedy for sore throat and hoarseness. It can also be chewed to cure throat inflammation. External use is of applying it as a paste to boils and to treat their hairloss and some skin diseases. Mixture of black pepper and honey has been recommended for night blindness. A mixture of black pepper and sesame oil is also applied on areas affected by paralysis. It is also found to be useful in diseases like hepatitis, urinary and reproductive disorders. Also, a paste of white pepper has been used to treat some eye diseases. Piperine is found to be central nervous system depressant and to have anti-fever, pain reliving, anti-inflammatory and insecticidal effects.

The harvesting and processing determines the type of pepper being produced i.e., green pepper which is fresh berry has a very mild pungency while white pepper has the rough outer coat removed before or after harvesting and has a pleasant cream white colour with moderate pungency.



antioxidants are used as spices and condiments which have antioxidant properties. The plant essential oil can also be considered as the alternative to chemical antioxidants considering the fact that there is lots of public awareness and demand for chemical free food products. The next generation of safer, environmentally friendly effective antioxidants is undoubtedly soon to come.



HEALTH BENEFITS OF JASMINUM SAMBAC (L.) AITON

Nikita Sapra



Jasminum sambac (L.) Aiton which is commonly known as Mogra belongs to Oleaceae family. Modern research has supported many of the traditional claims regarding its healing properties. Jasmine oil has proven to increase its alertness and improve mood while supporting healthy blood flow and blood-oxygen levels. The aroma of jasmine has even shown to be as effective as sedatives without any of unpleasant side effects such as depression, dizziness, or impaired motor function. Jasmine has also been found to have toxic effects against some harmful organisms. Scientists have identified several active compounds in Jasmine. They include flavonoids and coumarins, which help the body to detoxify. Different ways in which plant is used as:-

Leaves

- It is used in fever, cough, indolent ulcers, skin disorders, lowering blood glucose level.
- Juices from the leaves are applied to remove corns, in treating gall stones, abdominal digestion and diarrhoea.

Roots

- Root material is applied in combination with other drugs as external poultice in sprains and fractures.
- It is used as emmenagogue, in headache as analgesic, ophthalmology and in Diabetes mellitus.
- Roots are used with leaves in eye-lotion.

Flowers

- The flower is bitter, pungent, cooling, cures "tridosha", biliousness, itching sensation, useful in diseases of the eye, ear and mouth acting as tonic to the brain.
- It is very good in tooth ache, suppurations, in disease of blood, diseases of mouth.
- Decoction of dried flowers is used as eye wash during reddening, swelling and pain in the eye, in conjunctivitis, dermatitis, stomatopathy.

In Cosmetics

- Infusion of flowers are used as a face wash because of its fragrance, cleansing and soothing properties.
- Jasmine has also been used as an anti-aging remedy.
- Its effects go beyond good piece of mind and natural relaxation.
- Jasmine has been attributed with promoting healthy, smooth skin.
- Flowers in bean oil or coconut oil for hair, facial body use or as a perfume oil or perfume base.

Edibility

- Flowers are used to make jasmine tea.
- Flowers yield a yellow pigment used as substitute for saffron.

THE “ENVIRONMENT AND NUTRITION” CONNECTION

Mona Parmar & Dr. Hitesh Solanki

Global environmental change threatens human health on an unprecedented scale, both through direct effects such as extreme weather events and indirectly, through scarcity of safe water and nutritious food. The threats to the human health and the planet's ecosystems are exacerbated by demographic changes, including population growth, and increasing consumption. Smallholder farmers who rely on their crops and livestock for both food and income are most vulnerable to the impact of environmental changes. It is expected that increases in temperatures will be correlated with a decline in the ability to undertake manual labour, which will compound the impact of climate change on yields.

Such disruptions in environmental integrity can affect patterns of human health, disease, and nutritional status. In its preamble the Convention on Biodiversity recognizes that “conservation and sustainable use of biological diversity is of critical importance for meeting the food, health and other needs of the growing world population, for which purpose access to and sharing of both genetic resources and technologies are essential.” The Intergovernmental Panel on Climate Change specifically discusses the nutritional status as an outcome of climatic change.

