



# 52nd SHANTI SWARUP BHATNAGAR Memorial Tournament (Outdoor-Zonal 3)

SSBMT-2024, 6<sup>th</sup>-8<sup>th</sup> December

## SOUVENIR



सीएसआईआर-राष्ट्रीय रासायनिक प्रयोगशाला, पुणे  
CSIR-NATIONAL CHEMICAL LABORATORY, PUNE





# CSIR- Indian Institute of Chemical Technology

(Under Ministry of Science & Technology, Govt. of India)  
Tarnaka, Uppal Road, Hyderabad – 500007, Telangana, INDIA



**Industrial Outlook & Academic Excellence**



## Vision

To Serve Society Creating an Outstanding Knowledge base in Chemistry and Chemical Technology



- Cutting Edge Basic & Applied Research
- Advanced R&D Facilities
- High Impact Publications
- Excellent Placement Record
- Green Campus

## Departments

- ▶ Analytical & Structural Chemistry
- ▶ Applied Biology
- ▶ Catalysis & Fine Chemicals
- ▶ Chemical Engineering & Process Technology
- ▶ Energy & Environmental Engineering
- ▶ Fluoro & Agro Chemicals
- ▶ Natural Products & Medicinal Chemistry
- ▶ Oils, Lipid Science & Technology
- ▶ Organic Synthesis & Process Chemistry
- ▶ Polymers & Functional Materials

# WE

Provide Chemistry & Chemical Technology Solutions  
Nurture Future Science Leaders



## Would you Like to Join us !



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**Director**

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Tarnaka, Hyderabad- 500 007, Telangana, INDIA

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# SOUVENIR



## SHANTI SWARUP BHATNAGAR Memorial Tournament (Outdoor-Zonal 3)



# Message



I am extremely happy to welcome all the participants of the 52<sup>nd</sup> Shanti Swarup Bhatnagar Memorial Tournament (Outdoor) – Zone 3. CSIR-National Chemical Laboratory (CSIR-NCL) is privileged to host this prestigious tournament and extends warm greetings and wishes to all the participants of sister CSIR laboratories. I am sure our CSIR-NCL team of organizers will make the stay of all the participants comfortable.

An outdoor sport is an activity which makes all participants feel close and is extremely important from a social point of view. Outdoor sports brings a spirit of camaraderie which can be matched by only few other forms of activity. The physical activity along with the spirit of friendship and competition bring together a freshness which can be of great value. My colleagues have made extensive arrangements to ensure that the tournament becomes a great success. I am sure all of you will compete in the true spirit of the games and enjoy the tournament. The spirit of participation and competing is the essence in the sports and regardless of the winners in the field, all of you are winners by virtue of competing. The interactions among with the participants of the sister laboratories will only help the spirit of One-CSIR.

My sincere thanks to all those who are in the organization of the tournament from CSIR-Sports Promotion Board, other laboratories and CSIR-NCL. I acknowledge support and encouragement from Directors of the participating labs, CSIR Sports Promotion Board and all other concerned organizations. I wish the tournament a great success.



A handwritten signature in blue ink, appearing to read 'Ashish Lele'.

**(Ashish Lele)**

*Director, CSIR-National Chemical Laboratory*

# Message



On behalf of the CSIR Sports Promotion Board (CSIR-SPB), it is my pleasure to extend warm wishes to the organizers and participants of the 53<sup>rd</sup> Shanti Swarup Bhatnagar Memorial (Outdoor) Tournament (Cricket & Volleyball), Fourth Zonal, Scheduled to be organized by CSIR-SPB & CSIR-NCL during 6<sup>th</sup> to 8<sup>th</sup> December 2024.

CSIR-SPB remains committed to encouraging and promoting sports among CSIR employees, fostering a spirit of fair play, camaraderie, and resilience. These tournaments are a testament to our dedication to nurturing a healthy, unified, and motivated scientific community.

This tournament commemorates Dr. Shanti Swarup Bhatnagar's pioneering legacy and highlights the crucial role sports play in building a strong, determined community of scientists and researchers. Sports instill qualities like teamwork, perseverance, and excellence, vital both in scientific endeavors and on the field.

We are confident that this event will showcase the athletic talents of the participants and strengthen the culture of wellness and camaraderie within CSIR. May this tournament inspire greater participation in sports, embodying the same passion and dedication Dr. Bhatnagar exemplified in his contributions to science.

**Best wishes to all the teams for a successful and memorable tournament.**

With warm regards,



  
**(Sanjeev Khosla)**  
President, CSIR-SPB

# Message



It gives me immense pleasure to share this message on the occasion of the 52<sup>nd</sup> Shanti Swaroop Bhatnagar Memorial Tournament, Outdoor - Zonal, being hosted by CSIR – National Chemical Laboratory, Pune, from December 6 -8, 2024.

This tournament is a reflection of CSIR's commitment to fostering a healthy, cohesive, and vibrant environment where sports plays an important role. Through such events, CSIR emphasizes the importance of balancing the professional life with a healthy life. This is an apt tribute to Sir Shanti Swaroop Bhatnagar, an outstanding scientist, visionary and leader, who envisioned the importance sports and initiated the sporting activities at CSIR.

The Shanti Swaroop Bhatnagar Tournament has now become an integral part of CSIR's culture, providing a platform that promotes camaraderie, teamwork, and a shared sense of belonging. Sports play a crucial role in nurturing the personality of an individual, contributing to both the physical and mental health of an individual. It is through sports that a number of life skills are learnt.

I am confident that the players of this tournament will display the true spirit of sportsmanship during the matches. I hope that the players will cherish the memories created during this tournament forever.

I am grateful to CSIR-NCL for hosting the 3<sup>rd</sup> Zonal of the 52<sup>nd</sup> SSBMT. I extend my best wishes to all teams and participants, trusting that this tournament will be an inspiring and successful experience for all involved.

With best wishes for a memorable event.



*Madhukar*

**(Dr. Anuradha Madhukar)**

*Secretary, CSIR Sports Promotion Board*

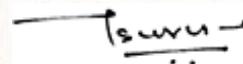
# Message



I am extremely happy to welcome all the participants of the 52<sup>nd</sup> Shanti Swaroop Bhatnagar Memorial (Outdoor) Tournament (Cricket & Volleyball), 3<sup>rd</sup> Zonal to be held at CSIR-National Chemical Laboratory from 06-08 December 2024. We are privileged to be the host for this prestigious event and extend our warm greetings and best wishes to all the participants of this tournament. CSIR-NCL team of organizers have put in a lot of hard work to make your stay comfortable and a memorable one.

The tournament organizing committee sincerely thank the Director, CSIR-NCL & President, NCL Staff Recreation Club (NCL-SR Club) for his kind and continuous support towards the arrangement of this tournament as well as for supporting sports & recreational activities at CSIR-NCL. We are also thankful to the CSIR Sports Promotion Board (CSIR-SPB) for all the support extended to the host laboratory. The generous support received from the sponsors and advertisers is greatly acknowledged. We would also like to thank CSIR-NCL staff and NCL SR Club Members for their wholehearted support for the success of this tournament. The credit for the success of this tournament goes to the untiring hard work put in by 'Team CSIR-NCL'.

I wish you all a pleasant and memorable stay and a successful tournament at CSIR-NCL, Pune.



**(Dr. Suresh Bhat)**

*Chairman, Tournament Organizing Committee  
52<sup>nd</sup> SSBMT Tournament (Outdoor) 2024 – 3<sup>rd</sup> Zonals*

# Message



It is grand pleasure and privilege for CSIR-NCL family to host the 52<sup>nd</sup> Shanti Swarup Bhatnagar Memorial Tournament (SSBMT) Outdoor Third Zonal from 6<sup>th</sup> to 8<sup>th</sup> December, 2024. On the behalf of NCL Staff Recreation (SR) Club, a warm welcome to all the participants who are representing various CSIR Laboratories to make this event a grand and memorable one. SSBMT is a very prestigious sports tournament in CSIR which has helped not only to imbibe energy within organization but also in fostering team spirit amongst the members of the CSIR family.

I sincerely thank the Director, CSIR-NCL & President, NCL SR Club for his kind and continuous support towards the arrangement of this tournament as well as for supporting sports at CSIR-NCL. I am also thankful to the CSIR sports promotion board (CSIR-SPB) for all the support extended to the host laboratory. The generous support received from the sponsors and advertisers is greatly acknowledged. CSIR-NCL team of organizers has put a lot of hard work to make your stay comfortable. The credit for the successful conduct of this tournament goes to the untiring hard work put in by '**Team CSIR-NCL**'. I would like to thank CSIR-NCL staff and NCL SR Club Members for their wholehearted support for the success of this tournament.

I call upon all participants to play the games in true spirit, raising the level of performance and thereby bringing greater pride and glory to CSIR.



A handwritten signature in dark ink, appearing to read 'V R Patil'.

**(V R Patil)**

*Vice President*

*NCL Staff Recreation Club*

# Message



We are highly obliged to host the Third Zonal of 52<sup>nd</sup> Shanti Swaroop Bhatnagar Memorial Tournament (Outdoor) 2024 at CSIR-National Chemical Laboratory, Pune during 06<sup>th</sup> – 08<sup>th</sup> December 2024. Sports promotes the values that are necessary for consistency and progress of modern societies but also promotes the most important blessing that is our health. Sports teaches discipline, focus, dedication, hard work, commitment and team work. It not only develops a sense of friendliness and team spirit but also helps in developing physical toughness and mental health. Healthy mind and soul reside in healthy body. It brings everyone together and through sports, we can create a healthy society and when we have a healthy society, we will surely have a healthy state or a healthy nation. This event helps developing relation and team spirit between the members of CSIR family. Sports, particularly team sports engender purposeful and meaningful social relationships and these social interactions with workmates provide highly desirable security, belongingness and ultimately happiness.

On behalf of NCL Staff Recreation Club, I extend my heartily welcome to all the participants from Various CSIR Labs./instts in this event.

*“Don't stop chasing your dreams, because dreams do come true.”*

**Sachin Tendulkar**



*Dayal Saini*

**(Dayal Ram Saini)**

*General Secretary  
CSIR-NCL Staff Recreation Club*



# About CSIR-National Chemical Laboratory



CSIR-National Chemical Laboratory (CSIR-NCL), located in Pune, India, is a constituent laboratory of the Council of Scientific and Industrial Research aimed at undertaking cutting-edge research and technology development in chemistry and the allied sectors. Established in 1950, CSIR-NCL has a rich legacy and a strong commitment to industrial development through the creation of globally acclaimed research competencies and skilled manpower.

CSIR-NCL is the brainchild of Sir Shanti Swarup Bhatnagar, the first director-general of CSIR. Laid on the foundation of strong scientific fundamentals, he envisioned the synergization of science with its applications to enrich the chemical industry. The laboratory was declared open on January 3, 1950, by Pandit Jawaharlal Nehru, the first Prime Minister of India. The inaugural ceremony was attended by six Nobel Laureates and several distinguished luminaries from across the globe.



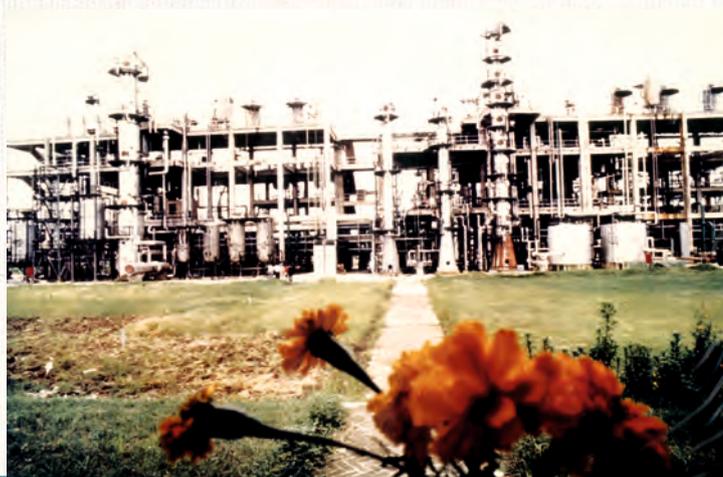
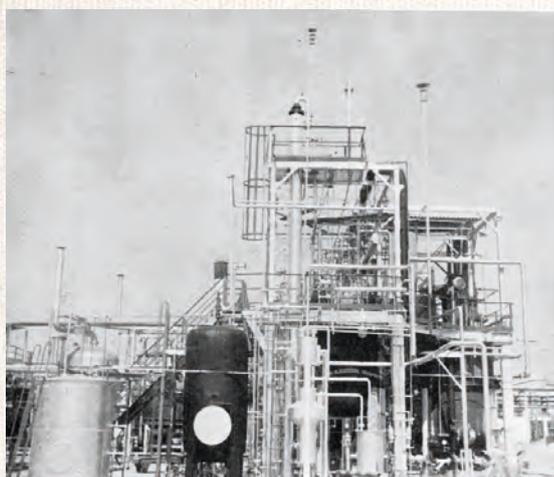
Inaugural ceremony of CSIR-NCL on 03 January, 1950

2025 marks the 75<sup>th</sup> year of the laboratory. Over the years, CSIR-NCL has enormously contributed to various sectors of the chemical industries through the successful demonstration and upscaling of lab-based research. It has been a key player in mitigating some of the pressing problems through the utilization of its scientific expertise. From fulfilling the industrial requirements to setting up pilot plants of commercially significant chemicals to enhancing global competitiveness and providing innovative solutions, the laboratory has created several pathways for bridging the gap between industry and academia. CSIR-NCL's primary objective is to advance knowledge and apply chemical science for the betterment of society.



CSIR-NCL is one of the pioneering organizations in the country to inculcate a culture of patenting and commercialization of indigenous technologies in the global arena. The laboratory has catalyzed the establishment and growth of industries catering to the manufacture of generic drugs, dyestuff, Active Pharmaceutical Ingredients, strategic services, tissue cultures for efficient farming practices, and commercially viable chemicals and materials. While licensing its technologies to global companies, CSIR-NCL is committed to empowering the Indian chemical sector. It has also made impactful contributions to enhance the economy at the grass-root level.

Research is streamlined through the 6 major divisions of the laboratory: Physical and Materials Chemistry, Catalysis and Inorganic Chemistry, Organic Chemistry, Biochemical Sciences, Polymer Science and Engineering, and Chemical Engineering and Process Development. These divisions cater to the needs of major industrial sectors like healthcare, specialty and fine chemicals, new material and catalyst synthesis, sanitation, clean Fuels and Energy efficient devices, Agriculture, microreactors and sustainable industrial processes. In addition, resource centers like the National Collection of Industrial Microorganisms and the Central Analytical facilities provide a wide range of services to several industries, research, and academic organizations. The support units of the laboratory include: the Technology Management Group, Intellectual Property Group, Knowledge Resource Center, Publication and Science Communication Unit, Central NMR facility, Digital Information Resource Center, and Administration and Engineering workshops. The NCL Innovation Park enables pathways and provides support for scientists and students to translate lab-based research into deep-tech start-ups and ventures. The state-of-the-art infrastructure and resources enable a conducive environment for carrying out research.



Some of the early pilot plants commercialized for Nitrile rubber and Xylene technology

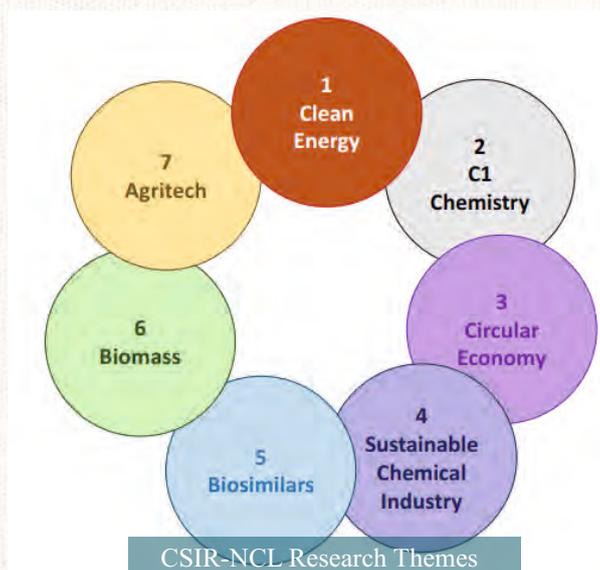
The laboratory has collaborated with numerous industry partners and research organizations, both in India and globally, to further research in areas of common interest. CSIR-NCL's dedication to applied research, collaboration with industry, and focus on generating long-term value has led to major achievements in scientific publications and the granting of numerous patents. The laboratory continues to strive for excellence in research, maintaining its commitment to benefiting society.



Continuous and sustainable manufacturing plants for specialty and fine chemicals

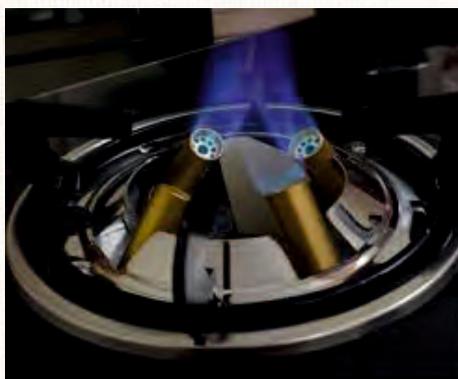
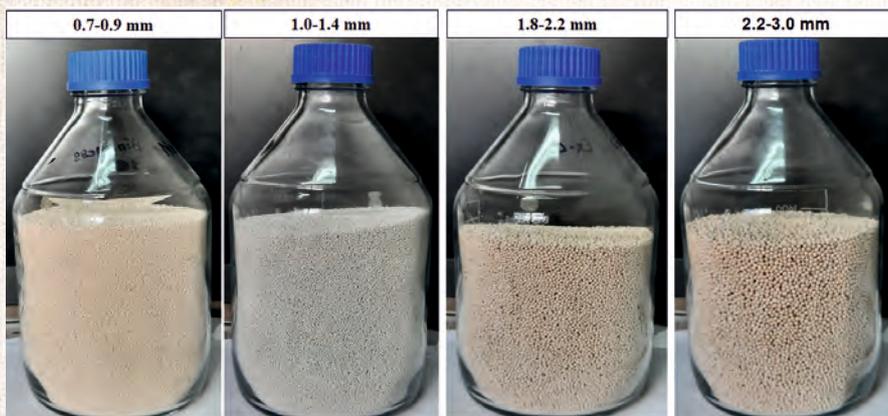
The institute offers various courses under the Academy of Scientific and Innovative Research (AcSIR) that include Ph.D. in five different faculties. It also offers M. Tech. and Integrated Dual-Degree (M. Tech + Ph.D.) Program in the Faculty of Engineering. The AcSIR is an Institution of National Importance established by an Act of Parliament in 2010, which has been mandated to undertake high-quality teaching and research in frontier areas of Science and Technology. Currently, about 400 students are pursuing their careers in Research and Development with the help of a Fellowship given by the Government.

The current focus of the laboratory is to deploy futuristic technologies and address critical issues like climate change, decarbonization of the chemical industries, affordable healthcare, incorporating environment-friendly, sustainable solutions, and so on. CSIR-NCL has devised a roadmap that leverages the laboratory's scientific expertise and stakeholder connections and encompasses seven key thematic areas Clean Energy, C1 Chemistry, Circular Economy, Sustainable Chemical Industry, Healthcare & Biotherapeutics, Biomass, and Agritech. The roadmap aims to develop *globally benchmarked* and *differentiated sustainable* process and product technologies, Offer best-in-class R&D services, develop high-quality human resources including entrepreneurs for the deep-tech industry, and focus on impactful outcomes in terms of private, public, and strategic goods.





CSIR-NCL exemplifies India's unwavering commitment to scientific research, innovation, and industrial development. With its relentless pursuit of scientific excellence, collaborative ethos, and a focus on practical applications, CSIR-NCL assumes a pivotal role in propelling innovation, fostering self-reliance, and contributing to the socio-economic growth of the nation. By aligning with global challenges and national developmental goals, CSIR-NCL strives to amplify the growth, sustainability, and self-reliance of the Indian Chemical Industry, heralding India towards a brighter and more prosperous future.



A few products developed in the laboratory

Sr. No.	Technology	Sector
1	Continuous catalytic process for the production of 4,4' Bisphenol-A (BPA)	Chemical
2	Novel, Eco-friendly & Autocatalytic process for the synthesis of Tributyl citrate (TBC)	Chemical
3	A patented catalytic process for making Diphenylmethane (DPM)	Chemical
4	Novel process platform for the manufacturing and purification of biosimilar rHu Ranibizumab	Biopharma
5	Novel process platform for the manufacturing and purification of Anakinra	Biopharma
6	Targeted glycosylation modulating process for recombinant proteins (Including monoclonal antibodies)	Biopharma
7	High-yield production of high-value Bacterial Nano Cellulose (BNC) films from low-cost crude glycerol feed	Health
8	Efficient manufacturing process For Na-LSX (13 X) & Li-LSX Zeolite	Specialty materials
9	Continuous process for manufacturing precision Silver Nanowires at scale	Specialty materials
10	Continuous & tunable process for the large-scale synthesis of Mesoporous & Nanoporous Silica	Specialty materials
11	Simple, eco-friendly catalytic delignification process for sugarcane bagasse (SB)	Biomass valorisation
12	Dietary Supplement Formulation of Probiotic Strain for Organic Poultry Production	Agriculture/ poultry
13	Efficient catalytic process & novel reactor design for hydrogen sulfide (H <sub>2</sub> S) removal from different gas streams	Gas separation
14	Process for the novel thermostable Biosurfactant production	Environmental
15	Efficient recovery process for metals from Spent Li-ion batteries (LIBs)	Environmental



## A TRIBUTE TO SIR DR. SHANTI SWARUP BHATNAGAR

**Dr. Shanti Swarup Bhatnagar** was born in Shahpur, now in Pakistan, and faced significant challenges early in life, losing his father, Parmeshwari Sahai Bhatnagar, when he was just eight months old. He was raised by his maternal grandfather, an engineer, which sparked his interest in science and engineering. From a young age, Bhatnagar demonstrated a natural curiosity, enjoying the construction of mechanical toys, electronics, and string telephones. He also inherited a passion for poetry, showcasing his talents with his Urdu one-act play, *Karamati*, which won first prize in a competition.

Bhatnagar played a crucial role in shaping India's science and technology landscape in the post-independence era, alongside prominent figures like Homi Jehangir Bhabha and Vikram Sarabhai. As the founder director of the Council of Scientific and Industrial Research (CSIR), he laid the groundwork for a robust research infrastructure that would benefit independent India for decades to come.

From 1919 to 1921, Bhatnagar pursued a DSc degree at the University of London, focusing on the surface tension of oils under the mentorship of Prof. E.C. Donnan. Supported by a scholarship from the Dyal Singh Trust, he excelled in his studies. Upon returning to India in August 1921, he joined Banaras Hindu University (BHU) as a Professor of Chemistry. During his three years at BHU, he established a thriving school of physico-chemical research and contributed to the university's culture by writing its official song, the *Kulgeet*.

