सत्यमेव जयते

newsletter

National Dope Testing Laboratory

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PROMOTING ANTI-DOPING

SCIENCE & RESEARCH

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- Parliamentary Standing Committee on Education, Women, Children, Youth Affairs & Sports (EWCY&S) at NDTL
- United Nations Educational, Scientific and Cultural Organization (UNESCO) delegates
- Delegates from NIPER-G
- Officials and students from Department of Nutrition and Dietetics from Manav Rachna University (MRIIRS)
- Scientific team from National Forensic Science University (NFSU), Gandhinagar, Gujarat
- Officials and Students from Shree Guru Gobind Singh Tricentenary University (SGT), Gurugram
- Senior Army Officers from Remount Veterinary Corps (RVC), Meerut



From the desk of the Director

The National Dope Testing Laboratory (NDTL) has been established by the Government of India to promote fair play and clean sports. The Laboratory, having International accreditation (WADA & ISO/IEC17025), is dedicated to analytical testing and research in Human Dope Testing.

It gives me immense satisfaction that the Laboratory has made tremendous progress in the recent years for many scientific areas in terms of upgradation of Infrastructure, Instrumentation and Research etc. It has now become a laboratory with sophisticated state of the Art instrumentation and advanced research facilities in the field of Anti-Doping Science.

In an effort, to realize India's longstanding potential for achieving independence in every field and keeping in tune with Government's 'Atmanirbhar Bharat'. In recent years, NDTL has synthesized a total of 10 No's of rarely available Reference Materials (RMs) in collaboration with premier scientific research institutes of India like National Institute of Pharmaceutical Education and Research Guwahati (NIPER-G) & CSIR-Indian Institute of Integrative Medicine, Jammu (IIM-J). The Laboratory is advancing of success steadily in a highly competitive manner in terms of synthesis of RMs, recognition of Scientific and Industrial Research Organisation (SIROs) & Patents etc.

The infrastructure and manpower is being constantly upgraded to meet the Laboratory requirement for carrying out advanced Research & Development activities and propose other setup like Athlete Passport Management Unit (APMU). It is a great pleasure and proud that the NDTL will have its statutory entity under the umbrella of National Anti-Doping Act 2022, which would further strengthen the Anti-Doping System in India.

At the very core of NDTL are its scientists, who work tirelessly on research and development of new analytical methods, and ensure that India sets high standards in Anti-Doping science research. Our scientists and researchers are the core of our laboratory. We, at NDTL, nurture our scientific and technical staff of top quality and soak up in them a feeling of obligation, genuineness, and responsibility. We motivate them to be scientific attitude, creative, independent, supportive and encourage them to take up blue sky research for advancement. I place on record my sincere thanks to the dedication of the Scientists and Staff of NDTL in bringing out this issue of the Newsletter. Further, we are always glad to provide opportunities to young students, faculties & scientists to visit our premises & well-versed them about the Anti-Doping science.

I also express my deep gratitude to the Hon'ble Union Minister Shri Anurag Singh Thakur, Shri Nisith Pramanik, Minister of State, Smt. Sujata Chaturvedi, Secretary (Sports) Government of India for providing all timely support, patiently bearing with NDTL, and encouraging NDTL to move forward with significant momentum.

Dr. P. L. SAHU
Director



NDTL at a Glance

The National Dope Testing Laboratory (NDTL) is an autonomous body of Government of India. This is a leading analytical testing & research organization established in the country and mandated for dope testing of sportspersons at National as well as International level. It is accredited by World Anti-Doping Agency (WADA) and also accredited by the National Accreditation Board for Testing & Calibration Laboratories (NABL) as per ISO/IEC 17025:2017 for Chemical and Biological testing.

NDTL is one of the modern & state-of-the-art Laboratory equipped with highly sophisticated analytical equipment and instruments required for Human Dope testing. It is the only Laboratory of its kind in the country with the most advanced facilities and methods required for Anti-Doping Science and allied research, while strictly adhering to the protocols of WADA International Standard for Laboratories (ISLs). Presently NDTL, it is one of the thirty (30) WADA accredited Laboratories across the World. The Laboratory is being constantly upgrading its infrastructure, manpower and instrumentation etc.

The Laboratory is equipped with highly sophisticated instruments like Liquid Chromatography-Mass Spectrometry (LC-MS/MS), Gas Chromatography-Mass Spectrometry (GC-MS/MS), and Isotope Ratio Mass Spectrometry (IRMS), etc. that are responsible for testing of Urine & Blood samples from human sports. NDTL has its participation in various External Quality Assurance Scheme (EQAS) like World Anti-Doping Agency (WADA),World Association of Anti-Doping scientists (WAADS) and Swiss Centre for Quality Control (CSCQ).

