

PASTEUR INSTITUTE OF INDIA

COONOOR 643 103, NILGIRIS
TAMILNADU



ANNUAL REPORT 2019-20

To strive to seek to find and not to yield



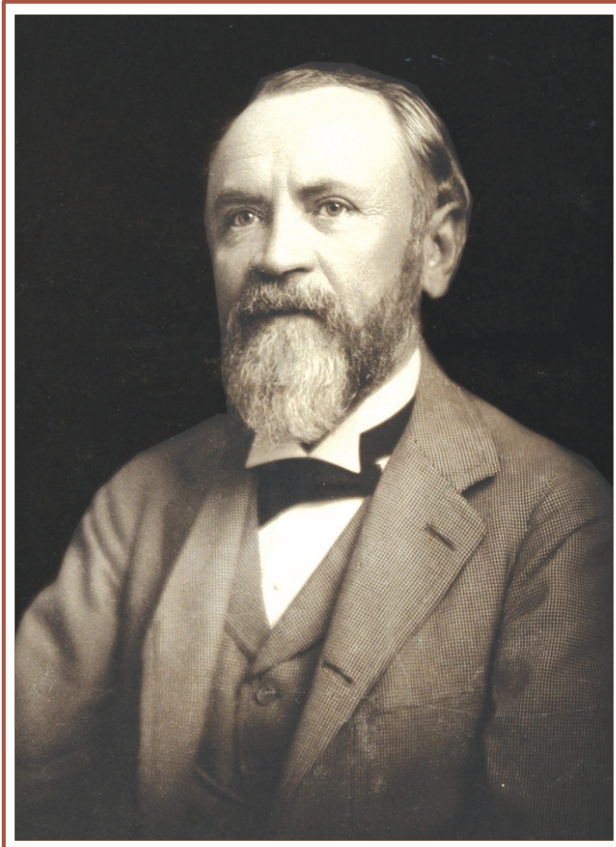
To strive to seek to find and not to yield



*“Laboratories are the Temples
of the future.*

*It is there the man learns to
read the works of
nature”*

Louis Pasteur

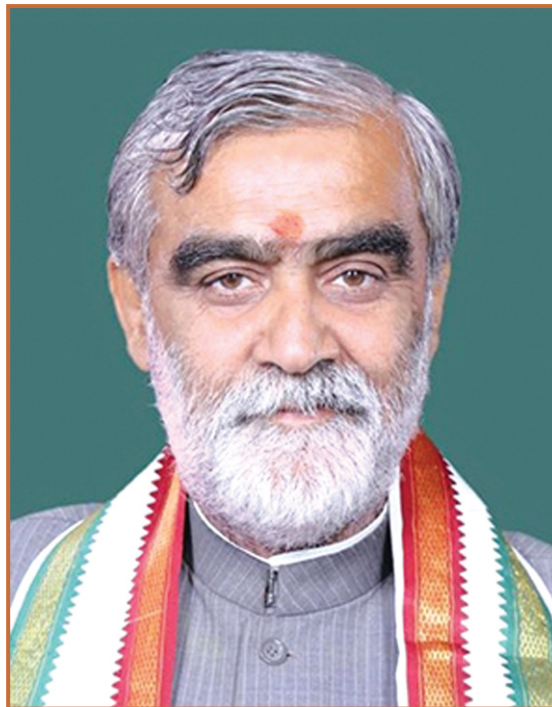


Mr. Henry Phipps, American Philanthropist donated to Lord Curzon, the then Viceroy of India a sum of Rs.50.00 lakhs for the development of Medical Institutions, out of which, a sum of Rupees one lakh was allocated to start the Pasteur Institute of Southern India at Coonoor.





DR. HARSHAVARDHAN,
HON'BLE MINISTER OF HEALTH AND FAMILY WELFARE



SHRI ASHWINI KUMAR CHOUBEY,
HON'BLE UNION MINISTER OF HEALTH AND FAMILY WELFARE

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Pasteur Institute of India Panoramic View



Pasteur Institute of India Administration Block

DIRECTOR

Dr. S. SIVAKUMAR, M.V.Sc.,

DEPUTY DIRECTOR

Vacant

ASSISTANT DIRECTORS

Vacant

ADMINISTRATIVE SECTION

ADMINISTRATIVE OFFICER

Shri A. Vairamoorthy, M.A., M.H.R.M., M.L., M.B.A.,

SENIOR P.A. TO DIRECTOR

Shri P. Sasikumar, B.Com., M.A. P.G.D.M.M

ACCOUNTS DEPARTMENT

ACCOUNTS OFFICER

Vacant

PURCHASE, STORES DEPARTMENT

STORES OFFICER

Vacant

QUALITY ASSURANCE

RESEARCH OFFICER

Shri R. Mohan, M.Sc.,

ASSISTANT RESEARCH OFFICER

Smt. Chandra Charles, M.Sc.,

QUALITY CONTROL DEPARTMENT

SENIOR RESEARCH OFFICER

Dr. A. Premkumar, M.Sc., Ph.D.,

ASSISTANT RESEARCH OFFICER

Dr. N. Sivananda, M.Sc., Ph.D., M.Ed.,

Shri G. Chandramohan, M.Sc.,

Dr. C. Muniandi, M.Sc., Ph.D.,

PRODUCTION DIVISION

TISSUE CULTURE ANTI RABIES VACCINE

ASSISTANT RESEARCH OFFICER

Dr. S. Jagannathan, M.Sc., Ph.D.,

DPT GROUP OF VACCINES

RESEARCH OFFICERS

Smt. Shanthi Mani, M.Sc.,

Dr. K.C. Shivanandappa, M.Sc., Ph.D.,

ASSISTANT RESEARCH OFFICERS

Smt. T. Lalitha, M.Sc.,

Shri T. Sekar, M.Sc.,

Shri B. Annamalai, M.Sc., P.G.D.M.L.T.,

ASSISTANT TECHNICAL OFFICER

Vacant

LABORATORY ANIMAL BREEDING DIVISION

ASSISTANT RESEARCH OFFICER

Shri Jason Muthukumar Jayacross, M.Sc.,

LIBRARY

LIBRARY AND INFORMATION OFFICER

Vacant

MAINTENANCE SECTION

MAINTENANCE OFFICER

Vacant

DISPENSARY

SENIOR MEDICAL OFFICER

Dr. (Smt.) Sibani Barman, M.B.B.S.,

MEDICAL OFFICER

Vacant



DIRECTOR'S MESSAGE

In the reporting year we have taken over all the newly constructed state of the art GMP facilities and modified facilities. Ministry gave the approval for Operation and Maintenance of facilities and utilities and Performance Qualifications of critical equipments and systems. Currently this Institute is in full swing in the pre qualification activities like identification of critical locations for EMP programme, preparation of rationale documents, trial runs of water systems, HVAC systems, utilities and all process equipments to ensure hassle free operations during the trial batches manufacturing and PQ activities.

This Institute obtained the approval of manufacturing trial batches from CDSCO, Govt. of India and State Drug Controller. The trial batches are planned to optimize the process and standardization of analytical methods to comply with the GMP requirements since there are critical changes in the facilities, equipments, utilities i.e. new process equipments, analytical equipments, systems and utilities are installed.

In the reporting year two Local Monitoring Committee meetings were conducted to update the status of GMP projects to the members, Mrs. Shanthi Gunasekaran, Deputy Drugs Controller, CDSCO, South Zone, Chennai and Dr. B.Sekar, Director BCG Vaccine Laboratory, Chennai. The Committee was satisfied with the Institute's compliance status to obtain form 29 license for the manufacture of trial batches.

This Institute engaged 19 interns with stipend belongs to various divisions of Life Sciences and Engineering in-order to create competent and trained manpower required for the Biopharmaceutical Industries as per the Ministry of Health and Family Welfare advice. After adequate training these interns are posted in different sections of PIIC viz., Production, Quality Assurance, Quality Control, Breeding and Experimental animal sections and various areas of Engineering based on their educational qualifications. These interns will be engaged initially for a year and their tenure may be extended for another one more year based on their competency level.

In this reporting year 1305 patients received Antirabies vaccine and 351 patients received Rabies Antiserum. 108 Samples were tested for Antirabies neutralizing antibodies by RFFIT in the Rabies diagnostic lab.

This year also this Institute celebrated Rabies day in commemoration of the death anniversary of Louis Pasteur. Various competitions were organized for the school children and prizes were distributed to the winners.

This Institute permitted industrial visit for 8966 students from different colleges and universities to enrich their scientific knowledge and to create awareness in vaccine production and immunization procedures etc.

Every employee of this Institute has been working together as a team to overcome this situation and formulating appropriate plans for the early release of the vaccines for UIP programme.

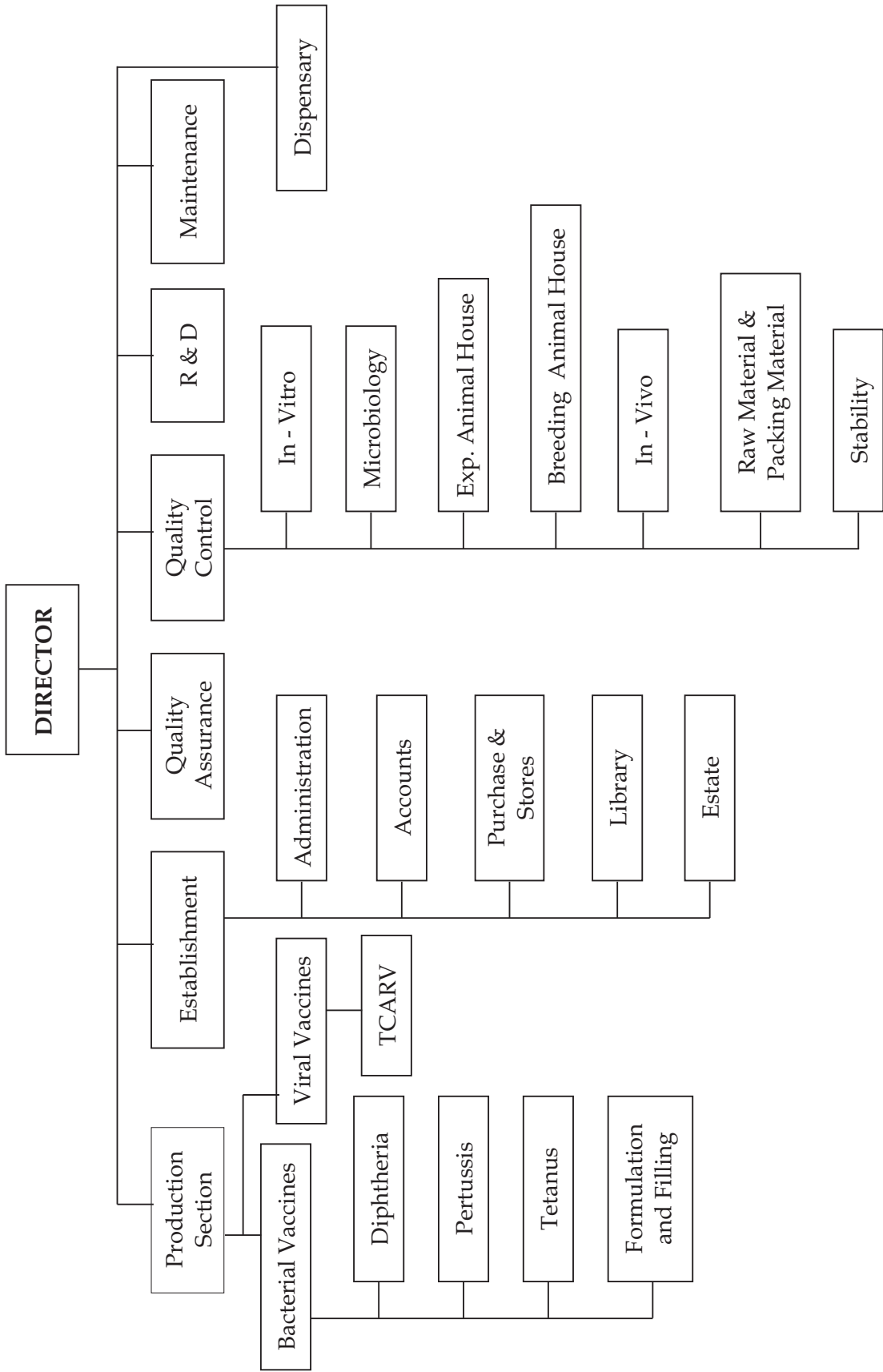
We, sincerely thank the Secretary (Health) and the Chairperson of Governing Body, PII, Coonoor, Special Secretary, Joint Secretary, Deputy Secretary and all officials of Department of Vaccine Institute of Ministry of Health and Family Welfare, Government of India, for all their supports rendered during this reporting period. I thank all the officers and staff of PII, Coonoor for all the achievements witnessed during this reporting period.