In 1924, Bhatnagar moved to Lahore, where he served as a University Professor of Physical Chemistry and the Director of the University Chemical Laboratories for 16 years. His work in applied and industrial chemistry was notable, including a pioneering project to convert bagasse (sugarcane waste) into cattle feed, commissioned by Sir Ganga Ram. His research on colloids gained international recognition, and a consultancy project with Steel Brothers of London resulted in a significant grant that facilitated the establishment of the Department of Petroleum Research at Panjab University.

Alongside K.N. Mathur, Bhatnagar co-authored *Physical Principles and Applications of Magneto Chemistry*, a seminal text published by Macmillan, which was well-regarded in the scientific community. Bhatnagar's influence extended beyond academia; he held several prominent government positions, including Secretary to the Ministry of Education and later to the Ministry of Natural Resources and Scientific Research. He was instrumental in the founding of the Atomic Energy Commission and served as the Chairman of the University Grants Commission.

Bhatnagar received numerous accolades for his contributions to science. In 1936, he was honored with the Order of the British Empire, followed by his knighthood in 1941. He became an Honorary Fellow of the Society of Chemical Industry in 1943 and was elected a Fellow of the Royal Society of London the same year. Various universities, including Oxford and Delhi, conferred honorary doctorates upon him, and he was awarded the Padma Vibhushan in 1954.

The CSIR, operational since September 26, 1942, benefitted significantly from Bhatnagar's vision, leading to the establishment of national laboratories that propelled scientific research in India. After his passing, the CSIR instituted the Shanti Swarup Bhatnagar Award to honor distinguished scientists, and the Sports Promotion Board of CSIR commemorates his legacy by organizing annual sports events. Bhatnagar's enduring contributions to science and education have left an indelible mark on India's development.



## ABOUT SHANTI SWARUP BHATNAGAR MEMORIAL TOURNAMENT (SSBMT)

One of the doyens of Science in India, Sir Dr. Shanti Swarup Bhatnagar (1894-1955), was the First Director, Board of Scientific and Industrial Research (now re-designated as Director General) of the Council of Scientific & Industrial Research (CSIR). He was also the first Chairman of the University Grants Commission (UGC). In 1936, Dr. Bhatnagar was rewarded with the Order of British Empire for his contribution to pure and applied chemistry. In 1943, the Society of Chemical Industry, London, elected Dr. Bhatnagar as its Honorary Member and later as its Vice-President. In 1943, he was elected the Fellow of Royal Society.

It was his dynamism and farsightedness that was responsible for the growth and development of not only the CSIR but also the level of Science & Technology in India. His untiring efforts, devotion to duty and pioneering work in the field of Chemical Sciences brought him many laurels from India and abroad. He emphasized on the utilization of science for national development and thus was a great builder of this important organization.

The SSBMT is a novel way of paying tribute to this great personality and has been a forum for bringing together staff members of CSIR irrespective of discipline and organizational hierarchy. What started and progressed as a biennial event has now grown magnificently to outdoor and indoor tournaments held in alternative years in different national laboratory premises.



# ABOUT CSIR SPORTS PROMOTION BOARD

Sports activities are recognized as universal form of overall personality development. It is also a form of the great expressions of the aspirations of a person to excel. Appreciating the impact of employee recreation in the development of leadership qualities, interaction and communication skills that are essential in providing effective service delivery, organizing sports events and creating recreational environment have become an integral part of the personnel policy of CSIR. Towards this objective, the early initiatives taken by a few of the CSIR Institutes/Laboratories specially those located in remote places like, Pilani, Bhavnagar, Karaikudi, Dhanbad, Jorhat, etc., to form staff clubs are highly laudable. The Institutes/Laboratories set up their staff clubs, as soon as they were established. However, organizing sports events at the agency level in CSIR commenced only in 1953 with the initiative of the CSIR Headquarters when it hosted a tournament for the staff of Delhi-based laboratories. This 'limited sports activity' continued for three years which was elevated to an All India level tournament in 1955.

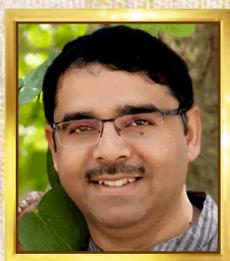
In memory of the founder Director (now re-designated as Director General), Dr. Shanti Swaroop Bhatnagar, the Tournament was named as the Shanti Swaroop Bhatnagar Memorial Tournament (SSBMT) that enlarged the participation of all CSIR employees spread across the country. Initially, the tournaments were organized biannually having games such as Cricket, Volleyball, Tennis, Basketball, Table Tennis, Badminton, Chess, Carom and Bridge. The responsibility was then shouldered by the CSIR Headquarters Staff Club that used to organize the tournament in CSIR laboratories over a period of 7 to 8 days, every alternate year. The SSBMT held at the National Physical Laboratory (NPL) in 1956 could be termed as the First All India CSIR Tournament. Meanwhile, CSIR considered providing greater impetus to sports within the system. An official platform was accordingly provided by forming the CSIR Sports Control Board (SCB) on the lines of those existed in the Railways, P&T, etc. Formalization of the CSIR Sports Control Board took place in March, 1980 with its registration as a Society under the Societies Registration Act XXI of 1860. In view of the objectives/role of Sports Control Board, its nomenclature was changed to the Sports Promotion Board (SPB). The SSBMT received overwhelming response with huge participation of around 1000 players and officials at one time. Some small Institutes/Laboratories with limited infrastructure experienced difficulties to host such mega events. It was therefore resolved to organize Zonals and Finals separately involving relatively lesser number of participants. All the 40 staff clubs were then clubbed to form four zones with the participation of around 200 participants in each zone. Top two successful teams in individual and team events of each game from these four zones then meet during the Finals. After employing various permutations and combinations over a period of time, the SSBMT came into being in its present form i.e. being organized every year, alternately for indoor and outdoor games. The present practice thus provides greater incentive to the best eight players/teams every year as they get an opportunity to play twice (at two different venues for zonals and for finals) during the same year.

The CSIR-SPB, in addition to the above tournaments, also organizes certain specialized tournaments, such as: Nayuydamma Memorial Cricket Tournament, Atma Ram Memorial Volleyball Tournament; Thacker Memorial Lawn Tennis Tournament; Hussain Zaheer Bridge Tournament; Sidhu Memorial Table Tennis Tournament; A.P. Mitra Memorial Badminton Tournament; and Anusandhan Basket Ball Tournament (alternate years).

# COMPOSITION OF CSIR SPORTS PROMOTION BOARD



**Dr N Kalaiselvi,**  
DG, CSIR and Patron CSIR-SPB



**Dr Sanjeev Khosla**  
President Director,  
CSIR-IMTECH



**Sh Mahendra Kr. Gupta**  
JS (Admin)  
Vice President (Ex-Off)



**Sh Chetan Prakash Jain**  
JS & FA  
Member (Ex-Off)



**Dr Anuradha Madhukar**  
Secretary, CSIR-Hqrs



**Sh Dipanjan Moitra**  
Treasurer, CSIR-Hqrs



**Dr Ranjit Ray**  
Member, CSIR-CMERI



**Dr Bama Prasad Bag**  
Member, CSIR-IMMT



**Dr Niti Kumar**  
Member, CSIR-CDRI



**Dr Niraj Kumar**  
Member, CSIR-CEERI



**Dr Sanjay D Patil**  
Member, CSIR-CSMCRI



**Dr Devendra J Haware**  
Member, CSIR-CFTRI



**Dr Rashmi Sharma**  
Member, CSIR-IIIM



**Dr Shuchismita Benjwal**  
Member, CSIR-NGRI



**Sh P Manish Theodore**  
Member, CSIR-Hqrs



**Sh Sandeep Mavi,**  
Supporting Staff CSIR-Hq

# COMPOSITION OF CSIR-NCL STAFF RECREATION CLUB



***Dr. Ashish K. Lele***  
President



***Mrs. Pooja Kulkarni***  
Vice-President (Ex-Officio)



***Mr. Virendra Patil***  
Vice-President



***Mr. Dayal Ram Saini***  
General Secretary



***Mr. Sunil B Patel***  
Sports Secretary



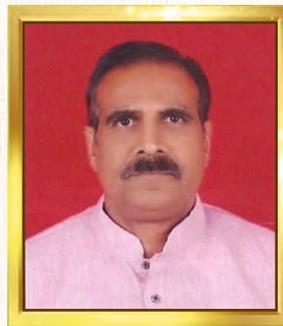
***Mr. Ravi B. Kute***  
Joint Secretary



***Mr. Sunil R. Shinkar***  
CRC Secretary



***Mr. Ajit D. Malwade***  
RRL & Cinema Secretary



***Mr. Deepak Balmiki***  
Community Centre Secretary



***Mr. Vishwanath S. Bagalkoti***  
Treasurer

# NCL STAFF RECREATION CLUB (NCL-SR CLUB)

**NCL Staff Recreation Club (NCL-SR Club)** was created with an objective to promote social, cultural, sports recreation and literary activities within the NCL community. Earlier the club was named as Staff Welfare Club which later got renamed as Staff Recreation Club. The club had a humble beginning with a small library & reading room and movies for the NCL fraternity, which were screened in the NCL auditorium. A couple of years later, sports activities were introduced and additional facilities like open air theatre and community centre services were created. These facilities helped in bringing together the diversified culture of NCL community and their families with a feeling of national integrity. The club officials are elected by the club members who run the NCL SR Club for a period of two years. During the tenure of every committee the club conducts many recreational activities for the staff and their family members. Each committee in their tenure had tried to perform additional activities and the new facilities and the related infrastructure have been created.

CSIR-NCL has its own beautiful cricket ground where the matches are being played throughout the year and it is one of the most popular cricket ground in Pune. SR Club is now working on to getting it converted into a turf wicket ground with lush green grass surface of the entire ground. NCL also has a dedicated football ground developed in recent years and now the club has started football coaching also. Many tournaments are being conducted throughout the year. The club is converting the same into turf ground with lush green grass. A part of the ground is already decorated with lush green grass surface. We also have a basketball court in the NCL colony campus. It is used for both basketball and skating classes. SR Club has appointed a coach for skating and many of our children have excelled in various skating competitions. We have a synthetic badminton court in the colony campus at NCL community centre which is being used by our staff and their family members. We have started karate coaching classes at community centre which is used widely by the children of our staff members. Many children have excelled in this sport. The club has a table tennis room near open air theatre in the colony. We also have two volleyball courts near SBI where the present tournament is going to be conducted. Now, both the courts will be equipped with the permanent structure of flood light facility and will be inaugurated for this tournament.

Lawn Tennis facilities in NCL is one of the best facility of the club which is located near NCL Medical Center in the colony. We have three excellent clay courts with the best flood light illumination. Tennis coaching is also arranged for lawn tennis by appointing expert coaches. We have organized CSIR's Prestigious Prof. Thacker's Memorial Lawn Tennis Tournament many times in NCL on these courts. Also, Pune District Inter Offices Sports Association also arranges the Inter-Office Lawn Tennis tournament every year in these courts.

We have a NCL Community Centre which is the very much required facility for any member to hold any kind of family function such as marriage, engagement, birthday celebration, religious function etc. This facility is made available only for the staff with the minimum maintenance charges.



NCL also has an open air theatre in the central part of the colony where the screening of the latest movies are arranged every fortnight. It also has a stage where cultural activities are organised during festival seasons. In the same campus NCL Ganesh Festival is celebrated every year with great zeal and enthusiasm. Many activities are conducted in this campus such as fun sports, colony artists program, rangoli, recipe competitions etc. Similarly, club has dedicated place allocated for the indoor sports like Chess, Carrom, Bridge etc. at our community centre and our staff uses the same extensively. Apart from this, every year club organizes the inter-division sports tournament for gents as well as ladies. This is one of the most appreciated activity wherein most of the staff members participate enthusiastically. This activity helps the staff in many ways for their personality development and build healthy work relations among each other.



SR Club also wholeheartedly support activities of our students whether cultural, academic as well as sports. Club not only allows them to use the infrastructure facilities but sometimes sponsors monetarily also.

As the years pass by, many staff members retire from the council services. The responsibility of running the SR Club now rests with the younger generation of staff members. Hope that these youngsters will carry forward the vibrant legacy of NCL-SR Club.

***Sunil Patel***

Sports Secretary, NCL SR Club

## ORGANIZING COMMITTEE

<b>Patron</b>	Dr. Ashish Lele, Director, CSIR-NCL
<b>Tournament Committee Chairman</b>	Dr. Suresh Bhat
<b>Tournament Advisory Committee</b>	Mrs. Pooja Kulkarni, Mr. V.R. Patil & Mr. S. Dheeraj
<b>Tournament Executive Committee</b>	Mr. V.R. Patil, Mr. Atul Mahajan, Mr. C.J. Jagtap, Mr. Sunil Patel & Mr. Kaushal Kumar
<b>Reception &amp; Communication Committee</b>	Mr. Dayal Saini, Mrs. Vaishali Yadav, Mr. Ravi Kute, Mr. Avinash Deotale, Mr. S.B. Gawali & Mr. P.V. Iyer
<b>Programme Committee</b>	Mrs. Samira Kulkarni, Mr. Tejas Gaydhankar, Mrs. Pooja Raut, Ms. Prajakta Patil, Mr. Yogesh Mahajan, Mrs. Swati Chadha & Mr. Mohan Suryawanshi
<b>Accommodation Committee</b>	Mr. Shankar Mane, Mr. R. Suryaprasad, Mr. Mahesh Gajare, Mr. Amol Bhagat, Mr. Gati Nayak, Mr. Ajit Pawar, Mr. C.B. Kadbane, Mr. Deepak Balmiki
<b>Food Committee</b>	Dr. Suresh Bhat, Mr. Avinash Deotale, Mr. Deepak Bendale, Mr. Sunil Shinkar, Mr. Ravi Kute, Mr. Ajit Malwade, Mr. Sanjay Askar & Mr. Gati Nayak
<b>Transport Committee</b>	Mr. R.K. Jha, Mr. S.P. Koli, Mr. D.R. Ahire, Mr. Shankar Jadhav & Mr. Ajit Malwade
<b>Sports Committee</b>	Dr. C.P. Vinod, Mr. M.B. Vadnere, Mr. S.M. Mane, Mr. Sunil Patel, Mr. K.T. Jadhav, Mr. S.H. Jadhav, Mr. Ravi Kute, Mr. S.B. Gawali, Mr. Ajit Phadke, Mr. T. Parshuram, Mr. S.B. Gaikwad, Mr. D.R. Ahire, Dr. Suresh Bhat, Mr. Vinay Patil, Mr. Mazhar Pathan, Mr. Sunny Ujagare, Mr. R.K. Kakade
<b>Technical &amp; Dispute Settlement Committee</b>	Mr. V.R. Patil, Dr. Suresh Bhat, Dr. C.P. Vinod, Mr. C.J. Jagtap, Mr. Sunil Patel, Mr. T. Parshuram, Mr. Ajit Phadke, Mr. S.M. Mane
<b>Accounts &amp; Purchase Committee</b>	Mr. Gyan Prakash, Mr. Aditya Kulkarni, Mr. S.P. Koli, Mr. Ajinkya Ghorpade, Mr. Dayal Ram Saini, Mr. Bhushan More, Mr. Vishwanath Bagalkoti, Mr. S.R. Shinkar, Mr. Amol Bhagat, Mr. A.D. Malwade, Mr. Sachin Gawali.
<b>Publication Committee</b>	Dr. Nikhilesh Yadav, Mr. C.J. Jagtap, Mr. G.S. Mane, Mr. Harekrishna Punjal, Mr. Avinash Deotale, Mr. R. Suryaprasad
<b>Medical Committee</b>	Dr. (Mrs.) Jyotsna Chitalkar, Dr. Sachin Mahajan, Mrs. Pooja Raut, Mrs. A.S. Tapkir, Mrs. Jyoti Gupta
<b>Support Staff</b>	Mr. Sanjay Balmiki, Mr. Santosh Shinde, Mr. Gopal Prasad, Mr. O.S. Parate, Mr. Ashok Bhosale, Mr. Murugan, Mr. Amol Shedde, Mr. Ramesh Kamble, Mr. Shanmugam, Mr. Nagappa, Mr. Rajender

# ORGANIZING COMMITTEE



Tournament Organizing Committee SSBMT 2024 CSIR-National Chemical Laboratory

# PROGRAMME SCHEDULE

Time & Date	Event	Venue
<b>05<sup>th</sup> December 2024</b>		
03:00 PM	Inaugural Function	NCL Cricket Ground, Near IISER Gate
06:00 PM	Managers Meeting	DIRC Meeting Room
07:30 PM	Director's Dinner	NCL Community Centre, Opposite SBI Bank
<b>06<sup>th</sup> December 2024 (Day 1)</b>		
07:00 AM	<b>Breakfast</b>	NCL Community Centre, Opposite SBI Bank
09:00 AM	Sports Event	
	<b>Cricket:</b> IISER Cricket Ground Kokate Cricket Ground, Sutarwadi A to Z Cricket Academy, Lavale	
	<b>Volleyball:</b> NCL Volleyball Court, Near SBI	
12:00 Noon	<b>Lunch</b>	NCL Community Centre, Opposite SBI Bank
08:00 PM	<b>Dinner</b>	NCL Guest House Lawns
<b>07<sup>th</sup> December 2024 (Day 2)</b>		
07:00 AM	<b>Breakfast</b>	NCL Community Centre, Opposite SBI Bank
09:00 AM	Sports Event	
	<b>Cricket:</b> IISER Cricket Ground Virangan Cricket Ground, Lohegaon	
	<b>Volleyball:</b> NCL Volleyball Court, Near SBI	
12:00 Noon	<b>Lunch</b>	NCL Community Centre, Opposite SBI Bank
08:00 PM	<b>Dinner</b>	NCL Guest House Lawns
08:00 PM	DJ Night	
<b>08<sup>th</sup> December 2024 (Day 3)</b>		
07:00 AM	<b>Breakfast</b>	NCL Community Centre, Opposite SBI Bank
09:00 AM	Sports Event	
	<b>Cricket:</b> IISER Cricket Ground	
	<b>Volleyball:</b> NCL Volleyball Court, Near SBI	
12:00 Noon	<b>Lunch</b>	NCL Community Centre, Opposite SBI Bank
08:00 PM	<b>Dinner</b>	NCL Guest House Lawns

# PARTICIPATING LABORATORIES

CSIR-CDRI, Lucknow, Uttar Pradesh

CSIR-Complex (HRDG), New Delhi

CSIR-CRRI, New Delhi

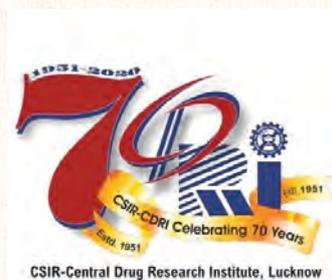
CSIR-IIP, Dehradun, Uttarakhand

CSIR-IITR, Lucknow, Uttar Pradesh

CSIR-NBRI, Lucknow, Uttar Pradesh

CSIR-NISCP, New Delhi

CSIR-NML, Jamshedpur, Jharkhand



# PLEDGE

*'We, the participants of the  
SSBMT, swear that we will take  
part in the games in the loyal  
competition, respecting all  
regulations which govern them  
and in the true spirit of  
sportsmanship for the honour of  
our organization and glory of  
sports'.*



## PARTICIPANTS FROM CSIR-CDRI, LUCKNOW



Sl. No.	Name	Post	Sports
1	Dr. Virendra Kumar Maheshbhai Prajapati (Captain)	Senior Scientist	Cricket
2	Mr. Arbind Kumar (Vice Captain)	Sr. Technical Officer (1)	Cricket
3	Dr. Santosh Kumar	Principal Scientist	Cricket
4	Mr. Jagdish Prasad	Assistant Section Officer	Cricket
5	Dr. Rajesh Kumar Jha (Team Manager)	Principal Scientist	Cricket
6	Dr. Chandra Bhushan Tripathi	Senior Scientist	Cricket
7	Mr. Ram Kumar	JSA	Cricket
8	Mr. Jitendra Singh	Technical Assistant	Cricket
9	Mr. Raman Kumar	Junior Secretariat Assistant	Cricket
10	Dr. Sachin Kumar	Principal Scientist	Cricket
11	Dr. Valmik Shinde	Senior Scientist	Cricket
12	Mr. Gaurav Jha	SRF	Cricket
13	Mr. Rupa Hansda	SRF	Cricket
14	Mr. Vinod Kumar Sharma	Lab Attendant (2)	Cricket
15	Mr. Ashok Kumar (Captain)	Senior Technical Officer (1)	Volleyball
16	Mr. Amit Kumar (Vice Captain)	Senior Technical Officer (1)	Volleyball
17	Dr. Madhav N. Mugale	Principal Scientist	Volleyball
18	Mr. Bihari Kumar	Hindi Translator	Volleyball
19	Mr. Dharmesh Kumar	Senior Technical Officer (1)	Volleyball
20	Mr. Brahma Singh	Senior Technical Officer (2)	Volleyball
21	Mr. Ram Karan	Senior Technical Officer (3)	Volleyball
22	Mr. Jadhav Prasad Ramachandra	SRF	Volleyball

## PARTICIPANTS FROM CSIR-CRRI, NEW DELHI



Sl. No.	Name	Post	Sports
1	Mr. Vikas Singh Negi (Captain)	ASO (F&A)	Cricket
2	Mr. Dinesh Kumar Mandal (Vice Captain)	Technical Assistant	Cricket
3	Mr. Niranjana Kumar Srivastava	SSA (G)	Cricket
4	Mr. Sachin Kumar	SSA (G)	Cricket
5	Mr. Sudip Santra	Technician	Cricket
6	Mr. Vijay Kumar Shah	Technician (2)	Cricket
7	Mr. Rajan Verma	Senior Technical Officer	Cricket
8	Mr. Nimish Mishra	SSA (G)	Cricket
9	Mr. Kumar Shashi Bhushan	Senior Technical Officer (2)	Cricket
10	Mr. Vineet Kumar Sharma	Technician (1)	Cricket
11	Mr. Nitin Mishra	Technician (1)	Cricket
12	Mr. Ashwani Kumar	Technician (1)	Cricket
13	Mr. Kartik	SSA (S&P)	Cricket
14	Mr. Saurabh Chandra	Technician (1)	Cricket
15	Mr. Y.K. Singh (Captain)	Senior Technical Officer (3)	Volleyball
16	Mr. Chirag Kapoor	Technician (1)	Volleyball
17	Mr. Ravi Kumar	Work Assistant	Volleyball
18	Mr. Rohit Gautam	Technician (1)	Volleyball
19	Mr. Amit Kumar	Technician (1)	Volleyball
20	Mr. Vijay Kaushal	Senior Technical Officer	Volleyball
21	Mr. Muni Raj Meena	Senior Technical Officer (2)	Volleyball
22	Mr. Abhijeet Kumar	Technician (1)	Volleyball

