Our Campus
Beloved Readers,

Pongal, an occasion celebrated with joy and enthusiasm in the campus is a good start for the year to get us connected and to rejoice in the charm of our heritage. Traditional games, dance and display of creativeness through the various competitions brings in new hopes and zeal among the Ramachandrites.

Bacteria, the single-celled organisms have become 'superbugs' since they can outsmart our best antibiotic defenses. Global News presents a sugary way to deal with these most abundant and toughest forms of life which are an emerging threat to public health.

Believe it or Not discloses optical genetic tools that manipulate neurons in the brain to convert negative memories into positive associations. While this neuroengineering promises to explain complexity by simple ideas, we have simple ways to engineer our brains for the better. Even if we've always remembered an event as being terrible and painful, it is never too late to change our perception of it to something healthy and constructive.

We need to remember that our life is filled with many different experiences, and no one single experience can define our life. Giving a new perspective to our negative experience, reflecting on it & not ruminating about it but discussing it with a supportive friend can all be effective techniques to change the way we process negative memories and stay positive.

Let us stay connected…

Sheela Ravinder. S.
Editor-in-Chief

Greetings

Dr. D. Hari Prasad
Medical Director, SRMC

Prof. S. Revathi
Principal, Faculty of Nursing

Farewell

Prof. Prasannababy
Principal, Faculty of Nursing

Memories

National Conference on Modern Techniques & Administration in Healthcare was organized by the Faculty of Management & Indian Society of Health Administrators, Bengaluru between 11th & 13th September 2003. Mr. N. Thalavai Sundaram, Honorable Minister for Health, Govt. of Tamil Nadu and Dr. Ashok Sahni, CEO, Indian Society of Health Administrators, Bengaluru were the chief guests.
Depts. of Pediatric Surgery & Urology conducted a live operative workshop on **Neurogenic Bladder** as part of Pediatric Urology Ramachandra Education (PURE) on 2nd Jan. The workshop focused on new treatment methods available for assessment and management of this complex problem in children. 200 delegates from all over India participated.

Depts. of General Surgery and Radiology conducted a two day workshop on **IMMIX - An Integrated Approach to Breast Disease** between 30th & 31st Oct. Faculty members from PGIMER, Chandigarh and AIIMS, New Delhi were part of the resource persons. 100 delegates attended.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Department/Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.12.'15</td>
<td>CPE on 'Inroads to Career Options: A Pharmacognosist’s Experience' by Dr. Dhanushka S. Hettiarachchi, Research Scientist, Wescorp Sandalwood Pty. Ltd., Australia</td>
<td>Pharmacology, Pharmacy</td>
</tr>
<tr>
<td>21.12.'15</td>
<td>Ms. Raphela R. Aranie and Ms. Jayanthi Anbhalagan, IV yr., B. Sc. BMS received the I &amp; II prizes for oral presentation and were awarded the overall Best Research Trophy at the National Conference on Biomedical Materials in Medicinal Chemistry, Madurai Kamaraj University</td>
<td>Biomedical Sciences</td>
</tr>
<tr>
<td>22.12.'15</td>
<td>Dr. S. Mythili, Senior Resident was awarded the ‘Jaya Group of Institutions Award to Young Researchers’ for the best research paper in the 36th IABMS Conference held at Pondicherry University, Puducherry</td>
<td>Oral Pathology &amp; Microbiology</td>
</tr>
<tr>
<td>18.12.'15</td>
<td>Dr. P. S. Haritha, Reader won the II prize in poster presentation at the 50th Indian Orthodontic Conference held at Hyderabad</td>
<td>Orthodontics</td>
</tr>
<tr>
<td>11.12.'15</td>
<td>Dr. P. S. Haritha, Reader won the II prize in poster presentation at the 50th Indian Orthodontic Conference held at Hyderabad</td>
<td>Orthodontics</td>
</tr>
<tr>
<td>26.11.'15</td>
<td>Dr. M. S. Prem Kumar, III yr. PG received the award for ‘Best Case Report of the Month’ by the Indian Association of Conservative Dentistry &amp; Endodontics (IACDE) at the 30th IACDE &amp; Conservative Dentistry</td>
<td>Conservative Dentistry</td>
</tr>
<tr>
<td>29.11.'15</td>
<td>23rd IES National Conference, Amritsar</td>
<td>Pharmacology</td>
</tr>
<tr>
<td>25.11.'15</td>
<td>Prof. Nalini Ganesan received the best poster award at the 42nd National Conference of Association of Clinical Biochemists of India - ACBICON 2015 held at Postgraduate Institute of Medical Biochemistry</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>28.11.'15</td>
<td>Education and Research, Chandigarh</td>
<td>Pharmacology</td>
</tr>
<tr>
<td>20.11.'15</td>
<td>Dr. B. Sreelekh, Reader received the best paper award in the 12th National Conference of Society of Midwives, India with the theme, 'Quality Maternal &amp; Child Healthcare: Opportunities &amp; Challenges' at Yenepoya University, Mangaluru</td>
<td>Nursing</td>
</tr>
<tr>
<td>19.11.'15</td>
<td>Ms. V. Supriya, Lecturer won the oral presentation in the Indian Dietetic Association (IDA) - Founder's Award for Food Science and Technology at the 48th Annual Conference of IDA held at Bengaluru</td>
<td>Clinical Nutrition</td>
</tr>
<tr>
<td>11.11.'15</td>
<td>Prof. P. Sampath Kumar was awarded the 'Distinguished Fellowship in Forensic Medicine and Toxicology' at the 14th Annual National Conference of the Indian Congress of Forensic Medicine &amp; Toxicology, Gurgaon</td>
<td>Forensic Medicine Toxicology</td>
</tr>
</tbody>
</table>