At a time of unprecedented climatic and environmental change, nutrition knowledge becomes vital in enabling individuals and populations to adapt in the most positive manner possible. The nutritional status of populations, as a recognizable and measurable outcome, should help direct other scientific disciplines and intervention programs in identifying sustainable solutions to the environmental and economic problems facing global communities.

As community development priorities merge with those of environmental conservation, it becomes increasingly clear that unless human populations meet their basic survival needs, they cannot afford to conserve. At the same time unless local communities protect the environments around them, they have limited hope to thrive beyond the short term.

Food-based strategies are key to addressing global hunger and malnutrition as well as enabling vulnerable populations to adapt to environmental and socioeconomic changes. While modern technology-based farming is essential for producing food for the growing world population, concerns about crop quality and production seldom include nutrition, or if they do, tend to focus on protein. Similarly, acknowledgments that loss of biodiversity and other environmental changes affect diet and health are usually limited to, general considerations of food security without attention to the complexity of nutrition health relationships.

Researchers have documented ways in which populations with traditional lifestyles (often populations identified as indigenous) satisfy their nutritional needs through unique human-environment relationships. For example, rice, pulses, and milk products provide a balance of amino acids for subsistence farmers in India. In situations where animal protein and fat are the

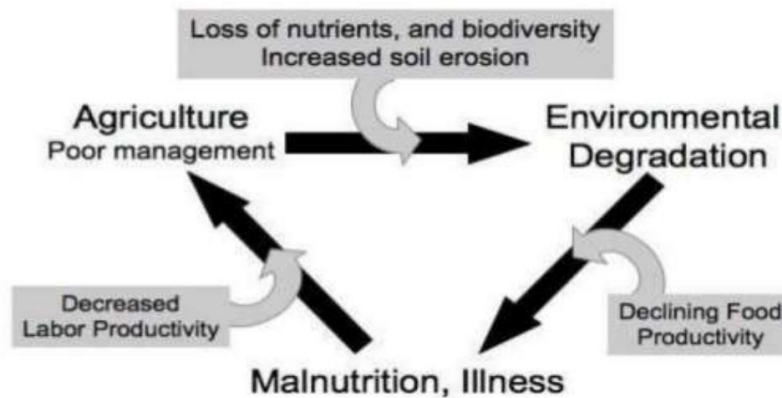
The primary energy sources, such as among Arctic hunters and dryland pastoralists, populations have adapted specialized preparation techniques and used wild plants to ensure that essential vitamins and minerals are consumed. Nutritional sciences can help determine whether these traditional systems can be adapted for use elsewhere. Coupled with knowledge

about the role of nutrition in contemporary health problems, traditional knowledge and resources can guide environmental efforts to identify sustainable solutions. In turn, adequate nutrition increases options for conservation, or at least reduces the pressure on people to use resources unsustainably in the effort to meet their basic needs. Traditional values of conservation, encompassing relationships to land, spiritual dimensions, and concepts of health, are fragile and vulnerable to modern forces of change. Nonetheless, cultural values can be important components in programs of public health education and ecological recovery. Integrating the biological, social, and cultural dimensions of human-environmental relations are as essential to the present and future sustainability of human health as it has been throughout history.

The problem of environmental change might adversely affect the agricultural diversity too. The local crops which are not resilient to such changes might be extinct. This may adversely affect the very large population of tribal people living in the countries like India, Pakistan, Bangladesh, Bhutan, Nepal, Myanmar, and Afghanistan. These types of populations are more dependent on the endemic agricultural diversity.

Food systems, food environments and econutrition

Interrelationships among nutrition, human health, agriculture and food production, environmental health, and economic production



Deckelbaum, Palm, Mutuo and F. DeClerck



Courtesy: Biodiversity International

CLIMATE CHANGE, GENDER, HEALTH AND ASIA

Rohan Thakker and Dr. Hitesh Solanki

There is now strong evidence that the earth's climate is changing rapidly, mainly due to human activities. Increasing temperatures, sea-level rises, changing patterns of precipitation, and more frequent and severe extreme events are expected to have largely adverse effects on key determinants of human health, including clean air and water, sufficient food and adequate shelter.

Many of the health risks that are likely to be affected by ongoing climate change show gender differentials. Globally, natural disasters such as droughts, floods and storms kill more women than men, and tend to kill women at a younger age than men. These effects also interact with the nature of the event and social status. The gender-gap effects on life expectancy tend to be greater in more severe disasters, and in places where the socioeconomic status of women is particularly low. It is a proven phenomenon that, climate-sensitive health impacts, such as malnutrition and malaria show important gender differences.