# PARTICIPANTS FROM CSIR-IIP, DEHRADUN



Sl. No.	Name	Post	Sports
1	Mr. Pradeep Pawar (Captain)	Senior Technician	Cricket
2	Mr. Pradeep Tyagi (Vice Captain)	Senior Technical Officer	Cricket
3	Dr. Sunil Pathak	Chief Scientist	Cricket
4	Mr. Pankaj Arya	Principal Scientist	Cricket
5	Mr. Aadesh Seth	ASO	Cricket
6	Mr. Parvez Alam	Senior Technician	Cricket
7	Mr. Hemant Tiwari	Lab Attendant	Cricket
8	Mr. Vaibhav	Technical Officer	Cricket
9	Mr. Hari Prakash	Pharmacist	Cricket
10	Mr. Amit Kumar	J.E	Cricket
11	Mr. Sarvesh Bisht	Technician	Cricket
12	Mr. Sandeep Chauhan	Technician	Cricket
13	Mr. Azeem Khan	SRF	Cricket
14	Mr. Bhagwat Upreti	SRF	Cricket
15	Mr. Rajeev Pawar (Captain)	Senior Technician	Volleyball
16	Mr. Rajendra Badola	Senior Technical Officer	Volleyball
17	Mr. Devendra Rai	Personal Secretary	Volleyball
18	Mr. Anoop	Driver	Volleyball
19	Mr. Shiv Singh Rawat	Group C	Volleyball
20	Mr. Bharat Singh Rana	Scientist	Volleyball
21	Mr. Rahul Gautam	JRF	Volleyball

## PARTICIPANTS FROM CSIR-IITR, LUCKNOW



Sl. No.	Name	Post	Sports
1	Mr. Satyaram		Cricket
2	Mr. Sarfaraz Ahmad		Cricket
3	Mr. Manoj Tewari		Cricket
4	Mr. Mohammad Rizwan		Cricket
5	Mr. Jai Shankar		Cricket
6	Dr. Manoj Kumar		Cricket
7	Mr. Shyam Kumar Pal		Cricket
8	Mr. Sandeep Kumar Pal		Cricket
9	Mr. Ram Bilas		Cricket
10	Dr. Sandeep Kumar		Cricket
11	Mr. Aman Singh		Cricket
12	Mr. Sachin Mishra		Cricket
13	Mr. Rahul Verma		Cricket
14	Mr. Sayed Ibrahim		Cricket
15	Mr. Ranjan Kumar		Volleyball
16	Mr. Vikas Barua		Volleyball
17	Mr. Naushad Ahmad		Volleyball
18	Mr. Abhinav Verma		Volleyball
19	Mr. R.S. Ray		Volleyball
20	Dr. R. Parthasarathy		Volleyball
21	Mr. Saureen Adhikari		Volleyball
22	Dr. Sandeep Negi		Volleyball

## PARTICIPANTS FROM CSIR-NBRI, LUCKNOW



Sl. No.	Name	Post	Sports
1	Dr. Sumit Bag	Scientist	Cricket
2	Dr. Vijay V. Wagh	Scientist	Cricket
3	Mr. Kapil Sharma	Personal Secretary	Cricket
4	Dr. Sharad Srivastava	Scientist	Cricket
5	Mr. Kamal Srivastava	Senior Secretariat Assistant	Cricket
6	Mr. Ashish Kumar	Senior Secretariat Assistant	Cricket
7	Mr. Vivek Gupta	Technical Officer	Cricket
8	Mr. Sagar Kumar	MTS	Cricket
9	Mr. Pawan Kumar	Technician	Cricket
10	Mr. Sandip Kumar Behera	Scientist	Cricket
11	Mr. Komal Ingle	Technical Officer	Cricket
12	Mr. Umesh Sahu	JRF	Cricket
13	Mr. Pradeep Somwal	SRF	Cricket
14	Mr. Dheeraj Pathak	Section Officer	Cricket
15	Dr. Geet Govind	Senior Technical Officer	Volleyball
16	Dr. Sumit Yadav	Senior Technical Officer	Volleyball
17	Mr. Surjit Kumar	Senior Technical Officer	Volleyball
18	Mr. Jai Chand	Senior Technical Officer	Volleyball
19	Mr. Amar Pal	Senior Secretariat Assistant	Volleyball
20	Dr. Ashok Mishra	Technical Officer	Volleyball
21	Mr. Dilip Sinha	Technician	Volleyball
22	Mr. Ajay Kumar	Technician	Volleyball

# PARTICIPANTS FROM CSIR-NISCP, NEW DELHI



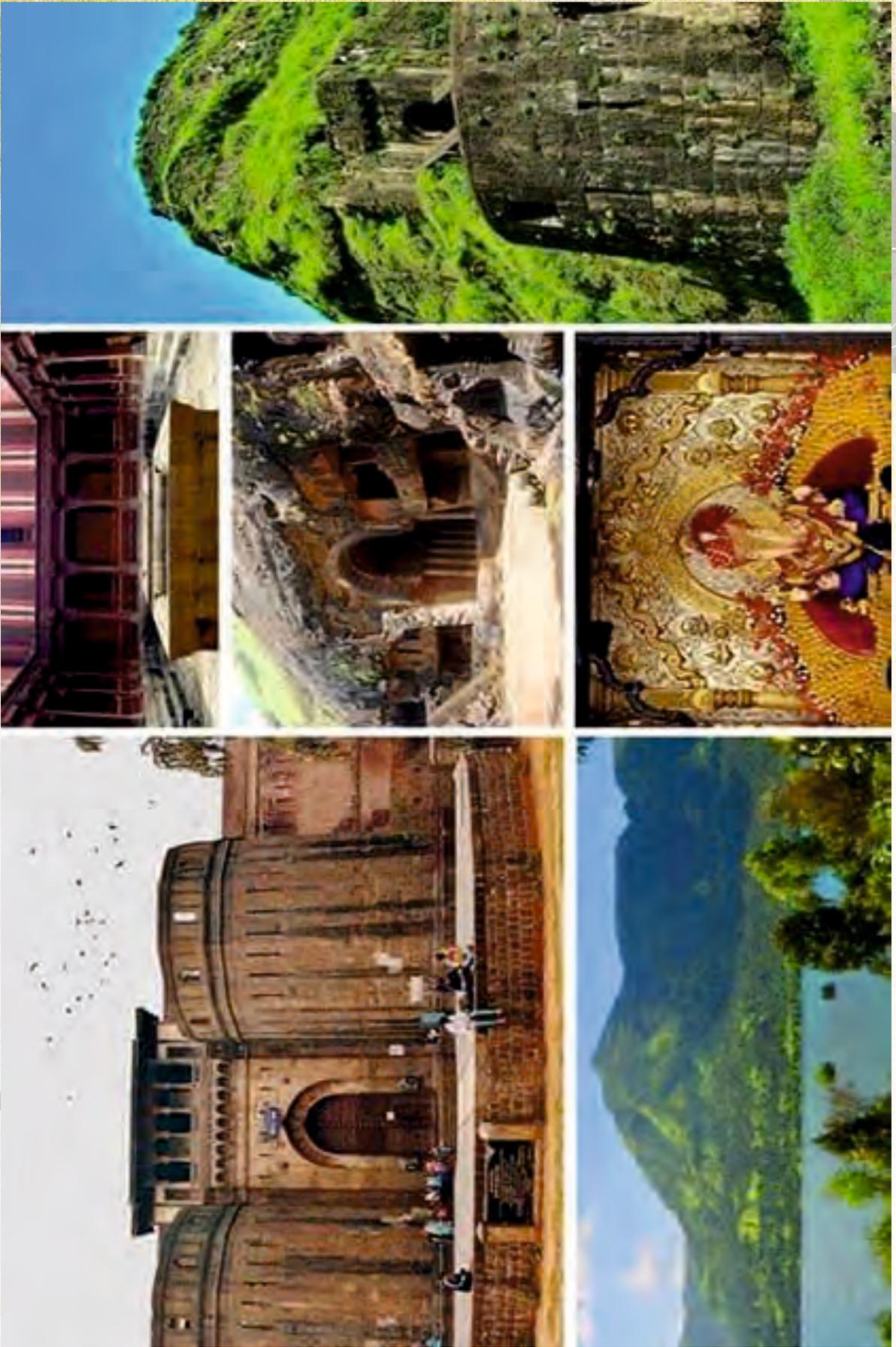
Sl. No.	Name	Post	Sports
1	Mr. Chandan Kumar (Captain)	Technical Assistant	Cricket
2	Mr. Mandeep Singh (Vice Captain)	Senior Technical Officer (2)	Cricket
3	Mr. Hashim Ali	Technical Assitant	Cricket
4	Mr. Arun Uniyal	Technical Officer	Cricket
5	Mr. Anil Kumar	Technical Officer	Cricket
6	Mr. Mohammed Shakeel Ahmed	Technical Officer	Cricket
7	Mr. Abhay Kumar Mishra	Technical Assistant	Cricket
8	Mr. B.L. Meena	Stores & Purchase Officer	Cricket
9	Mr. Anuj Singh	Technician 1	Cricket
10	Mr. Naresh	Technician 1	Cricket
11	Mr. Chand Mohammad	Technical Assistant	Cricket
12	Mr. Ashwani Kumar Brahmi	PTO	Cricket
13	Dr. Anil Kumar	Senior Technical Officer (2)	Cricket
14	Mr. Shiv Balak	ASO	Cricket
15	Mr. Yatish Panwar (Captain)		Volleyball
16	Mr. Khem Chand (Vice Captain)		Volleyball
17	Mr. Chand Ram		Volleyball
18	Mr. Manish Kumar		Volleyball
19	Mr. Ashok Kumar		Volleyball
20	Mr. M. Subramani		Volleyball
21	Mr. Arun Singh Rawat		Volleyball
22	Mr. Adarsh Raghuvanshi		Volleyball

## PARTICIPANTS FROM CSIR-NML, JAMSHEDPUR

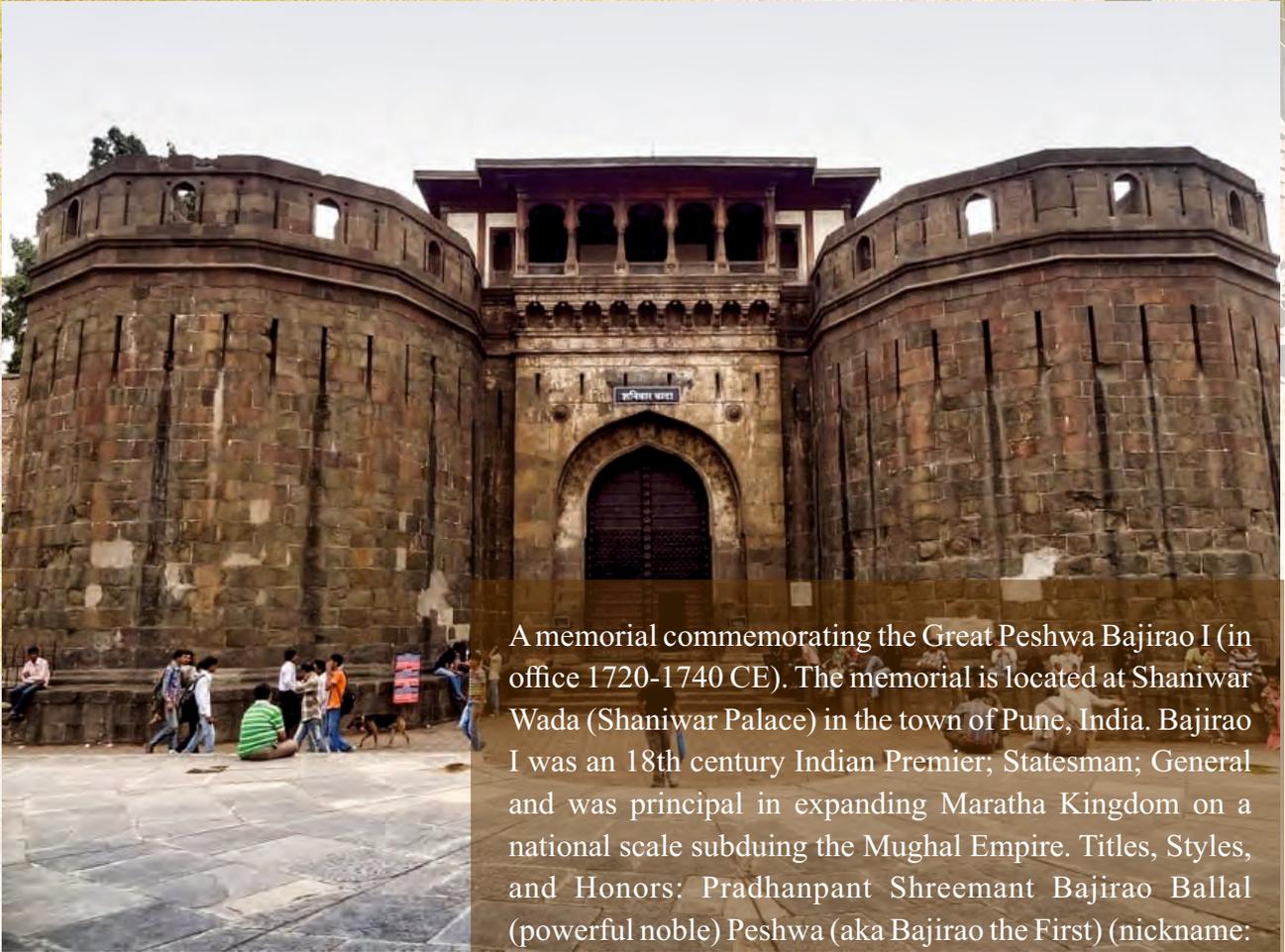


Sl. No.	Name	Post	Sports
1	Dr. M.M. Humane	Chief Scientist	Cricket
2	Dr. Bhupeshwar Mahato	Senior Technical Officer (2)	Cricket
3	Mr. Vijay Anand Mukhi	MTS	Cricket
4	Mr. Rajeev Ranjan Shrivastava	Senior Technical Officer (2)	Cricket
5	Mr. Rabindranath Behera	Technician (2)	Cricket
6	Dr. Sumanta Bagui	Principal Scientist	Cricket
7	Dr. Ammasi	Senior Scientist	Cricket
8	Mr. Lalit Kumar Meena	Senior Scientist	Cricket
9	Dr. Premkumar M	Senior Scientist	Cricket
10	Mr. Kalicharan Hembrom	Senior Scientist	Cricket
11	Mr. Deepak Kumar	SSA (F&A)	Cricket
12	Dr. Naveena	Senior Scientist	Cricket
13	Dr. Paritosh Dubey	Senior Scientist	Cricket
14	Dr. Kuldeep Singh Gour	Scientist	Cricket
15	Mr. Soupramanein	Senior Technical Officer (2)	Volleyball
16	Dr. M. Madan	Principal Scientist	Volleyball
17	Dr. V. Rajinikanth	Principal Scientist	Volleyball
18	Mr. M.U. Bhaskara Rao	Principal Scientist	Volleyball
19	Mr. Neeraj Mehta	Senior Steno	Volleyball
20	Mr. Ravi Ranjan Kumar	SSA (G)	Volleyball
21	Mr. Kogapu Sudhakara Rao	Technical Officer	Volleyball
22	Dr. Nikhil Kumar	Scientist	Volleyball

# PUNE DARSHAN - TOURIST PLACES



# SHANIWAR WADA (SHANIWAR PALACE)



A memorial commemorating the Great Peshwa Bajirao I (in office 1720-1740 CE). The memorial is located at Shaniwar Wada (Shaniwar Palace) in the town of Pune, India. Bajirao I was an 18th century Indian Premier; Statesman; General and was principal in expanding Maratha Kingdom on a national scale subduing the Mughal Empire. Titles, Styles, and Honors: Pradhanpant Shreemant Bajirao Ballal (powerful noble) Peshwa (aka Bajirao the First) (nickname: Rannmard Bajirao; Rau) with the styles of His Highness (prospectively); the Peshwa (prime minister/first minister) of Maratha India; de facto chief of all Maratha dominions; the foremost minister and chief general of the supreme Maratha Emperor (Chhatrapati)

**Shaniwarwada** (Śanivāravādā) is a historical fortification in the city of Pune in Maharashtra, India. Built in 1732, it was the seat of the Peshwas of the Maratha Empire until 1818, when the Peshwas lost control to the British East India Company after the Third Anglo-Maratha War. Following the rise of the Maratha Empire, the palace became the center of Indian politics in the 18th century. The fort itself was largely destroyed in 1828 by an unexplained fire, but the surviving structures are now maintained as a tourist site.



# THE RAJIV GANDHI ZOOLOGICAL PARK



The **Rajiv Gandhi Zoological Park**, commonly known as the Rajiv Gandhi Zoo, is located in Katraj of Pune in India. It is managed by the Pune Municipal Corporation. The 130-acre (53 ha) zoo is divided into three parts: an animal orphanage, a snake park, and a zoo, and includes the 42-acre (17 ha) Katraj Lake.

The zoo was re-named as the Rajiv Gandhi Zoological Park and Wildlife Research Centre (RGZP) and is still in the process of completion. It was inaugurated on the 14th March 1999. The zoo area is now 130 acres which also encompasses a water body popularly called as the Katraj Lake. The zoo is currently recognized and categorized as a large zoo by the Central Zoo Authority and houses 362 animals, of which 147 animals are classified as endangered and critically endangered as per the schedules of the Wildlife Protection Act of India. The animal collection and the zoo premises are cared for by a dedicated work-force of around 100 personnel. At the time of inauguration, the Rajiv Gandhi Zoological Park displayed the snake park, sambars, spotted deer and monkeys. Over the years all the animals from Peshwe Park have been shifted to Katraj; the last of the lot being shifted on 16th March 2005. All the animals are now housed in spacious, naturalistic, moated enclosures. The zoo is being designed and developed with the aim of contributing to the ex-situ conservation of the critically endangered fauna of the Western Ghats. One of our goals is to promote awareness of our precious biodiversity to the zoo visitors and inculcate in them a sense of responsibility to conserve them. We aim to achieve this through interpretation, education programmes and interesting signage. The wildlife research centre has been established to promote and carry out research in wild animals as even today, there is not a lot of data available on wild animal physiology, behaviour, diseases and treatment. In the recent years, the zoo has been successful in the captive breeding of many endangered animals like the Bengal tiger, sloth bear, four horned antelope, blackbuck, monitor lizard, jackal, peacock, Russell's viper, Indian cobra, etc.

# ISKCON NVCC TEMPLE



ISKCON NVCC (New Vedic Cultural Center) is located in the less congested area of Kondhwa near Pune. ISKCON NVCC is a temple devoted to Lord Krishna and Goddess Radha. The temple has lavish green hills in the background and provides its visitors with a great ambience. Once you enter the prayer hall, you will be awe-struck by the stunning idols of Lord Krishna and Goddess Radha. The idols are elegantly embellished with beautiful outfits and colourful garlands. The ceilings of the dome and the walls of the temple are artistically adorned with colourful paintings. The temple houses activities like youth training programmes and Bhagvat Gita reading classes, women and family empowerment activities, etc. apart from being the residency of Radha, Krishna and Balaram.

The 'International Society for Krishna Consciousness' abbreviated as ISKCON, is also commonly known as the 'Hare Krishna movement' is a spiritual organisation that was established by A.C. Bhaktivedanta Swami Prabhupada in the July of 1966 in New York. ISKCON matches the schoolings of the Vedic scriptures and the Vedas, which includes the Bhagavad-gita and Srimad Bhagavatam. These holy scriptures teach 'Vaishnavism' or the service to Lord Krishna.

# SHREEMANT DAGDUSHETH HALWAI GANAPATI



**Dagdusheth Halwai Ganapati Temple** in Pune, India is a temple dedicated to the Hindu God Ganesh. The temple is located a short distance from the historical Shaniwar Wada fort, which was administrative headquarters of Peshwas of Maratha Empire.

The temple is popular in Maharashtra and is visited by thousands of pilgrims every year. Devotees of the temple include celebrities and Chief Ministers of Maharashtra who visit during the annual ten day Ganeshotsav festival. Dagdusheth Halwai Ganapati Temple was founded in 1893 by Dagadusheth Halwai, a sweetmart seller who became a wealthy businessman. Halwai had lost his son the previous year, and at the request of his guru created murtis (image of a deity) of Ganesha and Dattatreya. He later established the Halwai Ganapati Trust. Bal Gangadhar Tilak, during the British Raj, gave a public form to the Ganesh festival celebrations as a way of getting around an order that barred public meetings.



# THE AGA KHAN PALACE



Aga Khan Palace was built in the year 1892 by Sultan Mohammad Shah Aga Khan III in Pune. Since then it is one of the biggest landmark in Indian history. The Aga Khan Palace of Pune was an act of charity by the Sultan who wanted to help the poor in the neighboring areas of Pune who were drastically hit by the famine. Aga Khan Palace is one of the finest piece of architectural beauty in the western India. The exquisite palace is surrounded by the lavish green gardens all around. Aga Khan Palace in Pune also houses some lavishly decorated guest rooms and suites which take you back to the royal past of the heritage building. Aga Khan Palace of Pune holds great significance as from 9th August 1942 to 6th May 1944, this palace was the prison for Mahatama Gandhi, his wife Kasturba and his secretary Mahadev Bhai Desai though the last two passed away in between their captivity at the Aga Khan Palace at Pune. Both of them have memorials in their name in the same complex near Mula river and everyday several visitors visit them. In 1969, the Aga Khan Palace at Pune was donated to the Indians by Aga Khan IV as a mark of respect to Gandhi and his philosophy. Today the Aga Khan Palace in Pune also houses a memorial on Gandhi where his ashes were kept. The historical palace also hosts a shop that deals in khaadi and hand loomed textiles.