During the reported year, the Institute progress well in compliance front and highly productive in pre - qualification activities.

Dr. S. SIVAKUMAR,
Director.

To strive to seek to find and not to yield

ORGANOGRAM - PASTEUR INSTITUTE OF INDIA



CONTROLLING OFFICERS

- | | | |
|----------------------------|---|--|
| 1. Director | : | Dr. S. Sivakumar, M.V.Sc., |
| 2. Senior Research Officer | : | Dr. A. Premkumar, M.Sc., Ph.D., |
| 3. Research Officer | : | Smt. Shanthi Mani, M.Sc., |
| 4. Research Officer | : | Shri R. Mohan, M.Sc., |
| 5. Senior Medical Officer | : | Dr (Smt.) Sibani Barman, M.B.B.S., M.Sc., |
| 6. Administrative Officer | : | Shri A. Vairmoorthy, M.A., M.H.R.M., M.L., M.B.A., |

RESPONSIBILITIES OF CONTROLLING & OTHER OFFICERS

- | | | |
|---|---|--|
| 1. DIRECTOR | : | Chief executive officer for all Activities associated with the Institute <i>viz.</i> Administration, Accounts & Finance, Production, QA, QCD, Engineering & Maintenance and R & D. |
| 2. SENIOR RESEARCH OFFICER | : | All Activities associated with QCD (QCD, Rabies Diagnosis Lab and Experimental Animal House), Tissue Culture Anti Rabies Vaccine, Lab. Animal House, Maintenance & Engineering and Estate. |
| 3. RESEARCH OFFICER | : | Activities associated with DPT (Diphtheria, Pertussis, Tetanus, Formulation & Filling). |
| 4. RESEARCH OFFICER (Quality Assurance) | : | Activities associated with Quality Assurance and Library. |
| 5. SENIOR MEDICAL OFFICER | : | Activities associated with Dispensary |
| 6. ADMINISTRATIVE OFFICER | : | Activities associated with Administration, Establishment, Security, Legal and Vehicle movement and Accounts. |

COMMITTEES**1. Governing Body :**

- (a) **Ms. Preeti Sudan**, Secretary to Govt. of India, Ministry of Health and Family Welfare, New Delhi - **Chairperson**
- (b) **Prof. (Dr.) Rajiv Garg**, Director General of Health Services, Govt. of India, Ministry of Health and Family Welfare, New Delhi - **Member**.
- (c) **Prof. Balram Bhargava**, Secretary, DHR & Director General, Indian Council of Medical Research, New Delhi - **Member**
- (d) **Shri Arun Singhal**, Special Secretary to Govt. of India, Ministry of Health & Family Welfare, New Delhi - **Member**
- (e) **Dr. Dharmendra Singh Gangwar**, Additional Secretary and Financial Advisor to Govt. of India, Ministry of Health and Family Welfare, New Delhi - **Member**.
- (f) **Dr. V.G. Somani**, Drugs Controller General (India), Directorate General of Health Services, Ministry of Health and Family Welfare, New Delhi - **Member**.

- (g) **Smt. Padmaja Singh**, Joint Secretary to Govt. of India, Ministry of Health & Family Welfare, New Delhi - **Member**.
- (h) **Ms. Vandana Gurnani**, Joint Secretary (RCH), Ministry of Health & Family Welfare, New Delhi - **Member**.
- (i) **Smt. Beela Rajesh**, Secretary to Govt. of Tamilnadu, Health and Family Welfare, Chennai - **Member**
- (j) **Shri S. Krishnan**, Principal Secretary to Govt. of Tamilnadu, Finance Department, Chennai - **Member**.
- (k) **Dr. S. Gurunathan**, Director of Medical and Rural Health Services, Govt. of Tamilnadu, Chennai - **Member**.
- (l) **Dr. Sridevi Gnanaiah**, Director-in-charge, King Institute of Preventive Medicine, Chennai - **Member**.
- (m) **Dr. P. Chandrika**, The Director, Institute of Veterinary Preventive Medicine, Ranipet - **Member**.
- (n) **Dr. S.N. Saxena**, F/A-164, Lajpat Nagar, GDA HIG Houses, Sahibabad 201005, Dist. Ghaziabad. U.P. - **Member**.
- (o) **Dr. L.R. Sood**, No.403, KBR Manicoms, Srinagar Colony, Hyderabad 500 073. - **Member**.
- (p) **Dr. S. Sivakumar**, Director, Pasteur Institute of India, Coonoor, Nilgiris - **Member Secretary**

2. Standing Finance Committee

- (a) **Shri Arun Singhal**, Additional Secretary, Ministry of Health and Family Welfare, New Delhi - **Chairman**
- (b) **Dr. R.K. Vats**, Additional Secretary & Financial Adviser to Govt. of India, Ministry of Health and Family Welfare, New Delhi - **or nominee**.
- (c) **Smt. Padmaja Singh**, Joint Secretary to Govt. of India, Ministry of Health & Family Welfare, New Delhi - **Member**.
- (d) **Dr. Inder Parkash**, Advisor (PH), Govt. of India, Ministry of Health and Family Welfare, New Delhi - **Member**
- (e) **Dr. S. Gurunathan**, Director of Medical and Rural Health Services, Govt. of Tamilnadu, Chennai - **Member**.
- (f) **Dr. V.D. Ramanathan**, Scientist G & Head(Retd), 40/10, Muthiyalu Chetty Street, Vepery, Chennai 600007 - **Member**.
- (g) **Dr. S. Sivakumar**, Director, Pasteur Institute of India, Coonoor - **Member Secretary**

3. Departmental Purchase Committee

- (a) **Dr. S. Sivakumar**, Director **Head of the Committee**
- (b) **Dr (Mrs) Sibani Barman**, Senior Medical Officer - **Member**
- (c) **Dr. A. Premkumar**, Senior Research Officer - **Member**
- (d) **Mrs. Shanthi Mani**, Research Officer / C.V.O., - **Member**
- (e) **Shri A. Vairamoorthy**, Administrative Officer and Drawing and Disbursing Officer - **Member**
- (f) **Shri R. Mohan**, Research Officer - **Member**
- (g) **Shri P. Sasikumar**, Sr. P.A. to Director and Officer-in-Charge, Purchase/Stores - **Member**

4. Library Committee

- (a) Dr. S. Sivakumar, Director - **Head of the Committee**
- (b) Dr (Mrs) Sibani Barman, Senior Medical Officer - **Member**
- (c) Dr. A. Premkumar, Senior Research Officer - **Member**
- (d) Mrs. Shanthi Mani, Research Officer - **Member**
- (e) Shri R. Mohan, Research Officer - **Member**
- (f) Shri K.C. Shivanandappa, Research Officer - **Member**

5. Interim Staff Council**Official Side**

- (a) Dr. S. Sivakumar, Director & Chairman
- (b) Shri A. Vairamoorthy, Administrative Officer & Secretary
- (c) Dr. A. Premkumar, Senior Research Officer & Member
- (d) Smt. Shanthi Mani, Research Officer & Member
- (e) Shri R. Mohan, Research Officer & Member
- (f) Dr. K. C. Sivanandappa, Research Officer & Member.
- (g) Shri. P. Sasikumar, Officer-in-Charge (Purchase & Stores) & Member

Staff Side

(a)	Shri R. Sathiyamoorthy	Technical Assistant & Leader	Rep. of Gr.01
(b)	Shri N. Chandran	Lab. Technician & Deputy Leader	Rep. of Gr.02
(c)	Shri C. Vadivelu	Lab. Assistant	Rep. of Gr.03
(d)	Shri C. Doraiswamy	U.D.C.,	Rep. of Gr.04
(e)	Shri R. Parvathi	MTS	Rep. of Gr.05
(f)	Shri B. Ramu	MTS	Rep. of Gr.05
(g)	Shri A. Senthil Kumar	MTS	Rep. of Gr.05
(h)	Shri V. Radhakrishnan	Maintenance Assistant	Rep. of Gr.06
(i)	Mrs. B. Jayalakshmi	Lady Staff Representative for Cadre 'C'	Rep. of Gr.08

6. Women Welfare Committee (Internal Complaints Committee)

- (a) Dr (Mrs) Sibani Barman, Senior Medical Officer - **Chairperson**
- (b) Smt Shanthi Mani, Research Officer - **Member**
- (c) Shri A. Vairamoorthy, Administrative Officer - **Member**
- (d) Smt T. Lalitha, Assistant Research Officer - **Member**
- (e) Smt. Chandra Charles, Assistant Research Officer - **Member Secretary**

7. Departmental Estate Committee

- (a) Dr. A. Premkumar, Senior Research Officer - **Chairman**
- (b) Smt Shanthi Mani, Research Officer - **Member**
- (c) Dr. K. C. Sivanandappa, Research Officer - **Member**
- (d) Smt T. Lalitha, Assistant Research Officer - **Member**
- (e) Dr. Sivananda, Assistant Research Officer - **Member**
- (f) Dr. S. Jagannathan, Assistant Research Officer - **Member**



8. Institutional Animal Ethics Committee (IAEC)

- (a) **Dr. S. Sivakumar**, Veterinarian & Director, Pasteur Institute of India, Coonoor - **Chairman**
- (b) **Dr. S. P. Muthukumar**, CPCSEA main nominee - Principal Scientist & Head, Animal House facility, CSIR Central Food Technological Research Institute, Mysuru, Karnataka - **Main Nominee.**
- (c) **Dr. D. Kannan**, Associate Professor, Deptt. of Laboratory Animal Medicine, Veterinary College and Research Institute, Namakkal 637 002 - **Link Nominee.**
- (d) **Dr. R. Vadivelan**, Dept. of Pharmacology, JSS College of Pharmacy, Ooty - **Scientist from outside the Institute.**
- (e) **Dr. T.K. Praveen**, 20, Rocklands, Deptt. of Pharmacology, JSS College of Pharmacy, Ooty 643001 - **Socially aware nominee.**
- (f) **Dr. A. Premkumar**, Senior Research Officer, PII, Coonoor - **Scientist from different discipline, Member Secretary.**
- (g) **Dr. S. Vishnukandan**, Veterinarian, Dept. of Animal Husbandry, Coonoor - **Veterinarian**
- (h) **Dr. B. Sugumaran**, Dept. of Animal Husbandry, Ooty - **Scientist from different discipline**

9. Institutional Scientific Advisory Committee (ISAC)

- (a) **Dr. S. Suja**, Professor & Head, Department of Biochemistry, Bharathiar University, Coimbatore 641 046 - **Chairperson**
- (b) **Dr. S. Sivakumar**, Director, Pasteur Institute of India, Coonoor - **Member**
- (c) **Dr. A. Michael**, Associate Professor & Head, PSG College of Arts and Science, Coimbatore - **Member**
- (d) **Dr. J. Angayarkanni**, Associate Professor & Head, Department of Microbial Biotechnology, Bharathiar Univeristy, Coimbatore - **Member**

10. Chief Vigilance Officer

Mrs. Shanthi Mani, Research Officer

11. Liaison Officer for SC & ST Employees

Dr. K.C. Shivanandappa, Research officer

12. Liaison Officer for OBC Employees

Dr. A. Premkumar, Senior Research officer

13. Central Public Information Officer And Appellate Authority Under RTI Act, 2005**Central Public Information Officer :**

Smt. Shanthi Mani, Research Officer (till 31.05.2020) & **Shri R. Mohan**, Research Officer

Central Assistant Public Information Officer :

Shri P. Sasikumar, Sr. P.A. to Director

Appellate Authority :

Dr. S. Sivakumar, Director

OVERVIEW

Pasteur Institute of India, Coonoor is an autonomous body under the Ministry of Health and Family Welfare, of India, pioneer in the production of Tissue culture based Antirabies Vaccine and DPT group of Vaccines. Govt.