Mission and objectives

- To provide accurate & reliable testing services for Dope testing of Human Sports
- To become an Institution with high level of research in drug of abuse analysis in the country and the world
- To conduct research in Bio-Chemistry, Bio-technology, Chemistry & Pharmacology to innovate new methods for drugs of abuse analysis
- To conduct Doctoral & Post-Doctoral research in drug of abuse and allied area under inter-disciplinary scheme to promote interest of young talent in this area



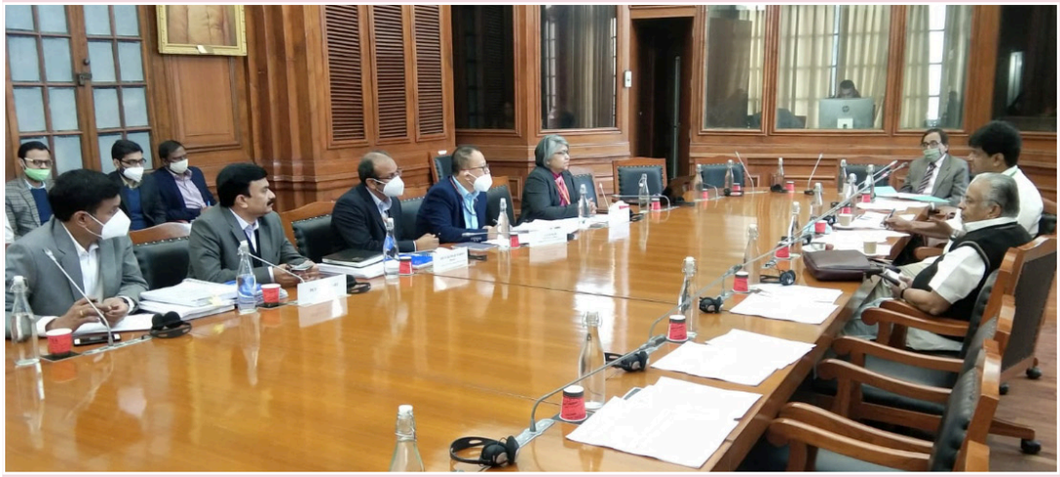
Shri Anurag Singh Thakur (Hon'ble Minister of Youth Affairs and Sports, MYAS) and Director (NDTL) with GB members at NDTL, New Delhi

Governing Body Meeting, NDTL (2021-22)

On 3rd August 2022, the 16th Governing Body & 14th General Meeting of the National Dope Testing Laboratory (NDTL) held under the Chairmanship of Shri Anurag Singh Thakur (Hon'ble Minister of Youth Affairs and Sports, MYAS). In this meeting, many important decisions and initiatives were taken to further strengthen the laboratory for compliance with WADA ISL 2021. The minutes of the same had been circulated and approved by the members of Governing Body of NDTL. The committee has discussed and provided approval on the following agenda as follows:



- Action Taken Report based on the decision taken during the 15th Meeting of the Governing Body
- Present status of the Laboratory, progress, and achievements
- Minutes of Meetings of the Scientific Advisory Board (SAB) and Finance Committee
- Revision of tariff for testing of dope samples
- Establishment of an Athlete Passport Management Unit (APMU) in India at NDTL
- Recognition of National Dope Testing Laboratory (NDTL) as a Scientific & Industrial Research Organization (SIRO)



Meeting on National Anti-Doping Bill, 2021, Parliament of India, Sansad Marg, New Delhi

The National Anti-Doping Act, 2022

The National Anti-Doping Bill 2021, was introduced in Lok Sabha on 17th December 2021 and passed on 27th July 2022 with some official amendments proposed on the basis of the suggestions/ recommendations received from the Parliamentary Standing Committee and some other key stakeholders. It was introduced in the Rajya Sabha on 28th July, 2022 and passed on 3rd August, 2022. The primary aims of the bill is to strengthen the National Anti-Doping Agency (NADA) and National Dope Testing Laboratory (NDTL) by establishing them as statutory entities and prohibits the use of performance-enhancing drugs by athletes, support staff, and other individuals.

Hon'ble Union Sports Minister Shri Anurag Singh Thakur, presented the bill into the Lok Sabha, and stated that "With the enactment of this Bill, this message will be clear in countries around the world and in WADA that India is very serious about Sports, Sportsmen and Doping". The country will have special laws and anti-doping testing facilities like other countries viz US, China, Australia, Korea & Japan. Now, India will be among those countries to have its own anti-doping law and testing laboratories as well. This bill also encourages in enhancing the number of Dope Testing laboratories at India.

"With the enactment of this Bill, this message will be clear in countries around the world and in WADA that India is very serious about Sports, Sportsmen and Doping"

Preliminary activities for setting up proposed APMU

An Athlete Passport Management Unit (APMU) is a group of persons designated by the Anti-Doping Organization (ADO) to administer an Athlete Biological Passport (ABP). The unit, ideally a WADA accredited laboratory-associated APMU, is responsible for the administrative management of Athlete Passports, advising the ADO on intelligent target testing, liaising with the Expert Panel, compiling and authorizing an ABP Documentation Package and reporting Adverse Passport Findings. At present, the total number of APMUs associated with WADA accredited laboratories are 16.

A principle approval for the establishment of an Athlete Passport Management Unit (APMU) was accorded by the esteemed members of the 16th Governing Body Meeting of the National Dope Testing Laboratory (NDTL) held on 3rd August 2022, New Delhi. The foundation of APMU would perceive our country as supporting Anti-Doping activities followed by the growth in ABP programs globally. Furthermore, athlete passport information, *via the APMU*, can be used to drive essential Anti-Doping activities including testing, analysis, sample storage, and investigations. Therefore, the establishment of APMU facilities at NDTL-India would be helpful to strengthen & recognize our laboratory worldwide.