# SARAS BAUG

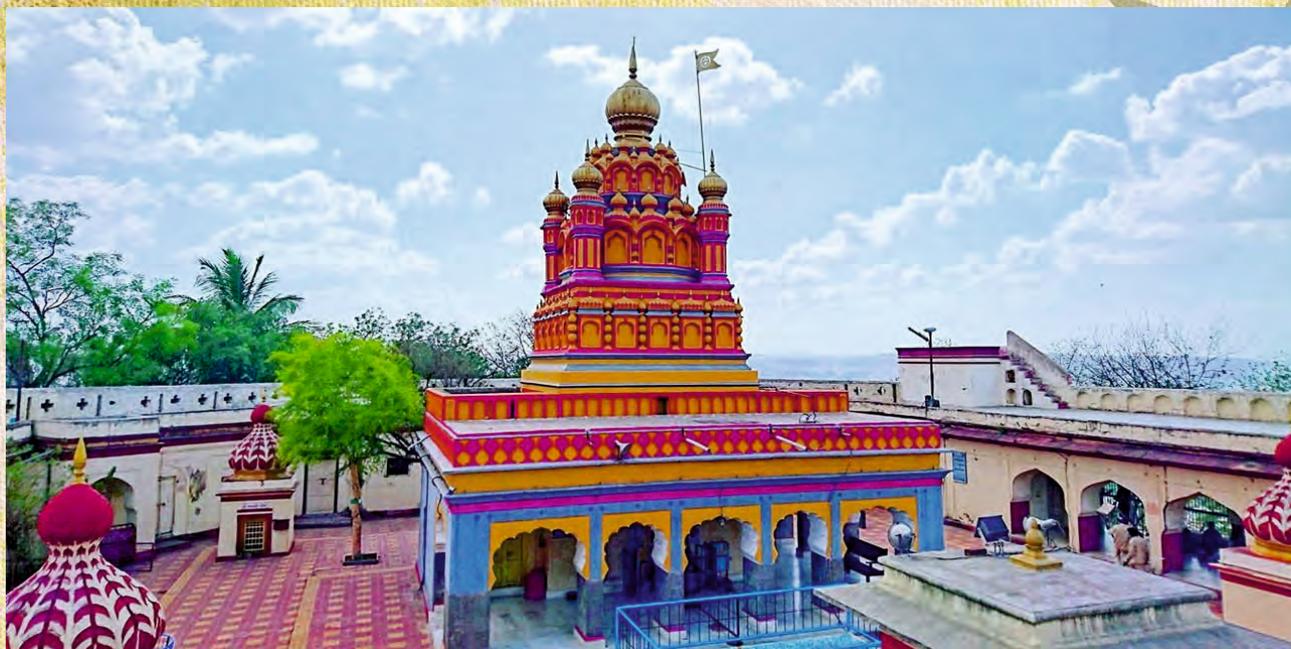


The “Sarasbaug Ganapati” temple is run under the auspices of Shree Devdevshwar Sansthan, Parvati and Kothrud. The Sarasbaug temple houses the idol of Shree Siddhivinayak (God who makes wishes true). A sacred ground of faith for millions of devotees in Pune and around the world, on an average the Sarasbaug temple receives ten thousand visitors a day and this figure goes upto eighty thousand devotees per day on Ganesha Chaturthi and other special occasions.

Various dignitaries and luminaries throughout India have made it a point to visit this sacred temple and seek the blessings of Shree Shiddivinayak. Some of the dignitaries include Late S. D. Sharma, Ex Vice President of India, Shankaracharya Shree Jayendra Saraswati of Kanchi Kamakoti Peetam, Lata Mangeskar, Hridayanath Mangeskar and Arun Date.



# PARVATI HILL



**Parvati Hill** is a hillock in Pune, India. The hillock rises to 2,100 feet (640 m) above sea level (It includes Punes MSL which is 560m from sea level, so effectively it's 80m(263 feet) from ground base). Atop the hillock is the Parvati Temple, one of the most scenic locations in Pune. The temple is the oldest heritage structure in Pune and was built during the rule of the Peshwa dynasty. For visitors, Parvati hill is also an observation point that offers a panoramic view of Pune. It is the second highest point in Pune (after Vetal Hill). The hill has 103 steps leading to the top of the hill where the temple is situated.

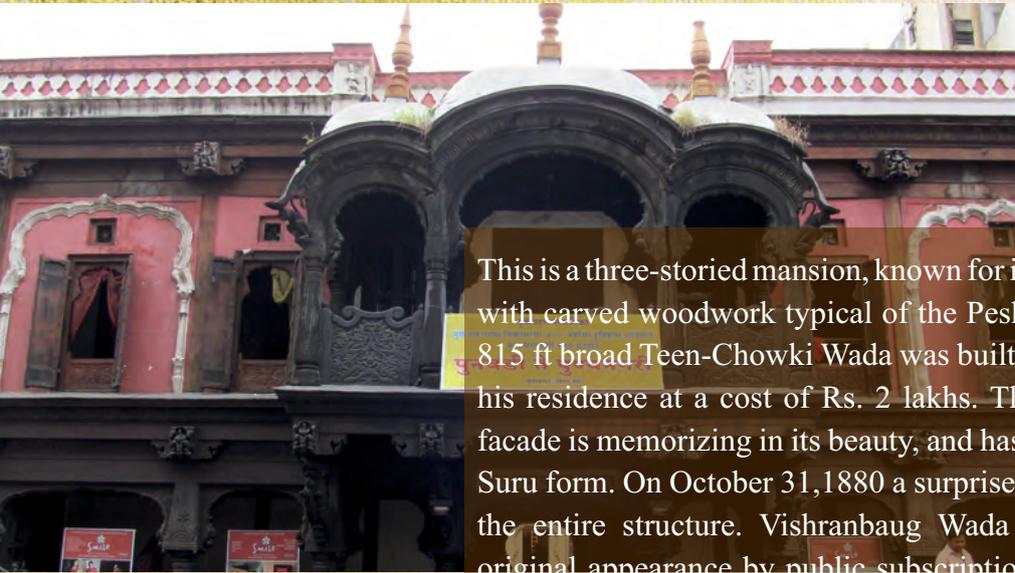
The main temple, Devdeveshwara, is made of blackstone. It was completed under Balaji Baji Rao, in 1749. Other temples are dedicated to Vitthal and Rukmini, Vishnu, and Kartikeya. Parvati Hill has 5 temples atop it:

- Devdeveshwar temple (Shiva and Parvati)
- Kartikeya Temple
- Vishnu Temple
- Vitthal Temple
- Rama Temple

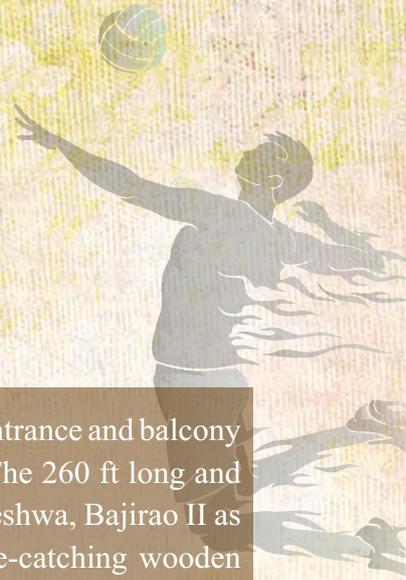
The temples open at 5:00 am and close at 8:00 pm.

Besides the temple, the Peshwa Museum is situated there. The samadhi of Balaji Baji Rao lies, where he spent the last moment of his life. Parvati water tank supplies water to the half of the city Pune.

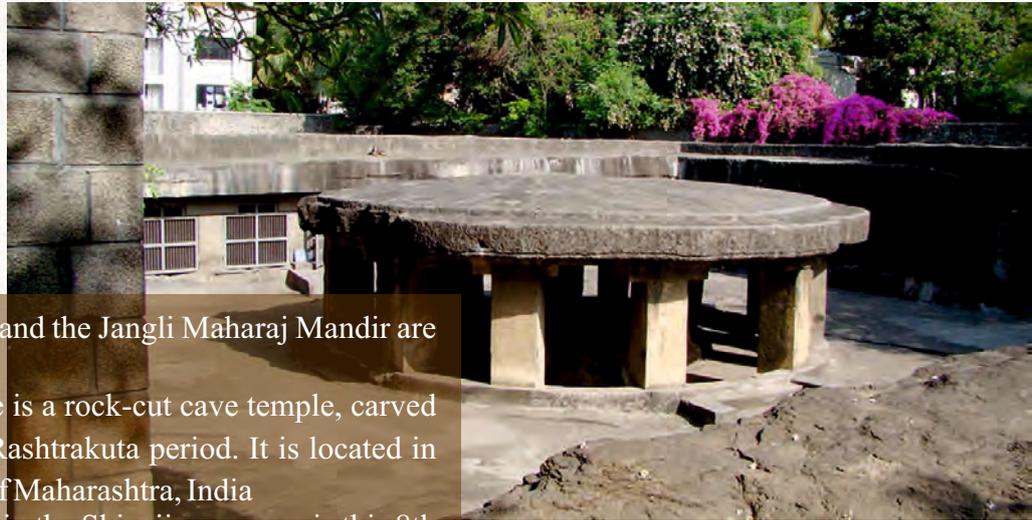
## VISHRAMBAUG WADA



This is a three-storied mansion, known for its beautiful entrance and balcony with carved woodwork typical of the Peshwa period. The 260 ft long and 815 ft broad Teen-Chowki Wada was built by the last Peshwa, Bajirao II as his residence at a cost of Rs. 2 lakhs. The Wada's eye-catching wooden facade is memorizing in its beauty, and has beautiful columns carved in the Suru form. On October 31, 1880 a surprise fire engulfed the Wada ravaging the entire structure. Vishranbaug Wada was restored to its somewhat original appearance by public subscriptions and municipal contributions. For many years till 1958 it was to serve as the offices of the Poona Corporation. Today it houses assorted offices: a strange fate for what was once a king's abode.



## THE PATALESHWAR CAVE TEMPLE (Jangli Maharaj Mandir)



The Pataleshwar Cave temple and the Jangli Maharaj Mandir are located next to each other. The Pataleshwar Cave Temple is a rock-cut cave temple, carved out in the 8th century in the Rashtrakuta period. It is located in what is now Pune, in the state of Maharashtra, India. Hidden in the heart of the city in the Shivajinagar area is this 8th century rock-cut temple. Still in use, this temple, similar to the Caves at Ellora, has been painstakingly hewn from a single rock and includes massive pillars, a Shiva shrine and a Nandi bull.

# RAJA DINKAR KELKAR MUSEUM



The Raja Dinkar Kelkar Museum is in [Pune, Maharashtra, India](#). It contains the collection of Dr. [Dinkar G. Kelkar](#) (1896–1990), dedicated to the memory of his only son, Raja. The three-storey building houses various sculptures dating back to the 14th century. There are also ornaments made of ivory, silver and gold, musical instruments (a particularly fine collection), war weapons and vessels.

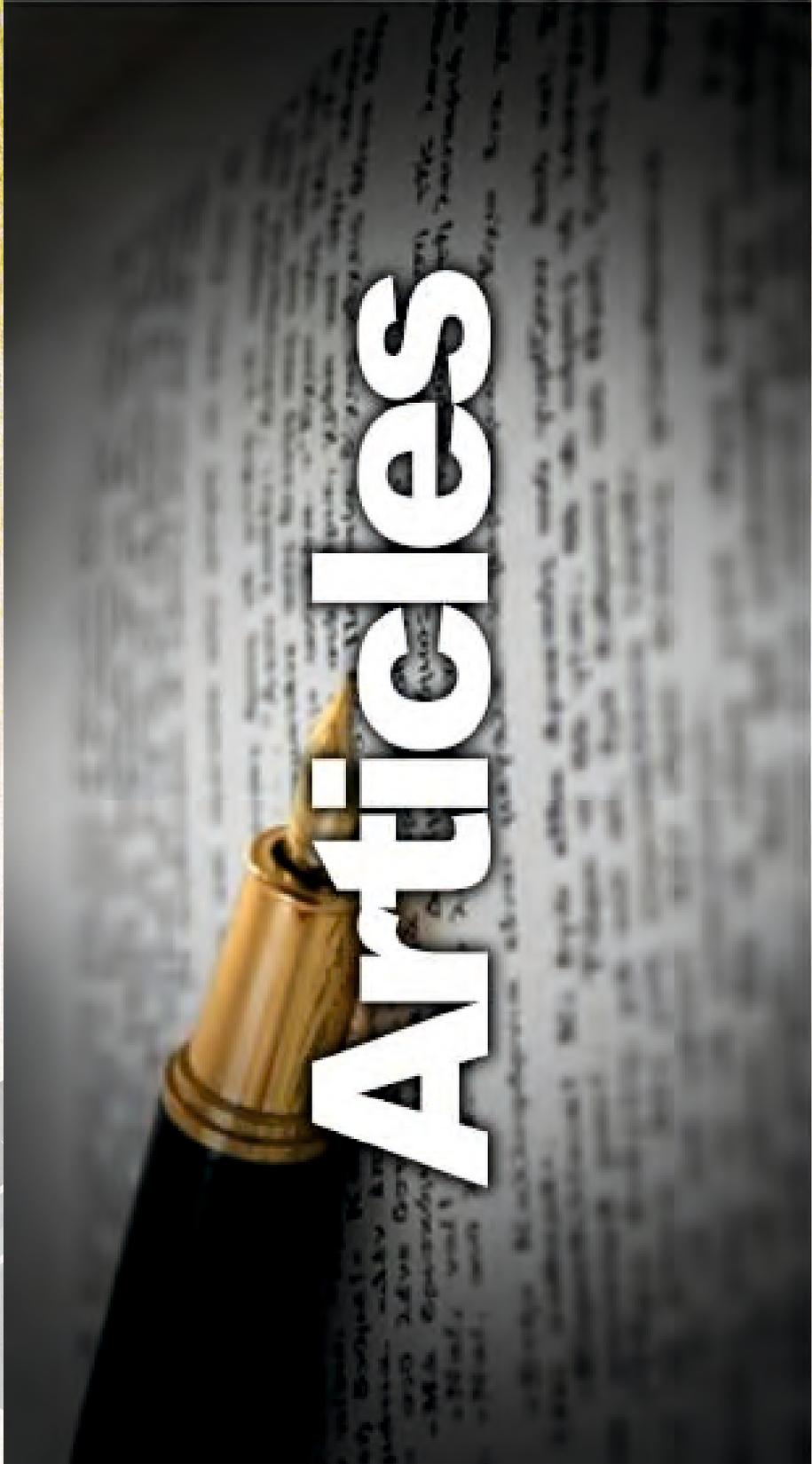
The collection was started around 1920, and by 1984 it contained around 15,000 objects. The museum was established in 1962, and Dr. Kelkar donated his collection to the Government of Maharashtra in 1992.

The museum now holds over 20,000 objects of which 2,500 are kept on display. These consist of mainly Indian decorative items from everyday life and other art objects, mostly from the 18th and 19th centuries. The museum's collection depicts the skills of the Indian artists of the time, including the prominent works of Pandit Abhijeet Joshi

*Mahendra Vadnere*



**ARTICLES**





## SPORTS, HEALTH and FITNESS

**Dr. Mrs. Pooja Raut (PT),**  
(Physiotherapist, NCL Medical Center)

Sports is an excellent medium that goes a long way to safeguard your wellbeing. They provide you with an exciting routine and a healthy body. Physical conditioning like playing sports comes with its benefits;

**Physical Health Benefits:** Sports enhance heart function, improve circulation, and reduce the risk of heart diseases. Regular physical activity burns calories, helping to maintain or reduce weight. Weight-bearing activities like running and team sports increase bone density and muscle strength. Physical activity enhances the body's ability to fight infections and diseases thereby boost our immune system. Aerobic sports like swimming or cycling improve lung capacity and efficiency. Participation in sports lowers the likelihood of developing diabetes, hypertension, and certain types of cancer.

**Mental Health Benefits:** Physical activity releases endorphins, which reduce stress and promote a sense of well-being. Playing sports enhances mood and reduces symptoms of anxiety and depression. Regular exercise improves the quality and duration of sleep. Sports boost focus, memory, and critical thinking skills.

**Fitness Benefits:** Sports like gymnastics or yoga improve flexibility and joint health. Activities like volleyball or cricket enhance motor skills and coordination. Regular participation in sports builds overall stamina and energy levels. Fast-paced sports improve reaction times and agility.

**Social and Psychological Benefits:** Team sports foster collaboration, communication, and social skills. Regular training teaches discipline, time management, and goal-setting. Achieving fitness goals or excelling in sports boosts self-esteem.

**Long-term Health Benefits:** Regular sports activities slow the aging process and maintain mobility in later years. For conditions like arthritis, appropriate sports can reduce pain and stiffness. By incorporating sports into daily life, individuals can achieve a balanced, healthy lifestyle and enhance their overall quality of life. Competition helps us to stretch our physical & mental limits for the better performance of our mind & body. It helps in our personal development. Sports inculcate the feeling of togetherness when you play in a team. Competition develops a fighting spirit in you where you fight against the defeat which builds your mental toughness. This helps you in all the situations in your life. Sports along with benefits of physical exercise give added advantages too e.g. Sportsman spirit, team spirit, acceptance to win or loss in competition. These qualities which one develops during sports career go a long way in personal life - which helps in family as well as professional life.



**Dr. Suresh Bhat,**  
*Chief Scientist, Polymer Science &  
Engineering Division, CSIR-NCL*

## History & Development of Volleyball in India

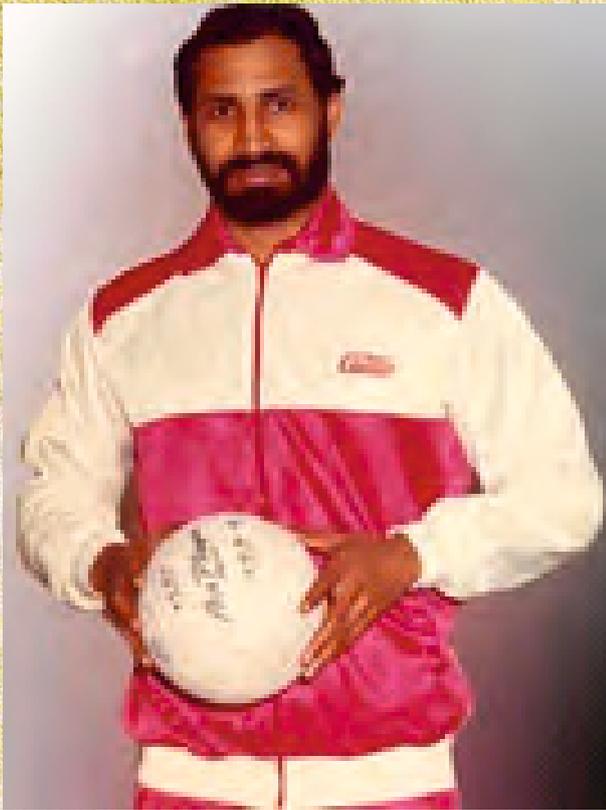
Volleyball is a team sport in which two teams of six players each are separated by a net. Each team tries to score points by grounding the ball on other team's court under an organized rule. The game of volleyball was invented in 1895 by William G. Morgan, a physical education director at the Young Men's Christian Association (YMCA) in Holyoke, Massachusetts, USA. With YMCA societies playing prominent roles in India, China, Europe, South America and Africa, the game started spreading in these regions. Though the game was invented in USA, it was in Asia that it gathered steam. By 1913, the popularity of the game in the Asian subcontinent was evident as that year saw the game being included in the far-eastern games organized in Manila. Though the game was played informally in India for a long time since its origin, it became popular only in 1936 (pre-independent India) with the first interstate volleyball championships conducted by the Indian Olympic Association (IOA). The game got proper structure with the formation of Volleyball Federation of India (VFI) in 1951 and the erstwhile interstate tournament evolved into the Senior National Championships, with the first edition held in 1952. This helped the nation to discover several talents who went on to represent senior Indian volleyball team. The Indian team had an almost immediate impact on the global stage winning the 1955 Asian tournament in Tokyo followed by a bronze medal at the 1958 Asian games at Tokyo. Volleyball was introduced in the Asian games only in 1958. Japan has the best volleyball team in the Asian subcontinent.

The finest Indian volleyball team was the one that represented the nation in the 1986 Asian games in Seoul. The team was led by the enigmatic Cyril Valloor and had players like G.E. Sridharan, K. Udayakumar, Abdul Basith, Dalel Singh, Sukhpal Singh, Jimmy George and P.V. Ramana, father of Indian women badminton icon, P.V. Sindhu. All of them were Arjuna awardees, but the most special of them all and the team's lynchpin was the maverick talent, Jimmy George, an Arjuna award winner himself and a legend of Indian Volleyball. Indian volleyball has gone through lot of crests and troughs now and currently ranks 67 in the FIVB rankings.

### **Remembering Jimmy George - The legend of Indian Volleyball**

**Jimmy George (08.03.1955 – 30.11.1987)** undoubtedly was one of the best volleyball player India has produced and a legend of the game. He is regarded as one of the best volleyball players of all time and is frequently referred to as the God of Indian volleyball. Jimmy is to Indian volleyball what Sachin Tendulkar is to Indian cricket.

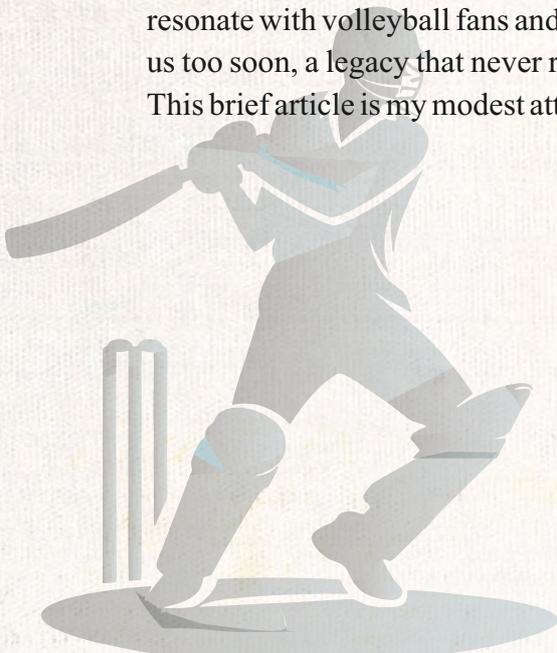
The 6'2" spiker from Kerala never quite achieved the same level of recognition in India as Tendulkar or even his sister-in-law, Anju Baby George, one of the country's greatest track and field athletes.



Jimmy George, however, has made an equally famous contribution to Indian sports.

Born on March 8, 1955, in Peravoor, a small town in Kerala's Kannur district, Jimmy George was the second-eldest among eight brothers. His father Joseph George was a lawyer and his mother's name was Mary George. Volleyball was literally in his blood as he learned the sport from his father, a former university level player. Although Jimmy had originally been interested in swimming, he made the wise choice to transition to volleyball at a young age. In 1971, at the age of 16, he secured a berth in the Kerala state team. At the age of 19, Jimmy represented India at the Asian games in Tehran in 1974. He represented India in the 1978 and 1986 Asian games also. In 1979 he went to play for Abu Dhabi sports club. He then became the first Indian to play for an Italian club. He is fondly remembered in Italy even now.

PalaGeorge, an indoor arena located in Montichiari, Italy is dedicated to Jimmy George. He was regarded as one of the world's top attackers when he was at his best. Jimmy George had one of the most graceful jumps, and his ability to hang in the air for a fraction of second longer than most helped him place his smashes, which were by themselves powerful due to his large frame, better. He received the Arjuna award in 1976, making him the youngest volleyball player to do so. He was full of life and on top of his game when the cruel hand of fate snatched him away from this world. In 1987, he lost his life in an automobile accident in Italy at the age of 32. Jimmy is another of those sports heroes who has been forgotten years after his death, possibly because he played a sport that lost out to cricket. Jimmy George died on 30 November 1987 almost 37 years back. For most modern sports fans, this name may not be familiar. However the name "Jimmy George" will resonate with volleyball fans and those who grew up in 1970s and 1980s; A man who was taken from us too soon, a legacy that never reached its full potential, and a memory that is gradually vanishing. This brief article is my modest attempt to honour this real volleyball legend.