PREAMBLE

This Institute started functioning as Pasteur Institute of Southern India, on 6th April 1907 and took a new birth as Pasteur Institute of India (registered as a Society under the Societies Registration Act 1860) and Started functioning as an autonomous body under the Ministry of Health and Family Welfare, Government of India, New Delhi from the 10th of February, 1977. The affairs of the Institute are managed by a Governing Body. This Institute is functioning on no profit no loss basis.

GENESIS

The death of a young English lady Lily Pakenham Walsh, due to hydrophobia in the year 1902, who could not get antirabies treatment in time, led to the establishment of Pasteur Institute of Southern India. Mr. Henry Phipps, American Philanthropist donated to Lord Curzon, the then Viceroy of India a sum of Rs.50.00 lakhs for the development of Medical Institution in India, out of which, a sum of Rupees one lakh was allocated to start the Pasteur Institute of Southern India at Coonoor.

The cool and equitable climate led to the choice of Coonoor as the most suitable location for the construction of the Institute. Spread over an area of 16 acres of land the Institute is situated on a grassy knoll on the upper reaches of Coonoor town amidst beautiful surroundings with lush greenery, manicured lawns and flower gardens. It has a glorious tradition of single minded dedication to alleviate the suffering of humanity by its contribution to the research and development of vaccines in the country.

VISION OF THE INSTITUTE

To produce and supply of DPT group of vaccines to Universal Immunization Program of Govt. of India to strengthen the vaccine security of the country.

MISSION OF THE INSTITUTE:

This Institute is committed to fulfill its vision with the tangible Quality Policy and Quality objectives.

QUALITY POLICY

We are committed to produce safe, potent and cost effective vaccines with continuing improvement in our Quality systems. The employees of PIIC discharge their duties provisionally while ensuring the safety, efficacy and quality of the vaccines manufactured.

QUALITY OBJECTIVES :

PIIC as a team, dedicates itself to achieve the Quality by following the Quality Objectives

- ▶ To adhere to cycle time for production, testing and dispatch.
- ▶ Improve the yield of production components.



- ▶ Reduce in-process rejections.
- ▶ Enhance customer satisfaction.
- ▶ Maintain nil customer complaints.
- ▶ Impart regular in-house training for employees.
- ▶ Recognize each employee's responsibility for Quality.
- ▶ Encourage team approach.
- ▶ Continually improve through Quality Management System.
- ▶ Review and renew this Quality Policy on regular basis.

IMPORTANT MILESTONES

- 1907 Manufacture of Neural Tissue Antirabies Vaccine.
- 1957 The isolation of Asian Flu Virus during the pandemic and development of Influenza vaccine against the same virus.
- 1970 The Development of BPL-inactivated Rabies Vaccine for the first time in India which made the treatment easier and cheaper with less dose and less injections with a vaccine of increased potency.
- 1970 Research, Development, Production and Supply of Trivalent (Sabin) Oral Polio Vaccine for the first time in India
- 1982 Release of DPT group of vaccines for the National Programme of Immunization.
- 1988 Release of Tissue Culture Anti Rabies Vaccine for Canine Prophylaxis.
- 2001 Development and release of Vero Cell Derived Purified Rabies Vaccine for human use at an affordable price to common man for the first time in India by Government controlled Institutions.
- 2003 This is the first Government sector Vaccine Institute awarded with ISO 9001-2000 certificate by BVQI, UK in Quality Management System.
- 2006 Renewal of ISO 9001:2000 Certificate for further period of 3 years by BVQI, UK for QMS
- 2019 Taken over of all newly established cGMP production facilities

SETTING THE PACE IN TECHNOLOGY

Pasteur Institute of India has consistently set the pace in innovating and adapting newer technology to suit Indian conditions and needs. The vast experience and expertise in the field of vaccinology equipped this Institute to meet the challenges of applying advanced technology in vaccine production. Among the major equipments available in the Institute are production scale bacterial fermentors, zonal centrifuge, industrial freeze drier, several bulk autoclaves, hot air ovens, fully automated filling machine, large cold rooms, deep freezers, bioreactors, purified water system, WFI plant, TOC analyzer, column chromatography, oil & moisture free air compressors, Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP). Research and Development facility is equipped with HPLC system, lab scale lyophilizer, ultra low freezers, automatic ELISA washer and reader, gel documentation system, Biosafety cabinets and equipments for molecular biology work.

The Institute is recognized by Tamilnadu Dr. M.G.R. Medical University, Chennai for M.D degree in Microbiology and by the Bharathiar University for Ph.D. in Microbiology, Biotechnology and Biochemistry in the faculty of Science.

INSTITUTE'S PRODUCT PROFILE

- ✍ Tissue Culture Antirabies Vaccine (Vero Cell Purified)
- ✍ DPT group of vaccines *viz.*, Diphtheria-Pertussis-Tetanus (DPT) Vaccine, Adsorbed Diphtheria and Tetanus vaccine for adults and adolescents (Td) Vaccine and Tetanus Toxoid (TT) Vaccine

CONTRIBUTION OF PII, COONOOR IN THE NATIONAL HEALTH SECURITY

- ✍ Research, Development, Production and Supply of Trivalent (Sabin) Oral Polio Vaccine for the first time in India during 1970.
- ✍ PII, Coonoor is the first Institute in the country both in public and private sectors to adopt and install the PROSTAK system for downstream process of bulk antigen manufacturing and concentration of Pertussis organisms.
- ✍ Development and release of Vero Cell Derived Purified Rabies Vaccine for human use at an affordable price to common man for the first time in India by Government controlled Institutions. Which triggered the slash down the price of TCARV.

FUTURE PLAN

- Creation of cGMP facilities for Tissue Culture Antirabies Vaccine and other emerging viral vaccines.
- Research and Development of newer cost effective Pentavalent and Hexavalent vaccines.
- Modification of old DTP production laboratories as a fully equipped R & D lab.
- Establishing a fully equipped training center with process equipments for students and newly joined staff members to impart hands on training / practice prior to post them in regular production process.
- Creation of New Ware house for Primary and Secondary Packing materials, Engineering materials, acids and alkalis and flammable materials to comply with cGMP requirements.
- Creation of a new multiproduct manufacturing unit on campaign basis.

INTERNATIONAL COLLABORATION

Developing Countries Vaccine Manufacturing Network (DCVMN)

This Institute was joined as a full time member of Developing Countries Vaccine Manufacturing Network (DCVMN) in the year 2019. DCVMN is a public health driven, international alliance of

manufacturers, working to strengthen vaccine manufacturers of developing nations. DCVMN works through the provision of information programs and professional training on technical improvements, research in vaccine production, encouraging technology transfer initiatives, and educating the public about the availability of safe and effective vaccines, from developing world manufacturers and related programs. Over the years the network grew reaching out today to include over 40 vaccine manufacturers, in 14 countries and territories, producing and supplying over 40 different types of vaccines, in several presentations and using a variety of technology platforms totaling around 200 products. From those over 70 are prequalified by WHO.

The Objectives of the Network is to provide a consistent and sustainable supply of quality vaccines at an affordable price to developing countries.

As a part of collaboration with DCVMN this Institute is actively involving in various activities and projects.

(a) 3 R's :

The 3 R's (Reduce, Replace and Refine) work group formed by the Developing Countries Vaccine Manufacturing Network (DCVMN) to implement the 3 R's principles in the vaccine testing. The Pasteur Institute of India is signed the Consortium Agreement to take part in Pertussis serological potency test (PSPT) project as alternative potency assay for mouse challenge method used to determine pertussis vaccine potency along with other vaccine manufactures in different part of the world. Further it is under discussion among the group members to implement the possibilities for monocyte activation test instead of *in-vivo* rabbit pyrogen test for the estimation of pyrogen in the vaccine and proposed the imitation of 3R's project in the field of Rabies, Diphtheria & Tetanus vaccine testing.

(b) DCVMN COVID-19 Committee :

In view of current COVID-19 pandemic situation, DCVMN has created the COVID-19 committee to share its related knowledge among the different vaccine manufactures and address all the queries and requests from WHO, GAVI and other organization. The online meeting were arranged fortnightly to discussion among the group members about current status of the disease severity and spread in different part of the world and strategies to develop the candidate vaccine against COVID-19.

PRESENT ACTIVITIES OF THE INSTITUTE

Prequalification activities like trial runs of all process equipments in sequence, facilities, systems and utilities are on going to ensure hassle free operation of these during PQ, trial batches manufacturing, media fills process validation and applying license for commercial batches manufacturing.

Rabies Diagnostic Lab and treatment center are functioning to cater the need of the general public Academic programmes like Ph.D. Microbiology, Biochemistry and Biotechnology (Part time & Full time) are affiliated to Bharathiar University, Coimbatore and M.D (Microbiology) is affiliated to Tamilnadu Dr. M. G. R Medical University, Chennai.

DETAILS OF GRANT-IN-AID RECEIVED FROM THE MINISTRY OF HEALTH AND FAMILY WELFARE, NEW DELHI AND THE EXPENDITURE INCURRED, ETC., DURING 2019-20

The Ministry of Health and Family Welfare, New Delhi has released a total sum of Rs.32.10 crores to this Institute during the financial year 2019-20.