**New Project Sanctioned**

<table>
<thead>
<tr>
<th>Title</th>
<th>Principal Investigator</th>
<th>Funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison and qualitative assessment of differentiation strategies for generation of β cell islets from adipose derived mesenchymal stem cells</td>
<td>Dr. Alan M. Punnoose Asst. Prof., CRF</td>
<td>Research Society for the Study of Diabetes in India (RSSDI)</td>
</tr>
</tbody>
</table>
Alacris Preschool was inaugurated on the 17th of August 2015. It caters to day-care and preschool services for children aged 1.5 to 6 years. It also extends its after-school programs for children up to 12 years of age. Alacris has included Summer School Programs to channelize the child’s interest into lifelong learning pursuits.

The preschool focuses on 'how to learn' through child-centric content. It nurtures an environment that supports every small step taken by the child with encouragement.

The system believes in

- A pressure-free holistic approach to learning
- Developmentally appropriate content
- Comprehensive learning by doing

Alacris works from Monday through Saturday between 8 am & 6 pm. The CCTV-monitored school has air-conditioned classrooms, a nap room and a kitchen-cum-dining with essential amenities. The team comprises of teachers, care-takers and helpers. Alacris observes monthly themes as a mode of teaching and also celebrates festivals involving children in related art & craft work. Both indoor and outdoor activities are encouraged.

Contact details: Extn. 7041, Behind Tennis Court

---

**Did you know?**

**Alacris Preschool**

---

**Health Glance**

**Eat Right ...**

- **Good breakfast to kick start the day:**
  Nourishing food with an appealing variety induces a healthy body and mind. A cup of sprouted green gram or channa soaked in water overnight/boiled groundnuts & one banana or a boiled tapioca or an omelette with a fruit.

- **Increase the antioxidant intake:**
  It is important to improve the color of the plate and treat the palate. Increase the intake of greens like coriander leaves, curry leaves, pudhina, fenugreek leaves, etc. and colored vegetables and fruits like grapes, brinjals, lime, tomatoes, apples, oranges and carrots.

- **Do not decide the quality by beauty:**
  Remember that a vegetable or fruit with holes in it is worm-infested and hence free from pesticides. Choose bananas which are ripening from the tail end with black or brown spots all over instead of the bananas which are greenish yellow in color throughout, as this means that they are artificially ripened.

- **Add more fruits in the diet:**
  A normal adult requires 100g of fruit per day. It is always advisable to consume the fruits in between the meal gaps. Researches show that they are absorbed better than immediately following the meal.

- **No rules to stay healthy:**
  Anything homemade, without using artificial colors, flavors, deep frying and excess amount of cooking oil becomes a healthy meal.

- **Use multiple oils to benefit from PUFA, MUFA and SFA:**
  Avoid refined oils and return to the chakki fresh oil, which has its natural aroma and colour. An ideal fat for good health is one which maintains a ratio of polyunsaturated to saturated (PUFA/SFA) of 0.8-1 and linoleic and alpha linolenic (n-6/n-3) of 5 – 10 in the total diet.

- **Remember the check-list of 'Five a Day'**
  This means the judicious inclusion of the healthy five food groups i.e., cereal/millet preparations, legumes, dhal & pulses, vegetables & fruits, milk & milk products and fats/oils, the combination of which makes a balanced diet.

*Courtesy: Dept. of Clinical Nutrition*
Neuroscientists at the Massachusetts Institute of Technology (MIT) have developed a method for turning off fear-conditioned responses in mice. The neuroscientists used cutting-edge optical-genetic tools to pinpoint the mechanisms of fear-conditioned avoidance and reward-driven behavior which are both critical to the survival of a species.

