

12**STANDING COMMITTEE ON
CHEMICALS & FERTILIZERS****(2014-15)**

SIXTEENTH LOK SABHA

**MINISTRY OF CHEMICALS AND FERTILIZERS
(DEPARTMENT OF PHARMACEUTICALS)****FUNCTIONING OF NATIONAL INSTITUTES OF PHARMACEUTICAL
EDUCATION AND RESEARCH (NIPER)****TWELFTH REPORT**

LOK SABHA SECRETARIAT

NEW DELHI

August, 2015/ Shravana 1937, (Saka)

TWELFTH REPORT
STANDING COMMITTEE ON CHEMICALS AND FERTILIZERS
(2014-15)

(SIXTEENTH LOK SABHA)

MINISTRY OF CHEMICALS AND FERTILIZERS
(DEPARTMENT OF PHARMACEUTICALS)

FUNCTIONING OF NATIONAL INSTITUTES OF PHARMACEUTICAL
EDUCATION AND RESEARCH (NIPER)

Presented to Lok Sabha on 12 August 2015

Laid in Rajya Sabha on 12 August 2015

LOK SABHA SECRETARIAT
NEW DELHI

August, 2015/ Shravana 1937, (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON CHEMICALS & FERTILIZERS (2014-15)

Shri Anandrao Adsul - Chairperson			
MEMBERS			
LOK SABHA			
2.	Shri Idris Ali		
3.	Smt. Anju Bala		
4.	Shri B.N Chandrappa		
5.	ShriSankar Prasad Datta		
6.	Smt. Veena Devi		
7.	Shri R. Dhruvanarayana		
8.&	Vacant		
9.	Shri K Ashok Kumar		
10.	Shri Kamalbhan Singh Marabi		
11.	ShriChhediPaswan		
12.	Smt. Kamala Devi Patle		
13.	Shri Rajendran S		
14.	Shri ChanduLal Sahu		
15.	Dr. Kulamani Samal		
16.	Dr. Uma Saren		
17.	Dr. Krishan Pratap Singh		
18.	Shri Taslimuddin		
19.	Smt. Rekha Arun Verma		
20.*	Shri Innocent		
21.*	ShriKotha Prabhakar Reddy		
RAJYA SABHA			
22.	Shri Biswajit Daimary		
23.	Dr. MS Gill		
24.	Shri Sanjay Dattatraya Kakade		
25.	Shri Narayan LalPanchariya		
26.	Shri K Parasaran		
27.	Shri Garikapati Mohan Rao		
28.	Dr. Sanjay Sinh		
29.*	Shri Palvai Govardhan Reddy		
30.%	Shri Mansukh L. Mandaviya		
31.\$	Vacant		
SECRETARIAT			
1.	Smt. Rashmi Jain	-	Joint Secretary
2.	Shri U.B.S. Negi	-	Director
3.	Shri A.K. Srivastava	-	Additional Director

Changed the nomination of ShriMurliDeora, Member of RajyaSabha from the Committee on Chemicals and Fertilizers to the Committee on External Affairs w.e.f. 25-09-2014.

* ShriPalvaiGovardhan Reddy, Member of RajyaSabha nominated w.e.f. 08-10-2014

Shri Mohanbhai KalyanjibhaiKundariya Nominated as Minister of State w.e.f. 09.11.2014

The term of ShriBrijlalKhabri, MP (RS) has expire w.e.f. 25.11.2014

Changed the nomination of Adv. Joice George, Member of LokSabha from the Committee on Chemicals and Fertilizers to the Personnel, Public Grievances, Law and Justice w.e.f. 24-12-2014.

*Shri Innocent, and ShriKothaPrabhakar Reddy, Member of LokSabhanominated w.e.f. 22-12-2014

% ShriMansukh L. Mandaviya, Member of RajyaSabha nominated w.e.f. 31-12-2014

% Dr. Chandrapal Singh Yadav, Member of RajyaSabha nominated w.e.f. 29.01.2015

\$Changed the nomination of Dr. Chandrapal Singh Yadav, Member of Rajya Sabha from the Committee on Chemicals and Fertilizers to the Committee on Industry w.e.f. 07.05.2015

& Changed the nomination of Shri Satish Kumar Gautam, MP, (LS) from The Committee on Chemicals and Fertilizers to the Committee on Labour w.e.f. 23.07.2015.

INTRODUCTION

I, the Chairperson, Standing Committee on Chemicals and Fertilizers (2014-15) having been authorised by the Committee to submit the Report on their behalf, present this Twelfth Report on the subject 'Functioning of National Institutes of Pharmaceutical Education and Research (NIPER)' of the Ministry of Chemicals and Fertilizers (Department of Pharmaceuticals).

2. The Committee on Chemicals and Fertilizers (2014-15) selected the subject Functioning of National Institutes of Pharmaceutical Education and Research (NIPER) for examination and report. The Committee took oral evidence of the representatives of the Department of Pharmaceuticals in their sittings held on 30 June, 2015 and 14 July, 2015.

3. The Committee (2014-15) considered and adopted the Report at their sitting held on 11th August, 2015.

4. The Committee wish to express their thanks to the Officers of the Ministry of Chemicals and Fertilizers (Department of Pharmaceuticals) and officers of NIPERs for furnishing the written replies and other material/ information and for appearing before the Committee to tender their evidence in connection with the examination of the subject.

5. For facility of reference and convenience, the observations / recommendations of the Committee have been printed in bold letters at the end of the Report.

New Delhi;
11 August, 2015
20 Shravana 1937, (Saka)

Anandrao Adsul
Chairperson
Standing Committee on
Chemicals and Fertilizers

CHAPTER –I

INTRODUCTION

1.1 Indian Pharmaceuticals Industry has been a global leader in Generic drugs. In order to acquire leadership position in drug discovery and development and to continue to excel in formulations, Government recognized that human resources/talent pool is very critical. Thus Government of India has set up National Institute of Pharmaceutical Education & Research (NIPER) in 1992 at SAS Nagar Mohali as a registered society under society registration Act 1860. Subsequently, the institute was given statutory recognition by an act of Parliament NIPER Act, 1998 and NIPER has been declared as an Institute of National Importance.

1.2 On being asked to give details about NIPER institutes established so far in the country, the Department in its written reply stated as under:-

“The Government of India has set up seven NIPERs at Hajipur, Hyderabad, Ahmedabad, Raebareli, Guwahati and Kolkata.. NIPER, Mohali was established in 1992. Eighth NIPER at Madurai is under process of establishment. New NIPERs are poised to cater to the future demand of the pharmaceutical industry for highly trained man power for continuous growth of the pharmaceuticals sector with increased focus on R&D, particularly after the amendment of Indian Patent Act. At present, new NIPERs are functioning with the assistance of the Mentor Institutes:

NIPER	Mentor Institute	Academic Session Started
NIPER, Mohali	--	1992
NIPER, Ahmedabad	B.V Patel PERD Centre, Ahmedabad	2007
NIPER, Guwahati	Guwahati Medical College, Guwahati	2007
NIPER, Hajipur	Rajendra Memorial Research Institute of Medical Sciences (RMRIMS-Patna) under ICMR	2007
NIPER, Hyderabad	CSIR-Indian Institute of Chemical Technology, Tarnaka, Hyderabad	2007
NIPER, Kolkata	CSIR-Indian Institute of Chemical Biology, Kolkata	2007
NIPER, Raebareli	CSIR-Central Drug Research Institute , Lucknow	2008-09*
NIPER, Madurai	Nil	Under process

*NIPER was approved by Cabinet in 2007 and the classes started from 2008-09 as clarified by US (NIPER) through e-mail dated 31-07-2015.)

In addition to above, Hon'ble Finance Minister in his budget speech 2015-16 has proposed three new NIPERs in Maharashtra, Rajasthan and Chhattisgarh. However, no budget provision has been made for these NIPERs”.

1.3 The aims and objectives of NIPER are as under:-

- (i) to nurture and promote quality and excellence in pharmaceutical education and research;
- (ii) to concentrate on courses leading to master's degree, doctoral and post-doctoral courses and research in pharmaceutical education;
- (iii) to hold examinations and grant degrees;
- (iv) to confer honorary awards or other distinctions;
- (v) to cooperate with educational or other institutions having objectives wholly or partly similar to those of the Institute by exchange of faculty members and scholars and generally in such manner as may be conducive to their common objective:

- (vi) to conduct courses for teachers, pharmaceutical technologies, community and hospital pharmacists and other professionals:
- (vii) to collect and maintain world literature on pharmaceutical and related sciences and technology so as to develop an information centre of its own kind for other institutions within the country and in the developing world:
- (viii) to create a central faculty of pharmaceutical instrumentation and analysis for use by the researches within and outside the Institute:
- (ix) to have a centre to experiment and innovate and to train teachers and other workers in the art or science or pharmaceutical teaching:
- (x) to develop a world level centre for creation of new knowledge and transmission of existing information in pharmaceutical areas with focus on national, educational professional and industrial commitments:
- (xi) to develop a multi-disciplinary approach in carrying out research and training of pharmaceutical manpower so that the larger interests of the profession academia and pharmaceutical industry are better served and a pharmaceutical work culture is evolved which is in tune with the changing world trends and patterns of pharmaceutical education and research:
- (xii) to organise national or international symposia, seminars and conferences in selected areas of pharmaceutical education, from time to time:
- (xiii) to arrange courses catering to the special needs of the developing countries:
- (xiv) to act as nucleus for interaction between academic and industry by encouraging exchange of scientist and other technical staff between the Institute and the industry and by undertaking sponsored and funded research as well as consultancy projects by the Institute: and
- (xv) to pay due attention to studies on the distribution and usage of drugs by the rural masses, taking into account the socio-economic spectrum in the country.

CHAPTER -II**Budget Allocations and Utilisation of Funds****2.1 Budget Allocations and Expenditure incurred in respect of all NIPERs during 2012-13 to 2014-15.**

	NIPER, Mohali		NIPER Ahmedabad	NIPER Guwahati	NIPER Hajipur	NIPER, Hyderabad	NIPER, Kolkata	NIPER, Raebareli	Total
BE 2012-13	Plan	Non-Plan	16.50	18.80	03.70	22.00	04.50	04.50	121.55
	24.00	27.55							
RE 2012-13	00.00	22.82	16.50	13.00	01.70	22.00	01.75	03.00	80.77
Expenditure 2012-13	00.00	22.82	06.71	05.22	00.45	20.30	01.75	03.00	60.25
% of BE	00	83	41	27.7	12.1	92.2	38.9	66.7	49.5
BE- 2013-14	12.00	23.57	20.00	18.80	03.70	25.00	04.50	04.50	112.07
RE 2013-14	00.00	19.20	06.94	03.00	03.50	23.00	04.50	04.70	64.84
Expenditure 2013-14	00.00	19.20	06.79	02.88	03.50	23.00	04.40	04.50	64.27
% of BE	00	81.4	33.9	15.3	94.6	92	97.7	100	57.3
BE- 2014-15	20.00	17.03	20.00	21.00	04.00	22.00	05.00	15.00	124.03
RE 2014-15	00.05	20.87	04.50	04.00	04.00	14.17	04.38	04.45	56.42
Expenditure 2014-15	00.00	20.87	04.50	03.91	04.00	14.17	04.38	04.45	56.23
% of BE	00	122.5	22.5	18.6	100	64.4	87.6	29.6	45.3

2.2 When asked about the reasons for reduction in allocation of funds in BE 2014-15 for all NIPERs from Rs. 124.03 crore to Rs. 56.42 crore at RE stage(2014-15), the Department in its written reply stated the reasons as under:-

- i. Non starting of construction activities for NIPER Campus.
- ii. Non creation of regular posts in new NIPERs.
- iii. Complex fund releasing system”

2.3 When asked by the Committee to state as to whether the funds allocated for all NIPERs for 2015-16 are adequate to run their programmes and also whether the Department has taken up the issue with Ministry of Finance for enhancing their allocation for the year 2015-16, the Department in its written reply stated as under:-

“The total funds allocated for 2015-16 for all NIPERs is as under:

(Rs. in crores)

Sl. No.	Name of the Schemes	BE 2014-15	Expn. Type	Actuals 2014-15	RE- 2014-15	B.E 2015-16
2.1	NIPER, Mohali	20.00 (plan) 17.03 (Non Plan)	CCA	0.00 (plan) 20.87 (Non Plan)	0.05 (plan) 20.87 (Non Plan)	20.00 (Plan) 27.48 (Non Plan)
2.2	New NIPER like Institutes					
	a) NIPER, Ahmedabad	8.00	GIA	4.00	4.00	9.00
		12.00	CCA	0.50	0.50	12.96
	b) NIPER, Hajipur	3.30	GIA	3.00	3.30	4.00
		0.70	CCA	0.70	0.70	2.00
	c) NIPER, Kolkata	4.50	GIA	4.00	4.00	5.00
		0.50	CCA	0.38	0.38	3.00
	d) NIPER, Hyderabad	16.00	GIA	7.50	9.67	25.00
		6.00	CCA	3.00	4.50	10.00
	e) NIPER, Rai Bareli	4.50	GIA	3.38	4.45	5.50
		10.50	CCA	0.00	0.00	1.50
	f) NIPER, Madurai	1.00	CCA	0.00	0.25	1.00

Sl. No.	Name of the Schemes	BE 2014-15	Expn. Type	Actuals 2014-15	RE- 2014-15	B.E 2015-16
2.3	Lumpsum provision for Project/Scheme for the benefit of N.E.Region& Sikkim - NIPER, Guwhati	4.50	GIA	2.70	3.00	4.50
		16.50	CCA	0.75	1.00	16.50
	Total	124.03		56.23	56.42	147.44
3	NCRDBD, Hyderabad	2.00	CCA	0.00	0.25	22.00
		126.03		56.23	56.67	169.44

As against the demand for Rs.1075.41 crore, Ministry of Finance has provided Rs. 169.44 crore. This fund is not at all sufficient for the NIPERs. The issue for further allocation, will be taken up with the Ministry of Finance in Supplementary grants in August/Sep'2015."

