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Chitra Dhvani

Quarterly e-magazine of SCTIMST, Trivandrum, Kerala, INDIA



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"Without continual growth and progress, such words as improvement, achievement, and success have no meaning" Benjamin Franklin

Disclaimer: *The views and opinions expressed in this magazine are those of the authors and do not necessarily reflect the official policy or position of Sree Chitra Tirunal Institute for Medical Sciences and Technology.*

From Editor's Desk....

A Letter from the Editor

Dear All,

I am glad to share 4th issue of the year 2022 of "CHITRA DHWANI". It is covering all the events held from 1st October to 31st December 2022.

In this issue, the special feature "In conversation with the Director" will provide key insights into various key realms of thoughts by our Director. Much awaited inaugural event of the Combination Devices block by **Dr Jitendra Singh**, (Honorable Minister of State (Independent Charge) of Earth Sciences, and Science & Technology), filled enthusiasm and new spark of energy in everyone. The **FONTAN clinic**, a national facility, will help in providing timely treatment to the ailing babies with heart anomalies. It was a great honor to have Travancore Royal Family member **Her Highness Aswathy Thirunal Gouri Lakshmi Bayi** to inaugurate a new section in our library on Royal Family Collection of books.

It is gratifying to share that SCTIMST passed in the inspection conducted by the 2nd Sub-committee of the PCOL. The SAMVAAD International lecture series and Academic Fest deliberations were truly enriching and enlightening. **Sree Chitra Technology Conclave** and **G Parthasarathi Oration** were resumed in flying colors. Several national and international days were celebrated with full spirit and vigor.

It was so heartening to observe continued medical education of our staff as several departments took outstanding initiatives in holding training workshops on heart, lungs, sleep, stroke, pre-clinical studies etc. Moreover, this year was marked with pragmatic activities organized by **GATI** and **ICC** for providing holistic education to women on safety at work place and awareness about the legal measures.

I thank each and everyone for their valuable and creative contributions to Chitra Dhvani. I hope you will enjoy this issue showcasing proud moments of successes.

We welcome suggestions from you about this endeavor, and continue to look forward to your co-operation and support to further improvise and make it a continued success. **Wishing you ALL a Bright New Year ahead full of Progress, Productivity and Fun. Get regular sleep and stay healthy.**

Thanks & Best regards

Kamalesh K Gulia, PhD
Chief Editor, Chitra Dhvani

Scientist G & Incharge
Division of Sleep Research
Biomedical Technology Wing
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India



In Conversation with Dr Sanjay Behari, Director, SCTIMST

Q: *What motivated you to come and work in this remote city of our country, in the GOD's own country?*

Reply: In India, SCTIMST is immensely respected as a citadel of learning, outstanding training, and diversified innovation. It is based on a model that every other institute is attempting to emulate. The fact that it is in one of the most educated and affluent states of India with an outstanding health infra-structure adds to its charisma. The focus on innovation in biomedical technology and the focus on public health increases the breadth of learning of every staff member and student present here. Therefore, it was a conscious and well-thought-of decision and I am honored and privileged to be an integral part of the institute. The fact that as a neurosurgeon, I am also able to do clinical work and participate in academic activities in Neurosciences that are added incentives. Home is where you think you belong!

Q: *What are the major challenges that you are facing here?*

Reply: The first challenge is to make every member of the Sree Chitra fraternity aware of the immense legacy of their own institution and the immense respect it commands amongst institutes of national importance in India.

The second challenge is to generate the realization that every member must fully utilize the immense breath of the opportunities in diverse fields that our institute has to offer. Thus, each of us has the responsibility to emerge from the silos of 'zones of comfort' that we have created for ourselves. We need to immerse into and fully utilize the diverse potentialities that exist within.

The third challenge is to instill the conviction that the only way forwards to enhance productivity and service is to work in well-orchestrated teams that have self-imposed targets and deadlines.

Q: *You have visited and worked in various Institutions in our country and abroad as well. Did you notice any difference working here?*

Reply: Sree Chitra has an eminent, intelligent and high-achieving fraternity. It is already ranked as among the best institutes of India due to what it has achieved in the last 40 years. I think the four areas where we need a greater focus are the following:

- a. Strictly creating and then adhering to well-defined and consensus-driven protocols is extremely important. This is related to both in carrying out clinical and scientific work, as well as in the resolution of occasional conflict that inevitably arises among diverse groups of people working in unison.
- b. Being extremely reticent is a Chitra trait. However, showcasing one's work and innovation

reaching out to the masses as well as to other institutes and industries, help in forging cooperation and brings awareness as well as keeps like-minded people together.

- c. One important aspect that needs to be implemented on a universal scale is an extremely meticulous and detailed documentation of the work executed. This also includes the processes involved, as well as the successes and the inevitable failures. Each of them not only serves as a template for other work related to this field but also certifies the authenticity and reproducibility of the activity conducted.
- d. Implementing effective mentorship at every level is also very important as it attracts brilliant applicants to the institution.

One has to realize that as one grows in an institution, the service that one does for the institution has to be matched with personal achievements. Service as well personal achievements are like the two parallel metal tracks on which a train runs. Performing service without also focusing on personal achievements subsequently leads to lack of motivation and burn-out. Lack of personal achievement has a cascading effect on also decreasing the team's and institute's achievements. On the other hand, focusing on only one's individual achievements at the cost of selfless service rendered, compromises team spirit and ultimately hampers productivity. Therefore, one must strive to attain both aspects together for ensuring success of the organization.

Q: *How do you meet the work pressures? What are your hobbies?*

Reply: At the height of achievement when everything is going one's way, as well as the ebb of adversity when nothing seems to work, one must constantly remind oneself: "...and this too shall pass away"; and, "We assume that our external world is predictive of our happiness levels, when in reality, 90 percent of long-term happiness is predicted not by the external world, but by the way our brain processes the world".

I love to read non-fiction literature. I also write a lot. I love classical music both Indian & Western.

Q: *What is your message for the Chitra members?*

Reply: Sree Chitra Institute is a place of worship for all of us. No matter what one's religious beliefs are, anyone who pays obeisance in a place of worship gives space to each other, respects its ambience, and adjusts to its minor discomforts. The place of worship is always revered, and every effort is made to uphold the highest standards of personal and professional integrity, behavior, and dedicated service within and outside its precincts. A place of worship is a place of dedication and not a subject of criticism.





In Focus

Inauguration of the Combination Devices Block: BMT Wing

The Combination Devices Block building was inaugurated by the **Dr Jitendra Singh**, Hon Minister of State (Independent Charge) of Earth Sciences and Science & Technology, on 15th November 2022. The new block of 11,300 square meter (1,20,000 square feet approximately) floor area in seven floors will help the SCTIMST to contribute towards developing medical devices combined with drugs and biologicals to meet the future needs of the nation in an organized manner.

A combination device, is a device that is composed of any combination of a drug and a device; a biological product and a device; a drug and a biological product; or a drug, device, and a biological product. Traditional examples of combination devices include oral inhalers for asthma management, prefilled syringes for drugs like insulin or pain management drugs, and pen injectors used for epinephrine and allergy therapy. More recently, wearable combination devices such as pain-management patches and insulin pumps are bolstering this rapidly growing market sector. Approximately one-third of all medical products under development today are combination products. This is clearly an area of rapid growth and great opportunity for medical device makers.

Once operational, the Combination Devices Block will house laboratories and facilities for the development of Combination products in addition to In-vitro diagnostics, Point of Care Devices, Biosensors, Tissue engineered products, devices incorporating Artificial Intelligence (AI) and Virtual Reality (VR), Orthotics and Rehabilitation, Micro electromechanical systems (MEMS) and micro robotics-based devices, which takes advantages of the digital age also for the benefit of healthcare needs of the society.

The basement 2 of the building will house a foundry for aiding developing metallic medical devices and all the supporting services like air-conditioning, electrical etc. Basement 1 will house laboratories for Micro electro mechanical systems (MEMS), Microfluidics and allied areas. The ground floor of the building with the main entry will have provision for all activities of the Technology business division in addition to Product release studies facility with BSL 1 & 2 laboratories and common instrumentation facility (SAHAJ facility). Combined facility for preclinical evaluation is planned in the first floor; with these two floors majority of the activities involving external customers can be housed within one building. Tissue derived products laboratory, 3D bioprinting, Bioink development, culture rooms and allied areas are planned in second floor. Third floor will house laboratories for invitro diagnostics, Point of care devices, Biosensors, microelectronics, Artificial intelligence, virtual reality, connected health devices etc. Fourth floor is dedicated to orthopaedic implants, orthotics, biomechanics and related areas.