Dr. P.L. Sahu [Director, NDTL New Delhi] and Ms. Ritu Sain, Director General [NADA-India], felicitate to Mr. Witold Banka [President of WADA] during symposium at Lausanne, Switzerland

Participation in WADA Annual Symposium 2022

Lausanne, Switzerland

World-Anti Doping Agency (WADA) Annual Symposium under the theme entitled 'Raising the Game" was held on 11-12th June 2022 at the SwissTech Convention Centre in Lausanne, Switzerland. Dr. P.L. Sahu, Director and Dr. Kapendra Sahu, Scientist 'C' from NDTL attended the WADA Annual Symposium. About 20 Scientists from National Anti-Doping Organizations across the world came together at Lausanne (Switzerland) to discuss the current state of clean sport in today's crucial time. As meeting outlined; how we can further advance anti-doping together for the benefits of athletes worldwide were explored and discussed. During the symposium, a short meeting with Mr. Witold Banka, WADA President was jointly organized by Director General, NADA and Director, NDTL for developing innovations in Anti-Doping activities at India.



WADAs Annual Symposium 2022

During the symposium, a short meeting with Mr. Witold Banka, WADA President was jointly organized by Director General, NADA and Director, NDTL

Proposed start-up for establishment of Gene Doping Testing Facility

Gene or cell doping is defined by the World Anti-Doping Agency (WADA) as "the non-therapeutic use of genes, genetic elements, and/or cells that have capacity to enhance athletic performance". In recent years, gene therapy has shown progress and positive results that have highlighted the potential misuse of this technology and the debate on 'gene doping'.



Director, NDTL and Quality Manager, NDTL with the Director of the Anti-Doping Laboratory, Japan and their team

The Director with his team from Anti-Doping Laboratory LSI Medience Corporation, Japan were visited in July 2022 to initiate the Gene Dope testing facility at NDTL India. The site inspection, instrumentation and manpower were explored and discussed the requirement for the establishment of Gene Dope testing facilities. This visit will open new avenues and facilitate towards establishment "Gene Doping testing facility" at India.

WADA Laboratory Director's Meeting



WADA Laboratory Director`s meeting at Lausanne, Switzerland

The Laboratory Director, participated in the WADA Laboratory Director`s meeting held on 9-10th June 2022 in Lausanne, Switzerland. In the opening meeting, Dr. Osquel Barroso (Senior Associate Director, WADA Laboratories) welcomed all the participants and newly appointed Laboratory Directors. Dr. Osquel also introduced the new members and shared the details of Laboratory Expert Group members. In this meeting, agenda items, current requirements of WADA, importance of human resource/manpower in Dope testing of laboratory were discussed.

NDTL, Director, participated in the WADA Laboratory Director's meeting held on 9-10th June 2022 in Lausanne, Switzerland



Dr. P. L. Sahu with Mr. Witold Banka [WADA President] at WADA Annual Symposium



Dr. P. L. Sahu with Mr. Olivier Niggli, Director General, WADA at WADAs Annual Symposium

Recognition of NDTL as SIROs by DSIR

The laboratory got recognition as a "Scientific and Industrial Research Organization" (SIRO) on 27th April, 2022 by the DSIR, Government of India. By virtue of the said recognition, the R&D activities of the Laboratory in niche areas of Anti-Doping Science will boost. Additionally, it has significant financial benefits for the Laboratory in the form of reduced Custom duty and GST. Further, it will also support for future promotions of scientific staff under the Modified Flexible Complementing Scheme (MFCS).

Indian Patent filed

As per the MoU signed with NIPER-Guwahati for synthesis and characterisation of Reference Materials (RMs) of Dope importance. Both Institutions have synthesised six RMs and out which two patents have been filed as given below:

1) Indian patent Application No: 202131058419 File on 15/12/2021
Title: Process to prepare Carboxy-Toremifene

2) Indian patent Application No: 202231000058 File on 01/01/2022
Title: Process to prepare Octopamine Sulfate

Synthesis of new reference materials

Earlier, the National Dope Testing Laboratory (NDTL) signed a MoU with NIPER-G and CSIR-IIIM, Jammu, in order to initiate synthesis and characterization of reference standards for specific prohibited substances and metabolites, as a part of the fulfilment of clause 4.3.3 of WADA ISL accredited laboratories to develop a plan for its research and development activities in the field of Anti-Doping Science. As of now, nine reference meterial are synthesize in collaborations.

S. No	Name of Drugs/metabolites	Class
1	N-acetyl-Aminoglutethimide	S4.1 Aromatase Inhibitors
2	Etamivan Sulfate	S6.B Specified Stimulants
3	17-Keto Prostanozol	S1.1 Anabolic Androgenic Steroids (AAS)
4	*p*-hydroxy-prenylamine	S6.A Non-specified Stimulants
5	Carboxy Toremifene	S4.2 Anti-Estrogenic Substances [Anti-Estrogens and Selective Estrogen Receptor Modulators (SERMS)]
6	Octopamine Sulfate	S6.B Specified Stimulants
7	Norfenefrine Sulfate	S6.B Specified Stimulants
8	Etilefrine Sulfate	S6.B Specified Stimulants
9	Norethylmorphine	S7. Narcotics

Release of Newsletter



Visit of Parliamentary Standing Committee and Release of 2nd Newsletter

The NDTL second newsletter (Vol 2, Issue 1, March 2022) was released by the Hon'ble Parliamentary Standing Committee to promote Anti-Doping Science & Research. This volume explored the insight and information's regarding to achievements, scientific and academic collaborations, training, research activities, and other laboratory activities.

Hon'ble Parliamentary Standing Committee visited NDTL and encouraged to promote Anti-Doping Science and Research

Renewal of ISO/IEC 17025:2017 Accreditation

On 18th April 2022, NDTL received an advisory letter from NABL stating that the laboratory ISO/IEC 17025:2017 accreditation had been extended till 22nd April, 2023.