2.4 During the course of evidence, when the Committee asked about the reasons for the significant cut in budgetary allocation for the year 2014-15, the representative of the Department of Pharmaceuticals explained the position as under:-

" Sir, all the members have said that why the budgetary cut has been made? For the last seven years from 2007-08, when NIPER was started the level of expenditure was very less. This is less than 50% .

The biggest problem is that we don't have the land so that we can start civil construction. The second issue is that we have not created posts due to which all vacancies are there. Therefore we are not able to incur expenditure. Every year this is the problem. Third reason is that earlier our procedure for release of finance was very difficult . If we see last year then we have not released any money during the first six months. But now, our Secretary have developed a new system, in that this week out of Rs.98 crore allocated to NIPER, Rs.46 crore are being released. Rs.30 crore has been released and Rs.16 crore are being released. System is being streamlined. Now we are also strengthening manpower.

Pharmaceutical sector is technical sector. All in our Department have come from civil services therefore we are taking approval for technical manpower. Now finance, expenditure will be good. Now for Ahmedabad and Hyderabad NIPERs, for that we have to prepare EFC. For that technical estimate is being prepared by PMC we have given proposal of Rs.1300 crore for the year 2015-16. But keeping in view the last expenditure we are not getting that much. We are requesting Subsidiary Budget for that we require your help."

CHAPTER -III

PHARMACEUTICAL EDUCATION

I Admission Procedure:

3.1 When asked to give details regarding the admission procedure followed for various courses offered by each NIPER in the country, the Department in its written reply stated as under:-

“NIPER, Mohali

The admission procedure followed for various courses offered by each NIPER in the country is as follows:

In the month of April every year advertisement is floated for Masters and PhD programme. Accordingly, applications are invited on the basis of eligibility.

Masters'- B Pharm + GPAT qualified

PhD-MS (Pharm)/M Pharm/M Tech (Pharm)/M Sc. + GATE/GPAT/NET qualified

Applications are sorted on the basis of eligibility.

Eligible candidates appear for Joint Entrance Exam Scheduled on second Sunday of June every year.

Result of passed candidates floated on net.

Basis of final selection:

Written + Counseling is held for Masters candidates

Written + GD/Interview/Counseling is held for MBA

Written + Interview + Counseling is held for PhD candidates.

NIPER, Ahmedabad

Admission for all the NIPERs are being done on the basis of Joint entrance examination conducted by NIPER SAS Nagar.

NIPER, Guwahati

Admission for all the seven NIPERs are being done on the basis of Joint entrance examination conducted on all India basis by NIPER-Mohali, SAS Nagar.

NIPER, Hajipur

Admission for all the seven NIPERs are being done on the basis of Joint entrance examination conducted on all India basis by NIPER-Mohali, SAS Nagar.

NIPER, Hyderabad

The eligibility criteria for admission in to NIPER P.G. programme is through JEE, conducted on all India basis. The criteria for appearing for JEE is that the candidate should have passed the qualifying degree with a minimum of 60% marks in aggregate or CGPA of 6.75 on a 10 point scale with a valid GPAT/GATE/NET score card. The admission is based on merit with reservation as per the set rules framed by NIPER Mohali.

NIPER, Kolkata

Admission for all the NIPERs are being done on the basis of Joint entrance examination followed by counseling conducted by NIPER SAS Nagar.

NIPER, Raebareli

Every year in June and July NIPER Mohali conducts national level entrance examinations for admissions to M.S. (Pharm). Depending on the rank secured in the entrance examination and number of seats offered in a department, the applicants get to opt for their choice in a counseling session.”

II Courses offered/disciplines:**3.2 NIPER, Mohali**

The first batch of students was admitted in 1998. NIPER offers **Masters’ and Ph.D. degrees** in 15 streams and caters to the various needs of pharmaceutical industry:

1. Medicinal Chemistry
2. Natural Products
3. Traditional Medicine
4. Pharmaceutical Analysis
5. Pharmacology & Toxicology
6. Regulatory Toxicology
7. Pharmaceutical Technology (Biotechnology)
8. Pharmaceutical Technology (Formulations)
9. Pharmaceutical Technology (Process Chemistry)
10. Pharmaceutics
11. Biotechnology
12. Pharmacy Practice
13. Clinical Research
14. Pharmacoinformatics
15. Pharmaceutical Management

NIPER, Ahmedabad

(i) M. S. (Pharm.) course in following seven disciplines:

1. Biotechnology
2. Medicinal chemistry
3. Medical Devices
4. Natural products
5. Pharmaceutical analysis
6. Pharmacology & Toxicology
7. Pharmaceutics

(ii) Ph.D Program

NIPER, Guwahati

M. S. (Pharm.) course in following disciplines:

1. Biotechnology
2. Pharmacology & Toxicology

M.Pharm Course in Pharmacy Practice

Ph.D Program

1. Pharmacology & Toxicology
2. Biotechnology
3. Pharmacy Practice

NIPER, Hajipur

1. Biotechnology
2. Pharmacy Practice
3. Pharmacoinformatics

NIPER, Hyderabad

M.S (Pharm) in Medicinal Chemistry, Pharmaceutical Analysis, Pharmacology & Toxicology and Regulatory Toxicology.

M.Tech (Pharm) in Process Chemistry

MBA (Pharm) in Pharmaceutical Management

NIPER, Kolkata

About 50 Nos. of students are being given MS (Pharm) degrees in the area of Medicinal Chemistry, Natural Product & Pharmacoinformatics in each year.

Additional courses proposed for establishment of MS (Pharm) in Pharmaceutics ,pharmacogenomics ,pharmaco public health , Pharmacy Practice, Pharmacology, Pharm.D,

PhD. Courses.

Integrating Human – Agri – Marine - health inclusive of AYUSH , In consultation with Food safety authority and pollution and PDF program

NIPER, Raebareli

M.S. (Pharm.) Course in the following three discipline:

1. Medicinal Chemistry
2. Pharmaceutics
3. Pharmacology & Toxicology

III Enrolment of students**3.3 NIPER Mohali**

Till date, >2,100 Masters' students [including 490 students of MBA (Pharm.)] have graduated from the Institute. 191 Ph.D. candidates have defended their thesis.

Since 2010, NIPER, S.A.S. Nagar, has increased seats for admission to postgraduate courses and Ph.D. programme.

Courses	Students admitted in year 2014
Ph.D.	27
M.S.	195
M.B.A.	39
Total	261

In July 2014, 256 Masters' students [including M.S. (Pharm.), M. Pharm. and M.Tech.(Pharm.)]and 64 M.B.A. (Pharm.) students graduated from the

Institute. Since the inception of academic programme, 2,036 students have passed out (Masters-1,651, MBA-421 & Ph.D.-191).

NIPER, Ahmedabad

The institute has currently 31 students from Batch 2013-15 and 34 in Batch 2014-16 in seven different streams of MS Pharm and 55 seat has been proposed for 2015-17 batch. Ph.D. programme was started at NIPER-Ahmedabad during the academic year 2011-2012. Presently 6 students are enrolled for Ph.D. in different streams and 9 seat has been proposed.

Discipline	No. of Students admitted to MS Pharm Programme			No. of Students admitted to Ph.D. Programme	
	Batch 2013-15	Batch 2014-16	Proposed for Batch 2015-2017	Enrolled	Proposed in 2015
Natural Products	4	3	6	2	1
Pharmaceutics	6	7	12	-	2
Biotechnology	5	5	7	2	2
Pharmaceutical Analysis	5	5	8	-	2
Medicinal Chemistry	3	5	8	-	1
Pharmacology and Toxicology	3	4	7	-	1
Medical Devices	5	5	7	-	-
Total	31	34	55	6	9

Note: Expansion of the infrastructure: Due to space constrain at the mentor institute seats were not increased progressively. To facilitate more number of masters' and Ph.D. students in forth coming years, the director has initiated for temporary construction in the premises of mentor institute.

NIPER, Guwahati

The total number of students who have been enrolled to pursue M.S.(Pharm), M.Pharm and Ph.D programme in NIPER-Guwahati during academic year 2014-15:

Department	No. of students admitted in 2014-15	No. of Senior Students	Total
Ph.D (Pharmacology and Toxicology)	2	10	12
Ph.D (Biotechnology)	1	-	1
M.Pharm (Pharmacy Practice)	5	8	13
MS(Pharm) (Pharmacology and Toxicology)	19	19	38
MS(Pharm) (Biotechnology)	8	8	16
Total	35	45	80

NIPER, Hajipur

Numbers of M Pharm / MS Pharm students admitted and passed during 2009 to 2012 are as follows:

Year	Admitted	Passed	Left NIPER
2009-11	34	32	2
2010-12	42	40	2
2011-13	43	41	2
2012-14	21	continuing	-
2013-15	39	Continuing	-
2014-16	36	Continuing	-

Number of students admitted in PhD programme:

Year	PhD (Biotechnology)	PhD (Pharmacoinformatics)	PhD (Pharmacy Practice)
2011	3	2	-
2012	3	2	-
2013	3	2	-
2014	3	0	1

NIPER, Hyderabad

The total number of students who have been enrolled to pursue M. S (Pharm), M.Tech(Pharm.) and MBA (Pharm.) in NIPER Hyderabad during academic year 2014-15:

Department	No. of students <i>1st semester</i> Admitted (2014-15)	No. of students <i>3rd semester</i> Admitted (2013-14)	Total
Medicinal Chemistry	30	30	60
Pharmaceutical Analysis	15	16	31
Pharmacology and Toxicology	15	15	30
Pharmaceutics	15	15	30
Pharmaceutical Management	18	20	38
Process Chemistry	07	08	15
Regulatory Toxicology	07	08	15
Total	107	112	219

Enrolment of Ph.D Students Year wise

The total number of students who have been admitted to pursue Ph.D in NIPER Hyderabad during academic year 2014-15 was:

Department	No. of students admitted In 2013-14	No. of students admitted In 2014-15
Medicinal Chemistry	6	5
Pharmacology and Toxicology	2	3
Pharmaceutics	2	2
Pharmaceutical Analysis	1	3
Total	11	13

NIPER, Kolkata

Counselling for admission of students took place in NIPER-Mohali in the month of July, 2014.

Discipline	No. of students
Medicinal Chemistry	16
Natural Products	12
Pharmacoinformatics	14

NIPER, Raebareli

The stream wise present status of students is given below:

Courses	No. of students in 6 th Batch (2013-15)	No. of Students in 7 th Batch (2014-16)
M.S. (Pharm.) Medicinal Chemistry	18	19
M.S. (Pharm.) Pharmaceutics	15	13
M.S. (Pharm.) Pharmacology & Toxicology	6	6
Total	39	38

IV **No. of Passed-Out students:**

3.4 On being asked about the number of students passed-out from each of the seven NIPERs in last 3 years, discipline wise, the Department in its written reply stated as under:-

“NIPER, Mohali

Students Passed Out	Ph.D.			Masters'		
	2012	2013	2014	2012	2013	2014
Natural Products	2	3	2	18	18	18
Medicinal Chemistry	8	9	6	37	40	48
Pharmacoinformatics	2	2	3	28	27	23
Pharmaceutical Technology (Process Chemistry)	2	-	2	07	08	17
Pharmacology & Toxicology	4	-	3	30	30	30
Biotechnology	2	3	2	27	28	28
Pharmaceutical Technology(BT)	-	-	3	09	09	08
Pharmaceutical Analysis	-	-	2	10	10	10
Pharmaceutics	4	3	4	25	24	36
Pharmaceutical Technology(Formulation)	-	-	-	10	10	10
Traditional Medicine	-	-	-	6	4	6
Regulatory Toxicology	-	-	-	07	07	07
Pharmacy Practice	1	-	-	16	8	9
Clinical Research	-	-	-	-	07	06
Pharmaceutical Management	-	-	-	56	53	64
Total	25	20	27	230	230	320*

*Degrees not awarded yet.