Side View of the CD Block



Front View of the CD Block



Offices of Director, Head BMT, Associate head, Board room and mini auditorium are planned in fifth floor. This facility is constructed with the financial support of Rs 53 crores from the Dept of Science and Technology, Govt of India.



Inauguration of the Combination Devices Block: BMT Wing



Inauguration of the Combination Devices Block: BMT Wing

Felicitations of the People who toiled hard in materializing the CD Block Building



"Human progress is neither automatic nor inevitable...Every step toward the goal of justice requires sacrifice, suffering, and struggle; the tireless exertions and passionate concern of dedicated individuals" Martin Luther King Jr



Inauguration of FONTAN Clinic, 26th Sept 2022

The Fontan Clinic of Sree Chitra Tirunal Institute for Medical Sciences and Technology was inaugurated on 26th September 2022 by Dr Sanjay Behari, Director SCTIMST, at the Cardiology Specialty Clinics Block. **This is the first dedicated clinic in the country for the care of patients with complex congenital heart diseases who are managed with multiple staged surgeries along the univentricular pathway, the final surgery of which is referred to as the Fontan repair.** This clinic will be conducted on Mondays from 9am to 11am by the Division of Pediatric Cardiology, Department of Cardiology in collaboration with other Divisions of Cardiology, Division of Congenital Heart Surgery, Department of Cardiovascular and Thoracic Surgery, Department of Cardiovascular Anesthesiology, Department of Imaging Sciences and Interventional Radiology and the Department of Physical Medicine and Rehabilitation.

Dr KM Krishnamoorthy (Professor and Head, Department of Cardiology) attended to the first patient at the Fontan Clinic. The Director, Dr Sanjay Behari signed in to the official email of the Fontan clinic thereby flagging off the secondary mandate of the clinic to serve as a portal for second opinion and consultations to other care providers across the globe. Eminent Faculty were present during the inauguration function including **Dr Ajit Kumar VK**, (Professor of Cardiology and Dean, SCTIMST), **Dr Rupa Sreedhar** (Professor of Cardiac Anesthesiology and Medical Superintendent, SCTIMST), **Dr Harikrishna Varma PR** (Head BMT wing), **Dr Shrinivas VG** (Professor and Head, Department of Cardiac Anesthesiology), **Dr Bejoy Thomas (Professor and Head, Imaging Sciences and Interventional Radiology)**, **Dr Jijo Varghese**, (Assistant Professor (Adhoc), **Ms. Nirmala MO**, (Nursing Superintendent), **Dr Deepa S Kumar**, (Additional Professor, Cardiology) and **Dr Anoop A (Associate Professor of Imaging Sciences and Interventional Radiology)**.

FONTAN CLINIC
Department of Cardiology, SCTIMST, Thiruvananthapuram

Inauguration

26th September 2022 at 08:00 a.m.
Cardiology Specialty Clinics Block

Distinguished Presence

Prof (Dr) Ajit Kumar VK
Dean, SCTIMST

Prof (Dr) Sanjay Behari
Hon. Director, SCTIMST

Distinguished Presence

Prof (Dr) Rupa Sreedhar
Medical Supt, SCTIMST

The eminent team highlighted the importance of offering continued holistic care to children with complex congenital heart diseases. noted that the development of the Fontan pathway was a landmark event in the care of congenital heart diseases. Increasing longevity of these patients is associated with several issues that necessitate multidisciplinary collaboration. The stages of Fontan palliation and its intricacies to the attendees were described and the Medical Superintendent released the version 1 of the Fontan protocol of SCTIMST developed by the Joint Cardiac team for congenital heart services. his presence.

The Congenital Heart Services Division of the institute over the years had provided services including over 250 Fontan completions, 2000 Tetralogy of Fallot repairs among a host of other surgeries. Advanced imaging extended support by the Radiology team in the follow up of children with complex congenital heart diseases helped in collaborated treatment and research in the field.



Inauguration of FONTAN Clinic, 26th Sept 2022.....

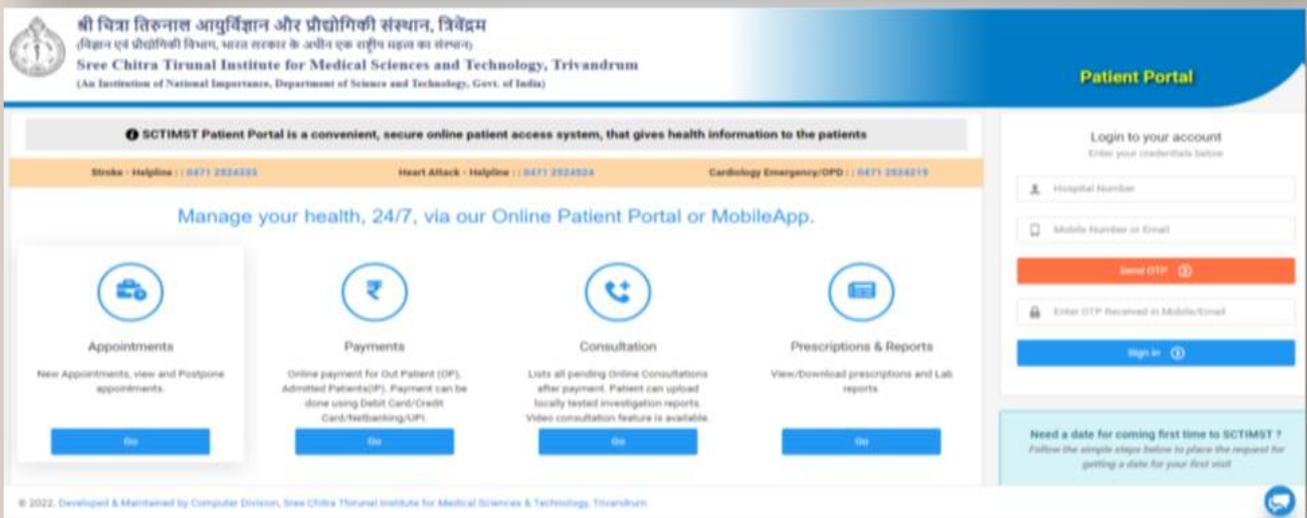
A live video teleconsultation with a post Fontan patient was conducted by Dr Deepa S Kumar, Additional Professor, Cardiology and Dr Anoop A, Associate Professor of Imaging Sciences and Interventional Radiology. The team in liaison with the Computer Division and Medical Records Division successfully demonstrated the ability of the Fontan Clinic to offer telemedicine consultation services to both patients and other care providers.



Portal can be accessed using the link: <https://patientportal.sctimst.ac.in>

Inauguration of New Patient Portal on 2 Nov 2022

A new web portal for Patients developed by the Computer Division was inaugurated by the Hon. Director on 02.11.2022. This portal is made to enable convenient and easy access to hospital services. A self-service platform; which will help patients to request for new registrations, fix review appointments, make online payments for services, request for certificates, ask queries, download discharge summaries, investigation reports, as well as prescriptions. The portal will also enable telephonic and video consultations.



“Education and health are two such areas which decide not only the present but also the future direction”
Narendra Modi, PM of India



Inauguration of Smirithi Vanam & Butterfly Garden, 30 Nov 2022

Smirithi Vanam and Butterfly Garden in the BMT wing were inaugurated by Prof Ajitkumar VK (Professor Senior Grade, Dept of Cardiology, Dean and Former Director, SCTIMST) in presence of Prof Sanjay Behari, Director, SCTIMST; Dr Harikrishna Varma, Head, BMT Wing; Dr Rupa Sreedhar, Medical Superintendent and Chitra family members on 30th November 2022. Prof Ajitkumar VK also inaugurated a portal dedicated to the retiring staff through which the Chitra members can express and register their emotions and feelings for the beloved retiring colleagues. In the Smirithi Vanam area, the retiring staff member will be planting a tree on day of their retirement which will be taken care by the estate. Planting of Trees was initiated by Smt Omana PN (Nursing Officer-D). All the present staff members enjoyed planting several flowering plants for the butterfly garden located behind the Satelmond Palace.