External Audits and Accreditations



Dr. P.L. Sahu with the team of WADA Assessors at NDTL, New Delhi

WADA Laboratory onsite assessment was conducted from 22-24th May 2022 and the following were the members of the WADA assessment team.

Dr. Osquel Barroso	Senior Associate Director Science & Medicine, Laboratories. WADA Lead Assessor
Mr. Thierry Boghosian	Senior Manager, Laboratory Accreditation. WADA Assessor
Dr. Sven Voss	Section Head Biological and Hematological Module Manager, WADA-accredited Laboratory, Doha, Qatar. (External Expert)
Dr. Xavier de la Torre	Scientific Vice-Director, WADA-accredited Laboratory, Rome, Italy. WADA Lab EAG member. Chair of WADA IRMS Working Group (External Expert)
Dr Peter Van Eenoo	Director, DoCoLab Universiteit Gent-Ugent, Ghent, Belgium. WADA Lab EAG member. Chair of WADA MRPL Working Group (External Expert)

During the closing meeting, the Lead assessor, briefed about their conclusion of the audit:

1. The Laboratory has improved as per the expectation of WADA.

2. The SOPs and Validation reports covers the entire requirement as per the compliance of ISL/WADA documents.

3. The WADA accreditation of the Laboratory will be continued.

Re-assessment Audit of ISO/ IEC 17025:2017

The Reassessment Audit of ISO/IEC 17025:2017 by NABL was conducted on 7-8th March 2022. A total of five Assessors and one Observer assessed the Proficiency Testing (PT) & other activity of NDTL. The team evaluated the confidentiality and impartiality, structural, resource, process requirement, and management requirement as per ISO/IEC 17025:2017. After the evaluation, all the concerned areas were found to be satisfactory.



Reassessment Audit of ISO/IEC:17025:2017



NDTL Technical and Scientific staff with WADA assessment team.

Annual Report on Audit & Accounts of NDTL

Annual Report (2020-21) and Audit Report of C&AG on the accounts of NDTL (2020-21), have been approved by Hon'ble Chairman, Governing Body NDTL & Minister of Youth Affairs of Sports on 24th March, 2022. After obtaining approval of the Hon'ble Chairman Governing Body NDTL, the printed document has been submitted to the ministry on 28.03.2022 for further proceedings to the parliament for lying in both the houses.

Interaction with DSIR Assessors

An online meeting was organized between the officials of NDTL and DSIR officials, Ministry of Science & Technology (Govt of India) on 15th March 2022 for the assessment of submitted application by the laboratory. The Director, (NDTL) has delivered a presentation on the research program, infrastructure, manpower, financial sustainability of R&D, and scientific achievements of the Laboratory in the past three years.

The Director, (NDTL) has delivered a presentation on the research program, infrastructure, manpower, financial sustainability of R&D

Initiatives for Collaborations with AIIMS and IITs

The Laboratory is also moving towards firming up agreements/ collaborative research on Anti-Doping Science at National and International levels including All India Institute of Medical Sciences (AIIMS), Indian Institute of Technology (IITs), and peer-established WADA-Accredited Laboratories across the world. The future goal of the laboratory is to establish a framework for research activities in collaboration between laboratory and the research organizations and producing a platform for the Anti-Doping community.

The future goal of the laboratory is to establish a framework for research activities in collaboration between laboratory and the research organizations

Trainings on Instrument Operation and Quality Management System by National Experts

Training on Eurotherm Data Recording System (EDRS) was conducted by Mr. Umesh Fulgala on 11th May 2022 at NDTL, New Delhi. EDRS system series is used to track and record the temperature parameters of all cooling types of equipment installed at various sections of the NDTL, New Delhi.

Training has been imparted to 5 MD Students of Sports Medicine from Sports Injury Centre, VMMC & Safdarjung Hospital from 14-17th March, 2022 Training has been provided by NDTL Scientific and Technical staff of their specific areas at NDTL, New Delhi.

Training entitled "To explain the Non-conformities and Observations related to Human Urine samples & Blood Samples observed by National Dope Testing Laboratory (NDTL) and further Suggestions" was provided on 23rd March, 2022 to Doping Control Officers (DCOs) & Blood Collection Officers (BCOs) at Office of National Anti-Doping Agency (NADA), JLN Stadium, New Delhi by Dr. Ashok Kumar Maurya, Scientist-C.



QMS Training
(Virtual) QMS Training has been imparted to the Quality team along with newly joined Dr. Narasimha Raju (Scientist 'E') & Dr. Tarun Handa (Scientist 'D') by Dr. Tiia Kuuranne & Dr. Guillaume Sine, on "Introduction to WADA Documents" on 21st, 22nd and 25th April 2022.

Training entitled "Brief upon the non-conformities observed by laboratory in Dope samples and further Suggestions" was provided on 18th June 2022 to Doping Control Officers (DCOs) & Blood Collection Officers (BCOs) at Office of National Anti-Doping Agency (NADA), JLN Stadium, New Delhi by Dr. Ashok Kumar Maurya, Scientist-C.



Training Imparted to MD Students (Safdarjung Hospital) at NDTL, New Delhi



Dr. P.L. Sahu with invited team for internal assessment

Internal assesment and trainings by International Anti-Doping Experts

Internal Assessment & Trainings;
A team of assessors Dr. Gloria Munoj Garcia, Director, Madrid Laboratory, Dr. Bhushan Pradosh Chaudhari, Senior Principal Scientist, (NABL ISO:17025: 2017) Dr. Mohana Krishna Reddy Mudiam, Senior Principal Scientist & Professor (NABL ISO 17025 Assessor) visited NDTL and conducted training cum internal assessment during April 25-27th 2022.