Differences are also found in Climate-vulnerability to the indirect and long-term effects of disaster risk and hazards. For example, droughts in developing countries of Asia like India, Pakistan, Bangladesh and Afghanistan bring health hazards through reduced availability of water for drinking, cooking and hygiene, and through food insecurity. Women and girls disproportionately suffer health consequences of nutritional deficiencies and the burdens associated with travelling further to collect water as socially women are associated with the collection of water. In developing countries like India there are concrete evidences that drought can disproportionately increase suicide rates among male farmers!

It is now a well known fact that males consume more energy than the women in these developing countries. They are less vulnerable to health risks than women. Women, children and old age people face more lung related problems due to house-hold burning than the working males. The climate change is definitely going to affect the needs and consumption pattern of household energy which will adversely affect the women in Asia.



LESSONS FROM NATURE

Dr. Archana Mankad

Health and Nutrition are two magic words that hold a lot of promise, hope and actually substance. The point is we all know it but we like to overlook it and simply indulge. Nature has given us plenty to eat. Nature has also given us plenty to nourish. What is more important eating or nourishing? Should we eat to nourish? Do we eat to nourish? Nature has equipped all living organisms with unique adaptations to obtain their share of nutrition. We need to urgently nourish our minds to adequately nourish our body and make it healthy.

“The food you eat can be either the safest & most powerful form of medicine or the slowest form of Poison” by Ann Wigmore .



Change Your Diet & Get Your Life Back

GLIMPSES OF GUJARAT UNIVERSITY BOTANICALS SOCIETY ACTIVITIES **JULY 2015-NOVEMBER-2015**

A one day **Seminar on Herbs N Health 2015 (HNH 2015)** was organized by Gujarat University Botanical Society (GUBS), Women Development Cell (WDC), Internal Complaint Cell (ICC) in collaboration with Gujarat Medicinal Plant Board and Shashwat at Department of Botany, Gujarat University, Ahmedabad on Friday, 10th July, 2015. The programme was aimed to promote herbal medicine, naturopathy, yoga and ayurveda among city residents and to nurture medicinal plants at home. Dr. M. N. Patel, Honorable Vice Chancellor, Gujarat University alongwith Shri B.N.Patel, Technical expert from Gujarat Medicinal plant Board (GMPB) inaugurated the seminar and blessed the event. Dr. Archana Mankad welcomed the guests and the participants. The participants included staff, students with their parents, and eminent persons from forest department and GMPB. Inaugurating the seminar, Honourable Vice Chancellor, Dr. M. N. Patel emphasized the urgent need of taking care of our health. Ms. Saswati Chandra, President - Shashwat, very effectively introduced the seminar objectives. Prof. Savita Gandhi, Chairperson- WDC and Head- Department of Computer Science and Prof. Rajshri Bhatt, Chairperson-ICC and Head- Department of Statistics blessed the participants. The inaugural session was followed by refreshments and the participants and guests enjoyed healthy snacks in the form of *boiled pulses salad* and yummy *sargava-no-soup*. The first Technical session was conducted by Shri B.N.Patel from GMPB who highlighted the activities of GMPB. The second technical session was conducted by Prof. Minoos Parabia, appropriately titled as *Dadima –na- nuskha*, the session generated a lot of interest among the participants. Alongside there were free health checkups arranged by GMPB and Shashwat group for everyone. In these checkups, ayurvedic doctors gave free counselling to the participants for their health related issues. The third technical session was conducted by Dr. Hemant Joshi, District Ayurved Officer. Dr. Joshi emphasized the need of relooking at our changing lifestyles and illustrated the amalgamation of Ayurveda in it. The traditional Lunch was not only sumptuous but also healthy and all the participants really enjoyed the Palak Paratha, Soya corn in punjabi gravy, fry dal and Kodri Pulao. This was accompanied with coconut khajur jaggery sweet and fresh green salad. After lunch the fourth technical session was conducted by Dr. Birju Acharya, Director, Yog Vedic Village. Dr. Acharya focused on the significance of yoga and reinforced the health benefits of a balanced life free of stress with the practice of yoga. Prof. L.B. Singh from Ayurved Mahavidyalaya, in