Retirement isn't the end of the road, but just a turn in the road. It is a time to enjoy the things you never could before.



Inspection status: PASSED

Institute Inspection by the 2nd Sub-Committee of the PCOL

The Second Sub-Committee of the Parliamentary Committee on Official Language (PCOL) had inspected the Institute. The PCOL consisted of 11 honorable parliamentary members and was chaired by honorable Ranjanben Bhatt. Director, SCTIMST briefed the committee members about the Institute. Honorable committee members praised the work Institute is doing in the field of Medical Sciences, Public Health and Technology development. Institute was given the status "PASS" by the PCOL implementation.





SAMVAAD: An International Lecture Series by SCTIMST

Under the dynamic leadership of the Director, Prof Sanjay Behari, with a noble goal of propelling the visibility of SCTIMST as an Institute of National Importance on the International arena, SAMVAAD, the Sree Chitra International Lecture Series was initiated on 24 June 2022. SAMVAAD is being organized to bring stalwarts in various sciences, social sciences and humanities disciplines to deliver lectures that initiate trans-disciplinary conversations. Lectures are organized through webex link and also live streamed in YouTube for global reach.

12 October 2022

3rd SAMVAAD lecture was delivered by the renowned Epidemiologist

Dr Richard Cash

Dealing with epidemics: Interventions that are Attainable, Sustainable, and Acceptable



Dr Richard Cash voiced that responses to epidemics should be consistent with the extent of the problem, available resources, sustainable and acceptable locally. A syndemic approach to dealing with epidemics is more appropriate in local contexts. The impact of the COVID-19 pandemic was varied across geographies, depending on the demographics of populations, political leadership, trust in governance and collective solidarity. Interventions such as vaccines for COVID-19 provided some community protections but not herd immunity. Therapeutics for COVID may take a longer time to develop and it is likely that when developed, its distribution is inequitable. For the COVID-19 pandemic, higher level technology based solutions were of limited value from a public health perspective. Solutions need to be based on local requirements, resources, demography and experience. In future, the ability to deal with similar pandemics will depend on strengthening primary and universal health care.

Richard A Cash, MD, MPH is a Senior Lecturer in the Department of Global Health and Population at the Harvard T.H. Chan School of Public Health. He began his international health career over 55 yrs ago at what is now the icddr, in Dhaka, Bangladesh where he conducted the first clinical trial of Oral Rehydration Therapy (ORT) in adult and pediatric patients, with cholera and other enteric infections. This led to further work with BRAC, the world's largest NGO, on scaling up ORT programs in Bangladesh, reaching 12 million mothers and documented in two books: The Simple Solution; and From One to Many: Scaling Up Health Programs in Low Income Countries. He is the co-editor of the WHO "Casebook on Ethical Issues in International Health Research" and developed the education capacity in public health schools in LMIC. He was presented the Prince Mahidol Award in Public Health for his work on ORT & is recipient of the Fries Prize.

21 December 2022

4th SAMVAAD lecture was delivered by the renowned Physicist

Dr Rohini M Godbole

Unravelling Secrets of Nature: From Rutherford to Large Hadron Collider (LHC)



Prof Rohini Godbole shared the journey of physicists towards gaining an understanding of 'what lies within', beginning from Rutherford's time to the era of the Large Hadron Collider (LHC) at CERN in Geneva. Beginning from Rutherford's classic experiment which indicated the presence of a nucleus inside an atom, today science has reached a stage where we understand what lies at the heart of the matter. The discovery of the Higgs boson ten years ago at the large Hadron Collider was the latest and perhaps the last step in arriving at this understanding. Further, this 'inward bound journey' has implications for different puzzles that the Universe and the Cosmos have set for us humans and which we are yet not able to solve. Thus the continuing journey towards unravelling the secrets of nature, now has to proceed on the twin paths of experiments on the earth and in the sky!

Rohini Godbole is Hon Professor at the Centre for High Energy Physics at the IISc, Bengaluru. She has her under-graduate degree with 1st rank from Sri Parshurambhau College, Pune and Masters in Physics from IIT, Bombay. She has her PhD in Physics from S.U.N.Y. at Stony Brook, U.S.A in 1979. She also has D.Litt. (Honoris Causa) from the S.N.D.T Women's University and Tilak Maharashtra Vidyapeeth, and D.Sc. from IIT (Kanpur) and VTU, Karnataka. The Govt of India conferred the Padma Sri on Prof. Godbole in Science and Engineering-Nuclear in 2019. She was awarded the Ordre National du Merite, Civilian Honour of France, January, 2021. She has more than 300 publications in highly cited Journals. She has served on several high level positions of science & technology governance nationally and internationally. She enjoys lecturing to young students on particle physics and encouraging women in science.



ACADEMIC FEST: Quarterly Departmental Discussions

Talks delivered from 1st Oct to 31st Dec 2022

Date	Department	Speaker	Title of presentation
01 Oct 2022	Division of Adult Cardiac & Vascular Surgery Department of Cardiovascular & Thoracic Surgery	Dr Vivek V Pillai, Professor	General Overview
		Dr Bineesh KR, Additional Professor	Minimally Invasive Cardiac Surgery
		Dr Shivanesan P, Associate Professor	Vascular Surgery at SCTIMST
15 Oct 2022	Achutha Menon Centre for Health Science Studies	Dr Manju Nair R, Scientist D	Observations from 2 recent works– Gender analysis of the Women Component Plan & the Utilization of health care services in Kerala
		Dr Srikant A, Associate Professor)	Epigenetic Epidemiology in Public Health
		Dr Jissa VT, Scientist C	Observations from the state-wide NCD survey and a community survey on women's reproductive rights
29 Oct 2022	Department of Transfusion Medicine	Dr Debasish Gupta, Professor and Head	History of the Department from its inception to the present day
		Dr Amita R, Associate Professor	Activities of the Department, mandate of ensuring provision of safe & adequate blood/ components to meet the needs of patients
05 Nov 2022	Department of Medical Devices Engineering	Dr Ramesh P, Scientist G & HoD	Overview of the Department of Medical Devices Engineering
		Dr Sujesh S, Engineer G Div Artificial Internal Organs	New Improved heart valve & minimally invasive cardiovascular devices
		Er Sarath Nair, Engineer F, Div Extracorporeal Devices	Research activities of the last 5 years
19 Nov 2022	Division of Pediatric Cardiac Surgery, Department of CVTS	Dr Baiju S Dharan, HoD Department of CVTS	A trust with pediatric hearts from my heart
		Dr Sabarinath Menon, Additional professor	Intra operative innovations and search for right ventricular outflow substitute
		Dr Sudip Dutta Barua, Associate professor	Ongoing Research in the division
03 Dec 2022	Department of Clinical Engineering	Er Shaj Upendran, Acting Head	The activities, progress and aspirations of DCE
		Department of Pathology	Activities of the Department of Pathology
17 Dec 2022	Department of Microbiology	Dr Kavita Raja, Professor and Head	Brief History of the Department, Diagnostic services, Homograft project, Infection Control, Corporate activities and future aspirations
		Dr Dinoop KP, Associate Professor	A brief overview of the completed clinical projects, Academic and training programs etc
		Dr Jyothi EK, Scientist C	Molecular diagnostics, Sequencing studies, details & status updates on the research work
	HICU	Ms Preethamol, Infection Control Nurse	Overview of all infection control and prevention (IPC) activities
31 Dec 2022	Department of Technology & Quality Management	Er Balram S, HoD	A brief introduction about the DTQM
		Er Leena Joseph	Significance of calibration in research and testing activities
		Dr Renjith S	An overview of Central Analytic Facility & how researchers can be benefitted from this facility

"In the longer run and for wide-reaching issues, more creative solutions tend to come from imaginative interdisciplinary collaboration"
Robert J Shiller



The theme of the year: **USE HEART FOR EVERY HEART**

World Heart Day Celebration, 29 Sept 2022

World Heart Day was observed with the aim for increasing global awareness about cardiovascular diseases, prevention and early detection by **Nursing Service Division along with Department of Cardiology** on 29th September 2022.