NIPER, Ahmedabad

NIPER, Ahmedabad has 100% pass out result right from inception. Pass out details at NIPER, Ahmedabad for last three years are appended below:

Streams	Year wise pass out details		
	2013	2014	2015
Biotechnology	9	10	5
Medicinal Chemistry	5	05	3
Medical Devices	---	5	5
Natural Products	8	9	4
Pharmaceutical Analysis	6	5	5
Pharmacology & Toxicology	5	6	3
Pharmaceutics	11	12	6
Total	44	52	31

NIPER, Hajipur

NIPER Hajipur has 100% pass out result right from inception. Pass- out details at NIPER, Hajipur for last three years:

Streams	Year wise pass out details		
	2013	2014	2015

Biotechnology	14	09	Results not declared yet
Pharmacoinformatics	14	04	
Pharmacy Practice	14	06	
Total	42	19	

NIPER, Hyderabad

Statement of M.S (Pharm), M.B.A (Pharm) and M.Tech (Pharm) Students admitted in NIPER Hyderabad and Degrees awarded			
Batch: 2010-12			
S.No	Dept	No. Of Students Admitted	No. Of Degrees Awarded
1	Medicinal Chemistry	30	30
2	Pharmaceutical Analysis	14	14
3	Pharmacology & Toxicology	15	15
4	Pharmaceutics	16	16
	Total	75	75
Batch: 2011-13			
S.No	Dept	No. Of Students Admitted	No. Of Degrees Awarded
1	Medicinal Chemistry	29	28
2	Pharmaceutical Analysis	15	15
3	Pharmacology & Toxicology	15	15
4	Pharmaceutics	16	15
	Total	75	73*
*02 students discontinued			
Batch: 2012-14			
S.No	Dept	No. Of Students Admitted	No. Of Degrees Awarded
1	Medicinal Chemistry	30	30
2	Pharmaceutical Analysis	15	15
3	Pharmacology & Toxicology	16	16
4	Pharmaceutics	16	15
5	Pharmaceutical Management	21	21
	Total	98	97**
**01 student discontinued			
Batch: 2013-15 (Current Batch)			
S.No	Dept	No. Of Students Admitted	No. Of Degrees Awarded
1	Medicinal Chemistry	30	Results yet to be declared
2	Pharmaceutical Analysis	16	
3	Pharmacology & Toxicology	15	
4	Pharmaceutics	15	
5	Pharmaceutical Management	20	
6	Regulatory Toxicology	8	
7	Process Chemistry	8	
	Total	112	

NIPER, Guwahati

a) M.S. (Pharm)- Pharmacology and Toxicology

Year Wise	Enrolled Students	Passed Out Students
2008-10	10	10
2009-11	15	15

2010-12	19	19
2011-13	20	20
2012-14	19	19
2013-15	19	Dissertation defence exam in June 2015
2014-16	19	----

b) M.Pharm- Pharmacy Practice

Year Wise	Enrolled Students	Passed Out Students
2008-10	9	9
2009-11	12	12
2010-12	9	8
2011-13	9	9
2012-14	9	8
2013-15	8	Dissertation defence exam in June 2015
2014-16	5	----

a. M.S. (Pharm)- Biotechnology

Year Wise	Enrolled Students	Passed Out Students
2010-12	9	9
2011-13	9	9
2012-14	9	9
2013-15	8	Dissertation defence exam in June 2015
2014-16	8	----

b. Ph.D students of NIPER, Guwahati

Year Wise	Enrolled Students	Passed Out Students
2011	4 (Pharmacology and Toxicology)	3 students successfully defended their Ph.D. Thesis work. One student will defend his Ph.D. thesis work in June 2015.
2012	4 (Pharmacology and Toxicology)	----
2013	2 (Pharmacology and Toxicology)	----
2014	2(Pharmacology and Toxicology) 1(Biotechnology)	----

NIPER, Kolkata

NIPER-Kolkata has 100% pass out result right from its inception. Pass out details at NIPER-Kolkata for last three years are given below:

Streams	Year wise pass out details		
	2013	2014	2015
Medicinal Chemistry	17	17	17
Natural Product	16	15	16
Pharmacoinformatics	14	10	16
Total	47	42	49

NIPER, Raebareli

NIPER, Raebareli has 100% pass out result right from inception. Pass out details for last three years are appended below:

Sl.No.	M.S. (Pharm) Discipline	2010-12	2011-13	2012-14
1.	Medicinal Chemistry	15	16	16
2.	Pharmaceutics	15	15	14

3.	Pharmacology & Toxicology (Introduced in 2012)	-	-	07
	TOTAL	30	31	37

V Acceptability of degrees/diplomas:

3.5 On being asked about the details of recognition of Degrees offered by the all the NIPER Institutes by the Indian and foreign Universities, the Department in its written replies stated as under:-

“NIPERs, are “Institute of National Importance” under an Act of Parliament. The Institute is also a member of Association of Indian Universities. A such, its degrees are recognized by Indian and foreign Universities”.

3.6 When the Committee asked about the acceptability of degrees/diplomas offered by NIPER in Pharma Industries in the country as well as abroad, the Department in its written reply stated as under:-

“NIPER, Mohali

The acceptability of degrees offered by NIPER, S.A.S. Nagar is very high among the stakeholders.

NIPER, Ahmedabad

Degrees of NIPERs are well accepted in the industry. There was an issue of recognition of NIPER M.S.(Pharm.) Degrees by Pharmaceutical Council of India (PCI) however, In 2014 PCI has clarified that they have no issues with NIPER- M.S (Pharm.) degrees.

NIPER, Guwahati

NIPER degrees are well accepted in the industries as sufficient numbers of passed out students have been absorbed in many big companies and research institutes across the country as well as in abroad. Although there was an issue of recognition of NIPER MS(Pharm) degrees by Pharmaceutical Council of India (PCI) however, in 2014 Pharmaceutical Council of India (PCI) has clarified that they have no issues with NIPER MS(Pharm) degrees.

NIPER, Hyderabad

The degrees offered by NIPER Hyderabad are well accepted both by Pharmaceutical Industries and Institutions. A number of students are placed in responsible positions by the pharmaceutical industries through campus placements. A number of students are pursuing higher education (Ph.D/PDF) in reputed national and international institutions.

NIPER, Kolkata

Till 2014, practically all the students have been placed successfully after obtaining M.S. (Pharm) degrees from NIPER-Kolkata.

The details are as follows:

1. About 10% of students are engaged for Higher Studies i.e. for PhD. work. Some have already obtained PhD. degrees.
2. About 5% of students are engaged in Pharma Industries through Campus recruitment.
3. Others are engaged in Pharmacy Colleges as teacher and in different Pharma Industries.

NIPER, Raebareli

Degrees of NIPERs are well accepted in the industry. There was an issue of recognition of NIPER M.S.(Pharm.) Degrees by PCI. However, in 2014 PCI has clarified that they have no issues with NIPER- M.S (Pharm.) degrees.”

3. On being asked by the Committee about the reasons for non-recognition of M.S.Pharm degree of NIPER, Mohali by UGC and also whether Master Degree courses offered by other NIPERs are recognized by UGC and if not the steps being taken by the Ministry in this regards to get recognized these courses by UGC, the Department in its written reply stated as under:-

“NIPERs are set up by an act of Parliament, NIPER Act, 1998 on the lines of IITs. NIPERs are awarding degrees under NIPER Act, 1998.

The matter of UGC recognition has been taken up by the Department with UGC & M/o HRD authorities. It is expected to be resolved soon through joint sittings.

VI Placement of passed out students:

3.7 On being asked about placement of students by various pharmaceutical companies (both private and public companies) during the last three years, the Department in its written reply stated as under:-

“NIPER, Mohali

The acceptability of degrees offered by NIPER, S.A.S. Nagar is very high among the stakeholders. Placement status for the last two years (in campus/off campus) is provided below:

Batch	Total Number of Students Placed	Campus Placement	Higher Studies	Off Campus Placement*
2011-13	177	100	34	43
2012-14	181	115	20	46

*Data presented regarding the off campus placement is given by the placement coordinators of the concerned batch.

Placement activities for the current batch (2013-15) are going on.

NIPER, Ahmedabad

Degrees of NIPERs are well accepted in the industry. There was an issue of recognition of NIPER M.S.(Pharm.) Degrees by PCI. However, in 2014 PCI has clarified that they have no issues with NIPER- M.S (Pharm.) degrees.

NIPER, Guwahati

NIPER degrees are well accepted in the industries as sufficient numbers of passed out students have been absorbed in many big companies and research institutes across the country as well as in abroad. Although there was an issue of recognition of NIPER MS(Pharm) degrees by PCI however, in 2014 CPI has clarified that they have no issues with NIPER MS(Pharm) degrees.

NIPER, Hyderabad

The degrees offered by NIPER Hyderabad are well accepted both by Pharmaceutical Industries and Institutions. A number of students are placed in responsible positions by the pharmaceutical industries through campus placements. A number of students are pursuing higher education (Ph.D/PDF) in reputed national and international institutions.

The following are the statistics for the past 3 years.

Statement of M.S (Pharm), M.B.A (Pharm) and M.Tech (Pharm) Students placed from NIPER Hyderabad				
Batch: 2010-12				
S.No	Dept	No. of Students	No. of Placements	No. pursuing Higher Education
1	Medicinal Chemistry	30	19	6
2	Pharmaceutical Analysis	14	10	3
3	Pharmacology & Toxicology	15	6	7
4	Pharmaceutics	16	10	5
	Total	75	45	21
Batch: 2011-13				
S.No	Dept	No. of Students	No. of Placements	No. pursuing Higher Education
1	Medicinal Chemistry	28	17	9
2	Pharmaceutical Analysis	15	13	1
3	Pharmacology & Toxicology	15	11	2
4	Pharmaceutics	15	12	2
	Total	73	53	14
Batch: 2012-14				
S.No	Dept	No. of Students	No. of Placements	No. pursuing Higher Education
1	Medicinal Chemistry	30	16	10
2	Pharmaceutical Analysis	15	9	4
3	Pharmacology & Toxicology	16	6	7
4	Pharmaceutics	15	8	2
5	Pharmaceutical Management	21	18	Nil
	Total	97	57	23

NIPER, Kolkata

Till 2014, practically all the students have been placed successfully after obtaining M.S. (Pharm) degrees from NIPER-Kolkata.

The details are as follows:

1. About 10% of students are engaged for Higher Studies i.e. for PhD. work. Some have already obtained PhD. degrees.
2. About 5% of students are engaged in Pharma Industries through Campus recruitment.
3. Others are engaged in Pharmacy Colleges as teacher and in different Pharma Industries.

NIPER, Raebareli

Batch. No.	Year	Total of Students	No. of Students Placed
3	2010-12	30	16
4	2011-13	31	13
5	2012-14	37	16

3.8 Regarding placement, the Secretary, Department of pharmaceuticals submitted during the course of oral evidence, as under :

“ Today, we are offering courses to 550 students in the Post-Graduate level and 50 students in the PhD. level. Almost all the students who come out from these institutions are getting jobs in campus placement itself or at least 75 per cent of them get campus placement; 20 per cent go for higher studies; and 5 per cent start their own small-scale start-up programmes. Though, these NIPERs are functioning with a lot of infrastructural difficulties, the students come up in big numbers; they compete to get admission in these national institutes; they come out successful; and they get employment not only in

our drug companies, but also in other countries as teaching faculty and in their drug companies.

3.9 When the Committee asked about the average remuneration/salary offered by the companies to the students passed out from NIPER Institutes, the Department in its written reply stated as under:-

“The average package of this year’s batch is Rs. 1.8 lakh - 4.12 lakh/annum at NIPERs”.

3.10 When asked to give the reasons for low remuneration offered by the companies to the students passing out from NIPER Institutes and also state as to whether students from which institute are being offered Rs. 4.12 lakh/annum by the companies, also the average package being offered by the Companies is adequate for the student graduating from NIPER Institutes, the Department in its written reply stated as under:-

“The remuneration of NIPER passout is driven by market forces”.

VII **Manpower**

Administrative Staff

3.11 On being asked by the Committee about the sanctioned strength and actual strength of Administrative staff in all the NIPERs post-wise, the Department in its written reply stated as under:-

“NIPER, Mohali

Sanctioned strength and actual strength of administrative staff at NIPER, S.A.S. Nagar:

<u>SANCTIONED/FILLED/VACANT POSITION</u>			
Name of the Post	Sanctioned	Filled	Vacant
	Total Sanctioned	Total Filled	Total Vacant
Director	1	0	1
Registrar	1	1	0
Dy.Registrar (F&A)	1	1	0
Dy.Registrar (A&P)	1	1	0
Dy.Registrar (Exam)	1	0	1
Asstt.Registrar (Exam)	1	0	1
Asstt.Registrar (Estt.)	1	0	1
Finance & Accounts Officer	1	1	0
Public Relation Officer	1	0	1
Stores & Purchase Officer	1	1	0
Estates-cum-Security Officer	1	1	0
Group B			
Security Supervisor	1	1	0
Secretary to Director	1	1	0
Section Officer (Admn.)	1	0	1
Section Officer (Exam)	1	0	1
Section Officer (S&P)	1	1	0
Section Officer (Accounts)	1	1	0
Stenographer Grade - B	3	2	1
Data Processing Asstt.	3	3	0
Data Entry Operator	4	3	1
Stenographer Grade-C	9	8	1
Store Keeper (Chemical+Engg.)	4	3	1
Asstt.Gr.I (Admn, Accts, S&P)	3	3	0
Asstt.Gr.II (Admn., Accts, S&P, Exam)	5	2	3
Guest House Incharge	1	1	0
Junior Hindi Translator	1	1	0

Group C			
Stenographer Grade-D	4	3	1
RTO	3	2	1
Asstt.Gr.III (Admn., S&P, Exam)	9	4	5
Artist/DIP Operator	1	0	1
Hindi Typist	1	1	0
Driver	5	0	5
Total	73	46	27

NIPER, Ahmedabad

SANCTIONED/FILLED/VACANT POSITION			
Name of the Post	Sanctioned	Filled	Vacant
	Total Sanctioned	Total Filled	Total Vacant
Director	1	1	0
Registrar	0	1	0
Senior Account Officer	0	1	0
Junior Assistant	0	3	0
PA to Director	0	1	0
Total	1	7	0

NIPER, Guwahati

All Academic and Non-academic staff posts are on Yearly Contract basis.

Academic Staff: 02 - Assistant Professors and 01- Programme Officer

Guest Faculties: 15

Non-Academic Staff: 14

NIPER, Hajipur

Sanction Strength - Nil

Academic 11 on contract (in position)

Non-Academic 9 on contract (in position)

NIPER, Hyderabad

Faculty : 25; Staff : 51; Outsourcing : 55; All the staff are appointed on contractual basis.

NIPER, Kolkata

No permanent sanctioned posts till date. All the administrative works are managed by the retired Govt. Employee and outsourcing with the help of the Mentor Institute.

NIPER, Raebareli

Sanctioned strength of administrative : NIL
staff

Actual Strength (on 1 Year Contact : 11
Basis)

Details are as follows:

- Officer 2
Supervisors
- Office Assistants 9

3.12 Academic/Teaching Staff/faculty:

On being asked by the Committee as to whether the Teaching/Academic staff is adequate in each of the NIPER Institutes in the country, the Department in its written reply stated as under:-

“NIPER, Mohali

	Sanctioned	Filled	Vacant
Professor*	14	16	-2
Associate Professor	18	9	9
Assistant Professor	29	6	23

* Associate Professor promoted under Career Advancement Scheme (CAS)

NIPER, Ahmedabad

So far no permanent faculty or staff has been employed in NIPER Ahmedabad. Sufficient faculty and staff will be recruited only after sanctioning of the positions by BOG which is yet to be formed.

However, thirteen faculty and six staff members are appointed on contractual basis for NIPER Ahmedabad given consolidated salary at par with sixth pay commission.