the fifth technical session gave a descriptive account of important medicinal plants. The sixth session was taken by Dr. Lancelot D'cruz, St. Xavier's College. Father Lancy also is part of the aadhi-aushadhi group and delivered a very informative and eye-opening talk on Important medicinal plants and associated traditional knowledge. His vast experience with the tribalsat Rajpipla and experiments on value addition using medicinal plants was appreciated by all. The participants appreciated the functions of Gujarat Medicinal Plant Board and Shashwat and had a hands on learning experience of making pain balm among other medical formulations in the last concluding session. All participants received a certificate of participation. The participants got an opportunity to buy medicinal formulations prepared by aadhiaushadhi group and Shashwat group besides the all time favourite amla chunks.



Inauguration: Lighting the lamp



Dr. M. N. Patel addressing the gathering



Dignitaries on the dais



Prof. R. G. Bhatt welcoming Dr. M. N. Patel



Prof.S.R.Gandhi welcoming Shri B.N.Patel



Ms.Saswati Chandra welcoming Prof.R.G.Bhatt



Dr. Archana Mankad welcoming Prof.S.R.Gandhi



Dr. Lancelot D'Cruz delivering the invited lecture

A **Nature education Camp** was organized by **Gujarat Ecological Education and Research Foundation (GEER)**, Aranya Udhyan Gandhinagar on 3rd August-5th August, 2015. M.Sc. Semester 3 students participated in the camp. The first session was given by Dr. Ketan Tatu on “Conservation of Biodiversity” and the second session was given by Dr. Amita Tatu on “How to identify Plants.” After the session, the students were taken for a field visit in which they learned the Quantitative Analysis including Quadrat Study and Plant Identification. After dinner, the students had night session .Dr. H.S. Singh was the speaker. During this session, the students had an interaction on Biodiversity. On Day 2, Dr. Ketan Tatu began the first session on “Animals and Birds Identification” through voice calls. After this session, the students were taken for a field visit in which birds identification was taught and transect method for Plant study was also taught. In the afternoon session, Mr. Nitin Patel gave a lecture on GPS and gave the practical application of GPS as well. In the next session, Entomologist- Ms. Kalavanti taught the students to identify insects. Then after they had field visit where they saw Wetland Habitat. Also, Mr. Chandrakant Damor taught the students how to make Herbarium sheets and Preserve the plants. In the concluding session, Dr. Ketan Tatu discussed with the students about Dissertation format, difference between magazines and Journals. On Day 3, students visited Indroda Park situated at Gandhinagar. The students were taken on a field trip for Identification of Plants. Students also saw the Zoological Park which had Snake house. The students were also familiarized with the laboratories in Indroda Park. There the students were explained about various instruments and showed them the data interpretation of images using Remote Sensing techniques. During the concluding session, Dr. Bharat Pathak discussed the 3 days activities and interacted with the students. There was also a Quiz competition for the students in which they were divided into 4 teams. The students had a great learning experience with the speakers. The students learnt Practically the things on field with Hands-on experience. The students also had an insight into the identification of Insects and Birds alongwith the Plants.



Dr. Ketan Tatu explaining Identification of Birds



Ms. Kalavanti-Entomologist explaining Identification of Insects



Mr. Nitin Patel teaching about GPS



Students visiting the Snake House



Students being taught image interpretation through remote sensing technique



Students learning about various instruments

The Gujarat University Botanicals Society (GUBS) is a society of Staff and Students of Botany, Department of Botany Staff and Students of Bioinformatics and Climate Change Impacts Management of the Applied Botany Centre, Department of Botany. The Gujarat University Botanicals Society (GUBS-2015) was formally inaugurated on 12th August by the Chief guest of the function-**Prof. N.K. Jain**, Head, Department of Life Sciences and Coordinator, Department of Biochemistry and Department of Food and Nutrition, Gujarat University. A short movie of the glimpses of 2014 activities was shown to the new members made by Ms. Shirin Qureshi and the new Team GUBS was selected this year. The new