Optogenetics inserts genes that express optically sensitive proteins into target cells that then make the cells respond to light. Use of optogenetics allowed the researchers to manipulate individual neurons projecting to both the 'context-storing hippocampus' and the 'emotion-storing amygdala'. In an unexpected finding, Kay Tye and colleagues at MIT found that the crossroads of convergent circuits in the basolateral amygdala, are involved in both fear and reward learning. Initially, they were stumped as to how the amygdala could orchestrate such opposing behaviors like seeking a reward and avoidance. The answer to this appears to be that one neural circuit projects to a reward center, the nucleus accumbens, and the other projects to a nearby fear center, the centromedial amygdala, which is the 'output station' of the brain's emotional hub.

Optically stimulating the reward center projection can enhance positive reinforcement and a feeling of safety. On the flip side, stimulating the fear center projection promoted negative reinforcement. Similarly, blocking the fear center projection impaired fear-learning and enhanced reward-learning. The neuroscientists found that each circuit projection is composed of separate populations of intertwined neurons. Using fluorescent bead tracers of optogenetics the scientists were able to differentiate which neurons belonged to each circuit. For this study, mice underwent classic fear or reward conditioning and were trained either to fear a sound paired with a shock or to associate the tone with a sugar reward. The MIT researchers measured the strength of the neural connections in both 'fearful' and 'safe' environments. The most striking discovery of this research was that the neuronal connectivity to reward center projections decreased after fear learning and increased with reward learning. Conversely, the connectivity to fear center projections increased with fear-learning and decreased after reward-learning.

"These converging mechanisms in anatomically intertwined circuits could hold clues to teasing apart how positive and negative emotional associations may influence each other," Tye concluded. Their findings open the door for revolutionary methods that humans might use some day to re-wire their minds to negate fear-conditioning and avoidance learning.

Source: Praneeth Namburi, Anna Beyeler, Ph.D., Kay M. Tye, Ph.D., Massachusetts Institute of Technology

A special type of synthetic sugar could be the latest weapon in the fight against superbugs. A team of scientists from the University of Queensland (UQ) and Alchemia, a biotechnology company have discovered a potential new class of antibiotics inspired by sugar molecules produced by bacteria. New antibiotics to which bacteria are unlikely to develop resistance are urgently needed to combat the rise of superbugs -- drug resistant bacteria. The research, led by Prof. Matt Cooper and Dr. Johannes Zuegg from UQ's Institute for Molecular Bioscience (IMB) in partnership with Alchemia, was published in the scientific journal, Nature Communications.

According to Prof. Cooper, Director, IMB Center for Superbug Solutions, bacteria are less likely to become resistant to an antibiotic based on a modified version of their own sugar. "Bacteria have cell walls similar to the walls of a brick house, except instead of mortar the walls are held together by sugar polymers. But if you add one of our modified sugar molecules, they stop the linking process, destroying the cell wall and killing the bacteria," Prof. Cooper said.

"Most molecules screened to become drugs have a flat, planar shape, whereas these molecules are three dimensional. This means we can build on the sugar core in a variety of ways to make thousands of different combinations in three dimensional spaces," Dr. Zuegg said.

The cell wall has been a target for antibiotics before, but the difference here is that, a centrally important part of the cell wall linking process is being stopped. The team examined hundreds of versions of Alchemia's modified sugar molecules to find those that will kill bacteria and are non-toxic to human cells. This discovery of a prospective class of antibiotics enthused by sugar molecules produced by bacteria may be very promising against the superbugs.

Source: Johannes Zuegg et al., Carbohydrate scaffolds as glycosyltransferase inhibitors with in vivo antibacterial activity. Nature Communications, 2015; 6: 7719 DOI: 10.1038/ncomms8719
NSS-SRU and SRMC organized a Medical Camp on 15th Dec. at the rain affected Karunakarachery village. 120 people benefited.

Dept. of Community Health Nursing participated in rain relief special medical camps organized by Nemam and Sorancherry PHCs from 12th to 31st Dec. Irularpalayam, Uttkottam, Uttkottam colony, Samathuvaparam, Kuchikadu, Gudapakkam, Nemam, Padur and Padur colony were the villages covered. Around 1500 people benefited.

Dept. of Community Health Nursing participated in flood relief activity from 10th to 27th Dec. at Pozhichalur village as directed by the Tamil Nadu Nurses & Midwives Council. Verification of chlorine content in drinking water, chlorination of water sources and distribution of bleaching powder were carried out. About 2000 families benefited.

Dept. of Public Health Dentistry along with the Rotary Club of Madras Downtown and the Indian Association of Public Health Dentistry observed the National Tooth Brushing Day on 7th Nov. at Thiruvallur. Free dental screening and treatment were provided. Toothbrushes and toothpastes were also distributed. Around 150 people benefited.