Director and GC/C/IRMS team with Ms. Maria de Castro (Spain) Sanchez at NDTL, New Delhi

(i) Training cum Verification of GC/C/IRMS (253 Plus) from Ms. Maria de Castro Sanchez, Madrid, Spain (M/s Thermo) was carried on 4-9th April 2022. All the members of the GC/C/IRMS team attended the training session successfully.

(ii) Gas Chromatography Combustion Isotope Ratio Mass Spectroscopy (GC/C/IRMS) training-cum-Inter Laboratory Comparison (ILC) was imparted to the IRMS team by Dr. Thomas Piper, Cologne Lab, Germany. The training session encompassed the sharing of 6 different urine samples derived from excretion studies and quality controls which were processed, evaluated, and reported at NDTL, New Delhi. NDTL results were evaluated correctly as per WADA-TD2022IRMS The training and discussion were held on 12th April 2022 in virtual mode.

(iii) Virtual QMS training on "Introduction to WADA Document" by Dr. Tiia Kuuranne, Director of the Swiss Laboratory for Doping Control Analysis, and President of the World Association of Anti-Doping Scientists (WAADS) was carried on 21st April 2022.

(iv) Virtual training on QMS Training (TD2022DL; TD2021IDCR; TD2022LDOC; TD2022MRPL by Dr. Tiia Kuuranne on 22 & 25th April, 2022 was conducted at NDTL, New Delhi.

(v) Training by Japan (Tokyo) Anti-doping Lab representative was held on 11th -15th July 2022. Dr. Masato Okano (Director), Ms. Ayako Ikekita (Quality Manager) and Dr. Kentaro Akiyama, Certifying Scientists of Gene Doping Testing were discussed on staff training schedule/ records, iQAS, CAR, Investigation Report for QC Chart, Laboratory Documentation Package (LDP) Internal Audit, Regular analysis for the quantification of threshold substances, the procedure for extending the expiration date of reference materials, Implementation of WADA new documents, Report for ADAMS, Technical matter of GC-MS/MS, LC-MS/MS, Immunoassays, ESAs, Blood analysis.

NIPER-G and NDTL Project Review Meeting

The project progress review meeting was scheduled on 5th July 2022 to evaluate the ongoing synthesis of Phase I and Phase II molecules as per the proposed project plan. The meeting was precided under the direction of Laboratory, Director and Director of NIPER-Guwahati followed by the presentations given by the concerned team members via virtual mode. During the meetings, various agenda points were discussed as follows;

- The purity issue was discussed and it was decided that the purity of the synthesized molecule will be cross-checked in other two laboratories such as CSIR-IIIM Jammu and IPC, Ghaziabad as per the protocols and other samples of different labs will be tested at NIPER-G before sending to WADA labs.
- NIPER-G will provide the remaining synthesized reference material by end of this month.

> "The meeting was precided under the direction of Laboratory Director and Director of NIPER-Guwahati"

CSIR-IIIM, Jammu and NDTL Project Review Meeting

The project progress review meeting was scheduled on 29 June 2021 via virtual mode. The meeting was preceded under the direction of Laboratory, Director and Director of IIIM-Jammu. Out of 10 substances/metabolites N-Acetyl-aminogutethimide (Phase-II metabolite of Aminogutethimide), Etamivan sulphate(Phase-II metabolite of Etamivan), 17-keto-Prostanozol (Phase-I metabolite of Prostanozol) have been synthesized. The various points were discussed related to the synthesis of reference standards of drug/metabolites, long-term metabolites of selective performance-enhancing substances including the current status of running projects regarding the ongoing synthesis of Phase-I and Phase-II molecules under the proposed timelines.

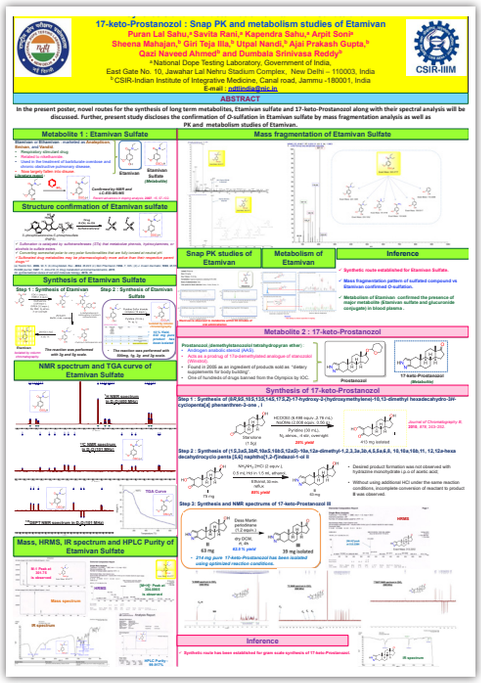
Research Publication at NDTL

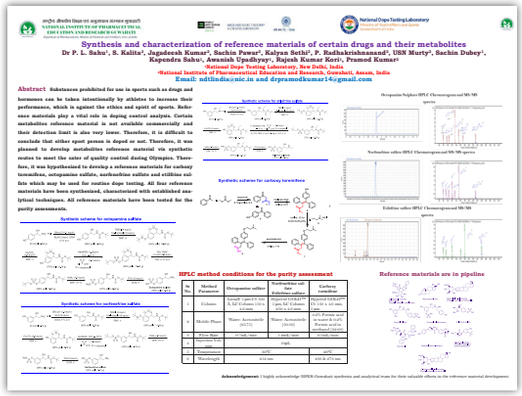
The Poster Presentations: In collaboration with NDTL and CSIR-IIIM Jammu

In the present poster, novel routes for the synthesis of long-term metabolites, Etamivan sulfate (S6.B Specified stimulants) and 17-keto-Prostanozol (S1.1 Anabolic androgenic steroids (AAS) along with their spectral analysis have been discussed. These synthesized drugs and their metabolites will be use and supply in routine dope testing laboratories.