Cardiovascular disease is the leading cause of death globally. Early atherosclerotic changes can begin early in life and through adolescence. There is a need to improve modifiable risk factors during adolescence to prevent progression into CVD in later life. A school health program on **"Cardio Vascular Disease Prevention": Begins from Adolescence"** was conducted for students of 10th and 11th standard in Govt Higher Sec School. The program was inaugurated by Mrs Nirmala MO, Nursing Superintendent SCTIMST, in the presence of Mrs Sophiya, Principal and Mrs Sreelekha, Head mistress, of the school. Class was taken by the Nursing Officers Mrs Suma M, Mrs Girija A, Mrs Swapna and Mrs savitha. Cardio vascular diseases awareness Posters were explained by Mrs Preena V, Mrs Sreeja KS, Mrs Aswathy and Mrs Preethamol P. Nursing Officers Mr Ullas JS and Mr Arun OU, demonstrated CPR with mannequin. Mrs Smitha AS, Asst Nursing Superintendent and Sen nursing officers Mrs Daisy Sebastian, Mrs Bindu Michale and Mrs Girija A coordinated the program. Mrs Leena RK delivered Vote of thanks.



National Voluntary Blood Donation Day Celebration, 1 Oct 2022



International Rural Women's Day Celebration, 15 Oct 2022



In connection with the International Rural Women's Day celebrations, a delegation from SCTIMST visited the Dr Ambedkar Vidyaniketan CBSE Model Residential School, Njaraneeli in Thenoor Village of Thiruvananthapuram district, Kerala on October 15, 2022. This is the only CBSE School for Tribal students in Government sector run by Scheduled Tribes Development Department, Government of Kerala. The team led by GATI Self Assessment Team Chairperson and Medical Superintendent Dr Rupa Sreedhar and GATI Nodal officer and scientist Dr Jayasree RS interacted with the students of class 10, 11 and 12 students. Dr Rupa Sreedhar inaugurated the program and delivered a lecture on the healthy food habits and life style to be followed. Dr Jayasree delivered the International Rural Women's Day lecture introducing the fields of Science, Technology, Engineering, Medicine and Mathematics (STEMM) and emphasizing the importance of women in STEMM. The team comprising Dr Rupa Sreedhar, Dr Karthika Ajit V (Asst Professor, Dept of Neurology), Dr Sayooja Sachithanandan (DM Neurology) and Smt Smita AS (Assistant Nursing Superintendent) conducted a medical camp for the students. School Principal Smt Durgamalathi expressed her appreciation and thanked the SCTIMST team for the visit and for motivating and interacting with the young students. The program was organized under the aegis of Gender Advancement for Transforming Institutions (GATI) scheme of Department of Science and Technology, Government of India and Dept of Women & Child Development, Government of Kerala and organized by SCTIMST, Trivandrum.





Sree Chitra Technology Conclave: 17-18 Oct 2022



Sree Chitra Technology Conclave: 17-18 Oct 2022



G Parthasarathi Oration, 17 Oct 2022

Science and Scientists in the New Millennium : A Short History of the Future
delivered by
Professor Ashutosh Sharma, Former Secretary, DST, Govt of India



G Parthasarathi Oration, 17 Oct 2022

Felicitations: Professor Ashutosh Sharma, Former Secretary, DST, Govt of India



Rashtriya Ekta Diwas (National Unity day) Celebration

Rashtriya Ekta Diwas (National Unity day) is celebrated in India on 31 October every year to mark the birth anniversary of Sardar Vallabhbhai Patel, known as the Iron Man of India. The employees of SCTIMST took National Unity pledge in both Hindi and English on 31/10/2022

राष्ट्रीय एकता दिवस शपथ

मैं सत्यनिष्ठा से शपथ लेता हूँ कि मैं राष्ट्र की एकता, अखंडता और सुरक्षा को बनाए रखने के लिए स्वयं को समर्पित करूँगा और अपने देशवासियों के बीच यह संदेश फैलाने का भी भरसक प्रयत्न करूँगा। मैं यह शपथ अपने देश की एकता की भावना से ले रहा हूँ जिसे सरदार वल्लभभाई पटेल की दूरदर्शिता एवं कार्यों द्वारा संभव बनाया जा सका। मैं अपने देश की आंतरिक सुरक्षा सुनिश्चित करने के लिए अपना योगदान करने का भी सत्यनिष्ठा से संकल्प करता हूँ।

RASHTRIYA EKTA DIWAS PLEDGE

I solemnly pledge that I dedicate myself to preserve the unity, integrity and security of the nation and also strive hard to spread this message among my fellow countrymen. I take this pledge in the spirit of unification of my country which was made possible by the vision and actions of Sardar Vallabhbhai Patel. I also solemnly resolve to make my own contribution to ensure internal security of my country.



Young men and women are to build-up a strong character. A nation's greatness was reflected in the character of her people. If it was sullied by selfishness, such a people could not prosper or achieve great things. Selfishness had its place in life as everyone had to look to his own needs and that of his family, but it could not be made the be – all and end – all of life.

(Date: 13 June 1935, Occasion: Advising young men and women to build up a strong character at Maharashtra Youth Congress)
Sardar Vallabhbhai Patel



Vigilance Awareness Week: 31 Oct 2022 to 06 Nov 2022

As per the instructions of the Central Vigilance Commission, Govt of India, staff and students of SCTIMST began observing Vigilance Awareness Week 2022 by taking the Integrity Pledge. The theme of Vigilance Awareness Week 2022 is **"Corruption-Free India for a Developed Nation"**. Employees and students took the Integrity Pledge at 11.00 am on 31st October 2022 by assembling on the lawn in front of Natakasala at BMT Wing and Swasthi Hall at the Hospital wing. Some employees took e-pledge. The oath was taken both in English and Hindi.

Dr Harikrishna Varma, Head BMT Wing, led the Chitra members in taking the pledge in English in the presence of Dr Sanjay Behari, Director, SCTIMST, and Dr Kesavadas, Dy Director followed by pledge taking in Hindi led by Dr Anugya Bhatt. Dr Krishna Kumar, Professor of Neurology & Associate Medical Superintendent led the staff and students of the hospital wing to take the pledge.



SCTIMST participates in the 41st IITF, Delhi 14-27 Nov, 2022

SCTIMST participated in the 41st India International Trade Fair 2022 (IITF) organized by the India Trade Promotion Organization at Pragati Maidan, New Delhi, by putting up an exhibition stall under the Department of Science & Technology, during 14th-27th Nov 2022. The IITF 2022 was inaugurated by the Union Minister of Commerce & Industry, Consumer Affairs, Food, and Public Distribution and Textiles, Shri Piyush Goyal. SCT utilized this platform to spread awareness of its excellent facilities dedicated to the advanced treatment of cardiac and neurological disorders, and development of innovative biomedical devices and products, evaluation of medical devices to global specifications, training in novel medical specialties, and research in medical & public health areas of social relevance and about the medical devices incubator (TIMed). From SCTIMST, two teams of five members each represented and participated in the event.