NIPER, Guwahati

Except two Assistant Professors (Biotechnology) and one Programme Officer cum Faculty (Application of Computers) on contractual basis, all other faculties are invited from mentor institute and other reputed institutes like PGI-Chandigarh, NIPER-Mohali, Gauhati University, Dibrugarh University and they are well recognized in their respective fields.

Academic Staff: Assistant Professors -02 and - Programme Officer cum Faculty (Application of Computers)-01

Guest Faculties: 15

Non-Academic Staff: 14

Since there is no sanctioned post in NIPER-Guwahati, regular teaching/academic staff could not be appointed till date and this is hindering the academic activities and overall growth of NIPER-Guwahati.

NIPER, Hajipur

There are no regular faculty and staff.

NIPER, Hyderabad

Presently NIPER Hyderabad has faculty on contract basis and some are guest faculty. The process for appointing regular faculty is being initiated by the DoP.

NIPER, Kolkata

At present NIPER-Kolkata has no permanent staff or faculty.

NIPER, Raebareli

The Institute recruits teaching/academic staff on yearly contractual basis:

Sl.No.	M.S. (Pharm.) Discipline	Total Positions	Total In- Position	Total Vacant
1.	Medicinal Chemistry	3	2	1
2.	Pharmaceutics	3	1	2
3.	Pharmacology & Toxicology	2	1	1

3.13 When asked by the Committee about any constrain which the Department would like to place before them, the Department in its written reply stated as under:-

“One of the major constraint being faced by the Department of Pharmaceutical is inadequate manpower in the Department at Director /DS, Under Secretaries, Section Officer and Assistants level”

3.14 On being enquired by the Committee as to whether the teaching staff in all the NIPERs except NIPER Mohali, have been engaged from respective mentors institute/medical College as there is no permanent faculty in NIPERs and about the efforts being made to have its own teaching staff, the Department in its written reply stated as under:-

“Yes, it is a fact that in all the NIPERs except NIPER Mohali, the teaching staff are either from respective mentors institute/medical College or on contract. NIPERs have no regular faculty. The Department of Pharmaceuticals has constituted an Academic Standard Committee on 27th March, 2015 which is mandated to recommend the number of faculties and staff for all NIPERs except NIPER, Mohali for processing the creation of posts in all new NIPERs”.

3.15 When the Committee enquired as to whether in NIPER, Guwahati, Principal of Guwahati Medical College and Hospital is having dual function of Medical College as well as NIPER and in such a situation it becomes very difficult to carry out the both functions, which often leads to administrative delay, the Department in its written reply stated as under:-

“Yes, it becomes very difficult for the Principal of Guwahati Medical College and Hospital, to carry out the dual functions of Medical College as well as NIPER-Guwahati. Appointment of permanent Director at NIPER-Guwahati is under process. Department of Pharmaceutical has constituted a Search-Cum-Selection Committee for selecting candidates for the post of Directors NIPER, Mohali, NIPER, Hajipur, NIPER, Hyderabad, NIPER, Guwahati and NIPER, Raebareli”.

3.16 On being asked by the Committee about the steps being taken to appoint Directors and permanent teaching faculties at various NIPER institutes, the Department of Pharmaceuticals in its written reply stated as under:-

“Appointment of Director

- Department of Pharmaceutical has constituted a Search-Cum-Selection Committee for selecting candidates for the post of Directors NIPER, Mohali, NIPER, Hajipur, NIPER, Hyderabad, NIPER, Guwahati and NIPER, Raebareli. An advertisement seeking applications for the post of Directors has been issued on 01.07.2015 and last date is 31.07.2015. The process is expected to be completed in 3 months.
- Department has appointed Dr. V. Ravichandiran as Director, NIPER, Kolkata with the approval of the Visitor. Thus there are two regular Directors viz. at NIPER, Kolkata and NIPER, Ahmedabad.

3.17 On being enquired by the Committee about the time by which the teaching faculty in various NIPERs (other than NIPER, Mohali) will be sanctioned and the steps taken by the Department to appoint regular teaching faculty, the Department stated as under:

"The Department of Pharmaceuticals has constituted an Academic Standard Committee on 27th March, 2015 which is mandated to recommend the number of faculties and staff for all NIPERs except NIPER, Mohali for processing the creation of posts in all new NIPERs.

The Academic Standard Committee has held three meetings so far. The Committee is expected to submit its report which will enable in creation of posts with the approval of Ministry of Finance".

3.18 On being asked by the Committee about the expected time by which the Academic Standard Committee is likely to take for completion and presentation of report, the Department in its written reply stated as under:-

"The Academic Standard Committee is expected to submit its Part –I report on creation of posts of faculties etc by the end of this Month (i.e. July'15). Part-II Report on other points is expected within next 3 months"

3.19 When asked by the Committee about the time by which all the contract posts in all academic and Technical Cadre are likely to be made regular in all NIPER Institutes, the Department in its written reply stated as under:-

"In case of NIPER, Mohali, a High Level Committee has been constituted under the Chairmanship of Secretary (Pharma). The committee is examining the appointment of each employee. The whole exercise is expected to be completed by the end of August'2015. In case of other NIPERs once posts are created recruitment of regular faculty will be taken up".

3.20 On being further asked about the issue regarding appointment of regular Directors and Staff for NIPER, Institutes, during the course of evidence held on 14.7.2015, the Secretary, Department has stated as under:-

"The second important issue is of appointment of regular Directors for these institutes. For the new institutes at Ahmedabad and Kolkata, advertisements were given long time back and we took some time to finalise the regular Directors. Both of them have joined and are attending this meeting today.

For other NIPERs, we have issued the advertisement on 1.7.15 calling for expression of interest from persons qualified for the post of Director in five NIPERs. It will take three months' time to finalise. We have given one month for applications, one month for process and we will be able to issue final orders in another one month. In three months, we will see that all the NIPERs have regular Directors appointed. That is one important lacuna which has hindered the growth of these institutions

Next is the issue of regular staff to these institutions. Except for Mohali, which came up long time back, 1992 onwards, in all other NIPERs, people are working on contract. The important lacuna is that we have not sanctioned the required number of posts for teaching as well as non-teaching disciplines. That is a very crucial issue. For instance, for the NIPER in Ahmedabad, it is not yet decided as to how many number of courses, how many MS students, how many PhD, how many disciplines and how many staff are required per course. These are the basic things which should be decided. Three months back, we have appointed a Committee on Standards under the chairmanship of former Vice-Chancellor of Hyderabad University. They have finalised the report. This week they are handing over the report to me. Based on the report, we will create the

requisite number of teaching as well as non-teaching posts for all these NIPERs. Then only, they will be empowered to fill up the vacancies.

At present, wherever staff members are available, they are appointed on temporary basis without the sanction and on contract basis. This is the status. Hence, they are not empowered today to appoint a large number of teaching staff. They are getting the teaching staff from various institutions as visiting faculty, and they are managing the courses. This again being an important item of work, we will give topmost priority and in one months time we will take the requisite permission from the Government of India, Ministry of Finance to create the staff and empower them to fill up the vacancies. In any case, in six months time all these NIPERs will have all required teaching as well as non-teaching staff. This is the commitment that I would like to give before the Committee so that they can function in an efficient manner.

In the meanwhile, they are functioning with teaching faculty borrowed from other institutions on contract basis / visiting faculty basis, but teaching programmes are going on. May be, some quality problems are there, but they are managing without difficulty.

He further added as under:-

“ In NIPER, all along, there was a system of employment of teaching staff on contract basis. They were never made permanent. Recently, a notification has been issued by the Government of India that a Committee should be constituted and that Committee should decide as to which are the faculty and staff members to be made permanent. Accordingly, we are making them permanent because we cannot keep them on contract for years together. We have taken a decision that wherever recruitment is correctly done and qualification is there, we will make them regular employees. It means that we are switching over from contract employees to permanent employees. Earlier, they have dismissed a number of people who had completed the contract period. So, for instance, if someone was on contract for 3 years and after 3 years period if the performance is not good, the Director has the power to terminate / dismiss him and dispense with his services. So, 3 or 4 persons who were terminated like this keep on filing court cases against the Director; against other teaching faculty; and against the procedures followed in the institutions. In most of the cases the court has given judgement in favour of the institution after a lot of deliberations in the court. It takes 3-4 years, but ultimately the institution only wins. In the meanwhile, a lot of mud is left”.

CHAPTER -IV
INFRASTRUCTURE

4.1 Total area occupied by each NIPER and the space available for boys and girls hostel as furnished by the Department may be stated as under:

S.No.	Name of NIPER	Total Area	Girls hostel	Boys Hostel
1	Mohali	130 ac	01(Capacity: 232)	03 (Capacity: 478)
2	Ahmedabad	10,000 sqm	separate hostel facility on double sharing basis to both boys and girls on hired basis as the mentor institute also does not have the hostel facility.	
3	Guwahati		NIPER-Guwahati provide separate hostel facility on double sharing basis to both boys and girls on temporary basis.	
4	Hajipur*			
5	Hyderabad	25 acres	5.18 acres	2.14 acres
6	Kolkata	1000 sq. feet for office + 36 rooms	16 rooms	20 rooms
7	Raebareli		Since NIPER, Raebareli is operating in two places, hostels on sharing basis have been provided in rented accommodations	

*** information not provided to the Committee**

4.2 On being asked about the status of infrastructure for NIPER institutes, the Department in its written reply stated as under:-

- “NIPER, Mohali has its own Campus.
- Construction works of NIPER, Guwahati Campus has been started since 30.05.2015.
- Construction work of NIPER, Ahmedabad and NIPER, Hyderabad likely to start shortly.
- The infrastructure of NIPER- Hyderabad is fairly well placed and there is an extensive support from the mentor institute, i.e., CSIR-Indian Institute of Chemical Technology (IICT-Hyderabad). Presently this institute is functioning in an independent campus i.e. former R&D laboratory of IDPL Hyderabad. The efforts are in progress to create the necessary infrastructure facilities.
- Land issue is yet to be settled in case of NIPER, Raebareli, Hajipur and Kolkata.

The main reason for delay in infrastructure development are

- i. Non-settlement of land in case of NIPER, Hajipur and Kolkata
- ii. PMC selection and designed and cost estimated approval
- iii. Man power shortage
- iv. Poor fund released and utilization'

4.3 When asked about the remedial steps being taken by the Department to resolve the functional and infrastructural impediments in regard to functioning of NIPERs, the Department in its written reply stated as under:-

- “MoUs with Project Management Consultants (PMC) have been signed for construction of Campuses of NIPER, Ahmedabad and NIPER, Guwahati.
- MoU between NIPER, Hyderabad and PMC likely to be signed shortly
- Action to resolve the land issue of NIPER, Hajipur and NIPER, Kolkata is taken up at the level of Secretary and Hon'ble Minister.”

NIPER, MOHALI

4.4 NIPER conducts regular education programmes for academia and industry in various disciplines and helps the Indian Pharmaceutical Industry in solving their R&D related requirements. NIPER has upgraded facilities for achieving the highest level of efficiency in imparting education and events.

There are state-of-art classrooms with installation of TV panels and laptop systems. NIPER laboratories are fully equipped with modern equipments that are equivalent to other state-of-the-art laboratories in the world. All the available facilities are of international level and standards. A Technology Development Centre has also been set up. In addition, there has been significant improvement in research infrastructure as several high value sophisticated instruments have been added which has helped in increased thrust in R&D activities.

4.5 On being asked to give details about the current status of work progress relating to construction of new campuses of NIPER, Guwahati and NIPER, Gandhinagar, the Department in its written reply stated as under:-

“NIPER, Guwahati

- In 2009, Government of Assam allotted 89 acres of land at Kamrup District for construction of NIPER, Guwahati.
- Boundary wall constructed.
- M/s EPIL has been engaged as PMC for construction work of NIPER, Guwahati Campus.
- MoU with NIPER Guwahati and PMC (EPIL) has been signed.
- Foundation stone for construction of NIPER, Guwahati Campus has been laid by Hon’ble Minister of Chemicals & Fertilizers, Shri Ananth Kumar, on 30.05.2015.

NIPER Ahmedabad

- In 2008, Government of Gujarat allotted 60 acres of land at Gandhinagar to NIPER-Ahmedabad
- Lease Agreement was signed on 8th December, 2008
- Possession of land was given on 6th April, 2009 and within 6 months, the wired fencing was completed
- On 8th November, 2012, Hindustan Steelworks Construction Limited (HSCL) was allocated the construction work of NIPER-Gandhinagar Campus
- On 30th January, 2013, MOU for construction was signed between NIPER-Ahmedabad and PMC (HSCL)
- On 30th December, 2014, final drawings and layout were approved by the NIPER steering committee
- In February, 2015 HSCL has floated the EOI for the selection of contractor
- Final BOQ is prepared and is under the process of verification.”

NIPER Hyderabad

Regarding NIPER, Hyderabad the Department of Pharmaceuticals has stated as under:-
 “Department of Pharmaceuticals has identified Project Management Consultant (PMC) for NIPER, Hyderabad new campus. The Construction work is likely to start shortly.

4.6 When asked about the settlement of land issue in case of NIPER, Raebareli, NIPER Hajipur and NIPER Kolkata, the Department in its written reply stated as under:-

“NIPER, Hajipur

At present the institute is running under the mentorship of Rajendra Memorial Research Institute of Medical Sciences (RMRIMS), Patna. Since, 2007, NIPER is functioning in the EPIP Campus, BIADA Industrial Area, Hajipur. The State Government of Bihar has been requested for allotment of 100 acre land free of cost, to set up NIPER at Hajipur. State Govt. has, however, not yet allotted the land for setting up full-fledged NIPER Campus at Hajipur, in spite of the matter being followed up with the State Govt. at Chief Minister and Chief Secretary level.

2. The matter has been brought to the notice that in the 10th State level coordination Committee meeting held at Hajipur on 21.3.2013. The Principal Secretary, Industries, Bihar has advised that 50 acres of land was not readily available for allotment to NIPER, the institution may proceed with vertical construction on the 12.43 acres of land already in possession of NIPER Hajipur, along with 3 buildings. At the same time the institute has been advised to pursue with the District Magistrate Vaishali for alternative land for acquisition for the NIPER.