In collaboration with NDTL and NIPER-Guhawati

In the present poster novel route of synthesis and development of reference materials for Carboxy-




Synthesis and characterization of reference materials of certain drugs and their metabolites

toremifene (S4.2 Selective estrogen receptor modulators (SERMs), Octopamine sulfate (S6. Stimulants), Norfenefrine sulfate(S6. Stimulants) and Etilfrine sulfate (S6.B Specified stimulants) has been discussed. These synthesized drugs and their metabolites will be use and supply in routine dope testing laboratories.

Poster Reference: Puran Lal Sahu, Savita Rani, KapendraSahu, Arpit Soni, Sheena Mahajan, Giri Teja Illa, Utpal Nandi, Ajai Prakash Gupta, Qazi Naveed Ahmed and Dumbala Srinivasa Reddy"17-keto-Prostanozol : Snap PK and metabolism studies of Etamivan"at40th Cologne (Manfred Donike) Workshop On Dope Analysis being held during 28th March – 1st April 2022 on virtual mode organised by Deutsche Sporthochschule Köln German sport university,Cologne.

Poster Reference: P. L. Sahu, S. Kalita, Jagadeesh Kumar, Sachin Pawar, Kalyan Sethi, P. Radhakrishnanand, USN Murty, Sachin Dubey, KapendraSahu, Awanish Upadhyay, Rajesh Kumar Kori, Pramod Kumar"Synthesis and characterization of reference materials of certain drugs and their metabolites"at 40th Cologne (Manfred Donike) Workshop On Dope Analysis being held during 28th March – 1st April 2022 on virtual mode organised by Deutsche Sporthochschule Köln German sport university, Cologne.

Scientific Advisory Board (SAB)



The Laboratory has a Science Advisory Board (SAB) for guidance and exploring the research and development activities. The 4th SAB meeting was held on 12th July 2022 under the Chairmanship of Prof. (Dr.) R. K. Goyal, Vice-Chancellor, Delhi Pharmaceutical Sciences & Research University (DPSRU), Delhi, and Foreign expert invitee Dr. Masato Okano, Director Anti-Doping Laboratory, (Tokyo) LSI Medience Corporation, Japan. The members of SAB attended the meeting names as Dr. Surinder Singh [Former Director & NIB & VC JSSAHER, Mysuru], Dr. Srinivasa Reddy [Director CSIR-IICT, Hyderabad, CSIR-CDRI, Lucknow], Prof. S.K. Jain, [Department of Pharmaceutical Science Dr. H.S.G. University, Sagar (MP)], Dr. Anil Handoo [Hematologist, BLK hospital, New Delhi], Prof. Saranjit Singh [Former Dean and Head, Department of Phramaceutical Sciences,NIPER, Mohali], attended the meeting in physical mode and Dr. S.K, Raza, [Former Director IPFT, Gurugram] attended meeting via Google meet. Briefly, the meeting has its main focus on the achievements and new initiatives, the status of Research & Development activities at the laboratory, a focused prospectus of the laboratory, establishment of the Athlete Passport Management Unit (APMU) in NDTL, New Delhi etc.





Prof. (Dr.) Masato Okano [Tokyo Laboratory, Director Anti-Doping Laboratory LSI Medience Corporation, Japan], Dr P. L. Sahu, [Director, NDTL New Delhi], Prof. (Dr.) R.K. Goyal, Dr. Surinder Singh, Prof. S.K. Jain, Dr. Srinivasa Reddy, Prof., Dr. Anil Handoo at NDTL, New Delhi during SAB meeting.

Hindi Activities

Hindi Upliftment committee meeting held on 23rd March 2022 under the presidentship of Dr. Tarun Handa, "Scientist-D". Hindi officials took a resolution to enhance the uses of Hindi in day-to-day activity.



Director invited as Chief Guest at DPSRU

The Laboratory Director was invited as a Chief Guest on the occasion of National Science Day 2022 at DPSRU. He delivered a talk and addressed the attendee/ delegates/students who attended the event.

Director's Lecture

at Lakshmibai National Institute of Physical Education(LNIPE), Gwalior

A lecture on "Use of Drugs and their adverse effects on health in the field of Sports & Fitness" was delivered by Dr. P. L. Sahu, Director (NDTL, New Delhi) on 21st March, 2022 at the LNIPE, Gwalior. It was attended by more than 500 participants including all faculty members and B.P.Ed (Bachelor of Physical Education), M.P.Ed (Master of Physical Education) diploma students and Ph.D. Scholars. It enhances the knowledge of Anti-Doping Science amongst the Sports persons that promoted fair play and Clean Sports.