Samvidhan Diwas (Constitution Day) Celebration 26 Nov, 2022



PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC and to secure to all its citizens:

JUSTICE, social, economic and political; LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity;

and to promote among them all FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation;

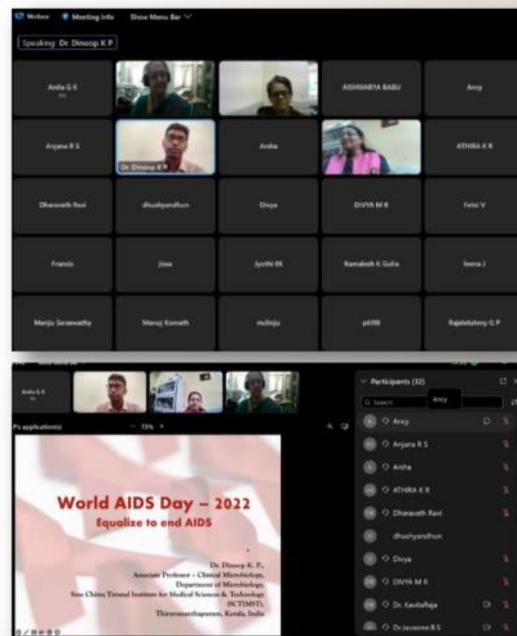
IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION



Commemoration of PoSH Act 2013: 25 Nov to 10 Dec 2022

The Sexual Harassment of Women at Workplace (Prevention, prohibition and redressal) Act 2013 (PoSH 2013) was notified on Dec 9th 2013. With an aim to showcase the principles of GATI and also to spread awareness on prevention of sexual harassment in the workplace, 16 days period between 25th Nov and 10th Dec was observed by SCTIMST for raising awareness about elimination of all forms of violence and discrimination against women so as to ensure safety, security and holistic empowerment of women and to ensure that the basic human rights of women and girls are respected by all. The Internal Complaints Committee (ICC) and GATI team of the Institute organized several programs during this occasion. As a chartered institute under the DST program of Gender Advancement for Transforming Institutions (GATI), SCTIMST prides itself on providing a safe environment for women to work in and to develop as a professional. An Inaugural program was conducted on November 25th, '**The International Day for the Elimination of Violence against Women**'. The function was officially inaugurated by Dr Harikrishna Varma, Head, BMT wing, SCTIMST. A pledge was taken in Hindi and English by the staff and students of all wings of the Institute to end violence against women and children. A 10 min documentary was shown to bring about awareness on the importance of the 16 day program against gender-based violence and putting a stop to violence against women.

On 1st December World AIDS day, a webinar was conducted By Dr Dinoop KP, Associate Professor of Microbiology, on the theme proclaimed by WHO: "**Equalize**". WHO is calling on global leaders and citizens to boldly recognize and address the inequalities which are holding back progress in ending AIDS; and equalize access to essential HIV services particularly for children and key populations and their partners - men who have sex with men, transgender people, people who use drugs, sex workers, and people in prisons.



Commemoration of PoSH Act 2013: 25 Nov to 10 Dec 2022

A gender sensitization program was conducted on 5 Dec in MSV block, BMT Wing. The invited speaker Dr Aswathy S Babu (Legal Advisor, Women Protection Office, Trivandrum) enlightened the audience by conducting an interactive session on **"Women empowerment-Know the Laws and your Rights"** in presence of Dr Rupa Sreedhar, Medical Superintendent, SCTIMST.



The valedictory function of the 16 days awareness campaign was organized at the Hospital wing auditorium to commemorate the PoSH Act 2013 anniversary day and the Human Rights day which falls on Dec 10. After a welcome address by Dr Kavita Raja (Chairperson, ICC), the Director, Dr Sanjay Behari spoke on the importance of gender equality in an institute. The Medical Superintendent, Dr Rupa Sreedhar explained the different aspects of the PoSH Act that supported women in working in a safe and secure environment with dignity. Following this, Dr Kala Kesavan the Principal, Govt Medical College, Trivandrum, an Institution in the same campus, was felicitated as a Woman Leader. She gave her experience as the Principal of a large college and hospital, explaining how as a woman she was able to bring people together as a team and also that her biggest asset was being able to give a listening ear to the problems of the people. Dr Jayasree RS, nodal officer for GATI gave a brief summary of the GATI initiative. The invited guest, Mr Manoj Krishna, Professor (retd) of Govt Law College, Thiruvanthapuram, spoke on the topic **"Redefining Women's rights for an egalitarian society and the role of PoSH Act 2013"**.

Dr Subhasri Balakrishnan, Obstetrician and Steering Committee member, Common Health, India delivered webinar on **"Understanding Sexual Harassment at workplace: Prevention and Management"** on 8 Dec.



The theme of the year: USE HEART FOR EVERY HEART

World Heart Day Training Program, 30 Sept - 1 Oct 2022.....



Training program for Nursing Officers on 1 Oct

Mrs Sunitha Nursing Officer, HFICU explained on Basics of ECG, Mrs Rajitha RV, Nursing Officer, CCU described normal ECG and its physiology. Prof Narayanan Namboodiri (Cardiology Dept) explained Bradycardia and common mistakes in ECG interpretation. Dr Krishna Kumar, Additional professor (Cardiology Dept) elaborated on Tachycardia and Pacemaker ECG interpretation. Dr Harsh Pandey (Cardiology Dept) explained in detail ECG analysis in Acute Coronary Syndrome. Following the sessions a quiz competition was held by Dr Jyothy Vijay (Cardiology Dept).

85 participants from all units of SCTIMST to attend the class.



NICE OXY 2022: Skill Enhancing Workshop & PBL, 2 Oct 2022

A one-day Skill Enhancing Workshop on Neuro and Cardiac Anesthesia, **NICE OXY 2022**, was conducted on 2nd October 2022 at AMC Auditorium, AMC halls, and Swasthy Hall, SCTIMST, Trivandrum. The event was organized by the Department of Anesthesiology of SCTIMST, Trivandrum. It was attended by over 250 participants, including 140 delegates and 75 faculty members from renowned Institutes across India. This was the third annual workshop in the NICE workshop series organized by the Department of Anesthesiology, SCTIMST, since 2017.

This year's workshop theme was "**Oxygenation**" based on Anesthesia and Critical care topics. The Program included *nine workshop stations* wherein Seven hands-on workshop stations included **Cerebral oximetry, Advanced Airway techniques, Lung isolation, Percutaneous tracheostomy, Airway ultrasound, Lung ultrasound & Vascular ultrasound**. In addition, two stations dealt with Problem based learning discussions on **Mechanical ventilation simulation and Arterial blood gas** based decision-making. All the workshop stations were manned by lead faculties of national and international reputation, who are experts in the field with years of clinical expertise. All stations simulated real-life scenarios, including challenging cases that anesthesiologists and intensivists encounter while caring for patients from different subspecialties. This was a first-of-its-kind workshop conducted with simulators in all stations, and received excellent feedback from all.

Inaugural function of NICE OXY 2022



Advanced Airway and Lung Isolation Workshop



Mechanical Ventilation Simulation Workshop



Continue....

NICE OXY 2022: Skill Enhancing Workshop & PBL, 2 Oct 2022

Vascular Ultrasound Workshop



Percutaneous Tracheostomy Workshop



Cerebral Oximetry Workshop



Lung Ultrasound workshop



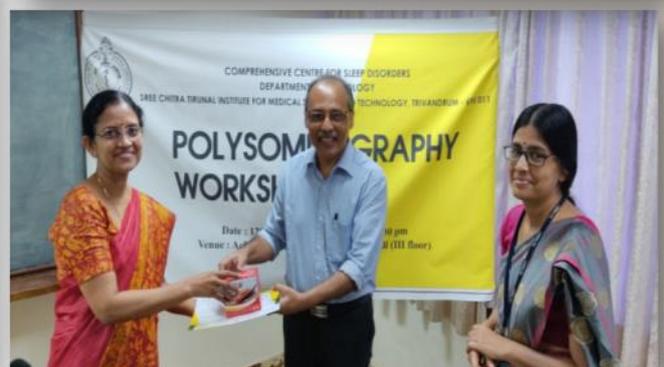
Organizing Team of NICE OXY 2022



Polysomnography Workshop on 12 November 2022



Polysomnography (PSG) workshop was conducted by the Comprehensive Centre for Sleep Disorders, Department of Neurology, SCTIMST on 12.11.2022 forenoon. The program was inaugurated by Prof Sylaja PN, Head, Dept of Neurology. The session consisted of 8 didactic lectures covering an overview of sleep disorders, basics of PSG, scoring of sleep and respiratory events, parasomnias, CPAP titration, Multiple sleep latency test and generating a final report. 80 participants attended the workshop (59 Doctors - which included trainees and Consultants of Neurology, Respiratory medicine and Dentistry and 21 Neurotechnologists). It was followed by a hands-on training on scoring and interpretation of PSG which was conducted by dividing the participants into 4 groups of 20 each, with each station managed by a faculty and Neurotechnologist.