3. Despite the matter being pursued at highest level, there is no progress in the matter. Latest 13th Meeting of State Level Coordination Committee of NIPER, Hajipur held on 16.01.2015 when Hon’ble Home Minister Shri Raj Nath Singh participated at the meeting. It was insisted upon proceeding for vertical construction in existing campus of 12.43 acres of land. However, Director, NIPER, Hajipur pleaded that the existing area of land will be insufficient as staff quarters and research programs, sports facility etc need more space.

4. Matter has not been settled as yet. Recently, the matter has been taken up at the level of Secretary and Minister. However, the matter regarding allocation of land is yet to be settled satisfactorily.

NIPER, Kolkata

- i. The State Govt has allotted about 35 acres of land, free of cost for Construction of NIPER Kolkata.
- ii. However the Industries Department has demanded Rs. 30.10 crores as development charges. The Ministry cannot pay this as this is against the mandate of Cabinet Note.
- iii. The matter is being pursued by the Department with the State Govt at Chief Minister level. The matter is yet to be resolved.

NIPER, Raebareli

Approximately 50 acres Land for NIPER Raebareli has been transferred in the institute’s name.

4.7 When asked by the Committee as to how do the NIPER Institutes Raebareli, Hajipur and Kolkata function without proper infrastructure, the Department in its written reply stated as under:-

“NIPER, Hajipur are working utilizing the infrastructure and servicing of Mentor Institute.

NIPER, Kolkata

NIPER-Kolkata functions by sharing the resources of CSIR-IICB (Mentor Institute) , In addition process are initiated to improve the shared resources locally , other states and countries.

NIPER, Raebareli

1. The classes for 1st year (I & II Semester) of M.S. (Pharm.) course are conducted at NIPER, Raebareli in a rented small building (ITI Raebareli premises)
2. The 2nd year (III & IV Semester) course involving project work is completed at CSIR-Central Drug Research Institute, Lucknow about 105 Kms away from NIPER, Raebareli campus."

4.8 The Department in its background notes have furnished as under:-

"The work relating to construction of new campuses for NIPER, Guwahati and NIPER, Gandhinagar has been initiated. An MoU had been signed by the concerned NIPERs and the Project Management Consultants. The layout/drawings for the campuses are under finalization. NIPER, Hyderabad and NIPER, Rae Bareli have been allocated land by the respective State Governments".

4.9 Regarding the present status of functioning of NIPERs, Secretary, Department of Pharmaceuticals during the course of evidence briefed the Committee as under:

"..... Mohali is the only NIPER which is full-fledged in all respects in terms of infrastructure, teaching staff and in terms of the number of students trained by NIPER and it lives up to the expectation of a national institute of importance. All other NIPERs, numbering six, were started in the year 2007 onwards. They are basically suffering from all these three important ingredients. One important ingredient is land. The basic condition put forth by the Government of India, while sanctioning the NIPER, is that the State Government should give 100 acres of land free of cost and then only the institute can start functioning. That is how, all other institutes function, for instance, IIT requires about 200 acres of land. After getting the land only, all the other activities will start.

But as far as NIPERs are concerned, all the State Governments, at the time of initial request stage, committed that they would give 100 acres of land. Immediately, NIPERs were started in those places in temporary buildings with mentor institute. That is the important crucial stage NIPERs have started coming up in those States but later on the States were not very serious. The States never gave 100 acres of land. For instance, even in Hyderabad we started an institution, IDPL. Temporary campus was available. Ready infrastructure was available. It was started. The State Government has given 50 acres of land in Genome Valley . Then in Kolkata, we wanted 100 acres of land. They promised but what was given was only 35 acres of land and after giving the land, the State Government wants Rs.70 crore towards development charges for that land. Then in Hajipur, we wanted 100 acres of land. The Bihar Government said, yes, take 100 acres of land. We started the institution in Hajipur in a temporary building. Till today, the Bihar Government is not responding. They say we have got 12.5 acres of land and you construct multi-storey building in Hajipur and we do not have sufficient land to spare for this purpose. In Raebareli, we wanted 100 acres of land. The Uttar Pradesh Government promised but they have given only 49.5 acres of land. Similar is the case elsewhere. There is a big correspondence going on between our Minister and the Chief Minister, and between the Secretary and Chief Secretaries and we keep on corresponding with the State Governments but the response is very poor.

Later on we started communication with the Government of Tamil Nadu for a centre at Madurai. The Government of Tamil Nadu promptly gave 100 acres of land. Immediately, we took over the land at Madurai and we are starting the process. But with many of the

State Governments, getting land is a very problematic issue. Correspondence is going on. This is the basic structure. That is why, these institutes are inside the mentor institutes. We are using the infrastructure available in the mentor institutes. That is one important lacuna”

4.10 The Secretary also stated as under:-

“.....As far as land is concerned, we will pursue with the State Government and see that the required land is obtained.

Last month, our hon. Minister laid the foundation stone for constructing a new NIPER in Guwahati. They have given 90 acres of land and the work has commenced. Similarly, we want to lay the foundation stone in Ahmedabad where land has already been given. It is ready for laying the foundation stone. In Hyderabad also, land has been given by the State Government in Genome Valley. We are yet to take a decision whether we should have it in Genome Valley or in the IDPL Complex itself. Based on the decision that we will take in the Cabinet meeting for revival of IDPL, we will take a decision shortly and start construction work.....”

4.11 Regarding hostel facilities, the Secretary of the Department submitted before the Committee as under:-

“.....As regards hostel facilities, here again, wherever we visit the students ask us about good hostel facilities. Since regular buildings are not there, most of these places are in rented buildings. If five persons can stay in a particular place, then they are putting 20 people in that place. So, the facilities are not up to the standard. Unless we complete new buildings as per standard, it is very difficult to solve this problem immediately. Hence, we have not increased the number of students. Some institutions want to recruit even 100-200 students per year, but we are restricting to only 30-40. The reason is that they do not have standard hostel facilities. We will be able to handle this issue effectively when we construct new NIPER buildings.....”

The Secretary also added as under:-

“.....The deficiencies are very many and the Department has realised it. We have been monitoring the functioning of NIPER at regular intervals. We convene regular Steering Committee meetings, and solve the problems then and there. But despite all these things, we will be functioning only with deficiencies because of this basic discrepancy. We will try to sort it out, and in six months time we will provide a very clean atmosphere as far as teaching staff, building and other places are concerned. This is what I would like to submit before the Committee”.

CHAPTER -V

RESEARCH ACTIVITIES

5.1 On being asked by the Committee about the research field undertaken by NIPERs and the number of medicines researched by them, the Department responded in writing as under:

“Recent research activities at

NIPER, Mohali

1. Neglected diseases

- Some multifunctional proteins have been identified as virulence factors in *Mycobacterium tuberculosis*.
- The role of different residues in the conserved motif of acetyl CoA synthetase (AceCS) from *Leishmaniadonovani* has been studied with a view to identify molecular targets on which to base future treatment strategies.
- A series of twenty six structurally diverse α -aminophosphonates have been synthesized and evaluated for in vitro anti-leishmanial activity and cytotoxicity. Seven compounds exhibited anti-leishmanial potency against the *L. donovanipromastigote* with IC₅₀ values in the low micromolar range.
- Of a total of 35 *S*-benzylatedguanylthiourea derivatives synthesized, one was found to be curative and five more compounds showed promising pharmacological profile on *Plasmodium berghii* in mice.
- Two pentamidine-heterocyclic hybrids were found to exhibit potent antileishmanial activities in promastigote assay, comparable to pentamidine (a clinically used antileishmanial drug). They were found to be significantly less cytotoxic than pentamidine for human monocytic cell line and macrophages.
- A combined structure and ligand based pharmacophore modeling, shape based virtual screening, docking and MD simulation for *Mtb*-ASADH (aspartate β -semialdehyde dehydrogenase) was performed to identify potent inhibitors of the enzyme. Best screened hits have the characteristics of highly electronegative functional groups (-COOH and -NO₂) on both sides and exhibited the H-bonding interactions with highly conserved residues Arg99, Arg249 and His256.

2. Other diseases

- CCR2 binds to the monocyte chemotactic protein MCP-1, a CC chemokine, produced at the sites of inflammation and infection. Homology modeling and subsequent molecular modeling studies proved successful in probing the structure of human CCR2 chemokine receptor for the structure-based virtual screening and predicting the binding modes of CCR2 antagonists.
- Structural modifications of scaffolds such as β -carboline and isoquinoline were designed to synthesize and to generate structure-activity relationship for anti leishmanial activity and cytotoxic potential against various human cancer cell lines.
- Extracts of *Ferula asafoetida* were evaluated for their pancreatic lipase enzyme inhibition activity.
- The metabolic profile of Itraconazole (associated with serious idiosyncratic adverse reactions of the skin like Steven-Johnson syndrome, Lyell's syndrome and photosensitivity) in rat skin S9 fraction using LC-MS tools resulted in identification of a direct covalent adduct of the drug with GSH (drug-GSH) and a total of six metabolites (M1-M6). The study revealed that skin toxicity of itraconazole may be associated with its GSH adduct or metabolites M2, M4 and M5 (as predicted by TOPKAT).
- Age- and gender-specific differences in experimental model of global cerebral ischemia/reperfusion injury showed significant effect on locomotor

hyperactivity and Y-maze spontaneous alternations behavior indicating that age and gender might have a significant role in the behavioral (functional and cognitive) outcomes of global cerebral ischemia.

- Study of the effect of high glucose and insulin in breast cancer cells provided the first evidence that high glucose and insulin promotes proliferation of these cells by differential alteration of GSK-3 β , NF- κ B, and ER α expression and histone H3 modifications, which may directly or indirectly modulate the expression of genes involved in its proliferation.
- Chemotherapy with agents like cyclophosphamide caused decrease in the zinc levels both in the serum and testes of the treated rat. Zinc supplementation was shown to be beneficial to those rats under chemotherapeutic agents; it has improved several of the reproductive damages caused by the anticancer agent.

3. **Drug development and formulation**

- Understanding kinetic and thermodynamic events is paramount for design of stable amorphous pharmaceutical systems. Taking Celecoxib as a model drug, (i) differences in molecular interactions in crystalline and amorphous state, (ii) thermodynamic events associated with amorphous state, (iii) nature of interactions in the binary systems, and (iv) solubility benefits associated with the amorphous systems, have been demonstrated.
- Co-encapsulation of antioxidant with anticancer drugs for improving oral bioavailability, synergistic anticancer efficacy and reduced toxicity has been attempted.
- Platforms are being designed for oral insulin delivery using nanocarrier systems.

4. **Other areas**

- Chemo-enzymatic synthesis of drugs (Ranolazine, Lebulozole, Dropropizine) using lipase as biocatalyst was carried out successfully. Oxidoreductase systems from various microorganisms were utilized for the stereoinversion of (RS)-Linezolid, (RS)-methyl pyridine methanol, DL-phenyl lactic acid, etc.
- A palladium-catalyzed regio- and chemoselective direct benzylation of primary benzamides with 2-bromobenzyl bromides under a mild basic condition has been developed affording various substituted diarylmethanes in good yields. Utilizing the above protocol, the synthesis of the two marketed drugs Xyzal[®] and Femara[®] are currently underway.
- Monograph on anti-inflammatory *Abhayavati* was developed.
- Study of the effect of RNA aptamers on stabilization of misfolded proteins involved in Huntington's disease was studied. This showed improved solubilization and enhanced viability of cells expressing the protein and the selected aptamers.
- Using rational (site-directed mutagenesis) and random (random mutagenesis) approaches, the process of generating variants of recombinant human PON1 enzyme having enhanced activity towards desirable substrate(s) is being optimized.
- Assessment of an appropriate and reliable method to diagnose neuropathic pain including translation of screening questionnaires in local languages and validating them in Indian population has been initiated.

NIPER, Ahmedabad

Significant research work in the field of medicine

1. More than 200 new chemical entities of leads are designed, synthesized and screened for diabetes, tuberculosis and anti-cancer potential.
2. 15 NCEs are developed as exceptionally potent PTP1-B and α -glucosidase inhibitors as antidiabetic drugs, a patent was filed in June, 2014.
3. Designed and synthesized 4 NCEs showing potent anti-tubercular activity against the Rifampicin resistant strain.

4. Several analogues of natural scaffolds as potent anticancer agents are developed
5. In stem cell research, somatic cells are dedifferentiated to different lineages like retinal, neuronal, etc for use in various therapies.
6. Gandhian innovation award was awarded for developing lipid based formulation for targeting of anti HIV drugs to reservoir sites in lymph nodes.
7. Cow ghee based micro-emulsion was formulated as potential penetration enhancer for targeted delivery to brain, with no toxic effects.

NIPER, Guwahati

NIPER, Guwahati conducts research in different areas of pharmaceutical sciences keeping in view the national and local needs. These can be summarized as under:-

Department of Biotechnology

1. Development of Biopharmaceuticals using Synthetic Biology approaches
 - a) Development of synthetic riboswitches to suppress gene expression in case of various life-threatening diseases.
 - b) Development of deoxyribozymes, which can degrade RNA of various oncogenes.
 - c) Generation of various novel protein coding sequences, which can be further developed as biopharmaceuticals.
 - d) Suitability of G-quadruplexes as gene regulation tool in cancer and other diseases.
 - e) Directed evolution of therapeutic proteins for enhanced activity and least immunogenicity.
2. Genomics and Proteomics to study various diseases like Multiple Myeloma, Acute Myeloid leukemia, Chronic Myeloid leukemia, Myodisplastic syndrome, Ischemia-Stroke disorder, Diabetes, Neuropathic Pain, etc.

Department of Pharmacy Practice

- Adverse Drug Reaction (ADR) monitoring,
- Drug Drug Interaction (DDI) studies,
- Drug utilization,
- Pharmacovigilance studies,
- ADR monitoring of Anti-TB therapy.