Home Hints
Fend off weeds

Use the newspaper as mulch and deter noxious weeds. Simply wet the sheets and put the layers around plants and garden beds, covering with soil. The weeds will not be able to get through the wet newspaper layers. It also helps to retain moisture if the garden is in a dry location.
Arthur Osborne has explained how the greater part of the world's art and poetry have been inspired by religious feeling – this, in spite of the secular spirit that swept over the Western world at the Renaissance and spread to the rest of the world subsequently. Marcus Vitruvius, a Roman architect and writer, who lived around 25 BCE sought to integrate the cosmic and divine in man with the shape of the circle and the earthly with the square. In his exploration of the awesome symmetry and proportion in the design of the human body, Leonardo da Vinci followed Vitruvius's recommendations and complemented this by diligent observations and arduous dissection of human bodies. The other notable genius who raised renaissance art to unprecedented heights was Michelangelo Buonarroti. “Good painting is noble and devout in itself” wrote Michelangelo “for among the wise nothing tends more to elevate the soul or raise it toward devotion than the difficulty of that perfection which approaches God and becomes one with Him. … Painting is the music of God, the inner reflection of His luminous perfection.”

An interesting interpretation of Michelangelo's famed painting *The Creation of Adam* (1508-1512) on the ceiling of the Sistine Chapel may be mentioned here. Although *The Creation of Adam* has been recognized as one of the world's greatest art treasures, what could be described as a hidden meaning in it remained overlooked by millions for centuries till it was pointed out in 1990 by Frank Meshberger MD. Meshberger noticed an anatomically accurate image of the human brain portrayed behind God. He has drawn our attention to the several structures in a sagittal section of the brain represented in the painting. Michelangelo was presumably able to do this because of his intimate knowledge of anatomy from his dissection of human bodies. Meshberger's article was published in the Journal of the American Medical Association (JAMA) in October 1990.

Music, dance, painting and sculpture in India have drawn and continue to draw inspiration from religious and mythological themes. Instructional resources like the *Vishnudharmottara Purana* on the theory and techniques in arts have been in existence from around the 6th century CE. These compendia elaborate on the rules for sculpture, painting etc. with detailed descriptions of how body proportions are to be represented. The system was known as *tala mana*. One *tala* was described as the distance measured from the tip of the middle finger to the wrist crease. Each *tala* was divided into 12 *angulas*. The proportionate allocation of the body segments in the figure was considered more important than the actual measurements. In *Chitrsutra* for example, one reads how the length of the human figure is to be represented under five categories – *Hamsa*, *Bhadra*, *Malaya*, *Ruchaka* and *Sasaka*. In the *Hamsa* category, the overall height of the image will measure 9 *talas* or 108 *angulas*. This is recommended for hallowed figures and deities. The other styles in *tala mana* system have lengths in a descending order.

Prof. S. Rangaswami,
Professor of Eminence in Medical Education, SRU.

*(will be continued…)*

---

**Bits 'n' Bytes**

**Downloading Facebook Videos**

Not being able to download one's favorite videos from Facebook is something that most users hate. Following are the ways in which these videos can be downloaded.

**To download a video which was posted earlier by the user:**

1. Open Facebook and access photos/albums.
2. Select the desired video and open it.
3. Once the video has opened, click the options link under the video.
4. Click on the required link depending on the quality (HD/SD) of the video and download.

**To download a video posted/shared by a friend:**

Unlike the videos uploaded by the user, Facebook does not allow the download of those videos that are posted or shared by friends. However, there are certain steps by which one can download or save any video uploaded on Facebook without any software:

1. Open Facebook and find the required video.
2. Play it and select the link in the address bar.
3. Then change the URL in the address bar as follows - change ‘www’ to ‘m’ so that the initial part of the URL looks like https://m.facebook.com/
4. Once the URL has been changed, press enter to open the mobile version of the page.
5. Once the mobile version of the page opens, click play and right click the video. Then, select from the options – 'save video as', 'save target as' or 'save link as' depending on the browser used.
6. Then choose the location to save and save the video.
Colors
On the edge ...

Your Corner
Gurukul

The 59th Bridges Monthly Book Review was held on 08.01.'16
Book : The Fountainhead
Author : Ayn Rand
Reviewed by : Ms. Suchitha Raghunathan, III yr., B.Sc. Biomedical Sciences
Forthcoming Bridges Monthly Book Review
Feb. 2016 : Jonathan Livingston Seagull by Richard Bach
Reviewer : Prof. D. Kandaswamy, Dean, Faculty of Dental Sciences