Asian Stroke Summer School 2022, 8-11 December 2022

Asian Stroke Summer School 2022 (ASSS 2022), a four-day teaching course which involved the acute interdisciplinary stroke treatment was conducted from 08th to 11th December at O by Tamara, Thiruvananthapuram. The previous editions of this training program were conducted mostly in European nations and this is the first time the event held in India. ASSS 2022 was organized by Comprehensive Stroke Care Program and the Department of Imaging Sciences and Intervention Radiology at the SCTIMST in collaboration with the University of Bern, Switzerland. **Smt Veena George**, Honorable Minister for Health and Family Welfare, Government of Kerala inaugurated, **Dr VP Joy**, Chief Secretary, Govt of Kerala was the Chief guest and **Dr Sanjay Behari**, Director SCTIMST delivered the presidential address in the inaugural ceremony.

Dr PN Sylaja, Professor and Head of Neurology, In-Charge, Comprehensive Stroke Care Program, SCTIMST, **Dr ER Jayadevan**, Additional Professor, Department of Imaging Sciences & Interventional Radiology (ISIR), **Dr Urs Fischer**, Professor of Neurology, Chairman, Department of Neurology, University Hospital Basel, Switzerland and **Dr Jan Gralla**, Professor and Head of Neuroradiology, Neurocenter, Inselspital, Bern, Switzerland were the course directors of ASSS 2022.

The 12 international faculties and 35 national faculties were involved in delivering hands-on training for neuro interventionists and special teaching sessions for stroke physicians. The program was a unique combination of plenary sessions, complex cases discussion, group tutorials and neuro-intervention workshop. There were 162 delegates in which 42 Neuro interventionists and 120 neurologists.



World Stroke Day 2022 theme: "Raising Awareness of the Signs of Stroke and the Need for Timely Access To Quality Stroke Treatment"





Asian Stroke Summer School 2022, 8-11 Decemebr 2022





Two-Day Conference
**Defining Ethics and Welfare in
Preclinical Research**
Workshop on
Preparing B-Forms and the Conduct of IAEC
14th & 15th November, 2022

Sree Chitra Tirunal Institute for
Medical Sciences & Technology
Thiruvananthapuram



Conference and Workshop

Defining Ethics and Welfare in Preclinical Research: DEW



A two-day conference and workshop on “Defining Ethics and Welfare in Preclinical Research” were organized by SCTIMST, Trivandrum from 14th November 2022, with support from the Committee for the Purpose of Control and Supervision of Experiments on Animals - (CPCSEA), Govt. of India, Science and Engineering Research Board - SERB, Department of Science and Technology, National Academy of Sciences - Kerala Chapter, and Kerala State Council for Science, Technology and Environment - (KSCSTE), was inaugurated by Dr OP Chaudhary, Joint Secretary of the National Livestock Mission & Chairman, Animal Welfare Board and CPCSEA in the presence of The Director, SCTIMST Prof (Dr) Sanjay Behari, Dr Harikrishna Varma PR, The Head, Biomedical Technology Wing, SCTIMST and Dr Ajit Kumar VK, Dean, SCTIMST.





Conference and Workshop

Defining Ethics and Welfare in Preclinical Research: DEW

Dr OP Chaudhary, Joint Secretary of the National Livestock Mission & Chairman, Animal Welfare Board and CPCSEA also inaugurated the upgraded Small Laboratory Animal Facility in the Biomedical Technology Wing in the Poojappura campus of SCTIMST, which has been set up with total environmental controls.



Esteemed Speakers of the DEW Conference & Workshop





Two-Day Conference
**Defining Ethics and Welfare in
 Preclinical Research**
Workshop on
Preparing B-Forms and the Conduct of IAEC
 14th & 15th November, 2022



Conference and Workshop

Defining Ethics and Welfare in Preclinical Research: DEW

Workshop on Preparing B- Forms and the conduct of IAEC



Winners of the first prize for the poster session & Valedictory function



Dr Jacob Roy Memorial CME, 18 Dec 2022

A one-day CME in memory of Dr Jacob Roy was organized by Alzheimer's and Related Disorders Society of India (ARDSI) Trivandrum Chapter, in collaboration with The Department of Neurology, SCTIMST, Trivandrum on 18th December, 2022 at AMCHSS Auditorium. The theme of this year was "**Cognitive Assessment in Adults**". Distinguished members of Roy family and Drs from various hospitals including Mr Greg Jacob (Son of Dr Jacob Roy), Prof Thomas Iype (Head, Dept Neurology, Govt Medical College, Trivandrum), Prof Sylaja PN (Head, Dept of Neurology, SCTIMST), Prof Robert Mathew (President, ARDSI Trivandrum chapter), Mr Kuttappan (Secretary, ARDSI Trivandrum Chapter), Prof Ramshekhar N Menon (Dept of Neurology, SCTIMST) and Dr Asish Vijayaraghavan (Assistant Prof, Dept of Neurology, SCTIMST) graced the occasion. Dr Robert Mathew and Prof Sylaja PN delivered the Inaugural address and Mr Greg Jacob, introduced the gathering to late Dr Jacob Roy and his contribution to the founding of ARDSI.

The CME constituted of an introductory session by Prof Thomas Iype on '**An overview of Cognitive symptomatology - a differential approach**' which was followed by a session on '**Domains of cognitive assessment: approach to screening and diagnosis**' by Prof Ramshekhar N Menon. This was followed by sessions on 6 modules dedicated to the detailed assessment of specific cognitive domains – language, behavior and social cognition, attention and memory executive functioning, perception and motor programming and gait, which were lead by Prof Amitabha Ghosh (Director & Head of the Dept of Neurology, Apollo Multispeciality hospital, Kolkata), Prof James Jose (Head, Dept of Neurology Govt Medical College, Kozhikode), Prof Robert Mathew (Head, Dept of Neurology, Mookambika Institute of Medical Sciences Kulasekaram), Dr Rammohan (Associate Prof, Dept of Neurology, Govt Medical College Thiruvananthapuram), Prof SR Chandra (Chief Consultant Neurologist, SK Hospital, Trivandrum), and Prof Syam K (Dept of Neurology, SCTIMST) respectively. Each Module was followed by a case Presentation by Senior Residents from various institutions. Dr Poornima Nair (Govt Medical College, Trivandrum), Dr Sneha VP (Govt Medical College, Kottayam), Dr Rohit Ram Kumar (Govt Medical College, Alappuzha), Dr Reshma Venugopal (Govt Medical College, Trivandrum), Dr. S M Krishnamohan (SCTIMST), Dr Nandana J (SCTIMST) presented a case each. The Academic Sessions were chaired by the faculty along with Prof Anil Prabhakaran (Former Prof & Head of the Dept of Psychiatry, Govt Medical College, Trivandrum), Dr Divya KP (Associate Prof, Dept of Neurology, SCTIMST) and Dr Asish Vijayaraghavan (Assistant Prof, Dept of Neurology, SCTIMST). The Program ended with a Musical Sitar Program.



Dr Jacob Roy Memorial CME, 18 Dec 2022.....



Eminent Visitors

Dr Jitendra Singh Addressing Chitra Staff and Students

Dr Jitendra Singh, (Hon Minister of State (Independent Charge) of the Ministry of Earth Sciences, Minister of State (Independent Charge) of Science & Technology, Minister of State in the Prime Minister's Office, Minister of State in the Ministry of Personnel, Public Grievances and Pensions, Minister of State in the Department of Atomic Energy and Minister of State in the Department of Space) addressed all Staff and Students at Hospital Wing on 15th Nov 2022 at the Achutha Menon Centre Auditorium, SCTIMST.



Eminent Visitors

Dr Jitendra Singh Addressing Chitra Staff and Students....

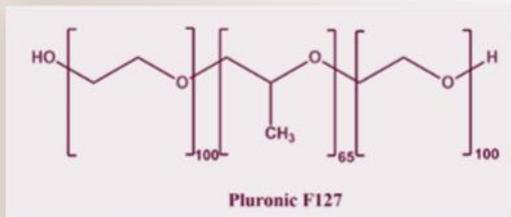


Research Highlights

Pluronic F-127, a potential poloxamer, shows promising effects on the lung cancer cells

The Toxicological Division team have conducted elegant studies to find the cytocompatibility of novel poloxamers named Pluronic F-127 on the human alveolar basal epithelial cell named as A549 cells.