Department of Pharmacology

- Protective effect of Carissa carandas against cyclophosphamide-induced toxicity.
- Evaluate the effect of Naringenin and Crocetin on cyclophosphamide-induced testicular toxicity.
- Studies on anti-tumor activity of various plants available in the North East region
- Effect of Ocimum sanctum in experimental diabetic neuropathy.
- Anti-inflammatory activity of Morabulusjalepa in acute and chronic models of inflammation in rats.
- Effect of Green tea polyphenols on the pharmacokinetics of Paclitaxel.
- Evaluate anti-inflammatory activity of Hibiscus rosasinensis in rats.
- Protective effect of mangiferin against lipopolysaccharide-induced depressive and anxiety-like behaviour in mice
- Studies on Neurodegenerative diseases like Parkinson's, Alzheimer's etc.
- Pharmacological studies of various anti cancer agents and plant extracts.
- Pharmacological studies in depression.

The establishment of NIPER-Guwahati has given a strong boost to the promotion of Pharmaceutical Education & Research in the North East region of

India for the first time. Research efforts of NIPER Guwahati have revived the studies on medicinal value of local herbs of North East Region particularly Assam. We are also moving ahead in the field of Biopharmaceuticals and Pharmacogenomics.

For Assam specifically, NIPER-Guwahati plans to generate educated and skilled manpower in the field of Pharmaceutical Sciences that can enter the field of Pharmaceutical entrepreneurship. In next 5 years, we would like to further emphasize on various medicinal plants and unexplored potential medicinal plants of Assam. One of our focus areas is generation of Biopharmaceuticals, where we have made significant progress. We are moving ahead in the field of Biopharmaceutical development through Synthetic Biology approaches. One of our works is ready for filing a patent.

NIPER, Hajipur

Research work being carried out at NIPER Hajipur are as under:-

Department of Biotechnology

Studies on the Role of Gluconeogenic Flux for Stress Management in *Leishmaniadonovani*.

Epigenetics, gene regulation and DNA repair in *Leishmaniadonovani*.

Characterization of cysteine biosynthesis pathway and role of 3'-ectonucleotidase in pathogenesis of *Leishmaniadonovani*.

Role of HIV-1 protease inhibitors in against *Leishmaniadonovanit*opoisomerase-1 (LdTOPILS) for the treatment of HIV-VL co-infection.

Development of non-invasive diagnosis tool for early detection of breast cancer.

Role of RNA in protein structure and function

Department of Pharmacoinformatics

- Rational Design of Inhibitors against Acid Sensing Ion Channel 1a (ASIC1a)
- Targeting Phosphoribosyl Transferases (PRT) of *Leishmaniadonovanito* discover Novel AntileishmanialCompounds
- Computational Designing and in-vitro testingof Ascorbate peroxidase (APx) inhibitors of *L. Donovan*
- Design of isoform-specific and class-selective inhibitors against histone deacetylases.
- In search of small molecule GLP-1R activator
- Sequence, structure and active site analysis of TAK1 kinase; exploiting DFG out and in conformation as a strategy to design new leads.
- Towards identification and optimization of antagonists against Androgen Receptor for the treatment of prostate cancer.

Department of Pharmacoinformatics

- Development and practice of systematic approach for identification and finding solutions of drug-related problems.
- Research in areas especially pertaining to the diseases in rural health community.
- Assessment of different obesity indices in type 2 diabetes.
- Comparative effectiveness research in different drug regimens in type 2 diabetes.
- Pharmacovigilance and biochemical estimation in gall bladder, leukemia and breast cancer patients.
- Prescribing pattern in eye disease and in hypertensive patients.

Biostatistics

Statistical analysis of some lifetime models using censored data.

NIPER, Hyderabad

NIPER Hyderabad has been established in the year 2007. Ph.D. programmes have been initiated in the year 2011 in the areas of medicinal chemistry, pharmacology, pharmaceutical analysis and pharmaceuticals. The research activities are mainly focused on a) Integrated Drug Discovery Programmes aimed at discovering new drug candidates in Cancer, Inflammatory Diseases, Metabolic disorders and Infectious diseases b) Computer Aided Drug Design (CADD) to support the medicinal chemistry in designing new chemical entities c) development of various *in vitro* and *in vivo* biological screens for evaluating the synthesized new chemical entities d) Drug Metabolism and Pharmacokinetic studies (DMPK) e) Development of novel process technologies for bulk drugs, Intermediate and APIs and f) Novel drug Delivery Systems: Nanotechnologies.

The research work carried out has been published in a number of peer reviewed international / national journals (around 150 articles are published till date) and patents on some of the novel, commercially important discoveries are in the process of being filed.

The faculty of NIPER Hyderabad have been receiving a number of national and international research grants to support their research activities.

Some of the highlights of the research work carried out are given below.

Medicinal Chemistry department, which include molecular modeling facility has been actively involved in designing and synthesizing NCEs with a potential to treat cancer, inflammatory and infectious diseases. Close to 250 new chemical entities with diverse chemical structures are synthesized and evaluated for their biological activity against various therapeutic indications. Several of these NCEs which have shown promise in the preliminary evaluation are being tested in further biological screens including animal models. Some of this research has been published in a number of peer reviewed journals viz., BMCL, JMC, EJMC, ChemMedChem, MedChemComm., Tet Lett., etc., filing of patents is in progress.

Department of Pharmacology and Toxicology has established the state of the art facilities to carry out pharmacological screening of NCEs and to study in-depth molecular mechanisms for understanding of various pathological conditions. The department has developed facilities for carrying out *in vivo* and *in vitro* studies, cell based studies, efficacy and toxicity studies. The faculty and research students have developed expertise in understanding and treating human diseases like Cancer, Diabetes and Diabetic complications, Inflammatory disorders etc. The studies have led to the identification of several biologically interesting NCEs which are being subjected to the next level of evaluation.

Process Chemistry department which has been established in the year 2013 has initiated research in the areas of developing novel, efficient and environmentally friendly processes for the preparation of various drugs, intermediates and APIs which will be useful to meet some unmet medical needs. These processes once optimized could potentially be useful for various commercial purposes. The department is also working closely with the Medicinal Chemistry department in developing scale up methodologies for some of the new NCEs.

Pharmaceutical analysis department is involved in developing new analytical methods which are having direct applications in quality control of bulk drugs and formulations. The methods developed include impurity profiling, stability studies, characterization of new impurities and degradants in trace quantities (which are not reported in literature and pharmacopeias). In addition, the department has developed expertise in bioanalytical methods viz., metabolite identification and pharmacokinetics of new drug molecules. The analytical methods developed are mostly based on Quality by design.

The research work has been published in international journals like Journal of Pharmaceutical and Biomedical analysis (American Association of pharmaceutical scientist journal), Analytical Methods (RSC), New Journal of Chemistry (RSC), RSC Advances, Journal of Mass Spectrometry, Rapid Communications in Mass Spectrometry, Journal of Separation Science on different topics of quality evaluation of pharmaceuticals.

The department of pharmaceutics has developed a) solid novel delivery systems for animal derived oil and curcumin with enhanced anti-inflammatory activity (Patent filing in process) b) successfully developed a simulation model for predicting few crystal-engineering aspects for bulk API using software, which will reduce the experiments and in turn reduce the number and quantity of solvents during processing and c) development of topical herbal delivery systems in collaboration with Unani under a project grant from AYUSH.

NIPER, Kolkata

Due to non-availability of permanent faculty and infrastructure, NIPER, Kolkata at present is not in a position to carry out any research work.

NIPER, Raebareli – Nil

5.2 On being asked by the Committee about the functioning and aims being achieved by NIPER, Mohali till date, the Department informed the Committee as under:

NIPER, Mohali

As per NIPER ordinance, research projects are carried out by doctoral candidates. In addition, after completion of two semesters of didactic coursework, Masters' students carry out research projects for the next two semesters. This enables them to enter the pharmaceutical industry with requisite hands-on experience.

- The Institute has identified certain diseases which are neglected by the Western world but are of immense importance in India and the rest of the developing world, as its thrust areas. These are tuberculosis, malaria, leishmaniasis (*kala azar*) and the lifestyle disease diabetes.
- In addition to above, NIPER, S.A.S. Nagar also carries out research in the areas of drug development, delivery and formulations, natural products and traditional medicine, biopharmaceuticals, biotransformations, proteomics, genomics, nanotechnology and nanotoxicology, hospital pharmacy, etc.
- NIPER, S.A.S. Nagar has published >1,900 papers, most of them in high impact, peer-reviewed journals. The highest impact factor among published papers is 40.
- The Institute has 170 patents at various stages of national and international filings. Of these, 36 have been granted till date.
- Technologies have been outlicensed to various industries.
- Faculty members are also in receipt of regular competitive extramural grants.
- Research work carried out by faculty members and students has been regularly acknowledged by national and international fraternity with various awards and recognitions.
- In addition to its regular activities, the Institute carries out quality improvement programmes for personnel from the domestic pharmaceutical industry (through SMPIC), personnel from government laboratories abroad (through CBP and ITEC-SCAAP), etc.. The Institute also offers a limited number of summer internships to exceptionally meritorious candidates.
- NIPER, S.A.S. Nagar has tie-ups with neighbouring tertiary care hospitals (both in the government and private sectors) wherein the students are trained in pharmacovigilance, detection of adverse drug reactions in the wards and ICUs of the hospitals, studying the antimicrobial prescription pattern, and various other problems, with the aim of generation of India-specific evidence in the use of

drugs and also to help the hospitals to develop better practices in the use of medicines.

- The Institute has fostered formal and informal programmes of collaboration with various centres of excellence, within the country and abroad, which has promoted exchange of ideas, research data, students and faculty, with improvement in the standard of research.

5.3 On being enquired by the Committee as to whether NIPERs have entered into international collaborations with regard to Research and Development, the Department in its written reply stated as under:-

“NIPER, Mohali

Informal collaboration with many international institutes is in place. Formal MoUs have been signed with the following international institutes for working in areas of mutual interest:

- Volgograd State Medical University
- Hertfordshire University
- Chicago College of Pharmacy

In addition, CDAs (Centre for Development of Advanced Computing) have been signed with WockhardtBioAG, Switzerland and Daewoong Pharmaceuticals Co. Ltd., South Korea, for execution of specific research projects.

A licensing agreement has been signed between NIPER, S.A.S. Nagar, Rush University Medical Center, USA and University of Illinois, USA for commercialization of technology regarding ‘Composition and Methods for Trapping and Inactivating Pathogenic Microbes and Sperms’, which has been licensed to EvoFenn, Inc. and Iaso Biotechnology, Inc., both US-based companies

NIPER, Ahmedabad

Discussions with two American Universities i.e. Purdue University and Emory University are in progress.

NIPER, Guwahati

NIPER-Guwahati is functioning under mentor institute. Till now, the NIPER doesn't have any international collaboration

NIPER, Hajipur Nil

NIPER, Hyderabad

NIPER-Hyderabad has entered into some international collaborations :

- University of Minnesota, USA
- University of Lausanne, Switzerland
- Hebrew University of Jerusalem, Israel
- Daewoong Pharmaceutical Co., Ltd., Korea
- The University of Manchester, U.K

NIPER, Kolkata – Nil

NIPER, Raebareli- Nil”

5.4 When the Committee asked about the grants being received from the Government for carrying out research activities and from foreign countries, Multi-national companies for research activities, the Department in its written reply stated as under:-

“NIPER, Mohali

Sufficient grants are received from Government. No grants are received from foreign countries or multinational companies for Research Activities.

NIPER, Ahmedabad

Sufficient grants are received from Government. No grants are received from foreign countries or multinational companies for Research Activities.

NIPER, Guwahati

Sufficient grants have been received for carrying out research activities. But non availability of permanent faculty and infrastructure is a big hurdle in conducting world class research.

NIPER, Hajipur

Two laboratories for biotechnology are established where apart from basic equipments, some advance instruments are installed. For Pharmacoinformatics a computer lab with required software and internet facility are maintained. However, these laboratories needs more equipments and instruments for which requirement has already been assessed and it is mentioned in the annual budget.

NIPER, Hyderabad - Nil

NIPER, Kolkata

No research work could be undertaken at NIPER Kolkata due to non availability of permanent faculty and infrastructure.

NIPER, Raebareli

NIPER, Raebareli don't have permanent faculty."

5.5 On being asked about the requisite facilities provided to students/research scholars for carrying out research work in all the NIPERs and how does NIPER propose to augment R&D activities in its institution, the Department in its written reply stated as under:-

"NIPER, Mohali

NIPER, S.A.S. Nagar makes every effort to provide requisite facilities for carrying out research work at the Institute. The timely release of funds for the XII plan period will help the Institute to overhaul its infrastructure which is now quite obsolete.

NIPER Ahmedabad

NIPER, Ahmedabad students are provided requisite facilities to a certain extent. However, space crunch at mentor institute has restricted the purchase of equipment and provisioning of more facilities.

NIPER, Guwahati

Since there is no sanctioned post in NIPER-Guwahati, it is hindering the research activities and overall growth of NIPER-Guwahati. Though, Mentor institute, GMCH, is trying its level best to provide the requisite facilities to NIPER students, space constraint is a major difficulty to procure sophisticated instruments and provisioning of more facilities.

NIPER, Hajipur

The NIPER has serious infrastructural and faculty problems.