While releasing the Grant-in-Aid, the Ministry has, vide above letter informed that the normal expenditure of the Plan scheme including the administrative expenses of grantee institutions may be met from the above amount. The details of the head wise expenditure incurred are given below:

Grant in Aid Received and Expenditure made during 2019-20

S.No.	Sanction Letter No. and Date	Amount in Rupees	Head of Account
1.	V.11011/04/2019-V.1/1 dated 25-07-2019	11,00,00,000	General
2.	V.11011/04/2019-V.1/2 dated 25-07-2019	3,00,00,000	Salaries
3.	V.11011/04/2019-V.1/3 dated 24-10-2019	10,00,000	SAP
4.	V.11011/04/2019-V.1/1 dated 24-10-2019	10,00,00,000	General
5.	V.11011/04/2019-V.1/2 dated 24-10-2019	3,00,00,000	Salaries
6.	V.11011/04/2019	5,00,00,000	Capital
	TOTAL	32,10,00,000	
	Unspent / Opening Balance 2019-20	19,44,63,362	
	TOTAL	51,54,63,362	
	Expenditure 2019-2020	38,68,63,023	

ABSTRACT

S. No.	Head of Account	GIA received during 2019-20	Expenditure made during 2019-20
1.	GIA-General	2100.00	2916.36
2.	GIA- Salaries	600.00	950.25
3.	GIA -SAP	10.00	2.02
4.	GIA-Capital	500.00	Nil
	Total	3210.00	3868.63

S. No.	Particulars	Amount in Rupees
1.	Unspent/opening Balance 2019-20	1944.63
2.	Grant in received 2019-20	3210.00
3.	Interest received 2019-20	68.27
	Total	5222.90
	Less : Expenditure 2019-20	3868.63
	Closing Balance as on 31.03.20	1354.27

PRODUCTION DIVISION

The installed capacity of the new GMP filling facility is 130 Mds. Working capacity will be approximately 100Mds.

A. BACTERIAL VACCINE DIVISION (DTP group of Vaccines)

The bacterial vaccines division comprises of four basic functional units, which are producing bulk antigens and the finished products of DTP group of vaccines.

- ✍ **Diphtheria**
- ✍ **Tetanus**
- ✍ **Pertussis**
- ✍ **Formulation and Filling**

All the production blocks are equipped with clean rooms for the manufacture of bulk antigens and finished products and they encompass the compliance with Schedule M and World Health Organization (WHO) GMP requirements.

DIPHTHERIA

Diphtheria unit, housed in DP block is a dedicated one for the manufacturing of Diphtheria bulk antigen. This block's built up area is 167.71 sq. m of functional area. The functional area is having dedicated area for Meat Digestion, Media & Buffer preparation, washing and sterilization area, seed preparation area, upstream area and downstream area. The production facility is equipped with Clean-In-Place (CIP) and Sterilization-In-Place (SIP) skids for cleaning and sterilization of fermentors and other vessels. The upstream area is equipped with fully automated SCADA controlled seed and production fermentors. The capacity of the production fermentor is 500 lit. The downstream area is equipped with fully automated Dia-filtration system for the purification of the bulk antigen. There is a dedicated room for sterile filtration activities of bulk antigen. In this reporting year trial runs for all the equipments were taken up.

TETANUS

Tetanus bulk antigen manufacturing block is a dedicated block. The facility is equipped with blown out unit in HVAC system to ensure the environmental safety by preventing the escape of Tetanus organism from the production facility.

This production block is having functional area of 304.39 Sq m. The functional area is having dedicated area for Meat Digestion, Media & Buffer preparation, washing and sterilization areas, seed preparation area, upstream area and downstream area. The upstream area is equipped with fully automated SCADA controlled two 500 lit. production fermentors. The production facility is equipped with Clean-In-Place (CIP) and Sterilization-In-Place (SIP) skids for cleaning and sterilization of fermentors and other vessels. The downstream area is equipped with fully automated microfiltration system for toxin separation and ultra filtration system for the purification of the bulk antigen. There is a dedicated room for sterile filtration activities of bulk antigen. In this reporting year trial runs for all the equipments were taken up.

PERTUSSIS

Pertussis unit, housed in DP block is a dedicated one for the manufacturing of Pertussis bulk antigen. Pertussis unit is having 185.77 sq. m of functional area. The functional area is having dedicated rooms for Seed Preparation, Media & Buffer preparation, preparatory and sterilization areas, upstream and downstream areas. The upstream area is equipped with two seed fermentors and two 500 lit. capacity production fermentors. They are fully automated and controlled by SCADA. The downstream area is equipped with Microfiltration system for concentration of organisms, as well as Heat inactivation function automatically. The production facility is equipped with Clean-In-Place (CIP) and Sterilization-In-Place (SIP) skids for cleaning and sterilization of fermentors and other vessels. The manufactured and QC released individual strains are pooled into Blending Vessel installed in a blending room to make a bulk antigen for vaccine preparation. This unit is also SCADA controlled.

Currently PIIC is using 4 different strains of *B. pertussis* for better immune response and protection.

In this reporting year trial runs for all the equipments were taken up.

FORMULATION & FILLING

The Formulation & Filling block is having 249.61 sq. m of functional area. This block is having dedicated areas for Gel preparation, Filling of final lots, Visual Inspection areas, Packing, Labelling and cold storage facility. This manufacturing facility is equipped with fully automated vial washing, sterilization tunnels and filling machine with a capacity of 200 vials per minute. The visual inspection of the vials will be carried out with the help of semi automated visual inspection machine. The inspected vial will be stored in dedicated cold storage area\s.

In this reporting year trial runs for all the equipments were taken up.

B. WARE HOUSE AND RAW MATERIALS & FINISHED GOODS AREA

The Ware House has functional area of 410.54 sq.m. with modular panel walls and HVAC system to facilitate clean room environment which encompass the compliance with Schedule M and World Health Organization (WHO) norms. This block is having dedicated rooms for Receipt, Quarantine, Sampling area and approved materials area. The ware house is equipped with suitable storage facilities to store temperature sensitive raw materials and excipients. All the materials will pass through the dedusting tunnel at the receiving bay. This block is equipped with five dedicated cold rooms for storing CDL released final lots prior to shipment.

C. QUALITY CONTROL DIVISION

Quality Control is an independent functional department reporting directly to the Head of the Institute. Quality Control Division is divided into

- (i) Raw Material testing section
- (ii) Microbiology
- (iii) *in-vitro*
- (iv) *in-vivo*
- (v) Experimental Animal House
- (vi) Stability testing and
- (viii) Rabies Diagnostic centre.

The following activities are carried out in Quality Control Division.

- Quality Control Tests on in-process, intermediates, bulk antigens and final lots of DPT group of vaccines.
- Environmental Control and Monitoring Programme (EMP) is carried out for the production areas to ensure and monitor the performance of clean rooms.
- Testing of utilities like source water, potable water, soft water, WFI, pure steam condensate and compressed air.
- Rabies Diagnostic Tests and
- in-vivo* tests to ensure safety and efficacy of the products.

In the current reporting year preparation of SOPs, Rationale documents for EMP and water sampling, study protocols for different studies recommend by GMP guidelines and Validation protocols have been taken under preparation.

Details of tests carried out by Rabies Diagnostic Centre :

During this period, we tested 27 R&D samples for *in-vitro* Virus Titration using Cell Culture method. 108 Serum Samples were tested and reported for Rabies Neutralizing Antibodies through RFFIT. The details are tabulated as follows :

S. No.	Type of Samples	Number of Samples Tested and Reported
1.	Out Patient's Serum	12
2.	PII Staff Serum	26
3.	Pet Animal Serum	30
4.	Validation Samples	40
		108

D. EXPERIMENTAL ANIMAL HOUSE

PIIC is having dedicated facility of Experimental Animal Block having functional area of 171.2 sq.m. with modular panel walls and HVAC system to facilitate clean room environment which encompass the compliance with Schedule M and World Health Organization (WHO) norms. This block has dedicated rooms for holding different species of animals. PIIC is using Anesthesia Chamber to anesthetize the animals prior to carrying out intra cerebral inoculation method.

PIIC installed Euthanasia Chamber for human method of sacrificing the animals after completion of tests

The following samples were received and tested and the results were reported during the reporting year to the concerned departments in time.

NIH potency testing	- 05 samples
Virus Titration on TCARV	- 13 samples
A Virulence Test (AVT)	- 02 samples
Virulence Test	- 02 samples
Abnormal Toxicity on Old Gel & New Gel	- 02 samples
Diphtheria Potency	- 02 samples
Tetanus Potency	- 02 samples

Total 18 environmental isolates found in Grade B and C during validation/Routine monitoring was identified to the species level and Picture library was maintained.

Smoke studies in clean rooms (Grade B) of new cGMP facility was carried out for 2 times by clean room fogger.

F. ANIMAL BREEDING

PII, Coonoor has CPCSEA approval for breeding, experimental and supply of animals.

The new Animal Breeding block has functional area of 227.69 sq. m with modular panel walls and HVAC system to facilitate clean room environment which encompass the compliance with Schedule M and World Health Organization (WHO) norms. This facility is having dedicated area for breeding of Mice and Guinea pig and for Quarantining of Animals, Stock rooms and wash area. This facility is equipped with double door autoclave for autoclaving of bedding materials and cages.

12th Institutional Animal Ethics Committee meeting held on 04.04.2019.

13th Institutional Animal Ethics Committee meeting held on 16.10.2019.

G. ENGINEERING

In the new GMP area, a dedicated utility system is functioning to enable smooth functioning of all equipments and machineries on 24 x 7 basis.

Manufacturing and laboratory areas in the site are provided with appropriate Heat Ventilation and Air Conditioning (HVAC) system. The HVAC system consists of appropriate features to maintain the desired environmental conditions such as temperature, humidity etc, as applicable around the facility during all seasons.

i) Building Automation System & Control Philosophy :

For automation and control, a state of the art building automation system is designed for AHU's catering to clean rooms.

In the building automation system, the temperature sensors/transmitters, RH sensors, velocity sensors, pressure sensors/transmitters are provided to control temperature, humidity and pressure differentials. BMS are programmed for normal, fumigation and emergency mode operation. DDC's are validatable type and conforming to 21 CFR part11.

(ii) Water System :

a. Source Water :

Source Water for this Institute is well and municipal water. The capacity of the collection tanks are 200 m³ and 150 m³ capacities respectively. The capacity of the Main water tank is of 45 KL. 200 m³ of water is distributed to fire hydrant system and 150 m³ is used for storing well water. and the rejected pre-treatment water is used for gardening.

The source water is passed through dual Media filter, Micron cartridge filter and Reverse osmosis treatment system to meet the source water specification for pre-treatment.

b. Feed water for purified water :

Feed water for purified water is generated from the source water through several stages of pre-treatment and finally through RO (Reverse Osmosis) system.

The pre treatment plant is designed to reduce the level of suspended solids, microbial load, dissolved impurities, colloids and organic solids in the source water.

Reverse Osmosis (RO) System / PW Generation System :

The Reverse Osmosis system is designed to further reduce the Total Dissolved Solids (TDS) level in the purified water. Individual production blocks are equipped with dedicated units as specified in the table given below.

Location	Capacity
Microbiology block	100 L
Diphtheria and Pertussis block	200 L
Tetanus block	200 L
Formulation	200 L

a. Purified Storage and Distribution System :

The purified water from PW generation plant is stored and the distribution is controlled by capacitance type level sensor. It is distributed to the user points through mother loops.

Location	Capacity
Microbiology block	500 L/hr
Diphtheria and Pertussis block	3500 L/hr
Tetanus block	2000 L/hr
Formulation	3000 L/hr

b. Pure Steam Generator (PSG) Plant :

Basic operation of the PSG is distillation by thin film evaporation and consists of shell and tube heat exchanger where heat transfer is done by falling film evaporation which gives assurance for achieving high temp for every drop of water. Separation of pyrogenic load is reduced to an acceptable / negligible limit by centrifugal action. The generated pure steam is distributed to user points through mother loop and subjected to quality tests like non-condensable gases, degree of super heat and dryness fraction as per requirement.

Location	Capacity
Microbiology block	100 kg/hr
Diphtheria and Pertussis block	500 kg/hr
Tetanus block	500 kg/hr
Formulation	500 kg/hr

c. WFI Plant

Purified Water is the feed water for multi column distillation point (MCDP). WFI from MCDP is stored in main WFI storage tank. This tank feeds WFI to the user point through a distribution loop (mother loop) which is maintained at a temperature NLT 80°C. Each production block has its own system and their capacity is presented in the table given below. The generated WFI is monitored for its desired quality routinely as specified in the SOPs.