Pluronic, due to its high water-soluble and thermo reversible ability, attracted much importance in biomedical applications. They are mainly utilized in drug delivery, gene therapy, and tissue remodeling.



This study aimed to explore the cytocompatibility of Pluronic F-127, which has gained much popularity due to its various properties. The cells were exposed to varying concentrations of Pluronic F-127 in A549 cells for 24 h. According to the MTT and neutral red assay, A549 cells displayed dose-dependent cell viability. The cell's morphology was preserved after treatment, as seen in phase-contrast and Giemsa staining. When exposed to PF-127, lysosomal, cytoskeletal, and nuclear integrity were maintained. The percentage of live cells in all the treated groups was more significant than 90%, according to the live/dead flow cytometric analyses.

The present study explored the remarkable cytocompatibility induced by PF-127 on A549 cells. The research highlights the importance of cytocompatibility induced by poloxamers which helps to determine the correct formulation of drug and poloxamer to adjust and enhance their biological properties. Understanding the possible biological interaction is a requisite to implementing the material for biomedical application.

Further research needs to be focused on evaluating the elimination route and degradation mechanisms in various modified forms of PF-127 in animal models. The modified forms of PF-127 have been reported for significant theragnostic application. However, much attention should be given to unraveling the underlying molecular mechanisms of the target drug. Pluronic polymers enhance effective targeted drug delivery and controlled drug release crucial for different types of cancer in mere future.

Megha KB, Swathi S, Xavier J, Vandana U, Mohanan PV. Cytocompatibility of Pluronic F-127 on adenocarcinomic human alveolar basal epithelial cells (A549 cells). *Environmental Science and Pollution Research* <https://doi.org/10.1007/s11356-022-20925-4>, 2022

"Research is formalized curiosity. It is poking and prying with a purpose" Zora Neale Hurston

Data science approaches to public health: case studies using routine health data from India

Over the last few decades, the emergence of the digital technologies has brought about unprecedented changes in our daily lives. It has become increasingly clear that data collected in the healthcare industry has become more complex and is being generated faster than we can make sense of it. Data on health is considered a national asset for every country and helps track the performance of its health system. It provides reliable information on health status and health outcomes of the population. It is crucial for decision-making at the local, regional and national level.

Achutha Menon Centre for Health Science Studies, has been working in the field of Data Science for the last few years and has been supporting involved in academic and research activities in this field. The data-science team at AMCHSS demonstrated the applications of data science approach to public health through a collection of case studies using routinely available data from India.

Case Study 1 – using crowd-sourced data on COVID-19 in India at the national level

Case Study 2 – using mortality data from the civil registration system at the panchayat level

Case Study 3 – using large scale data to inform policy on maternal health at the district level

Case Study 4 – using medical image data and design innovative solutions with applications in tele-medicine and tele-ophthalmology.

Some of this work presented at various national and international forums lead to the following Awards:

- Best Paper Award – 4th Public Health International Conference, 2021 organized by University of Sumatera Utara, Indonesia
- Best Research Paper Award – 2nd Young Leaders National Conclave, 2021 organized by Mahatma Gandhi Institute of Medical Sciences, Sewagram, in Association Indian Association of Preventive and Social Medicine
- First Prize Award – National Science Day, 2022 organized by SCTIMST, Trivandrum
- Best Paper Award – 3rd Young Leaders National Conclave, 2022 organized by AIIMS, Bhubaneswar, in Indian Association of Preventive & Social Medicine
- Promising Scientific Paper Award – 5th Amrita International Public Health Conference, 2022 organized by Amrita Institute of Medical Sciences, Kochi in association with University of Arizona, USA
- National Finalist – Young Research Scholar Program, 2022 Environmental Systems Research Institute (ESRI)
- The collection of case studies is being presented at the 7th International Conference on Data Management, Analytics & Innovation at the Defence Institute of Advanced Technology, Pune organized in association with Society for Data Science (<https://s4ds.org>).

Mitra A, Soman B*, Gaitonde R, Niehaus E, Bhatnagar T, Kumar S. *Data Management, Analytics and Innovation - Proceedings of the ICDMAI 2023; Lecture notes in Network and Systems, Springer Nature, 2023*



Nobel Matters

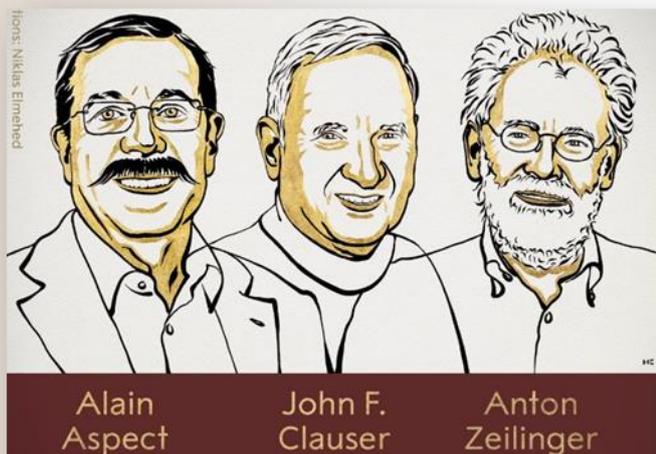
Nobel in Physiology/ Medicine 2022



The Nobel prize in physiology/ medicine for the year 2022 is awarded to Prof Svante Pääbo for his discoveries concerning the genomes of extinct hominins and human evolution. Prof Pääbo's seminal research revealed distinct genetic differences between current day humans and extinct hominins. Notably, Prof Pääbo discovered ancient flow of genes to present-day humans, which could have immense physiological relevance. Prof Pääbo's work paved way to the birth of a new branch of scientific discipline termed as paleogenomics. Thanks to Prof Pääbo's discoveries, we now understand that archaic gene sequences from our extinct relatives influence the physiology of humans.

<https://www.nobelprize.org/prizes/medicine/2022/press-release/>

Nobel in Physics 2022



The Nobel prize in physics for the year 2022 is awarded to Prof Alain Aspect, Prof John Clauser and Prof Anton Zeilinger for their groundbreaking experiments using entangled quantum states, where two particles behave like a single unit even when they are separated. The phenomenon is thought to take place throughout nature, among the atoms and molecules in living species and within metals and other materials. When hundreds of particles become entangled, they still act as one unified object. Like a flock of birds, the particles become a whole entity unto itself without being in direct contact with one another. Their results have cleared the way for new technology based upon quantum information. The ineffable effects of quantum mechanics are starting to find applications.

<https://www.nobelprize.org/prizes/physics/2022/press-release/>

Nobel in Chemistry 2022



The Nobel prize in chemistry for the year 2022 is awarded to Prof Barry Sharpless, Prof Morten Meldal and Prof Carolyn Bertozzi. Prof Barry proposed the concept of click chemistry, which is a form of simple and reliable chemistry, where reactions occur quickly and unwanted by-products are avoided. Later, Prof. Barry and Prof Morten, independently, presented the crown jewel of click chemistry i.e. the copper catalysed azide-alkyne cycloaddition. Later, Prof Carolyn has taken click chemistry to a new dimension and started utilizing it in living organisms in the form of bioorthogonal chemistry. Click chemistry and bioorthogonal reactions have taken chemistry into the era of functionalism. This is bringing the greatest benefit to humankind.