# Cricket and Volleyball Players Diet - The Essential Components and Nutrition

**A proper Cricket and Volleyball players diet should include a balanced set of nutrition. Diet is one component that every elite Cricket and Volleyball player must include as part of their Cricket and Volleyball game/ training program.**



**The player's diet discussed below is more than just eating healthy foods, but a highly systematic science of the proper nutrition needed for their game.**

A Cricket and Volleyball player's diet is different from a regular diet, in that the nutrition requirements are more specific and regulated. For players engaging in Cricket and Volleyball training, a highly specialized diet should be carefully planned and monitored.

In today's modern Cricket and Volleyball players recognize the need of on cricket ground training as well as off cricket ground and court preparation. All of the intangibles must be in place before a Cricket and Volleyball player can truly blossom and reach the next level. Too many players lack the off Cricket and Volleyball nutrition preparation needed to really succeed in a competitive Cricket and Volleyball playing environment. Eating a healthy and balanced diet should never be taken for granted. In order to achieve peak performance in Cricket and Volleyball, players must have adequate energy in their bodies for this level of performance.

## **Requirements of a Cricket and Volleyball Players Diet**

Cricket and Volleyball is a sport that requires endurance, agility, speed and power. Thus every Cricket and Volleyball player requires high energy storage to accomplish all these requirements. They also need protein to build up muscles and essential vitamins and minerals. For every player to win matches and tournaments, they must maintain proper diet not only during tournaments (diet before, during and after matches) but during practice and trainings as well. This is because an optimal Cricket and Volleyball diet is built over time.

A Cricket and Volleyball diet must be focused on high carbohydrate energy foods and adequate hydration. Diet should also be timed appropriately especially during tournaments.

## **What is a balanced and healthy diet?**

A balanced diet is a diet that contains all the necessary components responsible for a healthy body. These components are: carbohydrates, proteins, healthy fats, minerals and vitamins, and water or fluids. It is also ideal to eat fresh food rather than the readymade and processed food. Below are some guides on how to follow a balanced and healthy Cricket and Volleyball players diet.

## Main components of a healthy and balanced diet:

### Carbohydrates in a Cricket and Volleyball Diet

Cricket and Volleyball players need to consume high amount of carbohydrates considering the amount of energy they loss during Cricket and Volleyball trainings, practice and matches. Carbohydrates fuel muscles and avoid early muscle fatigue, thus increasing the player's endurance. Cricket and Volleyball players normally lose 500 to 1500 of calories after every match. For a professional Cricket and Volleyball player who has to play several matches in a tournament has to replenish carbohydrates loses by eating high carbohydrate foods. Any carbohydrate containing foods provide nutrients, fiber and above all energy.

A professional research showed that a healthy Cricket and Volleyball players diet include 7-10 grams of carbohydrates per kilogram weight of the player's body. It is also recommended to consume only the complex carbohydrates sources and avoid the simple sources of carbohydrates. Examples of high carbohydrate food that contain complex carbohydrates are pasta, rice, bread, oatmeal, potato, and other cereals.

Foods that contain simple carbohydrates such as chocolates bars, sugary drinks and so on should only be used for emergencies. Like for example, Cricket and Volleyball players may consume snack chocolate bars during matches.

### Protein in a Cricket and Volleyball Diet

A Cricket and Volleyball player's diet must also include protein. Protein is essential for the Cricket and Volleyball players' muscles build up. Protein is broken down into amino acids which are very important in muscle build up, hemoglobin formation and many others. Proteins also help players to recover quickly from long hours of matches and injuries.

For a healthy diet and to reach the protein requirement for Cricket and Volleyball players, one should consume two to three servings of protein sources foods. Oatmeal is a very good example of a cereal meal that provides good protein aside from the 7 B vitamins (Vitamin B1, Vitamin B2, Vitamin B3, Vitamin B6, Vitamin B5, Vitamin B7, Vitamin B9). Other examples of high protein source food are beans, eggs, meat (poultry, beef, port, etc.) fish, cheese, milk, yogurt and many others.

### Fruits and Vegetables for vitamins and minerals in a Cricket and Volleyball Diet

Other important diet components include fruits and vegetables. They are the natural source of vitamins, minerals, antioxidants and other nutrients. For a healthy diet, a player has to have three to five servings of vegetables in addition to four servings of fruits. 1/2 cup of cooked vegetable of any type (e.g. spinach, tomatoes, and other vegetables) and fresh salads is equal to one serving. And one serving of fruits is 1/2 cup of any type of fruits such as the berries, apple, mango and many others.



### **Fluids in a Cricket and Volleyball Diet**

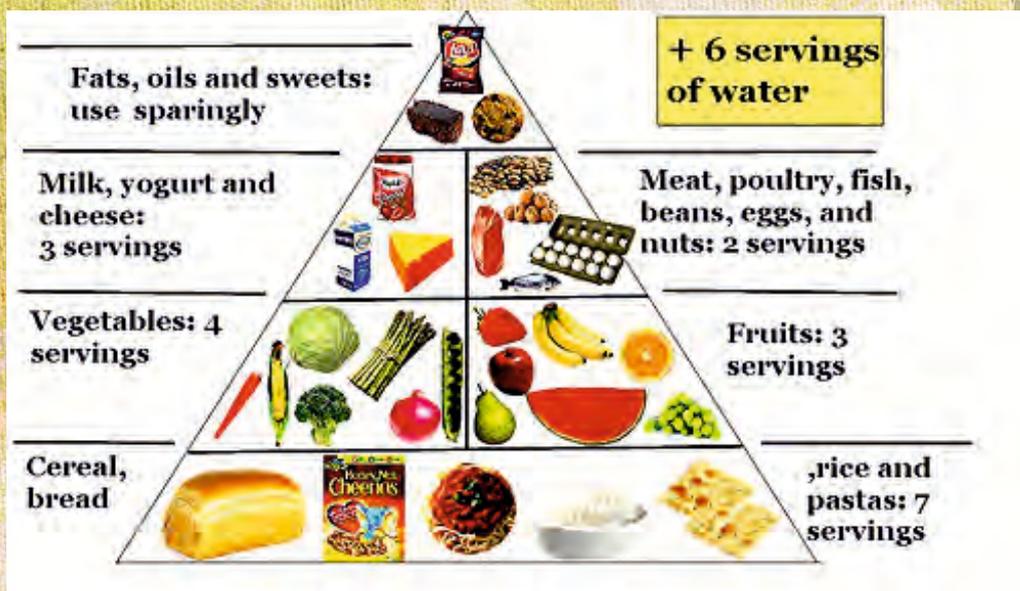
Cricket and Volleyball players need to drink water or fluids regularly even without any physical activities because hydration is vital for normal body processes. Reports show that ideally, Cricket and Volleyball players should consume 120 ounces of water or any type of fluid daily. It is also very important to drink the water or fluid regularly and not just drink it when you become very thirsty. Professional Cricket and Volleyball players in particular, need to drink lots of water or fluids all throughout the day and the night before big events or matches so that their body is always hydrated and functioning perfectly. In addition to water, Cricket and Volleyball players should also drink sports drinks that contain electrolytes, carbohydrates, sodium, and proteins. These types of sports drinks serve as immediate replenishment of all the essential body elements that are lost during matches or any intensive physical activities.

### **Tips for hydrating before training or a match:**

- To maintain a proper Cricket and Volleyball player diet, you have to limit (or if possible) avoid drinking beverages that contain high level of caffeine such as coffee, tea, and caffeinated cola drinks. Caffeine enhances urination causing fast fluid loss. It can also be a nuisance if your need to urinate comes in the middle of a match. This is not just a nuisance but can also affect your focus and concentration and your performance as a whole.
- Hydrate yourself 2 hours before the match by drinking 17-20 oz of drinks.
- As much as possible, drink regularly even during the match. Do not wait until you feel thirsty to grab your drinks. You have to drink about 4-8 oz of liquid when there is time or during the changeover. One very good indication if your fluid intake is enough is the color of you urine. Light or pale yellow color urine indicates that the fluid intake is enough.

### **Fats in a Cricket and Volleyball Diet**

Fats may sound unhealthy but a Cricket and Volleyball player's diet should also include this component. This component of diet is responsible for the slowing down of the carbohydrates absorption of the body. This means that the fat component help in prolonging the energy supply of the body. This nutrient is vital in a diet especially in sports like Cricket and Volleyball where matches can last for hours. Examples of good source of fats are nuts (for players with no allergies to nuts of course) such as walnuts and almonds, natural peanut butter, high fat milk, olive oil, fatty fish (e.g. mackerel), and whole eggs. However, it should be noted though that appropriate amount of fat should be consumed. Too much or too little fat intake has its own disadvantages. Appropriate fat consumption is at least 15% of the dietary calories requirements. Very low (lower than the requirements) disallow the player's body to absorb enough fat soluble vitamins such as Vitamin E which plays a vital role as antioxidants. Low fat diet restriction also put the players in limited food choices. The more varied food choices a Cricket and Volleyball player has the better. In addition, since fat is responsible for the prolonged supply of body energy, very low fat intake can also decrease the player's endurance and performance. On the contrary, too much fat consumption can also lead to some health related issues. The most common issue related to extremely high fat consumption is the cardiovascular disorder. Furthermore, too much fat consumption can also result to slow and sluggish performance.



Breakfast is always the most important meal of the day not only for Cricket and Volleyball players but for everybody. Breakfast is the key for any well versed Cricket and Volleyball player's diet. This meal is vital to replenish all the nutrients, minerals, glycogen, fluids during the whole night fasting. Cricket and Volleyball players normally have very low level energy in the morning before breakfast, thus it is important to include high carbohydrates in Cricket and Volleyball players diet for breakfast. This means that the depleting glycogen in the player's muscles is refueled and the player is able to start his day right. The meal after breakfast can be consumed at smaller quantities but at more frequent intervals. Cricket and Volleyball players should avoid eating one big meal in a day and consume no more after is. Smaller but more frequent meals provide a constant supply of energy. In addition, eating too much meal may overload the digestive system which may cause several problems. One of which is the sluggish performance of the player. Lastly, bigger meals at a time can also results to the accumulation of fats due to improper digestion.

***Reshma Mahendra Vadhre***

*Dietician, Sashwat Hospital and  
Reshma Weight loss Clinic*





## “SSBMT” - The CSIR Family Get Together of Sportsmen

**My memory of SSBMT goes back to the year 1990 when I joined CSIR NCL.**

In the week of my joining there talks of Cricket going on in my Section as three of my colleagues from Electrical section were part of the contingent which was on the tour to Calcutta for playing Zonal. I was excited to know about the SSBMT tournament as I am a diehard fan of cricket. After a weeks' time the contingent from Calcutta arrived and I came to know about the SSBMT. As a player I was given entry to the NCL cricket team. After two years of representation in NCL cricket team in local matches the day had arrived when the SSBMT zonal at Hyderabad were announced. I was eager to play the SSBMT. After a rigorous practice sessions & with a fierce competition my name was declared in the squad of NCL cricket team for tour to IICT Hyderabad. It was the first experience of SSBMT which got enriched by taking part in every SSBMT till date.

Since then my journey of SSBMT has started & it is going on for the last 32 years. SSBMT has given me immense pleasure of playing for the Cricket team of my Laboratory the NCL. By participating in SSBMT I could travel to almost all the Laboratories & got an opportunity see the different cultures of country, different working cultures of Labs. Over and above the most creditable thing I got from SSBMT is I could make a very dear friends all across the CSIR Labs. My habit of connecting people gave me very good friends to name a few are Mr.Farat Hussain, Dr.Sridhar, Dr.Sriram, Dr.Hafiz ur rehman, Mr.Srinivas, Mr Akhtar Mehndi, Mr. Wilson, Mr.Ravikiran, Mr.Sai Kishore from Hyderabad, Mr. Ravi Bhatia, Mr. Ramesh Baura, Mr. Ravi Saini from CEERI Pilani, Mr. Kapil, Mr.Jai Mehta from Chandigarh, Mr.Devendra Haware, Mr,Dinakar, Mr.Shiva, Mr.Ramesh from Mysore, Mr.Mehboob from NAL Bangalore, Mr.Ashok Balkrishnan from Karaikudi,Mr.Mahesh M from NIO Goa, Dr.Deka from Jorhat, Mr.Anand Chaudhary,Mr.Makwana, Mr. Rawal from Bhavnagar, Mr.Ashween from CIMAP Lucknow..... The list goes on and on. This collection of very good friends could be possible only because of SSBMT & I am really thankful to the NCL that gave me an opportunity to play for NCL. Apart from the games, personal relations with these friends boosts the energy to perform well in the professional life as well. Due to this friendship where ever I travel I meet the friends & never felt away from home.

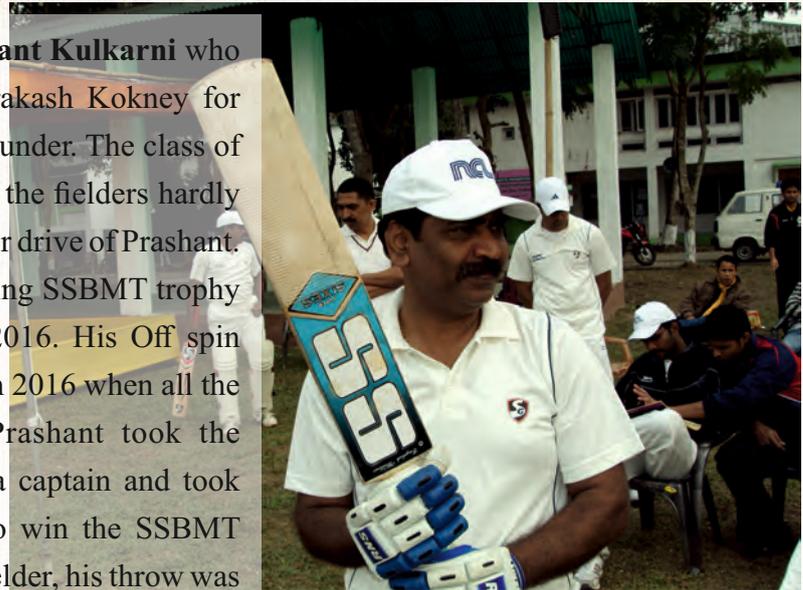
Along with the friends from other CSIR Labs I feel fortunate that I got an opportunity to play with the very great stalwart players of CSIR NCL Team. Everyone was of a great class. I vouch that if there would have been an IPL at that time at least few of them would have represented IPL.



To start with the first name come to my mind is of **Mr. Prakash Kokney**. A legendary opening Batsman & wicketkeeper of highest class. Prakash Kokney captained NCL for long time. Prakash had a typical style of holding the bat with index finger coming out on the backside of bat. Prakash used to hit the square cut so nicely with a precision that the ball will bisect the fielders at point & gully. He scored many centuries & half centuries in the league matches. Prakash Kokney was the wicket keeper of highest class who used to stand close to the stump for the bowling of fast bowlers as well. Prakash Kokney Represented all India CSIR team for many tournaments & shown his talent at the national level.

***Mr. Prakash Kokney***

Then comes the name of **Mr. Prashant Kulkarni** who was the opening partner of Mr. Prakash Kokney for many years as well as the best all-rounder. The class of batting of Prashant was so nice that the fielders hardly dare to put their hand to stop the cover drive of Prashant. Prashant has unique record of winning SSBMT trophy for the two times i.e. in 2008 & 2016. His Off spin bowling has brought us the trophy in 2016 when all the bowlers were giving runs and Prashant took the responsibility on his shoulders as a captain and took three wickets against IMTECH to win the SSBMT trophy. Prashant was the excellent fielder, his throw was like a bullet. I remember the incident when we were playing finals vs CDRI at Lucknow in 2005 and the match was balanced till last over. Opponent team needed more runs in less balls, third ball of last over was played towards mid-off towards Prashant. He fielded nicely and thrown the ball towards wicket keeper. The throw was so fast that the ball directly hit the eyeball of wicket keeper in spite of wicket keeper wearing the helmet. Prashant also played for CSIR team and played a crucial role at national level to win many matches for CSIR.



***Mr. Prashant Kulkarni***



The third great player of NCL cricket team was **Sanjay Patil**, an excellent all-rounder cricketer of NCL team. Sanjay Patil scored number of Centuries & half centuries by batting at number 4. I remember in one of the local leagues matches series Mr.Sanjay score 5 consecutive fifties. In one of the match I witnessed Mr. Sanjay Patil scored 215 not out & in the same match Mahendra Balmiki also scored 205. It was the golden time of NCL cricket team when the batsmen at the lower order hardly get chance to bat. Off spin bowling by Sanjay Patil have taken many wickets and won many matches for NCL team. Sanjay Patil was the fielder of Point position and there were very few incidents that the ball has passed through the Points position.

***Mr. Sanjay Patil,***

Mahendra Balmiki sirf Naam hi Kaafi hai in CSIR Cricket. There is no Cricket player in CSIR Labs who does not know Mahendra Balmiki. He was the best all-rounder of CSIR NCL team as well as CSIR National team. I vouch that if he would have got the right opportunity during his tender age he would have played cricket at very high level. Mahendra Balmiki captained NCL Cricket team for the longest period. Mahendra has scored large number of centuries and half centuries at local league matches. Mahendra also scored century at SSBMT when NCL played zonal at Dhanbad. That was the greatest inning played by him. Many of the sixes hit by him were lost in the railway station near the Cricket ground. Mahendra was the very accurate bowler. Mahendra used to bowl the fast bowling with very accurate swing bowling. In his later part of cricket career Mahendra started slow bowling. But the bowling was so accurate that five fielders used to stand at three slips, gully, short cover & cover. And the bats could hardly hit him on the other side of these filed positions. Fielding by the Mahendra was the treat to watch at any position. The throws used to be so accurate that if he hit the ball on square leg position with only one stump vision, he used to hit the stump. Mahendra started wicket keeping & it was so skill full that no batsman dared to step out of the crease.



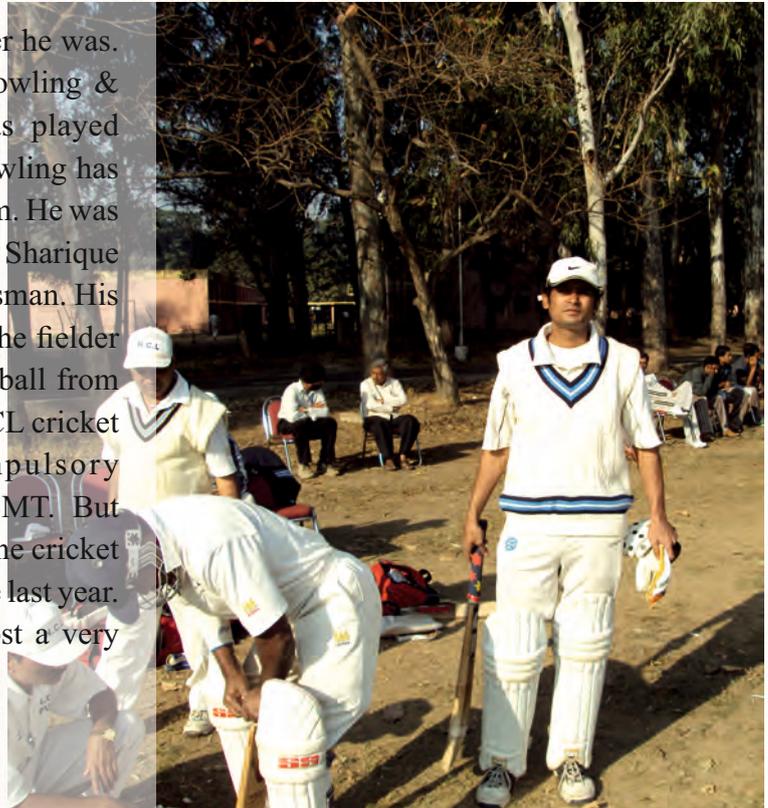
***Mahendra Balmiki***



***Mahendra Vadnere***

Mahendra Vadnere we call him Vaddu is the best & very polite cricketer of CSIR NCL cricket team. Mahendra Vadnere used to bowl left hand fast bowling & used to open the bowling for NCL cricket team. His bowling was very difficult to play as he had a very dangerous weapon of outswing bowling. He used to bowl the very accurate leg spin bowling. Mahendra Vadnere has taken big number of wickets with his fast as well as spin bowling. Mahendra Vadnere used to bat at open position or one down position. He has number of centuries at his cricket at local league matches. Mahendra Vadnere represented CSIR national team number of times to win matches for CSIR cricket team. Mahendra Vadnere is the very polite cricketer with his tongue but very dangerous with his bowling and batting.

Late Sharique Inamdar, what a cricketer he was. Fantastic all-rounder with very fast bowling & and explosive batsman. Sharique has played Cricket with great passion. His fast bowling has won many matches for NCL cricket team. He was the fastest bowler of NCL cricket team. Sharique was the very explosive and fearless batsman. His straight drives were treat to watch as the fielder were just used to watch and bring the ball from boundary line on his straight drive. NCL cricket team will never forget the compulsory “Antakshari” in the train and at the SSBMT. But his health had compelled him to leave the cricket at early age and he has left all of us in the last year. With his passing away we all have lost a very good friend.



***Sharique Inamdar***



### ***Ganesh Karanjkar***

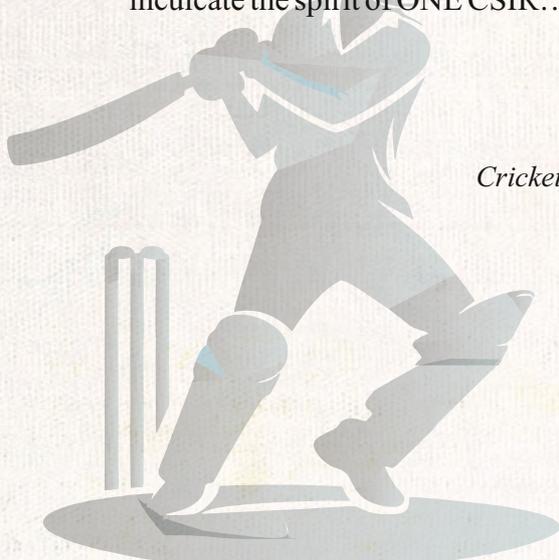
Along with all these stalwart I will be failing in my expression if I forget the contributions of Mr.AJit Phadke, Mr.Sunny Mathew, Mr.Sanjay Jadhav, Mr.Sachin Gawali, Mr.Sunil Patel, Mr.Anil Wachkal,Mr.K.T.Jadhav, Mr.G.T.Mane with whom I enjoyed a lot of cricket.

From student fraternity the contribution of Dr.Milind Sathe, Dr.Shakeel Abbasi, Dr.Deepak Kumar, Dr.Arun Dadwal, Dr.Pratish Patel, Mr.Shahebaz Sayyad, Dr.Salim Dar, Dr.Manzoor Dar, Dr.Yuvraj Dangat & Dr.Sudhakar were equally important in the glory of NCL cricket.