TEAM GUBS, under the guidance and support of Dr. Hitesh A. Solanki, would co-ordinate various curricular, co-curricular and extra-curricular activities all year round. Dr. Hitesh Solanki, Professor and Staff-in-charge welcomed the Chief guest Prof. N.K. Jain. Prof N. K. Jain inspired the students with his words of wisdom and the new **Team GUBS** was coronated with the badges by Prof N.K. Jain. The inaugural event was followed by icebreaking activities. The office bearers for 2015-2016 are as follows:

Patron	Dr. Archana U. Mankad, Head of Department
Staff-in-charge	Dr. Hitesh A. Solanki
President	Ms. Shirin A. Qureshi, Ph.D.
Vice-President	Ms. Dipika Dalal, M.Sc. Sem III Botany
Secretary	Ms. Anjali Shukla, M.Sc. Sem I Botany
Jt. Secretary	Ms. Neha Jha, M.Sc. Sem III Bioinformatics
Jt. Secretary	Mr. Zarnesh Kanojia, M.Sc. Sem III CCIM
Treasurer	Mr. Fulesh Kokni, M.Phil



Team GUBS 2015-16 with the Chief Guest-Prof. N.K. Jain.

GUBS Activities

The movie by BBC-David Attenborough on “**The Private Life of Plants-Travelling Series**” was shown to GUBS members on 14th August, 2015. Following this were events like Elocution Competition, Blindfold Games, Animated Movie based on Nature and

Conservation of Plants-“**Dr. Seuss-the Lorax**” and Dumbcharades. GUBS members participated in the events with lot of enthusiasm.

An **Invited Lecture** on “**Nanotechnology-Opportunities and Challenges**” by **Dr. Piran Kidambi** was organized at Department of Botany on 24th August. Dr. Piran Kidambi is a postdoctoral associate focusing on the synthesis and application of nano-structured materials in a joint appointment with the Mechanosynthesis group of Prof. John Hart at MIT, USA. He talked about the size of Hair, blood cells, Bacteria and the lotus leaf effect, Gecko fingers and combustion of engines. He spoke about reducing the size of molecules and the catalytic process involved and about Graphene. Also, mentioned about Ultrafast electronics-flexible photonic devices. He discussed how the future phones will be flexible and concluded the talk with Nanocarbon and in situ Nanometrology.



Dr. Himanshu Pandya welcoming Dr. Piran Kidambi



Dr. Piran Kidambi giving a lecture on Nanotechnology

An **Invited Lecture** was organized by GUBS on 18th September and the speaker, **Mr. Jacob Mathews from Academy of Human Potentials**, who has over 25 years of experience in public relations and HRD, mostly with ISRO and later on with IFFCO had been invited to deliver a workshop on “**Goal Directed Visualization**”. He explained the students how goals should be made and how visualizing them can lead to the goal achievements. Sir also taught about Creativity and the functions of Conscious (mastermind) and Sub Conscious Mind (slave). He explained about the four levels of Brain waves: Beta level, Theta level, Delta level and Alpha Level. He told that the major 5 ingredients (PPPEV) should be the following: Personal Goals, Present tense, Positive(words), Emotional and Visual and also, the conditions should be Simple, Specific and Realistic. He showed us various examples How to have a positive attitude and differentiate between them. People with Positive attitude have following characteristics: Responsible, have good Imaginations, Gratitude, Humour, Good Habits, Time

Management and Team players whereas the people with Negative attitude are Worriers, Rushing to Conclusion, Overreacting, Neglecting or Give up early. After the session, the students interacted with Mr. Jacob Mathews and it was a good learning experience for us to know how mind functions and the impacts of our thoughts and attitudes in daily life.