Lakshmibai National Institute of Physical Education(LNIPE), Gwalior



Dr P. L. Sahu [Director, NDTL] at LNIPE, Gwalior



Dr P. L. Sahu ,Director, NDTL at symposium, DPSRU, New Delhi

Director, NDTL addressed a symposium on "Challenges of Post-COVID Era" held at Delhi Pharmaceutical Sciences and Research University (DPSRU), New Delhi on 9th May 2022.



Director, NDTL during the Indian Pharmacopoeia (IP-2022) release at Vigyan Bhawan, New Delhi

Special Guest invitation on the 9th edition of

Indian Pharmacopoeia released by IPC (IP-2022)

The Indian Pharmacopoeia (IP) is published by the Indian Pharmacopoeia Commission (IPC) on behalf of the Ministry of Health & Family Welfare, Government of India, to fulfil the requirements of the Drugs and Cosmetics Act 1940. Recently, the 9th edition of Indian Pharmacopoeia-2022 was released on 1st July at Vigyan Bhawan, New Delhi. On the occasion of the release the Director, NDTL Co-chaired and attended the IPC conference-2022.

"Recently, the 9th edition of Indian Pharmacopoeia-2022 was released on 1st July at Vigyan Bhawan, New Delhi"



Director, NDTL (in Middle) with Dr Viranchi Shah (left) President Indian Drug Manufacturers' Association (IDMA), Dr. H. G. Koshia (right), Commissioner- Food and Drug Control Administration, Government Of Gujaratat Vigyan Bhawan during IPC Conference-2022.



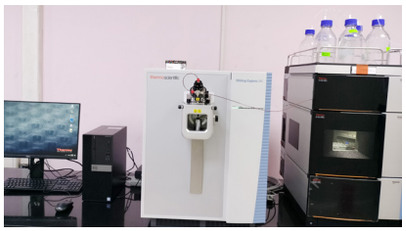
International Women's Day

International Women's Day is celebrated on March 8, every year. On this occasion, NDTL women staff members celebrated the day by discussing Women's extraordinary contributions to society, and their role in gender equality.



Installation of Orbitrap Exploris™ 240 Mass Spectrometer

National Dope Testing Laboratory has upgraded the instrument facility in dealing with the intrinsic technological dialectics that will facilitate the speed of analysis and increased sensitivity, specific techniques capable of analysis of small to large molecules in sport doping. Thermo Scientific Orbitrap Exploris 240 mass spectrometer delivers performance and versatility to drive discovery and identification with the quantitative precision and accuracy to confidently scale up while achieving impact. Orbitrap Exploris™ 240 Mass Spectrometer (Thermo Scientific™) instrument was installed in the Laboratory from 21-29 July 2022. The Operational & Performance Qualification was monitored by the Group Head and scientists.



Orbitrap Exploris™ 240 Mass Spectrometer (Thermo Scientific™) installed at NDTL, New Delhi.

76th Independence Day Celebration



Staff on occation of Independence Day celebration

This year the 76th Indian Independence Day was celebrated under the government's 'Har Ghar Tiranga' programme. On this occasion, NDTL staff gathered on the premises and celebrated the Indian Flag Ceremony with Chief Guest Mr. N. Venkateswaran, NABL-CEO. Later appreciated the Director, and the whole staff of NDTL, for their flawless work in the field of Anti-doping science and also congratulated them on getting WADA accreditation and DSIR recognition. He promised to support the NDTL for future technical assistance and also suggested scientific staff to become NABL assessors. The Director, NDTL expressed his gratitude to Mr. N. Venkateswaran, Chief guest and further requested staff to take the pledge to actively work towards the Nation building.



Mr. N. Venkateswaran (Chief Guest), NABL-CEO and Director, NDTL hoisted the National flag at the NDTL, New Delhi



Celebration of 8th International Yoga Day

International Yoga Day is commemorated every year on 21st June to spread awareness about the invaluable benefits of Yoga. This year's theme was based on “Yoga for Humanity”. On this occasion, NDTL staff gathered at the conference hall and in the garden to perform yoga together under the supervision of a yoga trainer. The main objective of the session was to make the participants aware of the basic asanas of Yoga. This activity was encouraged and appreciated by the Laboratory Director, Dr. P. L. Sahu. Furthermore Scientific, Technical, and Administrative staff members of the laboratory celebrated International Yoga Day for spreading the message to keep fit and good health to the nation.





8th International Day of Yoga at NDTL Premises



Welcome Ceremony of WADA Team Members

A scientific and technical team of the World Anti-Doping Agency (WADA) visited to investigate the efficient and effective implementation of WADA documents at the National Doping Testing Laboratory, New Delhi from 22-24th May 2022. The Director, NDTL welcome and felicitated all the team members including Dr. Osquel Barroso (WADA Lead Assessor), Mr. Thierry Boghosian (WADA Assessor), Dr. Sven Voss (WADA Assessor), Dr. Xavier de la Torre-Scientific (Chair of WADA IRMS Working Group), Dr. Peter Van Eenoo-Chair of WADA MRPL Working Group.



Director, NDTL felicitating WADA Officials during the WADA Assessment



Visit of UNESCO Delegates

A team of UNESCO delegates led by Ms. Ritu Sain, IAS, Director General, National Anti Doping Agency (NADA) visited NDTL on 21st June 2022. They visited the Laboratory facilities and premises and discuss the prospects of anti-doping science in India.