NIPER, Hyderabad

- a) NIPER Hyderabad has been focusing on the following core research areas:
 - Drug Discovery Programmes with focus on Cancer, Inflammatory Diseases, Metabolic disorders and Infectious diseases.
 - Computer Aided Drug Design (CADD)
 - Development of Innovative Cleaner processes for Bulk Drugs, Intermediate and APIs.
 - Drug Development and Formulations.
 - Drug Delivery Systems: Nanotechnologies
 - Drug Metabolism and Pharmacokinetic Studies (DMPK)
 - Stability Improvement Methods
 - Impurity Profiling and Analytical Method Development
- b) Salient Features regarding the facilities:
 - State-of-Art Research Laboratories for Drug Discovery, Development and Formulations. The following major equipments are available for the students to carry out their research activities.
 - ❖ NMR Spectrometer (500 MHz; Bruker)

- ❖ LC-MS/MS Q-ToF 6540 (Agilent Technologies)
- ❖ UV/Vis/NIR Spectrophotometer (Jasco; Perkin Elmer)
- ❖ FT-IR Spectrophotometer (Perkin Elmer)
- ❖ HPLCs (Analytical & Preparative) (Waters)
- ❖ Acquity UPLCH-Class Bio (Waters)
- ❖ Gas Chromatograph: GC-2014 (Shimadzu)
- ❖ Automatic Digital Polarimeters (Rudolph; Digipol Technologies)
- ❖ Differential scanning calorimetry (Mettler Toledo)
- ❖ Flow Cytometer (BD FACS Versa)
- ❖ Dissolution test apparatus (lab India)
- ❖ Stability Chambers (Osworld)
- ❖ Tablet Punching Machine (Karnavathi)
- ❖ Zetasizer Nano ZS (Malvern)
- ❖ Coating Machine (Riddhi Pharma Machinery Ltd.)

The students / research scholars of NIPER, Hyderabad are provided with requisite facilities for carrying out research in the frontier areas, however the facilities are further being strengthened to take up cutting edge research.

c) With a view to establish Centres of Excellence for carrying out research and to serve Industry and Academia, National Centre for Research and Development in Bulk Drugs (NCRDBD) is being established at the NIPER Hyderabad campus.

NIPER, Kolkata

NIPER, Kolkata students are provided necessary facilities towards the fulfillment of MS (Pharm) course and one year research work for their project works. However, due to space problem of Mentor Institute, and permanent faculty, it is difficult to carry out research work.

NIPER, Raebareli

NIPER, Raebareli students are provided requisite facilities to a certain extent. However space crunch at ITI Campus has restricted the purchase of equipment. and provisioning of more facilities."

5.6 On being asked by the Committee about the status of Infrastructure (lab, equipment etc.) for research, the Department in its written reply stated as under:-

"NIPER, Mohali

Infrastructure for research is obsolete and needs to be comprehensively overhauled.

NIPER, Ahmedabad

Infrastructure (Labs, Equipment, etc) for Research needs to be augmented.

NIPER, Guwahati

The Animal House, Biotechnology Lab, Ph.D. Lab and Computer laboratory at NIPER-Guwahati has been developed with NIPER fund. The students of NIPER-Guwahati use library and other infrastructural facility of the Mentor Institute. Facilities of DBT sponsored IBT-hub is actively used by the students of NIPER-Guwahati.

NIPER, Hajipur

NIPER, Hyderabad

The infrastructure of NIPER- Hyderabad is fairly well placed and there is an extensive support from the mentor institute, i.e., CSIR-Indian Institute of Chemical Technology (IICT-Hyderabad). The major equipments are available for the students to carry out their research activities.

- ❖ NMR Spectrometer (500 MHz; Bruker)

- ❖ LC-MS/MS Q-ToF 6540 (Agilent Technologies)
- ❖ UV/Vis/NIR Spectrophotometer (Jasco; Perkin Elmer)
- ❖ FT-IR Spectrophotometer (Perkin Elmer)
- ❖ HPLCs (Analytical & Preparative) (Waters)
- ❖ Acquity UPLCH-Class Bio (Waters)
- ❖ Gas Chromatograph: GC-2014 (Shimadzu)
- ❖ Automatic Digital Polarimeters (Rudolph; Digipol Technologies)
- ❖ Differential scanning calorimetry (Mettler Toledo)
- ❖ Flow Cytometer (BD FACS Versa)
- ❖ Dissolution test apparatus (lab India)
- ❖ Stability Chambers (Osworld)
- ❖ Tablet Punching Machine (Karnavathi)
- ❖ Zetasizer Nano ZS (Malvern)
- ❖ Coating Machine (Riddhi Pharma Machinery Ltd.)

NIPER, Kolkata

The resources of CSIR-IICB (Mentor Institute) shared for research. Planned to improve the shared resources.

NIPER, Raebareli

NIPER, Raebareli students are provided requisite facilities to a certain extent however space crunch at ITI Campus has restricted the purchase of equipment and provisioning of more facilities.”

5.7 On being asked by the Committee about the steps being taken by the Department to provide adequate infrastructure facility at NIPER, Kolkata for the promotion of drug research, the Department in its written reply stated as under:-

“Steering Committee for new NIPERs in its Meeting held on 22.05.2015 approved Shifting of theory & practical classes of NIPER, Kolkata from old Campus of CSIR-IICB to its new campus in Salt Lake. The actual overhead costs will be borne by NIPER.

Dr. V. Ravichandiran, has been appointed as Director, NIPER, Kolkata on 02.07.2015. Settlement of land issue is likely to be expedited”

5.8 On being enquired by the Committee about the steps being taken by the Department in respect of NIPER, Raebareli to bring it in line with other NIPERs in so far as research activities are concerned, the Department in its written reply stated as under:-

“A land of 19.6640 hectare(48.57 acres) had been provided by the Government of Uttar Pradesh against the Department’s request for 100 acres. Further, the Steering Committee of NIPERs constituted Search-Cum-Selection Committee for vacant NIPER Directors posts including that of Raebareli. The selection process is expected to be completed in 3 months. In addition, the Department has constituted Academic Standard Committee under the Chairmanship of Dr. Seyed E. Hasnain, former Vice-Chancellor, Hyderabad University to set norms for Department and faculty and the report is expected soon. This will facilitate creation of faculty and staff.”

5.9 About the research papers published by the Institutes and the patents filed/approved, the Department informed the Committee in writing as under:

Research papers published by the Institutes

NIPER, Mohali– One thousand nine hundred fifty (1950)
 NIPER, Ahmedabad- Fifty eight (58)
 NIPER, Guwahati - Fifty (50)

NIPER, Hajipur - Thirteen (13)
NIPER, Hyderabad- Around 150 articles / Research Papers are published till date.
NIPER, Kolkata - 16 Papers/Publications
NIPER, Raebareli - 14 Papers

Patents filed and approved

NIPER, Mohali - 172(filed) 36 (approved)
NIPER Ahmedabad - 7(filed) Nil (approved)
NIPER Hyderabad - 2(filed) Nil (approved)

(e-mail dated 3 August, 2015 from Department of Pharmaceuticals)

New Delhi;
11 August, 2015
20 Shravana 1937, (Saka)

Anandrao Adsul
Chairperson
Standing Committee on
Chemicals and Fertilizers

Observations/ Recommendations

1 Budgetary Allocation for NIPERs

The Committee observed that the total budgetary allocation for NIPERs under BE 2012-13, 2013-14 and 2014-15 was Rs. 121.55 crore, Rs. 112.07 crore and Rs. 124.03 crore, respectively. But the allocation was significantly reduced to Rs. 80.77 crore, Rs. 64.84 crore and Rs. 56.42 crore, respectively at RE stage. The Committee also note that for the year 2015-16, as against the demand of the Department for Rs.1075.41 crore, the Ministry of Finance has provided only Rs. 169.44 crore which is not at all sufficient for the NIPERs. Thus, the Committee are distressed to note that the Department is not getting the budgetary allocation commensurate with the projected requirement for the NIPERs. According to the Department, non-starting of construction of activities for NIPER Campus, non-creation of regular posts in new NIPERs and complex fund releasing system, are the reasons for reduction in allocation of funds to NIPERs at RE stage. The Committee also note that the Budget Speech for 2015-16 proposes three new NIPERs in Maharashtra, Rajasthan and Chhattisgarh but no budget provision has been made for them. The Committee are apprehensive that in the absence of adequate funds, it will be difficult for the Department to set up adequate and strong infrastructure for smooth running and functioning of NIPERs and to achieve its avowed objectives to nurture and promote quality and excellence in pharmaceutical education and research. The Committee are of the strong view that it is the responsibility of the Department to convince the Ministry of Finance ensuring optimum allocation of funds for execution of its projects. It is also entirely the responsibility of the Department to prepare a roadmap, in coordination with all stakeholders, for smooth execution of its projects with in a fixed time frame and ensuring optimum utilisation of funds. The Committee, therefore, recommend that the Department should strongly place its case before the Ministry of Finance to allocate budgetary allocation commensurate with the requirement for NIPERs. The Committee also recommend that the Department should also make concerted and coordinated efforts to address the constraints which are impeding the effective execution of NIPER projects and set up an institutional mechanism to monitor rigorously the progress of projects. The Committee would like to be apprised of the initiatives undertaken by the Department and the progress made in this regard.

2. Teaching faculty/Academic/non-Academic/Administrative Staff

The Committee note that NIPERs offer courses to students in the Post Graduate level and PhD level in various disciplines like Biotechnology, Medicinal chemistry, Pharmaceutics, Pharmacy Practice, Pharmacology & Toxicology etc. and the degrees offered by the NIPERs are well accepted in the pharmaceutical industries and institutions. A large number of passed out students are absorbed in companies and research institutes across the country as well as in abroad. While a number of these students are placed in responsible positions by the pharmaceutical industries through campus placements, others are pursuing higher education in reputed national and international institutions. However, the Committee are deeply distressed to note that except NIPER, Mohali and NIPER, Ahmedabad, all other NIPERs do not have regular/permanent /sanctioned faculty and staff and these NIPERs are running with the faculty and staff either on contractual basis or faculties invited from mentor institutes or other reputed institutes like PGI, Chandigarh, Gauhati University, Dibrugarh University etc. . Even in NIPER, Mohali which has a complement of 73 sanctioned posts for non-academic side, only 46 posts are filled up and the remaining 27 posts right from the top level of Director to the lowest level of Assistant or Clerk/Typist are vacant. Similarly as per the information furnished to the Committee, 2 posts of Professor, 9 posts of Associate Professor and 23 posts of Assistant Professor are vacant in NIPER, Mohali. The Committee strongly feel that in the absence of regular staff, academic or non-academic, NIPERs could not be expected to attain excellence and quality in the field of pharmaceutical education and research. It is, therefore, imperative that all the regular/sanctioned posts are filled up without further delay. During the course of evidence, the Secretary of the Department of Pharmaceuticals had accepted that inadequate man power is one of the major constraints or critical issue which has hindered the growth of these institutions and needs to be decided. In this context, the Committee were informed that the Department of Pharmaceuticals has constituted an Academic Standard Committee on 27th March 2015 which is mandated to recommend the number of faculties and staff for creation of posts for all NIPERs except NIPER, Mohali. During the course of evidence, the Committee were informed that the Committee has finalised the report and they will be handing over the report with in a week. On the basis of the report, the Department will create a number of teaching as well as non-teaching posts for all NIPERs and thereafter, the Department would be empowered to fill up the vacancies. He has also committed that all these NIPERs will have required teaching as well as non-teaching staff within a period of six months. Further, the Department has constituted a Search-cum-Selection Committee for

selecting candidates for the post of Directors in NIPER, Mohali; NIPER, Hajipur; NIPER, Hyderabad; NIPER, Guwahati and NIPER, Raebareli. An advertisement seeking applications for the post of Directors has been issued on 01.07.2015 and the last date was 31.07.2015. According to the Department, the process of selection is expected to be completed in 3 months. It was also informed to the Committee that in case of NIPER, Mohali, a High Level committee has been constituted under the chairmanship of Secretary (Pharma) which is examining the appointment of each employee and the whole exercise is expected to be completed by the end of August 2015. In case of other NIPERs, once posts are created recruitment of regular faculty will be taken up. In view of the foregoing, the Committee recommend that the process of selection for the post of Directors in NIPER, Mohali; NIPER, Hajipur; NIPER, Hyderabad; NIPER, Guwahati and NIPER, Raebareli and for creation of requisite number of posts for all NIPERs except NIPER, Mohali and subsequent recruitment of suitable candidates to man these posts may be expedited within a fixed time frame. The Committee hope and trust that once these posts are filled up, NIPERs will be able to augment its efficiency to attain academic excellence and achieve its avowed objectives in the field of pharmaceutical education and research for which they were established in the country. The Committee would like to be apprised of the progress made in this regard.

3. Recognition of M.S.Pharma Degree course

The Committee note that NIPER has been given statutory recognition by an act of Parliament and declared as an Institute of National Importance. NIPERs are awarding degrees under NIPER Act, 1998. These degrees awarded by NIPERs are recognized by the Indian and foreign universities and students passed out from these institutes are well placed in Indian and foreign Pharmaceuticals industries. However, the Committee are distressed to note that M.S.Pharma degree awarded by NIPERs is not recognized by the University Grants Commission (UGC). The Committee are of the view that the courses offered by NIPERs are of wide importance and non-recognition of degrees viz M.S.Pharma degree by UGC, will adversely affect the career prospects of the students holding the degree. Non-recognition of the degree would also raise suspicion on the quality of education being imparted by NIPERs and may in turn affect the quantum of package being given to the passed out students on their placements by the companies. However, the Committee were informed that the Department has taken up the matter with UGC and Ministry of HRD and the same is expected to be resolved very soon. Notwithstanding the position stated above, the Committee would like to recommend that the Department should vigorously pursue the case and impress upon UGC and

Ministry of HRD to grant recognition to degree awarded by NIPER under NIPER Act, 1998 without further loss of time to save the career prospects of several students passed out from these institutes. The Committee would like to be apprised of the progress made in this regard.