With this I say that SSBMT is the extravaganza for the sports lover of CSIR to come together, exchange thoughts, exchange cultures, make friendships and inculcate the spirit of ONE CSIR....

Ganesh Karanjkar was the most dangerous bowler of NCL cricket team. Ganesh Karanjkar used to bowl slow medium bowling which looked very slow with flight but many batsman fall prey to this and lost their wicket. His cutters were the best balls & were difficult for the batsman to play. Ganesh Karanjkar was the very gutsy player, very good fielder & a very fighting captain of NCL cricket team. He had a guts to go out & play with the broken fingers & play for NCL cricket team. Ganesh Karanjkar had won many matches for NCL cricket team by taking crucial wickets of opponent teams. He is the only bowler of NCL cricket team who took hat trick more than once. Ganesh Karanjkar captained NCL team to win the SSBMT tournament for NCL cricket team at Jorhat.

### ***Shankar Mane*** *Cricket Player Of CSIR-NCL*



# हिन्दी ही क्यों ?

हिन्दी भाषा हमारे देश की आत्मा है, प्रतिष्ठा है। हिन्दी जन-जन की भाषा है जो हमारे जन-मन-गण में इतनी रच-बस गई है कि वह राष्ट्रीय एकता का साधन बन गई है। हिन्दी हमारे देश की राष्ट्रीयता को परिभाषित करती है और यह हमारे देश की सभी क्षेत्रीय भाषाओं में भी प्रतिबिंबित होती है। हिन्दी निश्चित ही सक्षम और सशक्त भाषा है, इसमें कोई दो मत नहीं है। विभिन्न भारतीय भाषाओं के बीच हिंदी भाषा एक पुल है, जिसके सहारे विभिन्न भारतीय भाषाओं में समन्वय निर्माण किया गया है। देश के विभिन्न हिस्सों में हम धर्म, व्यापार, पर्यटन के क्षेत्र में हिंदी भाषा रूपी पुल को बखूबी महसूस कर सकते हैं। हिन्दी भारत की सभी भारतीय भाषाओं के बीच समन्वय का काम बखूबी करती है। श्री रवींद्रनाथ टैगोर जी ने भी कहा है कि "भारतीय भाषाएं नदियां हैं तो हिन्दी महानदी है।" गांधी जी ने हिन्दी भाषा का उपयोग स्वाधीनता संघर्ष की वाणी के रूप में किया और यह उस दौर में जन-जन की भाषा बन गई। आजादी के पूर्व हिंदी ने अगर भारतीय नवजागरण की चेतना का वहन किया तो आजादी के बाद राष्ट्र निर्माण की प्रेरणा का माध्यम भी बनी। साहित्य और ज्ञान के विविध क्षेत्रों में हिंदी में नए और मौलिक काम हुए।

## वर्तमान स्थिति -

आज हिन्दी विश्वभाषा बनने की ओर अग्रसर है। आंकड़ों के मुताबिक हिन्दी विश्व की तीसरी बड़ी भाषा है और तेजी से दूसरे क्रमांक की ओर बढ़ रही है। हाल ही के कुछ अध्ययनों में तो हिन्दी को विश्व की पहली भाषा भी सिद्ध किया जा चुका है। विश्व के लगभग 150 देशों में हिन्दी भाषा का प्रयोग किया जाता है, इनमें फिजी, गियाना, सूरीनाम, त्रिनिदाद, ब्रिटेन, कनाडा, नीदरलैंड, स्वीडन, डेनमार्क, सिंगापुर, थाईलैंड, मलेशिया, इंडोनेशिया, न्यूजीलैंड, कैनिया, युगांडा, तंजानिया, हंगरी, नेपाल, श्रीलंका, युगोस्लाविया, बुल्गारिया, पोलैंड, रोमानिया, क्यूबा, वेनेजुएला, कोलंबिया, चिली इत्यादि देश प्रमुख हैं। इनमें से कुछ देशों जैसे अफ्रीका महाद्वीप के अनेक देश जैसे-केनिया, युगांडा, जैंबिया इत्यादि देशों में हिन्दी के अतिरिक्त भारत की क्षेत्रीय भाषाएं गुजराती, पंजाबी भी पढाई जा रही हैं। जापान के 9 तथा रूस के 34 विश्वविद्यालयों में हिन्दी शिक्षण की व्यवस्था है। इसके अलावा विदेशों से कई विद्यार्थी प्रतिवर्ष हिन्दी सीखने के लिए दिल्ली विश्वविद्यालय तथा महाराष्ट्र के वर्धा स्थित महात्मा गांधी अंतर्राष्ट्रीय हिंदी विश्वविद्यालय में प्रवेश लेते हैं। पिछले कुछ वर्ष पहले भोपाल, मध्यप्रदेश में भी इसी तरह के एक हिन्दी विश्वविद्यालय की भी स्थापना की गई है।

आज सम्पूर्ण विश्व में 250 करोड़ से अधिक भारतवंशी रहते हैं, उन सबकी संपर्क भाषा हिन्दी ही है, विदेशों में वे एक भारतीय के रूप में जाने जाते हैं और हिन्दी भाषा के साथ ही भारतीय संस्कृति के संवाहक बनते हैं। वे भारत के किसी भी कोने या क्षेत्र से आए हों, उनकी सम्पर्क भाषा हिन्दी है। इंटरनेट, मोबाइल, सेटलाइट फोन आदि में हिन्दी के प्रयोग में बढोतरी आई रही है। इंटरनेट पर हिन्दी के अनेक पोर्टल हैं। फेसबुक, आरकुट, ट्विटर ब्लॉग आदि पर सभी लोग बखूबी हिन्दी का प्रयोग कर रहे हैं।

जहां एक ओर अंतर्राष्ट्रीय स्तर पर हिन्दी भाषा का महत्व और प्रयोग बढ रहा है, वहीं दूसरी ओर शिक्षा, विज्ञान एवं तकनीकी के क्षेत्र एवं प्रशासकीय कामकाज में हिन्दी का प्रयोग बहुत कम है। अंतर्राष्ट्रीय स्तर पर हिंदी की प्रसिद्धि और लोकप्रियता में निरंतर बढोतरी होने से गर्व होता है वहीं अपने ही देश में हिन्दी की दुर्दशा किसी से छिपी नहीं है। हम सभी जानते हैं कि अपने ही देश में हिंदी आज भी राष्ट्रभाषा-राजभाषा के रूप में भली प्रकार से स्थापित नहीं हो पाई है। आज हम अपनी हिन्दी भाषा को उसका वह सम्मान नहीं दिला पा रहे हैं, जिसकी वह अधिकारिणी है। बात अंग्रेजी भाषा

के विरोध की नहीं, हिंदी को अपनाने की है। बहुत से लोग हिंदी को अपनाने का अर्थ अंग्रेजी के विरोध से लगाते हैं। आज अपने ही देश में अपने ही नागरिकों से हिंदी में कार्य करने के लिए निवेदन करना पड़ रहा है।

हिन्दी भाषा के सार्मथ्य और शक्ति की बात की जाए तो इसे सर्वाधिक वैज्ञानिक भाषा माना जाता है। विश्व के सबसे अग्रणी ज्ञानकोष-एनसाइक्लोपीडिया ब्रिटैनिका द्वारा हिंदी वर्णमाला को वैज्ञानिक कहा गया है और विशेष बात यह है कि ऐसी टिप्पणी किसी और भाषा के लिए नहीं की गई है और इस टिप्पणी पर प्रत्येक भारतीय को गर्व महसूस करना चाहिए। हिन्दी भाषा की यह विशेषता है कि इसके उच्चारण और वर्तनी में कोई अंतर नहीं है और यह पूरी तरह से वैज्ञानिक तथा ध्वन्यात्मक भाषा है।

## समाधान क्या हो सकते हैं ?

हिन्दी को रोजगार से जोड़कर - यह एक सर्वमान्य तथ्य है कि जिस भाषा से ज्ञान और शिक्षा को संगठित करके रोजगारपरक बना दिया जाता है, वह भाषा तेजी से लोकप्रिय हो जाती है। अगर हम इतिहास पर नजर डाले तो हम पाएंगे कि लार्ड मैकाले ने अंग्रेजी भाषा लागू करते समय इसे अपनाने का कोई निवेदन नहीं किया था, उसने मात्र इस भाषा को रोजगार से जोड़ दिया था और आज स्थिति यह है कि हम भारतीयों की जीविका को अंग्रेजी भाषा के आश्रित बना दिया गया है। आज हिन्दी को स्थापित करना है तो उसे निश्चित तौर पर रोजगार से जोड़ना होगा। रोजगार की जरूरत स्वयं ही सब कुछ सिखा देती है। साथ ही सभी प्रकार की नौकरियों में अंग्रेजी के साथ हिन्दी भाषा में कार्य करने की योग्यता अनिवार्य की जा सकती है। यह भी देखने में आता है कि जो कुछ हम विद्यार्थी जीवन में सीखते हैं, उसका हमारे रोजगार से कोई संबंध नहीं होता। सभी राज्यों के सभी पाठ्यक्रमों में, चाहे वे व्यवसायिक हो अथवा नहीं, प्रशासकीय/कार्यालयीन तथा व्यवहारिक हिंदी का भी ज्ञान अनिवार्य रूप से देना चाहिए।

शिक्षा के क्षेत्र में बदलाव ला कर - शिक्षा के क्षेत्र में पाठ्यक्रमों में आज की जरूरतों के हिसाब से बहुत से बदलाव करने की आवश्यकता है। बच्चों को आरंभिक अवस्था से ही हिन्दी सिखाई जानी चाहिए, जबकि आजकल बहुत से राज्यों में नर्सरी, केजी 1, केजी 2 तक हिन्दी नहीं सिखाई जाती बल्कि कक्षा 1 या कक्षा 5 से ही हिन्दी सिखाई जाती है फलस्वरूप बच्चे हिन्दी भाषा से जुड़ नहीं पाते और हिन्दी भाषा के महत्व से अनजान ही रहते हैं। बड़े दुख की बात है कि भारत के कुछ राज्यों में तो कक्षा 1 से लेकर 12 वीं तक कहीं भी हमारी हिन्दी भाषा के लिए कोई स्थान नहीं रखा गया है। हमें यह भी ध्यान में रखना होगा कि हिन्दी मात्रा एक भाषा ही नहीं है, बल्कि हमारी महान संस्कृति और परंपरा की वाहक भी है। शाला में शिक्षा का माध्यम हिंदी भाषा रखा जाए तथा अंग्रेजी एक विषय के रूप में ही पढ़ाई जाने से निश्चित तौर पर इस भाषा का अच्छा विकास होगा। मैंने बहुत से घरों में देखा है जहां उन्हें अच्छे से अंग्रेजी समझ में नहीं आती, किंतु दिखावे के लिए अंग्रेजी पत्रिकाएं खरीदी जाती है और उसका प्रदर्शन किया जाता है। बहुत से लोगों को अंग्रेजी बोलना नहीं आता, इसके बावजूद वे आपस में अंग्रेजी में बात करके स्वयं को श्रेष्ठ सिद्ध करने की जुगत में लगे रहते हैं। इसके अलावा हम में से बहुतों का यह भ्रम है कि अगर बच्चों से घर में हिन्दी में या अपनी मातृभाषा में बात की जाए तो वे पिछड़ जाएंगे या बुद्धि कहलाएंगे। जबकि वैज्ञानिक सर्वेक्षणों में यह पाया गया है कि एक से अधिक भाषा का प्रयोग करने वाले विद्यार्थियों की बुद्धि और सीखने की क्षमता का तेजी से विकास होता है और मातृभाषा के माध्यम से शिक्षा प्राप्त करना बच्चों के लिए बाधक नहीं, बल्कि सार्थक सिद्ध होता है। अच्छी बात यह है कि सरकार ने भी मातृभाषा के माध्यम से शिक्षा देने के महत्व को समझ कर नई शिक्षा नीति में इसके संबंध में प्रावधान बनाए है। हालांकि यह तो आने वाले वक्त के साथ ही यह पता चल पाएगा कि इन बहुभाषी इस देश में इन प्रावधानों को कैसे लागू किया जाएगा।

हमारे देश में अंग्रेजी माध्यम से शिक्षा दिलाने का चलन इसलिए भी चल पड़ा है क्योंकि लोगों को यह लगने लगा है कि अंग्रेजी माध्यम से शिक्षा दिलवा कर ही प्रगति की जा सकती है। इसका एक कारण यह भी है कि उच्च शिक्षा या तकनीकी शिक्षा प्रदान करने वाले अधिकतर संस्थानों में शिक्षा का माध्यम केवल अंग्रेजी माध्यम ही होता है। ग्रामीण तबके के या मातृभाषा के माध्यम से शिक्षा ग्रहण करने वाले अधिकांश मेधावी छात्र केवल इसी कारण उच्च तकनीकी शिक्षा ग्रहण करने से वंचित रह जाते हैं। इस दिशा में गंभीर और ठोस प्रयास करने की आवश्यकता है। चीन, फ्रांस, ताइवान, दक्षिणी कोरिया, जापान जैसे देशों में उच्च शिक्षा उनकी राष्ट्रभाषा में ही दी जाती है। उन देशों में अंग्रेजी की पुस्तकों का देशी भाषा में अनुवाद करके ज्ञान को प्रचारित किया जाता है तथा केवल वे ही विद्यार्थी अंग्रेजी सीखते हैं, जो शिक्षा ग्रहण करने के लिए इंग्लैंड, ब्रिटेन, अमेरिका जैसे देश जाना चाहते हैं। वहां अंग्रेजी भाषा ठीक उसी तरह पढ़ाई जाती है, जिस तरह भारत में जापानी, फ्रेंच या रूसी भाषा सिखाई जाती है। भारत से अंग्रेजी माध्यम से पढ़ कर तथा अंग्रेजी भाषा में कुशलता प्राप्त इंजीनियर कोरिया या फ्रांस के उच्च शिक्षित इंजीनियरों से (जो कि टूटी-फूटी अंग्रेजी ही जानते हैं) कार, टीवी, मोबाइल बनाना सीखते हैं। हमें अपनी हिन्दी भाषा को तकनीक तथा ज्ञानविज्ञान से जोड़ने की भी बहुत आवश्यकता है। इसके साथ ही हमारी नई पीढ़ी हिन्दी भाषा की ओर किस तरह आकर्षित हो, उन्हें इस भाषा में अपनापन तथा सहजता महसूस हो, विरक्ति न हो - यह देखना भी हमारे शिक्षाविदों तथा रोजगार निर्माताओं के लिए अत्यंत जरूरी है।

### मानसिकता में परिवर्तन करके -

भाषा संस्कृति और संस्कारों की संवाहिका होती है। भाषा के पतन से संस्कृति व संस्कारों का भी पतन हो रहा है। भाषा बदलने से मूल्य भी बदल जाते हैं। भाषा संस्कृति का अधिष्ठान है। वर्तमान में भारत में जिस प्रकार अंग्रेजी का स्थान है, उसी प्रकार सन् 1332 तक ब्रिटेन में फ्रांसीसी का स्थान था। फिनलैंड में 100 वर्ष पूर्व स्वीडिश भाषा चलती थी, रशिया में जार के जमाने में फ्रांसीसी भाषा का दबदबा था। इन सभी देशों में वहां की जनता एवं शासकों की इच्छा शक्ति के कारण आज वहां अपनी भाषाओं में सारा कार्य हो रहा है। आज इस बात की बड़ी आवश्यकता है कि अपने देश की जनता में इस प्रकार की इच्छाशक्ति जागृत की जाए। इसकी शुरुआत स्वयं से करनी पड़ेगी। इस हेतु सभी स्थानों पर अपने हस्ताक्षर अपनी भाषा में करें। किसी भी भाषा में लिखें या बोलें तब 'भारत' शब्द का प्रयोग करें, इन्डिया का नहीं। कार्य व व्यवहार में अपनी भाषा का ही उपयोग करें। अपने बच्चों को मातृभाषा में ही पढ़ायें- समझाएं। अपने कार्यालय या संस्थान के स्तर पर सारा कार्य व्यवहार अपनी ही भाषा में करें। घर, कार्यालय, दुकान में नाम पट्ट एवं पट्टिकाएं अपनी भाषा में ही लिखें। अपने व्यक्तिगत पत्र, आवेदन पत्र, निमंत्रण-पत्र आदि भी मातृभाषा या भारतीय भाषा में लिखें या छपायें।

### हिन्दी को सभी प्रमुख क्षेत्रों में स्थापित करके -

विश्व के सभी छोटे-बड़े देशों में शासन की भाषा, शिक्षा-दीक्षा की भाषा, अभियांत्रिकी और चिकित्सा विज्ञान की भाषा उनकी अपनी भाषा है। ये देश भारत के महानगरों से भी छोटे हैं फिर भी उन्होंने अपने देशों में अपनी भाषा को लागू किया है। सूचना प्रौद्योगिकी का इस्तेमाल करके ये देश अपनी भाषाओं को मजबूत कर रहे हैं। भारत में उल्टा हो रहा है, सूचना प्रौद्योगिकी के नाम पर हिन्दी और क्षेत्रीय भाषाओं को शासन-प्रशासन-शिक्षा आदि से बाहर किया जा रहा है। हम इन देशों से सीख लेकर अपनी भाषा को उसका यथोचित सम्मान दिलवा सकते हैं।

हिन्दी को उसका खोया हुआ स्थान दिलाने के लिये हमें आज की युवा पीढ़ी में इसके प्रति

सम्मान की भावना जगानी होगी , जो कि आज की पीढ़ी में गुम हो चुकी है। इसे रोजगारपरक बनाना होगा और ये तभी संभव है जब हिन्दी को तकनीकी शिक्षा का मुख्य अंग बनाया जाए, साथ ही साथ हमारे अनुसंधान कार्य भी इसी में हों। अब समय आ गया है कि हर भारतीय यह अच्छी तरह समझ ले कि हिंदी भाषा का अस्तित्व बचाए रखने की जिम्मेदारी केवल सरकार या संविधान की नहीं, बल्कि प्रत्येक भारतीय की है। हिंदी भाषा को राष्ट्रभाषा-राजभाषा के पद पर सम्मानपूर्वक प्रतिष्ठित करने के लिए आम व्यक्ति की भी भागीदारी आवश्यक है और हमें अपनी भाषा के महत्व को समझने तथा उसके सम्मान को स्थापित करने की दिशा में सार्थक प्रयास करने होंगे।

राजभाषा क्रियान्वयन का क्षेत्र केवल सरकारी दफ्तरों तक सीमित नहीं है बल्कि शिक्षा , साहित्य और मीडिया से लेकर न्यायपालिका और संसद तक सब कुछ इसके दायरे में आता है। इसमें शक नहीं कि इस दिशा में अभी देश केवल कुछ ही कदम चल पाया है तथा लंबा रास्ता सामने है। लेकिन इतना तो संतोष किया ही जा सकता है कि जनभाषा के साथ ही राजभाषा हिंदी के प्रति भी लोगों में जागरूकता आई है, लेकिन अभी भी इस दिशा में बहुत से प्रयास किए जाने बाकी है।

### संदर्भ –

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**डॉ. (श्रीमती) स्वाति चड्ढा**

हिन्दी अधिकारी

सीएसआईआर- राष्ट्रीय रासायनिक प्रयोगशाला,  
( सीएसआईआर-एनसीएल), पुणे

(लेखिका सीएसआईआर-एनसीएल, पुणे में हिन्दी अधिकारी होने के साथ नगर राजभाषा कार्यान्वयन समिति-, पुणे की सचिव भी है।)



# तुम मुझे अक्सर दिखो

आपसे किसने कहा स्वर्णिम शिखर बनकर दिखो,  
शौक दिखने का है तो फिर नींव के अंदर दिखो ॥

चल पड़ो जो कहीं तो धूल बनकर आसमानों पर दिखो,  
और जो बैठो कहीं तो मील का पत्थर दिखो ॥

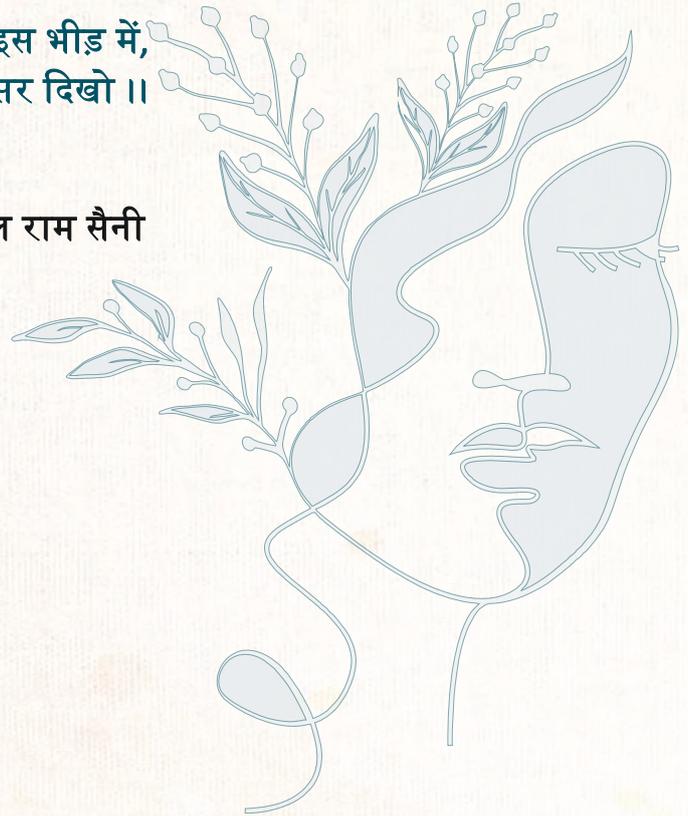
जिंदगी की शक्ल जिसकी टूट कर बिखरे नहीं,  
पत्थरों के शहर में वो आईना बनकर दिखो ॥

एक जुगनू ने कहा मैं भी तुम्हारे साथ हूं,  
वक्त की इस धुंध में तुम भी रोशनी बन कर दिखो ॥

सिर्फ दिखने के लिए दिखना कोई दिखना नहीं,  
आदमी हो तुम अगर तो आदमी बन कर दिखो ॥

कोई ऐसी शक्ल तो मुझको दिखे इस भीड़ में,  
मैं जिसे देखूं उसी में तुम मुझे अक्सर दिखो ॥

दयाल राम सैनी





## शांति स्वरूप भटनागर स्मृति खेल प्रतियोगिता (SSBMT)- मेरी नजर में

एस एस भटनागर स्मृति खेलों का आयोजन !  
स्वस्थ-स्पर्धा और सद्भावना का सुंदर-संयोजन !!  
खेलों का ये महाकुंभ यहाँ खुशियाँ बिखरायेगा !!!  
जीवन मे खेलों का महत्व हम सबको बतलायेगा !!!!

प्रयोगशालाओं की ध्वजा अंबर मे लहरायेगी !  
सीएसआईआर की आभा रंगो से बिखरायेगी !!  
सांस्कृतिक वैविध्य कदम का ताल दिखवाई देगा !!!  
देशभक्ति और लोक धुनों का तान सुनाई देगा !!!!