Director with UNESCO Team Members during the NDTL Visit



Visit of Parliamentary Standing Committee at NDTL

The Department-related Parliamentary Standing Committee (PSC) on Education, Women, Children, Youth Affairs & Sports (EWCY&S), which examined "The National Anti-Doping Bill 2021", visited National Dope Testing Laboratory (NDTL) on 7th March 2022. Dr. Vinay P. Sahasrabuddhe (Rajya Sabha Member) Chairperson of the Standing committee, with other Rajya Sabha and Lok Sabha members, examined the current laboratory facilities and capacity for testing dope samples.





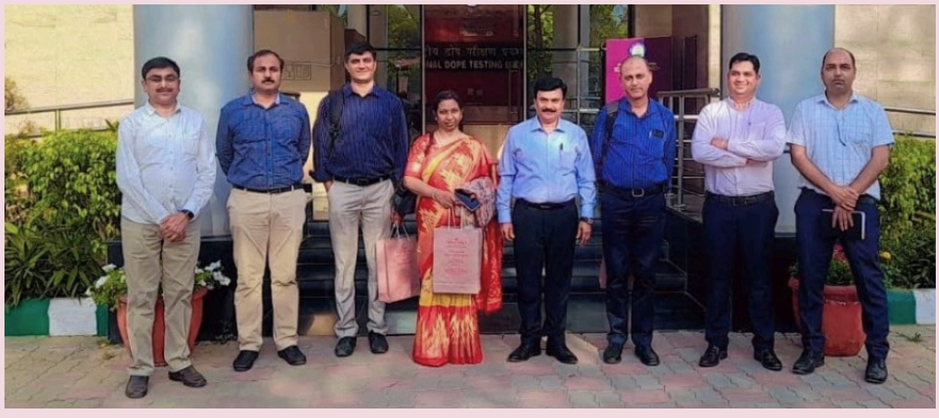
Visit of Parliamentary Standing Committee at NDTL



Visit of Scientific team from

National Forensic Science University, Gandhinagar, Gujarat

A team of senior faculty Dr. Ashtha Pandey (Associate Professor) and two other members from National Forensic Science University (NFSU), Gandhinagar visited NDTL to explore the NDTL instrumental facilities. The Director, welcomed the team members and enlighted them with the laboratory working procedures and facilities. They discussed the collaboration scope for NFSU and NDTL as a team.



Director, NDTL with NFSU team during the NDTL visit at New Delhi

Visit of NIPER-G team

Three members team Dr. Pramod Kumar (Assistant Professor), Dr. Deepak Bhardwaj (Assistant Professor), and Dr. Vaibhav Dixit (Assistant Professor) visited NDTL from 20–23rd July 2022 to explore the facilities and working procedures of NDTL and also discussed for further development and improvement between NIPER-G & NDTL.



NIPER-Guhawati (NIPER-G) Team visited to NDTL on 20th July 2022

Visit of Manav Rachna University students and officials



A team of faculty members and twenty-seven students from the Department of Nutrition and Dietetics, Manav Rachna University visited NDTL, New Delhi on 26th May 2022. The students and the faculty were educated with the facilities at NDTL and insight into Dope testing and its implications on the sport's men/women.

Officials and students from Shree Guru Gobind Singh Tricentenary (SGT) University, Gurugram visited to NDTL on 1st of June 2022 to know the activity of NDTL, New Delhi.

Official Dr. Thirumurthy Velpandian Professor and In-charge of Ocular Pharmacology & Pharmacy (AIIMS, New Delhi and Dr. Jaseela Majeed, Associate Professor. Delhi Pharmaceutical Sciences and Research University (DPSRU, Delhi visited NDTL, New Delhi and also interview for new Research Associate positions.



Director NDTL with Dr.Thirumurthy Velpandian [Professor and In-charge of Ocular Pharmacology & Pharmacy, AIIMS, New Delhi] and Dr. Jaseela Majeed [Associate Professor. Delhi Pharmaceutical Sciences and Research University,DPSRU, Delhi] interaction with NDTL staff during the visit on 28th April, 2022.

Visit of RVC team

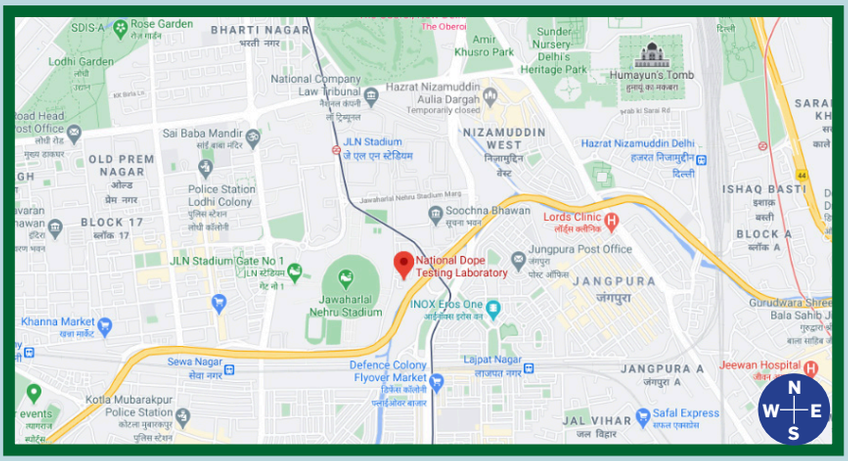
Senior army officers from RVC, Meerut visited NDTL on 15th June, 2022. They explored the testing procedures and facilities at NDTL, New DElhi



Director, NDTL with Senior Army Officers from RVC at NDTL, New Delhi

WAADS World Association of Anti-Doping Scientists

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सत्यमेव जयते

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