Mr. Jacob Mathews explaining about Visualization



Group Photo after the workshop

Science Excellence-2015 (SCIXL-2015) Paper Reading (Poster and oral) Competition: for UG/PG/Research/Faculty category was organized by Department of Botany, Gujarat University, Ahmedabad Science is all about discoveries, innovations and documentation. The spirit of science is, not only, a never ending pursuit of knowledge, but also, its application and these are the fundamental principles, that have shaped SCIENCE EXCELLENCE. Department of Botany, University School of Sciences, Gujarat University, Ahmedabad organized **Sixth Paper Reading (Poster and oral)** Competition on Saturday 26th September-2015 for UG/PG/Research/Faculty category. Students for 20 subjects viz., Biochemistry, Biotechnology, Bioinformatics, Biomedical technology, Botany, Chemistry, Climate Change, Environmental Science, Forensic Science, Food Science and Nutrition, Human Genetics, Life Science, Geography, Geology, Mathematics, Microbiology, Computer Science, Physics, Statistics and Zoology participated in this competition. There were more than 1000 participants from various Colleges and Universities of our progressive state-Gujarat. Two Participants were awarded 1st and 2nd winner in each subject at four levels and two competitions. In all the day ended with Cash prizes worth Rs. 64,000/- distributed to the best young presenters in all the subjects. Such events are significant as they go in a big way in promoting sciences among the developing minds of today who will be the leaders of tomorrow.



Lighting of the Lamp



Welcoming the President of the function, Dr.M.N.Patel



Welcoming the Chief Guest, Dr.Narottam Sahoo



Welcoming the Director-USSC, Prof.M.V.Rao



Dr.Archana Mankad – Formal Welcome



Prof.M.V.Rao – Blessing the participants



Dr.NarottamSahoo- Blessing the Participants



Dignitaries off the dais



Honorable Vice Chancellor - Dr.M.N.Patel addressing the gathering



Dr.Hitesh Solanki – Vote of Thanks



Dr.Megha Bhatt –Master of Ceremonies

On the occasion of **Gandhi Jayanti-2nd** October, essay writing competition was jointly organized by GUBS and Pavitradham Jain Sangh. The title of the essay writing competition was – **“Gandhi, Non-violence and Today”**. The competition received a huge response from the participants of more than 30 departments of Gujarat University. More than 300 students participated actively for the competition. For Prize Distribution function, we had the august presence of Rashtra Sant Pujya Gurudev Shri Namramuniji Maharaj Saheb who blessed us for the occasion.



Ms. Mona Parmar-Formal Welcome



Honourable Vice Chancellor addressing the audience



Winners being felicitated with Certificates by the Dignitaries on the dais

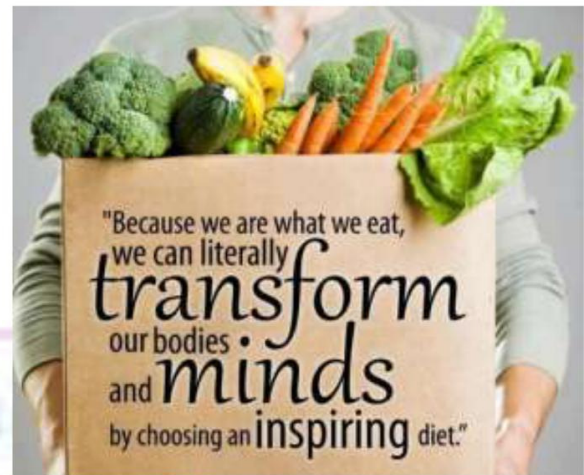
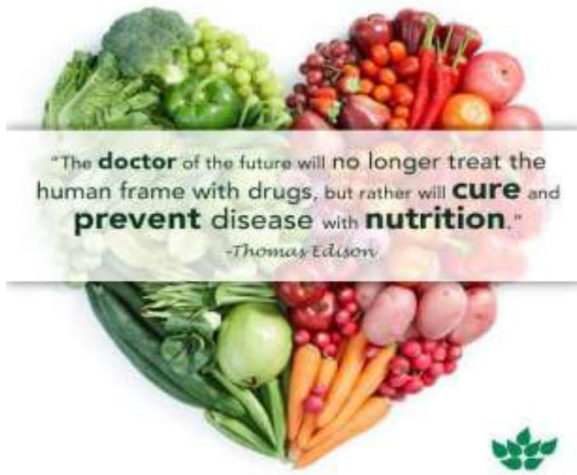
Gubs Garba-2015 was celebrated at Botany Department on 16th October, 2015 with lot of enthusiasm and all the students were in traditional dresses. The Garba celebration began with the “Ambe ma Aarti”. After the aarti, garba competition was held for Best Garba (Boys and Girls), Best Dance (Boys and Girls), Best Pair-Garba (Boys and Girls), Best Pair (Dress), Best Singing, Best Aarti Thali, Special Prize for Garba.



Garba Traditional Wear



GUBS members dancing on the tunes of Garba



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