Location	Capacity
Diphtheria and Pertussis block	3000 L/hr
Tetanus block	2000 L/hr
Formulation	2500 L/hr

PUBLIC ADDRESSABLE SYSTEM

Public Address system is an efficient tool in broadcasting pre defined messages or live announcements throughout the premises or specific location of the building. Public Address system further simplifies the evacuation operation in delivering evacuation messages / spot announcements that provides a clear view of the problem with necessary action to be taken following fire / emergency situation. This system is the most reliable way to evacuate people from the premises without panic.

PA system and call station with amplifier installed in Animal Breeding, Animal Experiment, Microbiology, Diphtheria, Pertussis, Formulation, Tetanus and Warehouse Department.

TALK BACK SYSTEM WITH MIXER AMPLIFIER

Talk back system is the form of transmission which both station (call station and receiver station) transmit information.

A set of talk back console and mixer amplifier is installed in Animal Breeding, Animal Experiment, Microbiology, Diphtheria, Pertussis, Formulation, Tetanus and Warehouse Departments.

FIRE ALARM SYSTEM**1. Alarm initiate device**

This system is equipped with Multi sensor detector senses the smoke, heat and communicates to the fire alarm panel and modular. The modular activates the hooter for alarm.

In case of emergency or fire whenever the employee pull the manual call point the hooter will activate through modular and communicates to the fire alarm panel.

As a part of this system, external fire hydrant, internal fire hydrant, fire portable extinguisher and sprinkler systems are installed at various places to protect building, premises and personnel.

H. RABIES TREATMENT CENTRE & DISPENSARY

Rabies treatment centre is established in the year 1907 for the treatment of dog bite cases and it is continuously functioning for the last 113 years more effectively and efficiently. During the day time the dispensary is also providing basic health care to the employees of Pasteur Institute of India and their dependents. Rabies treatment center is also engaged in collecting epidemiological data of animal bite cases. In order to minimize the cost and quantity of tissue culture vaccine intra dermal administration is practiced in the feasible cases.

I. DISPENSARY PERFORMANCE STATISTICS

a. DETAILS OF STAFF STRENGTH

Staff and family : 2702

b. PATIENT TREATED WITH TCARV

S.. No.	Details	Nilgiris	Other than Nilgiris	Total cases
1.	Class I	18	9	27
2.	Class II	166	74	240
3.	Class III	439	519	958
4.	A.R.S. given cases	95	256	351
5.	Adult Male	332	358	690
6.	Adult Female	209	147	356
7.	Child Male	82	49	131
8.	Child Female	80	48	128
9.	Advice cases	228	77	305
10.	Pre-Exposure	56	-	56
11.	Re-Exposure	14	9	23
12.	Post-Exposure	381	516	897
13.	Annual Booster	24	--	24
14.	Hydrophobia	--	1	1
15.	RFFIT Test	12	30	42

Role of Institute in RABIES FREE NILGIRIS movement

With the prevailing situation of no human Rabies reported from Nilgiris District for the past 11 years PII, Coonoor has initiated steps to declare the Nilgiris district Rabies free with a collaboration of Directorate of Public Health, Govt. of Tamilnadu.

The data of Pasteur Institute of India Antirabies clinic shows that no case of Rabies reported from Nilgiris District since 2003-04 and the same situation prevails in the other health facilities in the District. No case of animal rabies was reported for the past 16 years as per the Department of Animal Husbandry, Nilgiris District.

J. PHARMACOVIGILANCE (POST MARKETING Surveillance)

This Institute has planned to establish a separate 'Pharmacovigilance' department for the detection, assessment, understanding and prevention of adverse effects or any other drug related problems during post marketing. This department will be headed by a Senior Medical Officer / Medical officer, supported with a pharmacist and other biological sciences background staffs. It is planned to involve District health Authorities in this team for the effective monitoring of this activity. This department will functional fully once the adequate regular staffs are appointed.

K. QUALITY ASSURANCE

The Quality Assurance Department is provided with separate areas viz.,

1. Quality Assurance Office I, 2. Quality Assurance Office II, 3. Documentation Area I,
4. Documentation Area II, 5. Seed Storage Area, 6. Training Area and 7. Conference Halls.

The following activities are being carried out in Quality Assurance Section as a continuous and continual process.

- ❖ Preparation, Review, approval and control of complete GMP documentation of the site.
- ❖ Monitoring and improving the Quality System of the organisation.
- ❖ Preparation, Coordination, Review and Approval of Qualifications / Validations.
- ❖ Review of Process Controls and Batch Release.
- ❖ Incidence reporting, Deviation reporting, Failure investigation CAPA, Change Control, Vendor Qualification, Quality Risk Management and Product Quality Review.
- ❖ Coordination / Facilitation of training activities.
- ❖ Coordination for audits and ensure the overall compliance of the site.
- ❖ Conducting and Coordinating for External Audits & Internal Audits.
- ❖ Regular monitoring of seed stock in cold storage for bacterial vaccine (DTP Group of Vaccines) and issue to the production laboratories based on the requirement.
- ❖ Documentation control.
- ❖ Environmental monitoring (Viable & Non-Viable particle count) at critical area undertaken (as and when requested).
- ❖ Organisation of Calibration of critical equipments available in different sections.
- ❖ Actively participated in key meetings such as URS finalization, DQ Review & Discussion, pre bid, Kick Off, FAT & SAT Protocol review, etc for various equipment packages.
- ❖ Attending FAT & SAT program at vendors location / PII, Coonoor for various equipment packages.
- ❖ Participation in Local Monitoring Committee as and when scheduled.

Form CT-10 & CT-11

Application in Form CT-10 for grant of permission to Manufacture New Drug or Investigational New Drug for Clinical Trial or Bioavailability or Bioequivalence Study or For Examination, Test and Analysis was submitted to Central Licensing Authorities (CLA) on 13.08.2019.

A Joint Inspection of new cGMP facilities was conducted by CLA, SLA and NRA authorities on 14.10.2019 to 15.10.2019 to verify the GMP compliance. Subsequent to the same permission in CT-11 was issued by the CLA vide No. Permission/ CT-11/SZ/2019/084 (Biologicals) dated 01.11.2019 to Manufacture batches for test and analysis (Pre clinical toxicological studies).

Test License in form - 29

Application along with Permission in CT-11 obtained from the CLA was submitted to the SLA for issue of test license in form 29. The SLA after scrutiny of documents and payment of requisite fees issued test license in form 29 valid from 08.01.2020 to 07.01.2023 for the purpose of examination, test or analysis vide No. TN00005640 dated 08.01.2020.

RESEARCH & DEVELOPMENT LABORATORY

Research and Development is the source of the discoveries that will shape the future of our organization by providing continuous improvement for existing products and executing against new product.

R & D Laboratory is equipped with the following equipments and Instruments.

- ❖ Conventional PCR, Gradient PCR and Real time PCR.
- ❖ High performance Liquid Chromatography (HPLC) for the analysis of proteins.
- ❖ Two Bio-reactors for Vero cell cultivation for R & D activity for rabies vaccine production technology.
- ❖ Cell imager system and Bright Field cum Fluorescent Microscope for cell culture studies.
- ❖ Mini Pellicon system for the concentration and purification of biological products.
- ❖ DNA, Protein analysis by electrophoresis and western blotting facility.
- ❖ Bio-safety cabinet, laminar air flow chamber to handle sterile work and pathogen handling.
- ❖ Lab scale Lyophilizer.
- ❖ Sonicator, refrigerated centrifuge, incubators and spectrophotometer with micro cuvette.
- ❖ -20°C and -80°C Deep freezers for storage of temperature sensitive materials.
- ❖ Gel documentation system equipped with UV and white light facility (DNA and Protein).
- ❖ ELISA washer and Reader for the development of in-house ELISA methods.

During this reporting period, the following works were carried out :

- ❖ Microcarrier culture based Rabies Vaccine preparation in bioreactor system was carried out in experimental scale.
- ❖ Standardization of real time Reverse transcriptase PCR for Rabies virus detection and quantification of Rabies virus.
- ❖ Trial formulation of DPT vaccine in co-ordination with Formulation Department carried out in R & D Scale..
- ❖ In-house serological assay for rabies viral protein samples.
- ❖ Roller bottle culturing of Vero cells as inoculum preparation to get higher yield in Bioreactor.

i. Rabies virus detection and quantification.

Real time PCR is a modern molecular technique used for the detection and quantification of viral particle in the specimens. An in-house method was developed in R & D Laboratory to quantify the rabies virus PV-11 strain in the different viral harvests. This technique is compared with the standard viral titration methods like Mouse Inoculation Test (MIT) and Fluorescent Antibody Test (FAT). The primers targeting 98 base pairs from 446 to 543 in the cDNA of the rabies virus nucleoprotein gene (N gene) were designed and synthesized for Real time PCR assay since the N gene is highly conserved region in the rabies viral genome. Viral particle in each harvests were quantified in comparison with internal reference standard included in every assay based on the CT value. The results of MIT, FAT and Real time PCR methods were comparable with each other. This real time PCR based quantification of Rabies virus has the advantage of greater accuracy, rapid, economical when compared to the other tests and moreover no animal model is required.

ii. Vero cellular DNA quantification :

The residual Vero cell DNA in the final Vero cell derived vaccine should not be greater than 10 nanograms per single human dose. With reference to Indian pharmacopeia and British Pharmacopeia the real time PCR is an appropriate alternative method than the radioisotope hybridization method. The quantitative real time PCR technique was standardized in our R & D Laboratory using Quantitative Vero DNA kit with the 6 point standards ranging from 0.03 pg to 3000 pg.

LIBRARY

The Institute has a well stocked library with 4309 books and 12935 bound volumes, 7 International journals, 10 Indian Journals and WHO publication (Periodicals and Selected Series subscription). The library is having internet connection to utilize the E-Journal services to the maximum. Library department is responsible for issuing project certificates and attendance certificates to the students.

List of Books added to library during the reporting period :

1. Indian Pharmacopoeia -2018
2. Indian Pharmacopoeia -2018 (Addendum 2019)
3. British Pharmacopoeia 2019
4. European Pharmacopoeia 2019
5. US Pharmacopoeia 2019
6. Bergy's Manual of Determinative Bacteriology (9th Edition)
7. Bergy's Manual of Systematic Bacteriology
8. Vaccines (7th Edition), Stanley A. Plotkin
9. Immunology (8th Edition), Kuby
10. Veterinary Virology (5th Edition), Fenner

11. Validation of Pharmaceutical Practices (3rd Edition), James Agalloco
12. Veterinary Immunology (10th Edition), Ian Tizard
13. Advanced Aseptic Processingn Technology, James Agalloco
14. EC Guide to Good Manufacturing Practice, Gert Auterhoff
15. Handbook of Non Invasive Drug Delivery systems, Vittal S. Kulkarni
16. HPLC Made to Measure: A Practical Hand for Optimization, Stavros Kromidas
17. HPLC Method for Clinical Pharmaceutical Analysis: A User's Guide, Hermann Mascher

List of Journals Purchased :

- | | |
|------------------------------------|----------------------------|
| 1. Biologicals | 2. New Scientist |
| 3. Vaccines | 4. Journal of Immunology |
| 5. Indian Journal of Biotechnology | 6. The Indian Practitioner |
| 7. CIMS | 8. The Pharma Review |

ACADEMIC ACTIVITIES :

In addition to the usual library activities the industrial visit from different colleges and universities were permitted to the students to enrich their scientific knowledge and to create awareness in vaccine production and immunization procedures etc. From April 2019 to March 2020, 8966 students from 86 colleges and 3 schools have visited the Institute, and one student has undergone In-Plant Training for a period of one week and one student has undergone two months Internship Programme during the above period.