देश के कोने-कोने से प्रतिभा यहाँ आयेगी !  
अपने क्रीड़ा-कौशल से हम सबको हर्षायेगी !!  
कर्मक्षेत्र से अलग खिलवाड़ी करताब दिखलाएँगे !!!  
शक्ति और मन की दृढ़ता का, लोहा मनवाएँगे !!!!

हिल-मिल कर सब खेलेंगे, छल कपट ना कोई करेगा !  
'सीएसआईआर-पुक परिवार' का, नारा बुलंदी छुपेगा !!  
कोई जीते- कोई हारे, खेल यहाँ जीतेगा !!!  
खेल भावना और दिलों का, मेल यहाँ जीतेगा !!!!

प्रधानमंत्री जी के 'खेलो इंडिया' मिशन के दूत बनेंगे !  
महानिदेशक मैडम का 'विजन' मजबूत करेंगे !!  
खेल प्रोत्साहन बोर्ड और निदेशकों के प्रयासों को !!!  
स्वच्छ आवरण और खेल से हम फलीभूत करेंगे !!!!

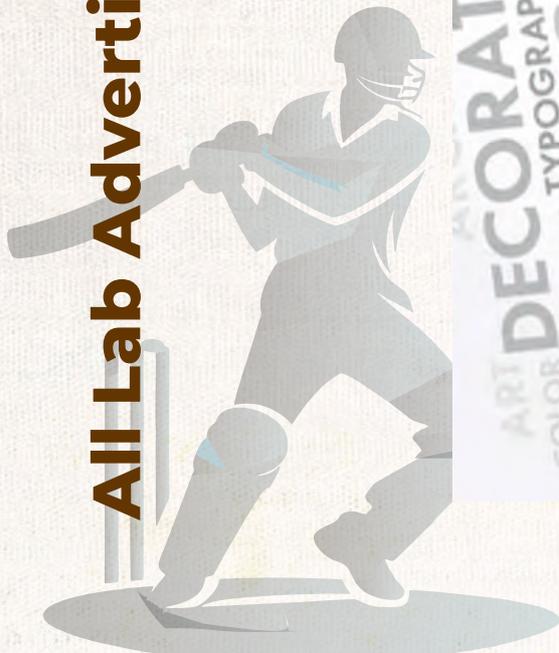
सुदृढ़ होगी टीम भावना और नव ऊर्जा पायेंगे!  
वैचारिक आदान-प्रदान से अपना ज्ञान बढ़ायेंगे !!  
नेतृत्व गुण होंगे प्रखर निर्णय क्षमता निखरेगी !!!  
गुणवता और परिपक्वता कार्यों मे झलकेगी !!!!

आओ ! हम सब करें प्रतिज्ञा उद्देश्यों को पानें की !  
भाईचारा और सद्भावना वहाँ और फैलानें की !!  
सीएसआईआर परिवार को और मजबूत बनाने की !!!  
खेलों के इस आयोजन को मिलकर सफल बनानें की !!!!



**बनवारी लाल मीणा**  
भंडार व क्रय अधिकारी  
सीएसआईआर-निस्पर, नई दिल्ली

# All Lab Advertisements





# सी.एस.आई.आर. - केंद्रीय भवन अनुसंधान संस्थान, रुड़की CSIR – Central Building Research Institute, Roorkee



The Central Building Research Institute, Roorkee, India, has been vested with the responsibility of generating, cultivating, and promoting building science and technology in the service of the country.

Since its inception in 1947, the Institute has been assisting the building construction and building material industries in finding timely, appropriate, and economical solutions to the problems of building materials, health monitoring and rehabilitation of structures, disaster mitigation, fire safety, and Energy efficient rural and urban housing. The Institute is committed to serving the people through R&D in the development process and maintains linkages at the international and national levels.

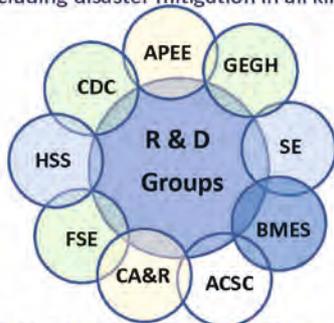


### Our Mission

To carry out R&D on all aspects of building and housing and assist the building industry in solving problems of planning, designing foundations, materials, and construction including disaster mitigation in all kinds of buildings.

### Our Vision

CSIR-CBRI works as the world-class knowledge base for providing solutions to almost all areas of Building Construction/Habitat planning and construction including building materials, technology, fire engineering, and disaster mitigation.



### R&D GROUPS

- Architecture and Planning & Energy Efficiency ( APEE)
- Geotechnical Engineering & Geohazards (GEGH)
- Structural Engineering (SE)
- Building Materials and Environmental Sustainability (BMES)
- Advanced Concrete, Steel and Composite (ACSC)
- Construction Automation and Robotics ( CA&R)
- Fire Safety Engineering(FSE)
- Heritage & Special Structures(HSS)
- CBRI Delhi Center (CDC)

### Major Activities

- Pursuance of basic and applied R&D on all aspects of building science and technology
- Contract R&D
- Sponsored research from public and private sector agencies
- Consultancy services
- Transfer of technology
- Dissemination of knowledge/information
- Codes and teaching manual
- Training programs, seminars and workshop

### R&D Management Offices

#### RESEARCH PLANNING AND BUSINESS DEVELOPMENT

- Project Monitoring & Evaluation
- Projects and Technical Services
- Intellectual Property
- Research Council Activities

#### Business Development Group

- Technology Transfer
- MoU/MoA, Collaboration & Co- Innovation
- Institute Data Management

#### OUTREACH AND DISSEMINATION SERVICES

- Student Training Cell
- Skill Development Cell
- Events & Lectures Cell
- Publication, Media, & PR Cell

#### DIRECTOR'S RESEARCH CELL

- R&D Wing
- Data & Admin Wing

### ADMIN OFFICES

- ADMINISTRATION
- FINANCE & ACCOUNTS
- STORE AND PURCHASE
- KNOWLEDGE RESOURCE CENTER
- MEDICAL SERVICES
- HINDI UNIT
- TECHNICAL SERVICES GROUPS
  - Estate
  - Electrical

### Academy (AcSIR)

- MTech & PhD Programs

- Amrit kal 75  
Glorious years
- Staff Member  
225+
- No. of current  
Advanced  
Tech. 85+
- Technologies  
with Societal  
Impact 20+
- No. of total  
Technologies  
105+



# सी.एस.आई.आर. - केंद्रीय भवन अनुसंधान संस्थान, रुड़की विज्ञान एवं प्रौद्योगिकी मंत्रालय, भारत सरकार CSIR – Central Building Research Institute, Roorkee

Ministry of Science and Technology, Government of India  
<https://www.facebook.com/csircbri/>, [https://twitter.com/CSIR\\_CBRI](https://twitter.com/CSIR_CBRI)  
Email: [director@cbri.res.in](mailto:director@cbri.res.in), Webpage: [www.cbri.res.in](http://www.cbri.res.in)





वैज्ञानिक और औद्योगिक अनुसंधान परिषद

COUNCIL FOR SCIENTIFIC & INDUSTRIAL RESEARCH

सीएसआईआर-केंद्रीय नमक व समुद्री रसायन अनुसंधान संस्थान, भावनगर

CSIR- CENTRAL SALT & MARINE CHEMICALS RESEARCH INSTITUTE, BHAVNAGAR



### BRIEF ABOUT INSTITUTE

CSIR-Central Salt & Marine Chemicals Research Institute is involved in R&D work for innovation of cutting edge technologies for the industries and for the improvement of society as a whole by S&T intervention and enhancing the livelihood of common people. CSIR-CSMCRI carries out research work in different areas of basic and applied sciences, such as, process for preparation of different grades of salt for various domestic and industrial use, membrane based separation process including water desalination & purification, specialty inorganic catalytic chemicals, seaweeds and microalgae cultivation and their downstream processing value added products, saline land reclamation, and; sensing & diagnostic chemicals for healthcare, industrial waste-to-wealth etc.

### SOME STATS:

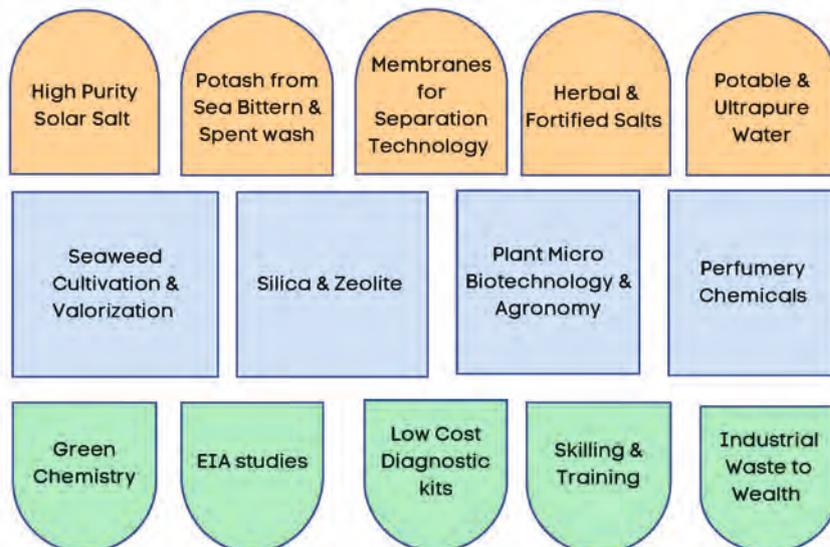
Technology Transferred  
(Upto 2023-24) : 89

Scimago Overall Institution Rankings (2024)  
: 17

Patents Granted : 147  
(From 2019-20 to 2023-24)

Publications in 2023-24 : 262  
Average IF: 5.71

### BUSINESS & COLLABORATION OPPORTUNITIES



#### For Partnerships & Collaborations

Contact Us: The Head, Business Development & Information Management,  
CSIR-Central Salt & Marine Chemicals Research Institute,  
G.B Marg, Bhavnagar - 364 002, Gujarat;  
Phone: +91-278-2567780/6280; Email: kamlesh@csmcri.res.in ;  
Website: www.csmcni.res.in



The CSIR- Central Road Research Institute (CRRI), New Delhi, a constituent laboratory of the council of scientific and Industrial Research(CSIR), provides high quality and globally acceptable research and consultancy services in the area of highway and road transportation technology. Established in 1952, the major activities of the Institute relate to pavement design and performance, road condition monitoring, pavement deterioration modeling, landslide management and hazard mitigation, and improved transportation planning for emerging urban needs.

### R&D Capabilities & Area of Consultancy

- Analysis and Design of Bridges
- Distress Diagnostics and Rehabilitation Measures for Bridges
- Design of Ground Improvement Measures
- Landslide Investigation, Hazard Zonation and Mitigation Technologies
- Soil Nailing and Soil Reinforcement
- Use of Marginal and Waste Materials for Construction
- Design of Flexible and Rigid Pavement
- Evaluation and Standardization of Road Construction Materials
- Development of New and High Performance Materials
- Structure and Functional Evaluation of Pavement
- Quality Control and Quality Assurance Aspects
- Evolving Pavement Management Strategies
- GIS and Remote Sensing Applications in Road Sector
- Rural Road Network Planning
- Road Development Policy Studies
- Application of HDM-4 for Road Development Plans
- Road Safety Audit
- Design and Management of Traffic Intersections and Interchanges
- Intelligent Transport System
- Traffic Safety and Analysis
- Control and Management of Environmental Pollution
- Green Highways
- Transport System Planning and Environmental Impact of Road Traffic System
- Customised Training Programmes for Highway and Transportation Engineers

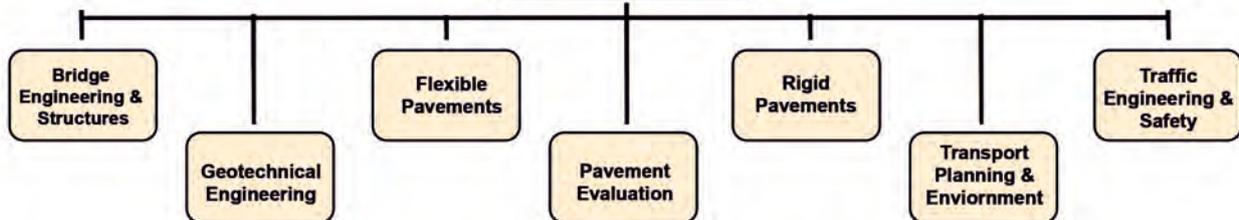
### Testing Services

- \* Universal Testing Machine 2000kN & 5kN (UTM)
- \* Pull-out Test Apparatus for Geosynthetics / GI strips
- \* 14 KN Pneumatic-Universal Testing Machine with Pneumatic Control Valves and Digital Control Technology
- \* The Cut and Pull Out (CAPO) Test
- \* Post Peak flexural Test
- \* Moisture Induced Stress Tester

### Technologies Available

		
<p>Heavy Vehicle Simulator (HVS)- An Accelerated Pavement Testing Facility</p>	<p>CSIR-CRRI Car Driving Simulator</p>	<p>Network Survey System</p>
		
<p>Mobile Bridge Inspection Unit (MBIU)</p>	<p>Patch Fill &amp; Mobile Cold Mixer Cum Paver</p>	<p>Automatic Road Unevenness Recorder / Bump Integrator</p>
		
	<p>Car Axle Mounted Bump Integrator With GPS</p>	

### R & D Areas



## CSIR - Central Road Research Institute

(Council of Scientific and Industrial Research)  
Delhi-Mathura Road, New Delhi-110025



Telephone: +91-11-26848917  
Email: [director.cri@nic.in](mailto:director.cri@nic.in)

Fax: +91-11-26845943  
Website: [www.cridom.gov.in](http://www.cridom.gov.in)



# सीएसआईआर-राष्ट्रीय धातुकर्म प्रयोगशाला CSIR-National Metallurgical Laboratory



*Committed to achieve Technological Innovation in the field of Minerals, Metals and Materials*



- Coal Research
- Lean Ore Processing
- Comprehensive Mineral Processing
- Valorisation of Industrial Wastes
- Extraction of Critical Metals
- Hydro-, Electro- and Pyro-Metallurgical Extraction
- Alloys Development
- Advanced Materials Characterization and Evaluation
- NDE and Structural Health Monitoring
- Corrosion Protection
- Advanced Coatings and Functional Materials



Contact  
Director, CSIR-National Metallurgical Laboratory  
Jamshedpur-831007  
Fax: 91-657-2345213  
Tel: +91-657-5209  
Email: [director@nml.res.in](mailto:director@nml.res.in)  
<http://www.nmlindia.org>

# CSIR - STRUCTURAL ENGINEERING RESEARCH CENTRE



## ABOUT US

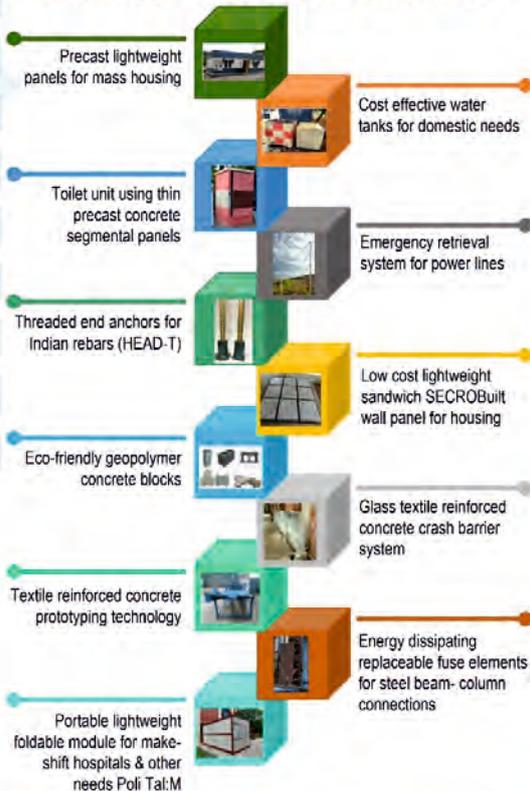
CSIR-Structural Engineering Research Centre (CSIR-SERC), Chennai, is one of the national laboratories under the Council of Scientific & Industrial Research (CSIR), India. CSIR-SERC has built-up excellent facilities and expertise for the analysis, design and testing of structures and structural components. Services of CSIR-SERC are being extensively used by the Central and State Governments and public and private sector undertakings. CSIR-SERC has developed several need based structural engineering technologies which benefits the industry and society at large. CSIR-SERC has been certified as ISO 9001:2015 quality institution.



## VISION

*To be a global leader in structural engineering by excelling in research in frontier and cutting edge areas, and by developing competitive technologies by embracing innovative inter- and trans- disciplinary approaches for the benefit of society and industry*

## TECHNOLOGIES FOR LICENSING



**Journal of Structural Engineering (JoSE)** - an international journal published bi-monthly from CSIR-SERC provides a medium for researchers and structural engineers in India and abroad to document, discuss, and debate current trends in design, research, development and contributions relating to all areas of structural engineering/mechanics.

**Consultancy Services Offered:** CSIR-SERC is the most preferred resource centre for industry in our country for solving new challenges in structures of different sizes, shapes, geometry and purpose of use. CSIR-SERC provides high-end knowledge based service to industry, society and strategic sector and structural engineering solutions for pre- and post- disaster needs. The vast client base of CSIR-SERC includes industries from energy and power sector (transmission line and communication towers, nuclear/thermal power plants), construction industry (new materials, construction techniques, road and railway bridges, high-rise buildings/ structures), automobile sector, etc.



For further details:  
 Director, CSIR-Structural Engineering Research Centre,  
 CSIR Campus, Taramani, Chennai - 600 113.  
 Tel.: 91-44-22549201; Email: [director@serc.res.in](mailto:director@serc.res.in); Website: <https://serc.res.in>





# CSIR-CENTRE FOR CELLULAR AND MOLECULAR BIOLOGY

CSIR-CCMB

A constituent laboratory of CSIR to carry out research in frontier and multidisciplinary areas of modern biology, and seek potential applications



## ADVANCED FACILITIES

- Advanced microscopy and imaging facility (confocal, SEM, TEM, AFM-Raman); NMR (600 MHz) microimaging and high-resolution spectroscopy: X-ray crystallography & FACS
- Genome engineering and transgenic facility for several model systems
- Medical biotechnology facility, biosafety levels 2 & 3 labs, bioinformatics cluster, nanotechnology facility
- IHUB - CSIR-CCMB's Innovation Centre to facilitate entrepreneurial activities in healthcare and biotechnology

## CURRENT AREAS OF RESEARCH

- Cell & Molecular Biology
- Genetics, Chromatin Biology, Genomics & Bioinformatics
- Developmental Biology
- Protein Structure & Function
- Biology of Macromolecules
- Biology of Infection
- Conservation Biology & Ecology

## FROM LABS TO SOCIETY

- DNA fingerprinting technology for quicker and reliable identification of individuals
- Universal primer technology facilitates identification of animal species & helps in wildlife protection and conservation
- Improved Samba Mahsuri rice variety for developing better crop varieties without genetic engineering
- DNA based diagnostic kits for quick identification of genetic disorders & microbes causing eye infections
- COVID-19 mitigation

Contact: Dr Vinay K Nandicoori, Director, CSIR-CCMB  
email: [director@ccmb.res.in](mailto:director@ccmb.res.in)  
Visit us at [www.ccmb.res.in](http://www.ccmb.res.in)



## CSIR-National Geophysical Research Institute

Exploring Earth for 60 Eventful Years



Unique Geophysical Research Institute of the country for Near Surface to Deep Earth Exploration

CSIR- National Geophysical Research (CSIR-NGRI) established in 1961, with a vision for the pursuit of earth science research, which strives for global impact and its application for optimizing sustainable societal, environmental, economic benefits for the Nation. CSIR-NGRI carries basic and applied research in the fields of Geophysics, Geology, Geochemistry and Geochronology

### Overview

**Research:** From academic to field stations, research is the lifeline of CSIR-NGRI. Excellent laboratory and infrastructure to carry out cutting-edge research in Hazard, Water, Energy, Geodynamics, Minerals. It is supported by High Computing facility.

**Academic:** A large number of PhD programs are running with vibrant campus life. It has two hostels with canteen facility.

**Campus:** Performances, events, fitness center, Club, gym facility and dispensary within the campus.

**Knowledge Center:** One of the largest libraries in India in Geosciences. It subscribes to 102 research journals and holds more than 20000 books.

**Publications:** ~ 5000 SCI research papers, ~ 1260 technical reports, more than 300 books, 31 patents.

### Significant Achievements

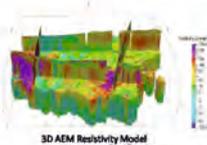
- Pioneer in Airborne Geophysical Research in India
- Gravity Map Series of India (GMSI)
- first indigenous airborne geophysical instruments
- Largest Seismological Network across the country
- Expertise of sub-Basalt imaging for oil and gas exploration
- Simulation of deep Earth processes and magnetic field

### Future R&D

- Geological Hazard Assessment - Early Warning System
- Water Security - Sustainable Groundwater Resources Management
- Energy Security- Hydrocarbon, Uranium, Geothermal
- Minerals - Lithium and REEs
- A/AM for Geosciences



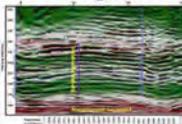
Drone based Magnetic Survey in Ladakh



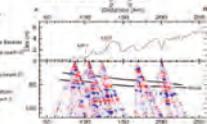
3D AEM Resistivity Model



Earthquake Risk Map - Lucknow



3D Seismic Data for CBM Exploration



Seismic image of the Moho in Kashmir Himalaya

### Contact:

+91-40-23434600 91 4027171564 [director@ngri.res.in](mailto:director@ngri.res.in) [www.ngri.res.in](http://www.ngri.res.in)

<https://www.facebook.com/csirngrihyd/> <https://twitter.com/csirngri>



सीएसआईआर-हिमालय जैवसंपदा प्रौद्योगिकी संस्थान  
 CSIR-Institute of Himalayan Bioresource Technology  
 पालमपुर-176 061 (हि.प्र.) Palampur-176 061 (H.P.)