<https://www.nobelprize.org/prizes/chemistry/2022/press-release/>

Source: www.nobelprize.org, Photo credits: Niklas Elmehed (Nobel Media): Compiled by Dr Naresh Kasoju, Scientist C, Division of Tissue culture, Department of Applied Biology, BMT Wing, SCTIMST

One can state, without exaggeration, that the observation of and the search for similarities and differences are the basis of all human knowledge.
Alfred Nobel



Farewell Adieu to Prof Ajitkumar, our beloved GEM



Chitra's Stars: Awards/ Honors

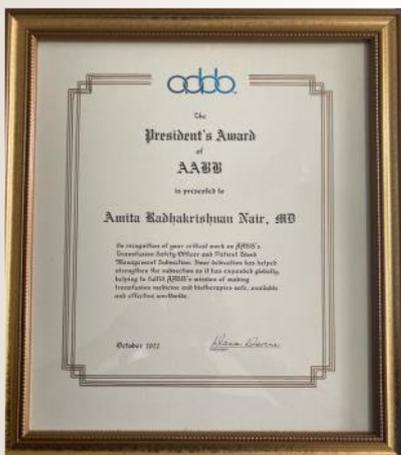
Dr TV Anilkumar: Elected President of the Laboratory Animal Veterinarian's Association



Dr Prof TV Anilkumar (*PhD (London); Cert LAM (Guelph); BVSc & AH*) began his career in Laboratory Animal Science in 1987 by establishing a non-human primate research facility for SCTIMST. Later he specialized in Comparative Medicine through research and visiting fellowships at distinguished institutions like Imperial College of Science Technology and Medicine (London) and John Hopkins School of Medicine (Baltimore, USA). He has also completed a Post-Doctoral Certificate in Laboratory Animal Medicine from the University of Guelph (Canada). He is a member of the American Association of Laboratory Animal Science.

He has been elected unanimously as the President (2022-2024) of the **Laboratory Animal Veterinarian's Association**, the national professional organization of veterinary doctors practicing Laboratory Animal Medicine as a specialty in India. This is indeed a great career recognition for him and reflection of acceptance of SCTIMST among peers.

Dr Amita R Nair, Associate Prof, Dept of Transfusion Med, receives the President's Award of AAB's Transfusion Safety Officer



Dr Sai Kiran Kakarla, final year Senior Resident, Department of Cardiology, has won **1st prize** in the Indian Heart journal Cardiology Society of India (IHJ-C SI) Annual Thesis Awards 2022 which was presented at the 74th annual conference of Cardiological Society of India, held on 8-11th December 2022, for his thesis entitled "Speckle tracking echocardiography in post-operative anomalous origin of the left coronary artery from the pulmonary artery (ALCAPA) patients".



Dr Megha KB, Post Doctoral Fellow, Division of Toxicology, Biomedical Technology Wing, SCTIMST has awarded **the Gold Medal** for the best oral presentation, for her research work entitled 'Development of ELISA kit for animal Pyrogen test' (Megha KB and Mohanan PV), at the 5th Annual Conference of Society for Alternatives to Animal Experiments – India (SAAE-India 2022), held at CLIF, Karyavattom Campus, University of Kerala, during 8-9 December 2022.



Chitra's Stars: Awards/ Quiz Masters



Dr Arun Mitra (PhD Scholar under Prof Biju Soman) won **1st Prize** for his oral presentation of paper titled "*Patterns and Trends of Caesarean Sections in India: exploring large-scale national level data using data science.*" presented at the "3rd Young Leaders National Conclave" organized by

the AIIMS, Bhubaneswar in association with Indian Association of Preventive and Social Medicine (IAPSM) between 10th – 12th November 2022.

Dr Arun Mitra also won **The Promising Scientific Paper award** for his research paper titled "*Caesarean Sections in India: A geospatial exploration of data from the National Family Health Survey (NFHS)*" presented at the "5th Amrita International Public Health Conference" organized by the Amrita Institute of Medical Sciences, Kochi in association with University of Arizona, USA and Cochin University of Science and Technology, Kochi between 2nd – 3rd December 2022.

Dr Punkesh Patel, 1st Year Junior Resident of Department of Transfusion Medicine received the **1st Prize** in Oral Presentation at the 29th ISBTI Kerala Chapter meeting held on 18.12.2022.



Mrs Jisha S, Second year Diploma in Neuronursing student won **1st prize** in the scientific paper presentation competition (UG category) and **3rd prize** in model exhibition (UG category) at 42nd National Annual Conference of the Society of Indian Neuro Science conducted at Agra.

Nurses (SINNCON-2022)

Mr Rathish Rajan, Nursing Officer-B, Neurosurgery Ward has won the **1st prize** in Neuro Quiz-PG in the 42nd Annual Conference of the Society of Indian Neuroscience Nurses, SINNCON 2022, during 70th Annual conference of Neurological Society of India (NSICON 2022) held at Hotel Jaypee Palace & Convention Centre, Agra, 9-10 Dec 2022.



Mrs Arathi Anilkumar A, second year Diploma in Neuronursing student won **3rd prize** in the scientific paper presentation competition (UG category) at 42nd National Annual Conference of the Society of Indian Neuro Science Nurses (SINNCON-2022) conducted at Agra.

Mr Prajeesh P Prakash, Nursing Officer-A, NMICU has won the **1st prize** in Neuro Quiz-UG in the 42nd Annual Conference of the SINNCON 2022, during 70th Annual conference of Neurological Society of India (NSICON 2022) held at Hotel Jaypee Palace & Convention Center, Agra, 9-10 Dec 2022.



Sports Week Celebration, 15-30 October 2022

As per the Order No. SCTIMST/DAA/1/84/2022 dtd 06.09.2022, a **Sports Cell** of SCTIMST was constituted under the chairmanship of Dr Varghese T Panicker, Prof CVTS to conduct sports events in the Institute for the residents and students. The sports events were conducted from 15th - 30th October 2022. As part of it, table tennis, shuttle badminton, athletic events, group events etc were contrived.



Sport & health are so important to any nation that they deserve to be right at the front of people's minds



Sports Week Celebration, 15-30 October 2022



Camera Captures by Chitra Family Members

Powerful Kathakali Expressions

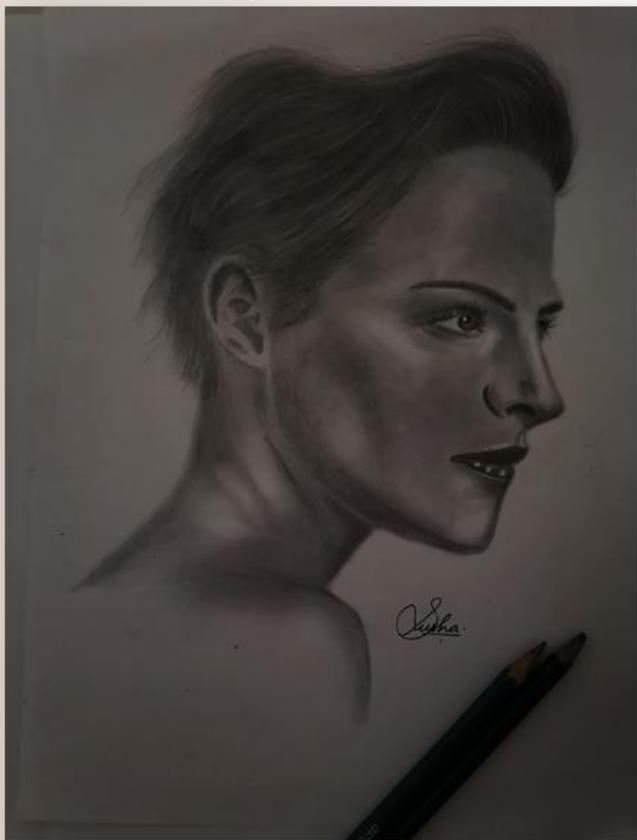


(Mr Sajin Raj RG, Technical Assistant, Instrument B, Ceramics coating Facility, BMT Wing, SCTIMST)



Artwork and Camera Captures by Chitra Family Members

Beauty of Assertiveness



The realism of "Peril"



(Ms Susha SS, PhD Scholar, Division of Sleep Research, BMT Wing, SCTIMST)

Yellow spark of Black-headed Oriole



Warmth of the Last Sunset 2022



(Dr Kamalesh K Gulia captured these pics in the BMT Wing campus, Division of Sleep Research, SCTIMST)

"Life is a manifestation of the unified field of consciousness. Colors, beauty, pleasure and pain are its songs of creation"
Amit Ray





War Memorial in background of India Gate, Night view clicked by Dr Kamalesh K Gulia

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Co-Editors: Dr Manoj Komath (*BMT Wing, SCTIMST*)

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Dr Amita R (*Department of Transfusion Medicine, SCTIMST*)

Dr Jissa VT (*Achuta Menon Center Health Science Studies, SCTIMST*)

Our Potential Reporters: Ms Medha R, *PhD Scholar*; Ms Susha SS, *PhD Scholar*

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(The articles are invited for the next issue and may be sent to the above mailbox)