RIGHT TO INFORMATION ACT, 2005

During the reporting period, under Right to Information Act, 2005, 13 applications were received and disposed off in stipulated time.

DETAILS OF THE PROMOTION GIVEN DURING THE PERIOD FROM APRIL 2019 TO MARCH 2020

S. No.	Name of the Official (Shri)	Designation	Promoted to	Date of Promotion
1.	G. Ravi	Multi Tasking Staff	Laboratory Assistant	12.04.2019
2.	P. Krishnasamy	Multi Tasking Staff	Laboratory Assistant	12.04.2019
3.	R. Durai	Multi Tasking Staff	Laboratory Assistant	12.04.2019
4.	K. Ravichandran	Multi Tasking Staff	Laboratory Assistant	12.04.2019
5.	T. Natarajan	Multi Tasking Staff	Laboratory Assistant	12.04.2019
6.	R. Sreenivasan	Multi Tasking Staff	Laboratory Assistant	12.04.2019
7.	M. Thiyagarajan	Multi Tasking Staff	Laboratory Assistant	12.04.2019

**DETAILS OF THE STAFF SUPERANNUATED/OPTED for V.R.S.
DURING THE PERIOD FROM APRIL 2019 TO MARCH 2020**



Smt. Savithri Sundaran,
Senior Res. Officer
31.04.2019



Shri B. Iyer
Technical Assistant
31.05.2019



Shri. M. Bellan,
Senior Tech. Asstt.
30.06.2019



Shri R. Dharmalingam,
Head Clerk
31.07.2019



Shri G. Ravi,
Laboratory Assistant
31.07.2019



Shri. M. Thirumoorthy,
Multi Tasking Staff,
31.07.2019



Smt. B. Rangalakshmi,
Laboratory Technician
30.09.2019



Shri R. Manisekaran,
Laboratory Assistant
31.10.2019



Shri K. Ravichandran,
Laboratory Technician
29.02.2020



Shri R. Kanagaraj,
Head Clerk
31.03.2020



Shri K. Manohar,
Multi Tasking Staff
31.03.2020



Shri A. Singaravelu,
Multi Tasking Staff
V.R.S. on 28.11.2019

**DETAILS OF THE STAFF DECEASED DURING THE PERIOD FROM APRIL
2019 TO MARCH 2020**



Shri P. Krishnasamy,
Laboratory Assistant
26.03.2020

OTHER ACTIVITIES DURING THE PERIOD

WORLD RABIES DAY:

As done in the previous years, in commemoration of the Death Anniversary of Louis Pasteur, this year also the World Rabies Day was observed by this Institute. In the morning at PII, Coonoor, Louis Pasteur statue garlanded by the Director, PII, Coonoor and 2 minutes silence was observed by all the Officers and Staff of PII, Coonoor.

Prior to this, this Institute has organized an inter school quiz competition on '*Development in Vaccinology*' on 03.09.2019 at 10.00 a.m. at Riverside Public School Auditorium, Kotagiri. About 60 schools in Nilgiris District, both private and government schools, were invited to participate in the quiz competition Among which 16 teams from 16 schools have participated. The quiz competition was inaugurated by Mr. Francis Xavier P.K., Principal, Riverside Public School, Kotagiri.

Out of 16 Teams by Screening Test, 6 Teams with 2 students each had been selected for the final quiz competition. The main aim of the quiz competition was to create awareness on vaccine preventable diseases among school children and to the general public through them.

- | | |
|----------------------------|---|
| I - Prize was awarded to | Ms. Shiva Netra and Master Kiruthik Vigneswaran of St. Jude's Public School and Junior College, Kotagiri. |
| II - Prize was awarded to | Master V. Hariharasudhan and Master Shahu Maharaj of St. Josephs Boy's Hr. Sec. School, Coonoor. |
| III - Prize was awarded to | Master Shahil and Master Abishek. S of Kendirya Vidyalaya, Wellington. |

Open questions were also asked to the audience and those who answered correctly were awarded. Shri R. Mohan, Research Officer of the Institute conducted the Quiz programme.

Followed by quiz competition, this Institute has also conducted Essay Writing Competition on "Recent advances in Vaccinology (or) Eradication of Rabies by 2030" among the school students of Nilgiris District on 04.09.2019. 56 candidates have participated from 28 schools among which Shri Joshua Ajith, IX Std of Kotagiri Public School, Kotagiri won I prize, Mr. Krishnapiritha Krishnamurthi, X Std of St. Jude's Public School and Junior College, Kotagiri won II prize, Ms. J. Sakhti Priya, X std, of Crescent Castle Public School, Ooty won III Prize.

This Institute has also conducted Drawing Competition among the school students of Nilgiris District on "Conservation on Environment" on 05.09.2019 at Pasteur Institute of India, Coonoor. 48 candidates have participated from 24 schools among which Shri A. Karthik Raja, VIII Std of Holy Innocents School and Junior College, Wellington won I Prize, Master Kishan Patel, VIII Std of J.S.S. International School, Ooty won II prize and Shri C. Immanuel Xavier, VII Std of Government High School, Yellanalli won III Prize.



The valedictory function and prize distribution was held on the World Rabies Day, 28th Sep. 2019, at Pasteur Institute of India, Coonoor. The Chief Guest Smt. Shanty Gunasekaran, Deputy Drugs Controller (South Zone), Chennai and the Guest of Honour Dr. B. Sekar, Director, BCG Vaccine Laboratory, Chennai, Dr. M. Sivasamy, Principal Scientist & Head, Indian Agricultural Research Institute, Wellington, Dr. P. Nallathambi, Principal Scientist (Plant Pathology), Indian Agricultural Research Institute, Wellington and Dr. B. Mohan, Scientist D, Satellite Silkworm Breeding Station, Central Silk Board, Coonoor, Mr. Francis Xavier P.K., Principal, Riverside Public School, Kotagiri and Dr. Ilona, Director of International Veterinary Training, Worldwide Veterinary Service were invited and felicitated.

The prizes were sponsored by State Bank of India, Coonoor and the Stationeries and food were sponsored by Bank of Baroda, Coonoor.

Followed by, as done in previous years, a rally was organized to promote awareness on the prevention of rabies. The rally started from PII, Coonoor and reached Coonoor bus stand. Officers and staff of the Institute and College students have participated in the rally. Placards carrying messages on the prevention of rabies among humans and animals were displayed. Hand bills with messages on prevention of rabies were also distributed in the rally. Earlier in the day, hand bills in English and Tamil were distributed along with the newspapers in the district.

On the whole the three competitions held in commemoration of World Rabies Day enriched the students with sound educational information on the importance of the vaccine and the disease that can be prevented by vaccination.

NATIONAL SCIENCE DAY EXHIBITION AT RADIO ASTRONOMY CENTRE, OOTY

Pasteur Institute of India, Coonoor participated in the capacity as a Central/State Government Exhibitor for National Science Day 2019, on the commemoration of Sir C.V Raman held at Radio Astronomy Centre, Muthorai Palada, Ooty on 28.02.2019.

In this year, the exhibition or stall was allocated for discussion in the areas like UIP, Microbiology, Rabies, Antiques of Light sources and Tissue Culture Rabies Vaccine production and along with the 25 seating capacity for Rabies awareness and treatment in Audiovisual hall.

In the UIP theme, a small presentation was made about the history of Pasteur institute India, Milestones and role of Pasteur Institute in Universal Immunization programme, present and future activities of PII, Coonoor.

In the Microbiology theme, presentation was made on infectious diseases caused by the different microorganisms and the vaccine prescribed by the Indian Paediatric association. The morphological structure details of *Corneybacterium diphtheriea*, *Bortadella pertussis*, *Clostridium tetani*, *Heamophilis influenza and Hepatitis B* were displayed which are the components of Liquid Pentavalent vaccine. The production flow chart of Diphtheria toxoid, Tetanus toxoid and Pertussis vaccine were also displayed.



In the rabies theme, milestones of Pasteur Institute of India, Coonoor in the rabies vaccine production, rabies virus, mode of transmission of rabies and displays showing the symptoms like hydrophobia, photophobia aerophobia spasm and rabies in animals like drooling of saliva were displayed.

In the audio visual session, the details about the rabies, awareness i.e how the rabies virus was transmitted from dog saliva to human brain and the symptoms of rabies, first aid for dog bite, wound washing with water, soap and dettol and the passive immunization etc were explained.

The Chief guest Shri S. Ragu, Superintending Engineer, Kundha Power Generation, TNEB, along with Dr. Jayantha Roy, Astronomer,, Scientist, National Centre for Radio Astrophysics, GMRT, Pune and Shri Packiaraj, Administrative Officer, RAC , Ooty visited and appreciated the rabies awareness program especially Audiovisual and the oral explanation to the School students and public.

CONCLUSION

In this reporting year, the entire functional units of this Institute have been in full swing as a team in the finalization of process and testing SOPs, Validation documents, Rationale documents and Quality Risk Assessment Documents for different functions and equipments. For the successful Performance qualification of critical systems, utilities, facilities and manufacturing trial runs, as a pre qualification activities, trial runs of each process equipment, critical systems, training of microbiological analytical methods have been undertaken.

The Rabies Diagnostic lab and Anti Rabies Clinic continued to render public health services. This year also this Institute observed "World Rabies Day" by organizing events to create awareness on prevention of Rabies among school children and general public. Similar like previous years, in the reporting year also this Institute permitted students as a part of their Industrial Visit, In-Plant training and Course Project to enrich their knowledge in vaccine production.

This reporting period was one of the challenging years for the PIIC team to obtain Form 29 for the manufacturing of Experimental batches and for the continuous improvement of the Quality Management System.

In this year this Institute has progressed well in compliance front and highly productive in prequalification activities.