**R&D HIGHLIGHTS**



Wild Marigold



Rose



Stevia



Tea



Jigyasa

**VISION**

To be a global leader on technologies for boosting bioeconomy through sustainable utilization of Himalayan bioresources

**MISSION**

To discover, innovate, develop and disseminate the processes, products technologies and knowledge from Himalayan bioresources for society, industry, environment and academia

**Bioresource**

- Plants, Algae, Microbes (bacteria, fungi & viruses)
- Vegetation Assessment
- Mapping, Remote Sensing
- Status
- Prospection
- Plant databases
- Conservation, Propagation

**Technology**

- Agrotechnology
- Biotechnology
- Chemical Technology
- Dietetics & Nutrition Technology
- Environmental Technology
- Extension of Technologies & Capacity Building

**Bioeconomy**

- Aromatics
- Floriculture, Horticulture, Spice Crops
- Food & Nutraceuticals
- Industrial Enzymes
- Pharmaceuticals
- Biomolecules
- Biowaste Management
- Biofertilizers

**Contact Us**

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# CSIR-INSTITUTE OF MINERALS AND MATERIALS TECHNOLOGY

Council of Scientific and Industrial Research  
Bhubaneswar-751013, INDIA

## CORE AREA COMPETENCY

- Material characterization
- Mineral beneficiation, pelletisation and agglomeration
- Extraction of metals from ores, sludge and scraps
- Plasma processing of materials
- Nanomaterials, bio materials and energy materials
- Coatings, thin films, alloys, composites
- Green technology for industrial waste management
- Drinking water filtration and wastewater recycling
- Environmental impact assessment
- CFD/DEM modelling and simulation

## INDUSTRY INTERFACE

- Technology development for mineral, material, metallurgical and chemical industries
- Contract research and consultancy for process optimization
- TEFR and Basic engineering packages in core area
- Testing of water quality and components in ores, rocks, soils, slags, and processed products
- Skill development

## FACILITIES

- Mineral processing pilot plant
- SOPs for extraction of materials from industrial wastes
- Coal characterization
- Processing of natural gemstones for value addition
- State-of-the art analytical equipments for characterization of ores, minerals & materials
- Commercial scale production facility for fly ash and red mud building materials
- Mechanical workshop for design and fabrication
- Biomass operated cook stoves and testing lab
- Technology validation



Constructed wetland for waste water treatment



XPS



Particle Size Analyzer



High Concentration Slurry Transportation



CNC Turning & Milling Machines



Fly Ash & Red Mud Bricks



EPMA



XRD



Plasma Spray Coating



Column Flotation Unit



Hydrogen Plasma Reactor



TEM



X-ray Micro CT



Microwave Plasma Reactor



Scanning Electron Microscope



### CONTACT US

Director, CSIR-Institute of Minerals & Materials Technology  
Bhubaneswar – 751013  
Phone: 0674-2379401; Email: [dir@immt.res.in](mailto:dir@immt.res.in)  
URL: [www.immt.res.in](http://www.immt.res.in)



ISO/IEC 17025:2005  
NABL Accredited

Inspiring minds  
for a Greener Planet



# CSIR-National Institute of Oceanography

(A constituent laboratory of Council of Scientific and Industrial Research)



CSIR-National Institute of Oceanography (NIO) is one of the 37 constituent laboratories of the Council of Scientific & Industrial Research (CSIR) established in 1966. CSIR - National Institute of Oceanography is a premier oceanographic research organisation in the Indian Ocean region. This distinction has been gained over almost five decades of experience on the seas - as far south as the Antarctica, east as Australia and west as the Caribbean

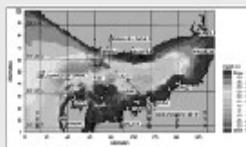


**Mission :** *“To continuously improve our understanding of the seas around us and to translate this knowledge to benefit all”*

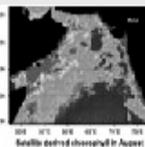
## Research and development

The major research areas include the four traditional branches of oceanography - biology, chemistry, physics and geology and geophysics, besides ocean engineering, marine instrumentation and archaeology. The major ongoing research projects are:

- Effect of trace metals on the microbial metabolism in the marine environments and its implication on nutrient cycling
- Coastal dynamics, ocean renewable energy and marine structures
- Circulation of the Indian Ocean and its links to climate, climate change, and the marine ecosystem
- Geo-scientific investigations in the continental margins of India and adjacent deep ocean basins (GEO-INVEST)
- Marine Biodiversity and Ecosystem Functioning
- Studies on biogeochemistry, chemical ecology and pollution aspects of the marine environment
- Development of technology for coastal and deep sea applications
- Maritime Archaeological Investigations along the Indian coast
- Implications of natural & anthropogenic processes on the coastal biodiversity and ecosystem functioning of north-west India
- Ecosystem Studies of South Eastern Arabian Sea (Eco SEAS)
- Coastal Processes and Tectonics of Eastern Continental Margin of India



Environment



Processes



Tectonics



Resources



Technology



Biodiversity

## CSIR - National Institute of Oceanography

Head Office : Dona Paula, Goa - 403 004, India

Phone : 91(0)832-2450 450 Fax: 91(0)832 2450602

e-mail : [director@nio.org](mailto:director@nio.org)

URL : <https://www.nio.res.in>

### Regional centres

#### • Mumbai

Phone : 022-26359605 (4 lines)

Fax : 022-26364627

e-mail : [soniya@nio.org](mailto:soniya@nio.org)

#### • Kochi

Phone : 0484-2390814 (7 lines)

Fax : 0484-2390618

e-mail : [rjyothisabu@nio.org](mailto:rjyothisabu@nio.org)

#### • Visakhapatnam

Phone : 0891-2784569, 2539180 (7 lines)

Fax : 0891-2543595

e-mail : [sarmav@nio.org](mailto:sarmav@nio.org)



**CSIR - Central Electronics Engineering Research Institute  
Pilani, Rajasthan, India**



Serving the country since 1953 through

- Technology Development
- Sponsored/Contract R&D
- Consultancy
- Skill Development

**IN THE AREAS OF**

- Electronic Instrumentation**
- Advanced Information Technologies Group
  - Integrated Circuits and Systems Group

- Microwave/Vacuum Devices**
- Vacuum Electron Devices Group
  - High-Power Microwave Systems Group
  - High-Frequency Devices and Systems Group

- Semiconductor Devices & Smart Sensors**
- Semiconductor Sensors and Micro-Systems Group
  - Semiconductor Process Technology Group

**Academic Programmes Offered**

- The institute conducts post graduate and research programmes under the aegis of AcSIR in Advanced Electronic Systems, Advanced Semiconductor Electronics, and High Power Microwave Devices and Systems Engineering.
- Skill Development Programmes for Students and Working Professionals
- ME/M Tech project work and doctoral thesis work for highly motivated university students in all the above areas of electronics

**For Further Details, Please Contact**

Director, CSIR - Central Electronics Engineering Research Institute, Pilani (Rajasthan) 333 031  
Tel.: 91+1596-242111 Fax: 91+1596-242393 E-mail: director@ceeri.res.in www.ceeri.res.in



**CSIR - Central Glass & Ceramic Research Institute**

196, Raja S C Mullick Road, Kolkata-32, India  
Tel.: +91 33 2473 3469/76/77/96, 2483 8079/82  
Fax: +91 33 2473 0957; Web: <http://www.cgcri.res.in>  
Email: director@cgcri.res.in



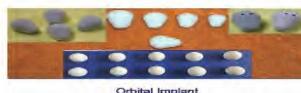
**Major Research & Development Activities**

- Fibre Optics & Photonics
- Specialty Glasses
- Sensor & Actuator
- Sol-gel processing
- Whiteware & Rural Pottery
- Engineering Ceramics
- Bioceramics & Coating
- Solid Oxide Fuel Cell & Li-Ion Battery
- Ceramic Membrane Filters
- Refractory & Tiles from Industrial Waste
- Nano-structured Coatings
- Nano-structured Materials

**Recently Transferred Technologies**

- Ceramic membrane based water purification systems
- Glass nodules for nuclear waste immobilization
- Coated medical implants
- Bioceramics hip & orbital implants
- Optical amplifier for cable TV network
- Glass lining material for reactor

**PRODUCTS DEVELOPED BY CSIR-CGCRI**



CSIR-CGCRI is devoted to achieve excellence and providing leadership in the niche areas of specialty glass, optical fibres, advanced ceramics and nano-structured materials covering frontier science, viable technology and societal empowerment.

**Outreach Centres**

**Naroda Centre**  
168 & 169, Naroda Industrial Estate  
Ahmedabad 382 330, Gujarat  
Tel.: 079 2282 3345, Fax: 079 2282 2052  
Email: slccgcrinc@cgcri.res.in

**Khurja Centre**  
G T Road, Khurja 203 131, Uttar Pradesh  
Tel.: 05738 245433, Fax: 05738 245081  
Email: iksharma@cgcri.res.in



# CSIR-NPL

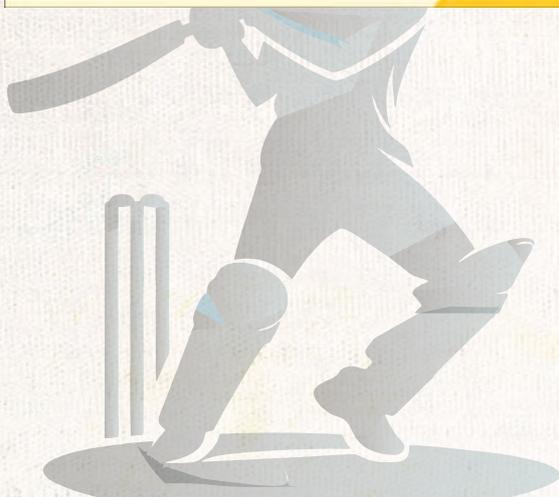
## National Metrology Institute of India

CSIR-NPL is the custodian of National Standards and maintains the Indian Standard Time (IST). It is mandated to be India's National Measurement Institute (NMI) by an act of Parliament. CSIR-NPL disseminates precision measurements that are needed for the growth of Indian science and industry as well as for the legal metrology needs of the nation.

- 1 Calibration and testing
- 2 Consultancy and technical services
- 3 Industrial training
- 4 Academic activities
- 5 Focused R&D in frontline S&T areas
- 6 Bharatiya Nirdeshak Dravya (BND)



For details, please visit:  
[www.nplindia.org](http://www.nplindia.org)



सीएसआईआर - भारतीय पेट्रोलियम संस्थान

**CSIR-INDIAN INSTITUTE OF PETROLEUM**

CSIR-Indian Institute of Petroleum, an ISO 9001:2015 accredited, a premier National Laboratory engaged in Research and Development activities in the downstream sector of the Petroleum Industry. It has more than 2100 publications in National/International Journals, more than 320 patents (India/abroad), several processes/products and a large number of commercialized technologies to its credit. The Institute has the distinction of winning several awards including the prestigious CSIR Technology Award (in Chemical Sector) a number of times, since its inception in 1990. It conducts a vibrant training programme catering to various sectors of the energy industry.

### CREATING FUTURE FUELS

Core Competence

Advanced Separation Processes, Catalyst & Conversion Processes, Renewable Fuels & Lubricants, Industrial & Domestic Combustion, Tribology, Characterization of Petroleum & related Products

Process for Petrochemicals, Intermediates & Biocatalysis, Additives & Speciality Chemicals, Crude evaluation & Characterization, IC Engine Emissions & Alternate Fuels, CO<sub>2</sub> utilization & Petrochemicals

### Recent Major Technologies

Wax De-oiling Technology, NRL Assam, Benzene Recovery Unit (BRU), RIL Jamnagar

Visbreaking with Soaker Internal Technology, Haldia Refinery, LPG Sweetening Catalyst 'THOXCAT ES'

### Technologies Ready for Commercialization

Oxidative desulphurization of Diesel, Super-critical Propane Deasphalting, Ultra-low deep Desulphurization, Light Naptha to LPG & Gasoline (NTGG), Catalyst & Process for removal of Sulphur Dioxide, Adsorptive desulphurization of FCC gasoline & Diesel, Re-extraction for dearomatization of middle distillates, CO<sub>2</sub> recovery from flue gas

Isomerization of light Naptha, Room-temperature Biodiesel, Bio-lubricants & Biodiesel from vegetable oils, Speciality chemicals from Jojoba oil, Biosurfactant, Bioethanol from biomass by micro organism, Microcrystalline wax, Petroleum based electrode pitches, Speciality Carbon materials, Production of Grade-A Helium

### Training Programs

Petroleum Refining Technology, Vehicular Pollution, Emission & Control, CFR Engines, Deposit Rating, Solvent Extraction, Heat Exchangers, Crude Assay, Processing & Handling of Heavy Crudes

Skill Development  
Analytical Chemistry, Tools & Techniques, Glass Blowing, Refrigeration & Air Conditioning, Library & Information Science, Fitting cum Welding, Testing of Petroleum Products. Recombinant Bio-technology



# CSIR – Central Drug Research Institute, Lucknow

## A Centre for Integrated Drug Discovery and Development

CSIR-CDRI is a premier biomedical research institute focused on the discovery and development of drugs, affordable technologies and diagnostics for diseases of relevance to India. Since its inception in 1951, the Institute has played a key role in the growth of the Indian Pharmaceutical Industry. Institute has end-to-end drug discovery and development research capabilities which include structure-guided drug design, medicinal chemistry, in vitro screening, pharmacology, pharmacokinetics, formulation development and toxicology.

### Vision

To drive discovery and development of cutting edge and affordable healthcare technologies

### Mission

Discovery and development of therapeutics for nationally important diseases with global impact, understanding fundamental disease biology and training future drug researchers

### Achievement Since Inception

- > 13 New Drugs Discovered and Developed
- > 6 Diagnostics
- > 80 Process Technologies
- > 12,000 Research Publications
- > 456 Patents Filed Abroad
- > 586 Patents filed in India
- > 2,000 Ph.D.'s
- > 2,000 Sponsored Trainings
- > 7000 Post Graduate Trainings

- #### Therapeutic Research Areas
- Microbial Infections
  - Viral Infections
  - Parasitic Infections
  - Neurological Disorders
  - Metabolic Disorders
  - Musculoskeletal Health Disorders
  - Cancer
  - Reproductive Health



### Licensing / Co-development Opportunities

#### Small Molecules

- > S011-1793 (Anti-malaria)
- > S016-1348 (Anti-cancer) Smac mimetic
- > SIB-CDRI4-115 (Neuropathic pain)

#### Phytopharmaceuticals

- > Picroly (NAFLD)
- > NMITLI-118 AF1 (Anti-stroke)
- > Thebulinic acid enriched fraction for BPH
- > 1703FC03-4-HL (Anti-PCOS)

#### Cost effective Generics

- > Olaparib
- > Nintedanib
- > Nitrozanid
- > Centhaquin
- > Niclosamide
- > Centbuclidine

### Business Model

- Co-development
- Out licensing
- Contract R&D
- Consultancy

For more details: please visit <https://www.cdri.res.in>

## CSIR-Central Drug Research Institute

Sector 10, Jankipuram Extension, Sitapur Road, Lucknow-226031, India; Contact: director@cdri.res.in Phone: +91-522-2771940 Fax: +91-522-2771941



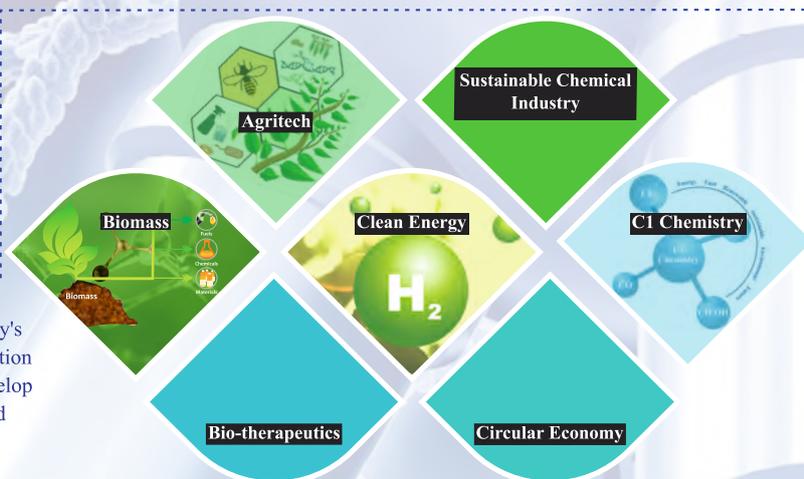
The CSIR - NCL founded in the year 1950 has contributed significantly to the growth and development of the Chemical industry in India. It has partnered research with some of the largest companies in the world. Many of the processes and products that have come out of CSIR-NCL have been successfully commercialized by the industry for domestic consumption and exports.

### CSIR-NCL serves sectors such as

- **Advanced Materials**
- **Clean Energy & Environment**
- **Sustainable Chemical Industry**
- **Drugs & Pharmaceuticals**
- **Chemical & Polymer Engineering**

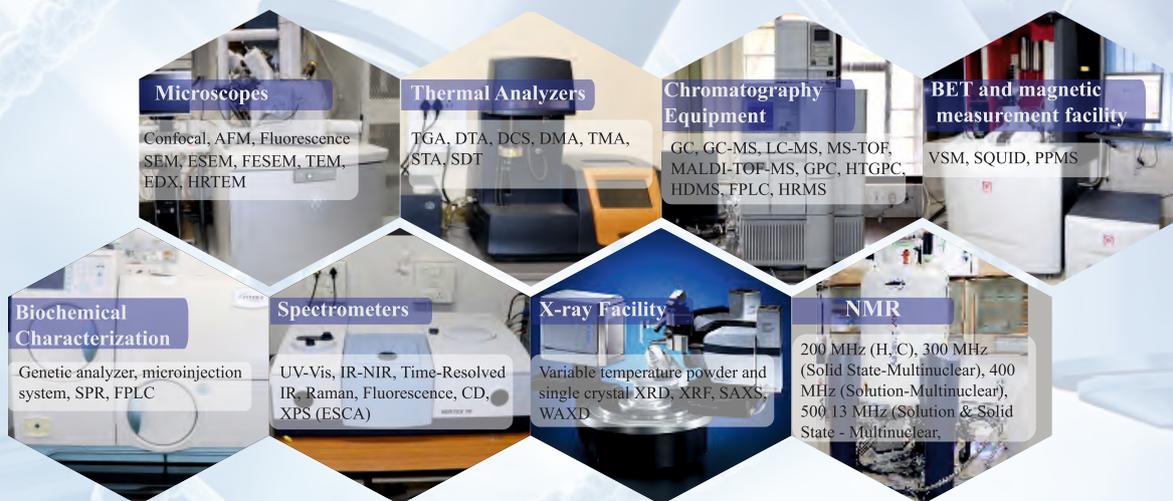
### Thematic research roadmap

The roadmap aims to leverage the laboratory's scientific excellence and passion for translation along with key stakeholder connects to develop technologies for public, private, societal and strategic goods.



A sophisticated analytical facility that hosts an array of state-of-the-art analytical equipment. It is dedicated to providing high-quality research and technical services, along with expertise and guidance to its users

### Central Analytical Facility (CAF)



### National Centre for Industrial Micro-organisms (NCIM)

A national facility and microbial culture repository dedicated to isolation, preservation and distribution of authentic and industrially important microbial strains. Over 5000 microbial cultures of bacteria, fungi, yeasts and algae are available for commercial utilization.



### Skill Development Program (SDP)

Short module-based, hands-on certification courses in industrially significant technologies, instrumentation techniques and research tools for graduates, postgraduates, industry workers, staff, and unemployed youth who possess suitable educational qualifications but still struggle to find employment



**Contact us** Dr. Homi Bhabha Road, Pune- 411 008 (INDIA)  
डॉ. होमी भाभा रोड, पुणे (भारत)-411 008

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# CSIR-NEIST

Science & Technology for Sustainable Development

Established as a national R&D Institute under the Council of Scientific & Industrial Research (CSIR) in 1961, CSIR-North East Institute of Science & Technology, Jorhat has been engaged in multidisciplinary R & D activities contributing to the region's as well as country's industrial growth and economic prosperity.



#### CSIR-NEIST Focus Areas

- ❖ Environmental Care
- ❖ Herbal Formulations
- ❖ Knowledge for Empowerment

#### CSIR-NEIST R&D Divisions

- ❖ Advance Computation & Data Sciences Division
- ❖ Agrotechnology & Rural Development Division
- ❖ Biological Sciences & Technology Division
- ❖ Chemical Sciences & Technology Division
- ❖ Coal & Energy Division
- ❖ Engineering Sciences & Technology Division
- ❖ Geosciences & Technology Division
- ❖ Material Sciences & Technology Division

#### CSIR-NEIST R&D Centres

- ❖ Centre for Infectious Disease
- ❖ Centre for Petroleum Research
- ❖ Centre of Excellence (CoE) in Bioinformatics

#### CSIR-NEIST Branch Labs

- ❖ Branch Lab Itanagar (BLIT)
- ❖ Branch Lab Manipur (BLIM)

#### Major Testing and Analytical Facilities available

- ❖ 500 MHz NMR, GC-MS, LCMS, FTIR, CHN & Sulphur Analyser
- ❖ Confocal Microscope
- ❖ Ion Chromatography System
- ❖ Fluorescence Activated Cell Sorter & Flow cytometre
- ❖ Universal Testing Machine
- ❖ High Pressure Reactor
- ❖ Ultra-High Performance Liquid Chromatography
- ❖ X-Ray Photoelectron Spectrometer
- ❖ High Resolution Mass Spectrometer (HRMS)
- ❖ Thermal analyser for DTA, TGA & DSC
- ❖ Atomic Emission Spectrophotometer (ICP-AES)
- ❖ High Resolution Transmission Electron Microscope (HRTEM)
- ❖ Scanning Electron Microscope
- ❖ Isotope Ratio Mass Spectrometer (IRMS)
- ❖ Nuclear Magnetic Resonance (NMR)

#### Major Awards

- ❖ FICCI Award in the year 1982 & 1985 for technologies and rural development
- ❖ NRDC Awards for technologies development in the year 1972, 1984 & 1985
- ❖ SIDC Award in 1987
- ❖ Industrial Promotion Board Award in 1988
- ❖ CSIR Technology Awards for four consecutive years from 2010 to 2013
- ❖ Assam State Science Award 2019 for Science Popularization and Research

#### Translational Research for Transforming Indian Economy

The Institute has generated more than 120 technologies and developed expertise in the areas like natural products chemistry, herbal products for quality life, drug intermediates, agro-technologies, petrochemicals, crude-oil transportations, paper and paper products, foundation design engineering, bioreactors and bioremediation, soil investigations and building materials.

#### Societal Activities & Agrotechnologies

CSIR-NEIST has been extending awareness, training and skill development programmes on cultivation of Mushroom, Vermicompost Medicinal & Aromatic Plants; Welding, Plumbing, Fitting, Weaving; benefitting large number of women, unemployed youths and marginal farmers of this region for livelihood generation and self employment under CSIR-AROMA mission and various other programmes.

#### Testing/Analytical Services

The institute has been extending analytical services for testing of various samples like water, soil, fertilizers, building materials, cement, iron & steel, stones, oil & petroleum products, coal, minerals, fibres, paper, boards, natural products, etc to Industries, PSUs, Govt Organizations, Academic Institutions, Students and Farmers of North East Region.

#### For Details Contact

Director

CSIR-North East Institute of Science & Technology, Jorhat – 785006, Assam, India

Phone: (0376) 2370012 Fax: (0376) 2370011, Email: [director@neist.res.in](mailto:director@neist.res.in), Website: [www.neist.res.in](http://www.neist.res.in)



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