THE TEAM

Office Superintendent

1. Shri R. Ram

Foreman

Vacant

Sr. Technical Assistant

1. Smt. Victoria Jayaraj
2. Shri B.H. Bellie
3. Shri N. Kesu

Head Clerk

1. Shri T.K. Balakrishnan
2. Shri S. Ravi
3. Mrs Bareedha Jaffarulla
4. Mrs Shanthi Subramani
5. Shri R. Kanagaraj
6. Shri D. Anurag
7. Shri P. Mani

Pharmacist

1. Shri P. Venkatachalam

Research Assistant

1. Shri V. Raja Karthikeyan

Technical Assistant

1. Shri A. Jaffarulla
2. Shri K. Devaraj
3. Shri R. Sathiyamoorthy
4. Shri P. Paramasivam
5. Shri S. Mani
6. Shri A. Paulraj
7. Mrs R. Manjula

Maintenance Supervisor

1. Shri A. Rajappa

Laboratory Technician

1. Shri R. Gopalakrishnan
2. Shri A. Victor
3. Mrs Uma Subramani
4. Mrs Melan Basavaraj
5. Shri K. Shankaran
6. Shri N. Chandran
7. Shri R. Raja
8. Shri P. Vasu
9. Shri B. Lakshmanan
10. Shri S. Peter
11. Shri V. Muthu
12. Shri K. Ravichandran (Sr)

Maintenance Technician

1. Shri M.E. Sridhar
2. Shri C. Alexander Joseph
3. Shri R. Ravi
4. Shri R. Saravanan

Staff Car Driver

1. Shri R. Yesudoss

Upper Division Clerk

1. Shri N. Kuppusamy
2. Shri S. Chandran
3. Shri C. Doraiswamy
4. Shri R. Dhurairajan
5. Shri B. Karthick
6. Shri Y.D. Praveen

Laboratory Assistant

1. Shri M. Subramani
2. Shri M.B. Raju
3. Shri A. Dhanabalan
4. Shri M. Radhakrishnan
5. Shri S. Ligan
6. Shri C. Vadivelu
7. Shri B. B. Sundaram

To strive to seek to find and not to yield



- | | |
|---------------------------------|---------------------------------|
| 8. Shri R. Gunasekaran (Junior) | 15. Shri R. Dharmaraj Shanmugam |
| 9. Shri P. Periaswamy | 16. Shri S. Anandan |
| 10. Shri S. Devanbu | 17. Shri K. Ganesan |
| 11. Shri M. Murugan | 18. Shri K. Manohar |
| 12. Shri S. Chandrasekaran | 19. Shri V. Kanagaraj |
| 13. Shri B. Sivalingam | 20. Shri A. Karuppiah |
| 14. Shri K. Elancheran | 21. Shri P. Nandakumar |
| 15. Shri M. Gunasekaran | 22. Mrs B. Jayalakshmi |
| 16. Shri K. Manoharan | 23. Shri M. Ganesan |
| 17. Shri V. Vijayan | 24. Mrs Dhanamani Murugesan |
| 18. Shri R. Mohan | 25. Shri R. Raghu |
| 19. Shri R. Siddayan | 26. Shri R. Gunasekaran |
| 20. Shri R. Vasudevan | 27. Miss B. Saroja |

Maintenance Assistant

1. Shri B. Nataraj
2. Shri V. Radhakrishnan

Library Clerk

Vacant

Truck/Van Driver

1. Shri G. Thanaraj
2. Shri P. Rajendran

Multi Tasking Staff

1. Shri R. Durai
2. Shri K. Ravichandran (Jr)
3. Shri T. Natarajan
4. Shri R. Sreenivasan
5. Shri M. Thiyagarajan
6. Shri S. Gangadharan
7. Shri Y. Vincent Heuman
8. Shri J. Selvan Vincent Raj
9. Shri A. Velmurugan
10. Shri S. Murugan
11. Shri M. Murugan
12. Shri K. Mani
13. Shri K. Ambiraj
14. Shri D. Surendran

28. Shri G. Saravanamoorthy
29. Shri B. Ramu
30. Shri L. Murali
31. Shri N. Ramadass
32. Shri M. Ravindran
33. Mrs R. Parvathi
34. Mrs M. Geetha
35. Shri Min Bahadur Katri
36. Shri Bommiraj Bahadur
37. Mrs K. Kalavathi
38. Mrs R. Kamatchi
39. Mrs Shanthi Rajkumar
40. Mrs Sivarani
41. Mrs D.R. Latha
42. Shri G. Ramesh
43. Shri S. Balasubramani
44. Shri A.K. Jithendran
45. Shri A. Senthilkumar
46. Shri G. Saravanan
47. Shri P.K. Anandan
48. Shri R. Vinoth
49. Shri B.N. Haldurai
50. Mrs S. Pavithra
51. Mrs. M. Mahalakshmi



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LIST OF OFFICERS/ OFFICIALS OF THIS INSTITUTE DEPUTED TO VARIOUS PLACES

FROM 01.04.2019 TO 31.03.2020

S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
1.	Dr. N. Sivananda	Asstt. Res. Officer	CMS College of Science and Commerce, Coimbatore	01.04.2019		To attend meeting of 13 th Board of Studies
2.	Dr. S. Sivakumar	Director	Bharathiar University, Coimbatore	09.04.2019		To conduct a pooled Coimbatore Campus Interview in different disciplines
3.	Shri A. Vairamoorthy	Administrative Officer				
4.	Shri R. Mohan	Research Officer				
5.	Dr. K. C. Shivanandappa	Research Officer				
6.	Dr. A Premkumar	Sr. Res. Officer				
7.	Smt. Savithri Sundaran	Sr. Res. Officer				
8.	Dr. S. Jagannathan	Asstt. Res. Officer	Kendriya Vidyalaya, Ooty	09.04.2019		To deliver Motivational Speech to the students
9.	Dr. A. Premkumar	Sr. Res. Officer	Vaccine and Immunosera for Human Use Scheduled by Indian Pharmacopoeia Commission, Ghaziabad	27.04.2019	29.04.2019	To attend 7 th Expert Working Group and Stakeholders meeting
10.	Shri T. Sekar	Asstt. Res. Officer				
11.	Dr. S. Sivakumar	Director		01.05.2019	03.05.2019	To attend meeting at Ministry
12.	Shri Jason Muthukumar Jeyacross	Asstt. Res. Officer	Central Food Technological Research Institute, Mysuru, Karnataka	05.05.2019	11.05.2019	To attend Program on Laboratory Animal Techniques, Ethic and Welfare.



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
13.	Dr. S. Sivakumar	Director	MoH & FW, New Delhi	07.05.2019	10.05.2019	To attend official work at Ministry
14.	Shri A. Vairamoorthy	Administrative Officer		14.05.2019		
15.	Shri B. Karthick	U.D.C				
16.	Shri P. Sasikumar	Sr. PA to Director	MoH & FW, New Delhi			To attend Government e-Marketplace (GeM)
17.	Shri D. Anurag	Head Clerk	Chemistry Manufacturing and Controls (CMC) Hyderabad	12.06.2019	13.06.2019	To attend Advanced training workshop on Chemistry Manufacturing and Controls (CMC)
18.	Dr. K. C. Shivanandappa	Research Officer				
19.	Shri G. Chandramohan	Asstt. Res. Officer				
20.	Dr. C. Muniandi	Asstt. Res. Officer				
21.	Shri T. Sekar	Asstt. Res. Officer				
22.	Shri P. Nandakumar	M.T.S	M/s Gulati Enterprises, Bangalore	16.06.2019	19.06.2019	To handed over Fermentor spare part to M/s Biosene and for Air Particles Calibration
23.	Dr. S. Sivakumar	Director	Chennai	20.06.2019		Official Work
24.	Shri A. Vairamoorthy	Administrative Officer	Hindustan College of Arts & Science, Coimbatore	22.06.2019		To attend Board of Studies Meeting
25.	Dr. C. Muniandi	Asstt. Res. Officer				
26.	Shri P. Sasikumar	Sr PA to Director	Bharat Biotech, Hyderabad	27.06.2019	29.06.2019	To have some exposure on warehouse practices like receipt of materials, storage, inventory control, issues etc. and also require knowledge regarding Finished Goods Storage and dispatch practices
27.	Shri D. Anurag	Head Clark				



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
28.	Shri M.E. Sridharan	Maint Tech	Akshaya College of Engineering and Technology, Coimbatore	26.06.2019	27.06.2019	109 th AITT under Apprenticeship Training Scheme (ATS) Exam Session - April - 2019.
29.	Shri G. Saravanan	M.T.S		27.06.2019	26.06.2019	
30.	Shri C. Alexander	Maint. Tech	Coimbatore	02.07.2019	03.07.2019	To attend review meeting on the status of implementation of decisions taken in the Governing Body.
31.	Shri A. Vairamoorthy	Administrative Officer	Coimbatore			
32.	Dr. S. Sivakumar	Director	MoH & FW, New Delhi			
33.	Shri A. Vairamoorthy	Administrative Officer	National Centre for Disease Control, Coonoor			As a member of condemnation of their office vehicle
34.	Shri R. Mohan	Research Officer	Veterinary College and Research Institute, Namakkal	17.07.2019		To have a discussion with the Dean with regard to animal feed testing
35.	Dr. B. Sundaran	Consultant (Technical)				
36.	Dr. A. Premkumar	Sr. Res. Officer				
37.	Dr. S. Sivakumar	Director				
38.	Shri A. Vairamoorthy	Administrative Officer				
39.	Shri R. Mohan	Research Officer				
40.	Shri G. Chandramohan	Asstt. Res. Officer	Tamil Nadu University of Veterinary and Animal Sciences (TANUVAS), Chennai	18.07.2019		To collect the Neuro 2A cell lines
41.	Shri A. Vairamoorthy	Administrative Officer	Bharathiar University, Coimbatore	23.07.2019		To have a discussion with the Registrar
42.	Shri B. Karthick	U.D.C				
43.	Dr. A. Premkumar	Sr. Res. Officer	Food and Drugs Administration, Goa	27.06.2019		To attend 2 nd Integrative meet on Pharmacopoeia Standards Regulatory and Quality Considerations
44.	Dr. N. Sivananda	Asstt. Res. Officer				



S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
45.	Shri A. Vairamoorthy	Administrative Officer	Coimbatore, Tirupur and Erode	27.07.2019	and 29.07.2019	Identification of vendors for clean room garments for GMP facilities at this Institute
46.	Shri R. Mohan	Research Officer				
47.	Shri P. Sasikumar	Sr PA to Director				
48.	Dr. S. Jagannathan	Asstt. Res. Officer	Nehru Arts and Science College, Coimbatore	31.07.2019		As a Chief Guest for Department Association (Aims-Intellectual Microbiologist) Association of Inauguration Function
49.	Dr. S. Jagannathan	Asstt. Res. Officer	AJK College of Arts and Science, Coimbatore	21.08.2019		As a Chief Guest for the inauguration of BioinGENEnio - 19 Association of Biotechnology
50.	Dr. S. Sivakumar	Director	MoH & FW	22.08.2019	23.08.2019	To attend official work.
51.	Shri A. Vairamoorthy	Administrative Officer				
52.	Shri A. Vairamoorthy	Administrative Officer	Electrotek Static Control Private Limited, Bangalore	26.08.2019		For Factory Inspection and assessment of vendor for clean room garments for GMP facilities at this Institute.
53.	Shri P. Sasikumar	Sr PA to Director				
54.	Shri R. Mohan	Res. Officer				
55.	Dr. A. Premkumar	Sr. Res. Officer	The DDG & Head,	29.08.2019	30.08.2019	Program on Train the Trainers on 55
56.	Shri R. Mohan	Res. Officer	Dr. Ambedkar Institute of Productivity (AIP), National Productivity Council, Chennai			
57.	Smt T. Lalitha	Asstt. Res. Officer				
58.	Shri B. Annamalai	Asstt. Res. Officer				
59.	Dr. S. Sivakumar	Director	Chennai	09.09.2019	10.09.2019	Drug License meeting with various Authorities
60.	Dr. B. Sundaran	Consultant (Technical)				



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
61.	Dr. N. Sivananda	Asstt. Res. Officer	PSG College of Arts and Science, Coimbatore	09.09.2019		To attend as a Chief Guest in the Association and deliver a lecture on "Vaccine Production and Immunological Diagnosis of Rabies"
62.	Shri T. Natarajan	Lab Assistant	Coimbatore Industrial Infrastructure Association, Coimbatore	16.09.2019		To attend one day special seminar on "The Training Need Identification in the present Economic Order"
63.	Shri A. Senthilkumar	M.T.S				
64.	Shri A. Vairamoorthy	Administrative Officer	MoH & FW, New Delhi	16.09.2019	17.09.2019	To attend a Stakeholders meeting regarding 'Vaccine Security'
65.	Shri R. Mohan	Res. Officer				
66.	Dr. S. Jagannathan	Asstt. Res. Officer	Vellore Institute of Technology, Vellore	19.09.2019		Guest Lecturer in the ideation for M.Sc., Applied Microbiology students in the Department of Biotechnology
67.	Dr. C. Muniandi	Asstt. Res. Officer	The United States	20.09.2019		Education course on Introduction to USP Reference standards and USP-NF which will be conducted at Bangalore
68.	Dr. N. Sivananda	Asstt. Res. Officer	Pharmacopeia-India Pvt. Ltd., Education and Training, Hyderabad is organizing			
69.	Shri T. Sekar	Asstt. Res. Officer				
70.	Shri G. Chandramohan	Asstt. Res. Officer				
71.	Shri P. Sasikumar	Sr. PA to Director	M/s Bharat Petroleum Corporation Ltd, Coimbatore	20.09.2019		To attend Training Session on Em-Locks, which is the New Magnetic Lock System to ensure better control and convenience of locking and tank lorries for HSD supplies.
72.	Shri D. Anurag	Head Clerk				



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
73.	Shri R. Mohan	Res. Officer	The Westin Oberoi Garden City, Mumbai	24.09.2019		To attend 10 th Annual Pharma SCM Summit 2019
74.	Shri B. Annamalai	Asstt. Res. Officer	St. Antony's Hr. Sec. School, Coonoor	05.10.2019		To give awareness on Rabies to the volunteers of NSS unit.
75.	Dr. S. Jagannathan	Asstt. Res. Officer	MoH & FW, New Delhi	10.10.2019	12.10.2019	To attend various official works
76.	Shri A. Vairamoorthy	Administrative Officer	MoH & FW, New Delhi	06.11.2019	07.11.2019	To attend an official Work
77.	Shri A. Vairamoorthy	Administrative Officer	South zone and State Drugs Control Office, Chennai	07.11.2019	08.11.2019	Official work at CDSCO
78.	Shri R. Mohan	Res. Officer	CMS College of Science & Commerce, Coimbatore	11.11.2019		To attend 14 th Boards of Studies Meeting
79.	Dr. B. Sundaran	Consultant (Technical)	Rathinam College of Arts and Science, Coimbatore	18.11.2019		To attend the Academic Advisory Committee meeting of Microbiology Board in the Department of Microbiology.
80.	Dr. N. Sivananda	Asstt. Res. Officer	Tamil Nadu Veterinary and Animal Science University, Veterinary College and Research Institute, Namakkal	20.11.2019		To attend an Official work
81.	Dr. S. Jagannathan	Asstt. Res. Officer				
82.	Dr. S. Sivakumar	Director	Coimbatore			
83.	Shri A. Vairamoorthy	Administrative Officer				
84.	Shri A. Vairamoorthy	Administrative Officer		22.11.2019		To Inspect the Factories viz. M/s Lakshmi Life Science Ltd. M/s Lakshmi Engineering Industries and Angel Fabric Coimbatore.
85.	Shri R. Mohan	Res. Officer				
86.	Shri P. Sasikumar	Sr PA to Director				



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
87.	Dr. S. Sivakumar	Director	MoH& FW, New Delhi	26.11.2019	27.11.2019	To attend official Work
88.	Shri A. Vairamoorthy	Administrative Officer				
89.	Dr. S. Sivakumar	Director	Developing Countries Vaccine Manufacturing Network (DCVMN), Bangkok, Thailand	02.12.2019		To attend the Expert Regional Workshop on 3Rs Working Expert Group
90.	Shri R. Mohan	Res. Officer	Coimbatore	27.11.2019		To Visit factories as per GMP requirement and also to attend other official work
91.	Shri P. Sasikumar	Sr PA to Director				
92.	Dr. A. Premkumar	Sr. Res. Officer	NOTTO at Vijay Bhawan, New Delhi	30.11.2019		To 10 th Indian Organ Donation Day Meeting
93.	Dr. B. Sundaran	Technical (Consultant)	Chennai	06.12.2019		For official work at Drug Control Authority (State and Central)
94.	Shri A. Vairamoorthy	Administrative Officer	Central Research Institute, Kasauli	05.12.2019	06.12.2019	To attend National Public Procurement Conclave (NPPC) at India Habitat Centre
95.	Shri P. Sasikumar	Sr PA to Director				
96.	Shri R. Mohan	Res. Officer	Central Research Institute, Kasauli	09.12.2019	10.12.2019	To attend National Public Procurement Conclave (NPPC) at India Habitat Centre
97.	Shri G. Chandramohan	Asstt. Res. Officer	Central Research Institute, Kasauli	11.12.2019		To collect Toxin (Diphtheria & Teanus) samples for QCD-Invivo
98.	Shri B. Annamalai	Asstt. Res. Officer				
99.	Dr. B. Sundaran	Consultant (Technical)	CRI, Kasauli	17.01.2020		To attend official work at CRI and CDL



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
100.	Shri A. Vairamoorthy	Administrative Officer	MoH & FW	16.12.2019	19.12.2019	To attend an official work
101.	Shri B. Karthick	U.D.C				
102.	Shri R. Mohan	Res. Officer	Kongunadu Arts and Science College, Coimbatore	18.12.2019	19.12.2019	To attend two days National Workshop on "Data Analysis using Excel and SPSS for Application of Biological
103.	Shri B. Annamalai	Asstt. Res. Officer				
104.	Shri G. Chandra Mohan	Asstt. Res. Officer				
105.	Shri V. Raja Karthikeyan	Res. Asstt.				
106.	Mrs. Chandra Charles	Asstt. Res. Officer				
107.	Dr. N. Sivananda	Asstt. Res. Officer				
108.	Dr. S. Jagannathan	Asstt. Res. Officer	Dr. R. K.S. Institute of Health Science (HL. ANM),	19.12.2019		To attend as a resource person in the one day State level seminar on "Vaccination trends, Developments and recent researches"
109.	Dr. S. Jagannathan	Asstt. Res. Officer	Tamilnadu Veterinary and Animal Science University, Madras Veterinary College, Chennai	20.01.2020	24.01.2020	To attend National workshop on "Recent trends in Animal Cell Culture Techniques"
110.	Shri A. Jaffarulla	Technical Asstt.	USP India, Bangalore	23.01.2020		To participate the educational course on 'Microbiological and Sterility Assurance'
111.	Mrs. M. Vidya	Outsourced Staff				
112.	Shri K.S. Pranav Priyan	Outsourced Staff				
113.	Shri A. Vairamoorthy	Administrative Officer	National Institute of Health Family Welfare, New Delhi	04.02.2020		To attend a Mandatory Training / Officer and Family Welfare, Workshop on Suo-Moto
114.	Shri R. Mohan	Res. Officer	New Delhi			Disclosure and Transparency Audit under Section-4 of RTI, Act
115.	Shri P. Sasikumar	Sr. PA to Director				



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
116.	Dr. S. Sivakumar	Director	MoH & FW, New Delhi	27.01.2020	28.01.2020	To attend a Meeting
117.	Shri A. Vairamoorthy	Administrative Officer				
118.	Shri N. Chandran	Lab Technician	USP India, Mumbai	27.01.2020	28.01.2020	To participate the educational course on "Essentials of Control and Testing of Microbial Quality of Non-sterile and Sterile Products"
119.	Shri D. Gowtham	Outsourced Staff				
120.	Shri B. Manoj	Outsourced Staff				
121.	Mrs Chandra Charles	Asstt. Res. Officer	Kongunadu College of Technology, Coimbatore	24.01.2020		To assist the Selection Committee in the pooled Campus Interview
122.	Shri T. Sekar	Asstt. Res. Officer				
123.	Shri B. Karthick	U.D.C				
124.	Shri A. Vairamoorthy	Administrative Officer	Chennai	05.02.2020		To PAO and to attend other official work
125.	Shri A. Vairamoorthy	Administrative Officer	MoH & FW, New Delhi	13.02.2020		To attend a meeting
126.	Shri R. Mohan	Res. Officer	Paramexcil in collaboration with IDMA TNPQSB	15.02.2020		To attend conference on "Recent Advancements in Regulatory Landscape of India & Emerging Markets"
127.	Shri S. Sridharan	Outsourced Staff				
128.	Shri G. Bharat	Outsourced Staff				
129.	Dr. S. Sivakumar	Director	MoH & FW, New Delhi	23.02.2020	28.02.2020	Standing Finance Committee of Pasteur Institute of India
130.	Shri R. Mohan	Res. Officer				
131.	Shri A. Vairamoorthy	Administrative Officer		25.02.2020	27.02.2020	
132.	Shri P. Sasikumar	Sr PA to Director				



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S. No.	Name	Designation	Subject & Place	Date		Particulars
				From	To	
133.	Dr. S. Sivakumar	Director	MoH & FW, New Delhi	02.03.2020	05.03.2020	To attend a meeting under the chairmanship of Special Secretary (AS)
134.	Shri A. Vairamoorthy	Administrative Officer				
135.	Shri R. Mohan	Res. Officer				
136.	Dr. A. Premkumar	Sr. Res. Officer	Dr. Ambedkar Institute of Productivity, Chennai	05.03.2020	06.03.2020	To attend the workshop on "Gender Sensitisation & Sexual Harassment at Workplace"
137.	Dr. K.C. Shivanandappa	Res. Officer				
138.	Dr. A. Premkumar	Sr. Res. Officer	M/s. Mettex Lab, Chennai	07.03.2020		To inspect the facility as part of vendor evaluation.
139.	Dr. K.C. Shivanandappa	Res. Officer				
140.	Shri S. Sridharan	Outsourced				
141.	Shri Jidesh Thilak	Outsourced				
142.	Shri R. Mohan	Res. Officer	Chennai	14.03.2020		To attend Workshop on e-Governance initiatives of CDSCO
143.	Smt Chandra Charles	Asstt. Res. Officer				
144.	Smt Swarna Gowri	Outsourced				
145.	Dr. S. Jagannathan	Asstt. Res. Officer	Coimbatore	18.03.2020		To attend the Academic Advisory Committee meeting for Curriculum and Syllabi enrichment of the B.Sc Microbiology Course.



**List of students registered (full-time) for Ph.D. Programme under
Bharathiar University, Coimbatore**

S. No.	Name of the Candidate	Title of the Ph.D. thesis	Supervisor/Guide
1.	Ms.S.Preethi	Construction of Recombinant Diphtheria toxin	Dr. B. Sekar

**Staff (Part-time) registered for Ph.D. programme under
Bharathiar University, Coimbatore**

S. No.	Name of the Candidate	Title of the Ph.D. thesis	Supervisor/Guide
1.	Shri T. Sekar	Preparation of Tissue Culture Antirabies Vaccine using microcarrier culture in bioreactor preparation	Dr. A. Premkumar
2.	Shri G. Chandramohan	Development of chicken egg yolk antibodies (IgY) against Rabies	Dr. A. Premkumar
3.	Shri V. Raja Karthikeyan	Standardization of alternate veg media for increased production of tetanus toxin	Dr. N. Sivananda
4.	Shri B. Karthick	Construction of Recombinant Pertussis toxin by chimeric fusion of <i>Bordetella pertussis</i> antigens	Dr. B. Sekar
5.	Shri R. Mohan	Development and Standardization of highly purified Diphtheria Toxoid using Casein based semi synthetic media	Dr. N. Sivananda
6.	Shri B. Annamalai	Development of chicken egg yolk antibodies (IgY) against Rota virus	Dr. B. Sekar

The team involved in the preparation of Annual/Scientific Report :

- (a) Dr. S. Sivakumar, Director
- (b) Shri R. Mohan, Research Officer and
- (c) Shri B. Karthick, Upper Division Clerk

Photographs:

Shri B. Karthick, Upper Division Clerk

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