4. Infrastructure facility

The Committee are deeply anguished to know that except NIPER-Mohali, presently all the six New NIPERs are still functioning with the assistance of Mentor Institutes even after a lapse of more than 7 years since 2007-2008. The Committee note that while the construction work of NIPER, Guwahati campus has since started from 30.05.2015, the construction work of NIPER, Ahmedabad is likely to start shortly. For NIPER, Hyderabad, the land has been given by the State Government in Genome Valley but a decision is yet to be taken as to whether the institute be set up in Genome Valley or in the IDPL complex itself where the institute is presently functioning. In the context of NIPER, Hajipur, the Committee note that the Institute is running under the mentorship of Rajendra Memorial Research Institute of Medical Sciences, Patna. The State Government of Bihar was requested for allotment of 100 acre land free of cost, for setting up NIPER at Hajipur. However, in spite of the matter being followed up with the State Government at Chief Minister and Chief Secretary level, the land has not been allotted for setting up full-fledged NIPER Campus at Hajipur. It was advised by the State that the institution may proceed with vertical construction on 12.43 acres of land already in possession of NIPER, Hajipur, along with 3 buildings. However, the existing area of land was not found sufficient for the purpose. The matter has again been taken up at the highest level but the issue is yet to be settled satisfactorily. As regards, NIPER, Kolkata, the State Government has allotted about 35 acres of land, free of cost for construction of NIPER Kolkata but demanded Rs. 30.10 crores as development charges which can not be paid by the Ministry as the same is against the mandate of Cabinet Note. The matter is being pursued by the Department with the State Government at Chief Minister level and the same is yet to be resolved. In the context of NIPER, Raebareli, the Committee note that approximately 50 acres Land has been transferred in the institute's name. The Committee were also apprised by the Department during the course of oral evidence that State Government of Tamil Nadu has provided 100 acres of land for NIPER Institute at Madurai and the Department of Pharmaceuticals has immediately taken over the land and the process of construction of NIPER is being started.

In view of the foregoing, the Committee are not satisfied with the snail's pace progress in the construction of campuses for New NIPERs. The very fact that even after a lapse of more than 7 years, these institutions do not have their own campuses clearly reflects the failure of the Department for timely acquisition of land for construction of campuses. Needless to say, in the absence of requisite infrastructure facilities, it would be difficult for NIPERs to achieve the quality and capability in the field of pharma education and research. The Committee, therefore, recommend that the Department should vigorously pursue with the respective State Governments to allocate land of requisite dimension within a fixed time frame and for this purpose the Department may consider to create a Special Cell to monitor and pursue vigorously with the States for acquisition of land. The Committee also recommend that the process of construction work in respect of NIPERs for which land has already been acquired should be expedited and be completed within a fixed time frame. The Committee would like to be apprised of the initiatives taken by the Department in this regard.

5. Hostel Facilities

The Committee are distressed to note that most the NIPERs do not have adequate hostel facilities. In NIPER, Ahmedabad, separate hostel facility on double sharing basis to both boys and girls is hired as the mentor institute also does not have the hostel facility. In respect of NIPER-Guwahati, hostel facility on double sharing basis to both boys and girls has been provided on temporary basis. NIPER, Raebareli is operating in two places and therefore, hostels on sharing basis have been provided in rented accommodations. During the course of evidence, the Secretary of the Department has accepted the fact that the hostel facilities are not up to the standard and unless new buildings are constructed, it would be difficult to address the problem immediately. Further, due to lack of standard hostel facilities, NIPERs are not able to increase intake of students for admission in various disciplines run by the institutes. In this regard the Committee are not convinced with the explanation of the Department on the issue. The Committee, therefore, recommend that good and standard hostel facilities should be provided to the students who intend to pursue their higher education in various disciplines offered by NIPERs. The Committee would like to be apprised of the action taken in this matter.

6. Research and Development programme

The committee note that NIPERs conduct regular education programmes for academia and industry in various disciplines and help the Indian Pharmaceutical

Industry in solving Research & Development (R&D) related requirements. NIPER, Mohali has identified certain diseases which are neglected by the Western world but are of immense importance in India and the rest of the developing world, as its thrust areas. These are tuberculosis, malaria, *kala azar* and the lifestyle disease diabetes. Besides, NIPER, Mohali also carries out research in the areas of drug development, delivery and formulations, natural products and traditional medicine, etc. In NIPER, Ahmedabad more than 200 new chemical entities of leads are designed, synthesized and screened for diabetes, tuberculosis and anti-cancer potential. NIPER-Guwahati conducts research in different areas of pharmaceutical sciences keeping in view the national and local leads in the fields of Biotechnology, Pharma Practice and Pharmacology. In NIPER Hajipur research work is being carried out in the fields of Biotechnology, Pharmacoinformatics and Biostatistics. In NIPER, Hyderabad the research activities are mainly focused on Integrated Drug Discovery Programmes aimed at discovering new drug candidates in Cancer, Inflammatory Diseases, Metabolic disorders and Infectious diseases, Computer Aided Drug Design to support the medicinal chemistry in designing new chemical entities, development of various *in vitro* and *in vivo* biological screens for evaluating the synthesized new chemical entities, Drug Metabolism and Pharmacokinetic studies (DMPK), Development of novel process technologies for bulk drugs, Intermediate and APIs and Novel drug Delivery Systems: Nanotechnologies. NIPER, Mohali has also published 1950 research papers. Similarly, NIPER, Ahmedabad has published 58 and NIPER, Guwahati has published 50 research papers. NIPER Hajipur, NIPER Hyderabad, NIPER Kolkata and NIPER Raebareli have published 13, 150, 16 and 14 research papers respectively. Notwithstanding the position stated above, the fact remains that most of the NIPER institutes lack state of the art infrastructure for undertaking research work. Research infrastructure in NIPER, Mohali has become obsolete and needs comprehensive overhauling/innovation. In NIPER, Ahmedabad infrastructure i.e. laboratory, equipment etc., require augmentation. NIPER, Guwahati lacks basic infrastructure for research such as animal house, biotechnology laboratory and students are using library and other infrastructural facilities of Mentor Institution and the same is the case in NIPER, Kolkata and NIPER, Rae Bareli where no research activity is being carried out. The Committee also note that not a single patent has been filed/approved by NIPERs with the exception of NIPER, Mohali. This clearly shows that the quality of research work being undertaken by NIPERs in pharma sector is not upto to mark. The Committee feel that the research in medicine and Pharmaceuticals sector is critical for developing country like India where qualitative and economical drug availability is important for common people. The Committee, therefore, recommend,

that all NIPERs should be equipped with state of the art research infrastructure and facilities so that they could undertake research work in areas of drug development, and formulations, etc. resulting in high quality drugs and medicines which are affordable to the common man. The Committee would like to apprise of the initiatives undertaken by the Department in this regard.

MINUTES
MINUTES OF THE EIGHTEENTH SITTING OF THE
STANDING COMMITTEE ON CHEMICALS & FERTILIZERS
(2014-15)

The Committee sat on Tuesday, the 30th June, 2015 from 1500 hrs. to 1700 hrs. in Room G-074, Parliament Library Building, New Delhi.

PRESENT

Shri Anandrao Adsul - Chairperson

MEMBERS

LOK SABHA

2. Shri B.N. Chandrappa
3. Shri Sankar Prasad Datta
4. Smt. Veena Devi
5. Shri R. Dhruvanarayana
6. Shri Satish Kumar Gautam
7. Shri Chhedi Paswan
8. Shri Chandu Lal Sahu
9. Dr. Krishan Pratap Singh
10. Shri Tasleem Uddin
11. Shri Innocent
12. Shri Kotha Prabhakar Reddy

RAJYA SABHA

13. Dr. M.S. Gill
14. Shri Narayan Lal Panchariya
15. Shri K. Parasaran
16. Shri Palvai Govardhan Reddy
17. Shri Mansukh L. Mandaviya

SECRETARIAT

- | | | |
|-------------------------|---|---------------------|
| 1. Smt. Rashmi Jain | - | Joint Secretary |
| 2. Shri U.B.S. Negi | - | Director |
| 3. Shri A.K. Srivastava | - | Additional Director |

I. MINISTRY OF CHEMICALS AND FERTILIZERS
(DEPARTMENT OF PHARMACEUTICALS)

- | | | |
|------------------------|--|------------------|
| 1. Shri V.K. Subburaj | | Secretary |
| 2. Dr. M. Ariz Ahammed | | Joint Secretary |
| 3. Ms. Sunanda Sharma | | Economic Advisor |

II. REPRESENTATIVES OF NIPER

- | | | |
|-----------------------|----------------------|------------------|
| 1. Dr. Kiran Kalia | Director | NIPER, Ahmedabad |
| 2. Dr. K. K. Bhutani | Officiating Director | NIPER, Mohali |
| 3. Dr. Ahmed Kamal | Project Director | NIPER, Hyderabad |
| 4. Dr. Pradeep Das | Project Director | NIPER, Hajipur |
| 5. Dr. P. K. Sengupta | Dean (Academic) | NIPER, Kolkata |
| 6. Shri M. Rehman | Registrar | NIPER, Guwahati |
| 7. Dr. Kashif Aniff | Course-Coordinator | NIPER, Raebareli |

2. At the outset, Hon'ble Chairperson welcomed the Members of the Committee and representatives of the Ministry of Chemicals & Fertilizers (Department of Pharmaceuticals) to the sitting. Their attention was invited to the provisions contained in Direction 55(1) of the Directions by the Speaker regarding confidentiality of the Committee's proceedings.
3. After the witnesses introduced themselves, the Joint Secretary of the Department of Pharmaceuticals made power point presentation to the Committee on the subject "Functioning of National Institutes of Pharmaceutical Education and Research (NIPERs)". Thereafter, the representatives from all the seven NIPERs made power point presentation on the functioning of each of the respective NIPER Institute.
4. The Chairperson, thereafter thanked the witnesses for appearing before the Committee as well as for furnishing valuable information to the Committee.
5. A copy of the verbatim record of the proceedings of the sitting has been kept.

The Committee then adjourned.

**MINUTES
MINUTES OF THE NINETEENTH SITTING OF THE
STANDING COMMITTEE ON CHEMICALS & FERTILIZERS**

(2014-15)

The Committee sat on Tuesday, the 14th July, 2015 from 1500 hrs. to 1630 hrs. in Committee Room C, Parliament House Building, New Delhi.

PRESENT

Shri Anandrao Adsul - Chairperson

MEMBERS

LOK SABHA

2. Smt. Anju Bala
3. Shri B.N. Chandrappa
4. Shri Sankar Prasad Datta
5. Smt. Veena Devi
6. Shri R. Dhruvanarayana
7. Shri Satish Kumar Gautam
8. Shri K. Ashok Kumar
9. Shri Kamalbhan Singh Marabi
10. Shri Chhedi Paswan
11. Smt. Kamala Devi Patle
12. Shri Chandu Lal Sahu
13. Dr. Kulamani Samal
14. Shri Tasleem Uddin
15. Smt. Rekha Verma
16. Shri Innocent
17. Shri Kotha Prabhakar Reddy

RAJYA SABHA

18. Dr. M.S. Gill
19. Shri Palvai Govardhan Reddy

SECRETARIAT

- | | | |
|-------------------------|---|---------------------|
| 1. Smt. Rashmi Jain | - | Joint Secretary |
| 2. Shri U.B.S. Negi | - | Director |
| 3. Shri A.K. Srivastava | - | Additional Director |

I. MINISTRY OF CHEMICALS AND FERTILIZERS
(DEPARTMENT OF PHARMACEUTICALS)

- | | |
|------------------------|------------------------|
| 1. Shri V.K. Subburaj | Secretary |
| 2. Shri Rajiv Yadav | Special Secretary & FA |
| 2. Dr. M. Ariz Ahammed | Joint Secretary |
| 3. Ms. Sunanda Sharma | Economic Advisor |

II. REPRESENTATIVES OF NIPER

- | | | |
|----------------------|----------------------|------------------|
| 1. Dr. Kiran Kalia | Director | NIPER, Ahmedabad |
| 2. Dr. K. K. Bhutani | Officiating Director | NIPER, Mohali |
| 3. Dr. Ahmed Kamal | Project Director | NIPER, Hyderabad |

4.	Dr. Pradeep Das	Project Director	NIPER, Hajipur
5.	Dr. Ravichandiran	Director	NIPER, Kolkata
6.	Dr. P.K. Shukla	Project Director	NIPER, Raebareli
7.	Shri M. Rehman	Registrar	NIPER, Guwahati

2. At the outset, Hon'ble Chairperson welcomed the Members of the Committee and representatives of the Ministry of Chemicals & Fertilizers (Department of Pharmaceuticals) to the sitting. Their attention was invited to the provisions contained in Direction 55(1) of the Directions by the Speaker regarding confidentiality of the Committee's proceedings.

3. After the witnesses introduced themselves, Hon'ble Chairperson and Members of the Committee raised queries on several issues which may be enumerated as under

- a) Status of construction of NIPER institutes;
- b) Availability of Land;
- c) Hostel Facilities to students;
- d) Appointment of regular staff both technical and other staff;
- e) Under utilization of funds;
- f) Low salary package to NIPER pass out;
- g) Non-recognition of post graduate degree by UGC;
- h) Research and Development activities.

4. The queries raised, by the Committee were replied by the representatives of Department of Pharmaceuticals.

5. The Hon'ble Chairperson, thereafter thanked the witnesses for appearing before the Committee as well as for furnishing valuable information to the Committee and directed them to furnish the requisite information in writing on the points raised during the discussion, on which the information was not readily available with them.

5. A copy of the verbatim record of the proceedings of the sitting has been kept.

6. The Committee decided to hold their next sitting on 22 July, 2015.

The Committee then adjourned.

MINUTES**MINUTES OF THE TWENTYFIRST SITTING OF THE
STANDING COMMITTEE ON CHEMICALS & FERTILIZERS****(2014-15)**

The Committee sat on Tuesday, the 11th August, 2015 from 1500 hrs. to 1540 hrs. in Committee Room 'E', Parliament House Annexe, New Delhi.

Present**Shri Anandrao Adsul - Chairperson****Members****Lok Sabha**

2. Smt. Anju Bala
3. Smt. Veena Devi
4. Shri K. Ashok Kumar
5. Shri Kamalbhan Singh Marabi
6. Smt. Kamala Devi Patle
7. Shri S. Rajendran
8. Shri Chandu Lal Sahu
9. Dr. Kulamani Samal
10. Shri Kotha Prabhakar Reddy

Rajya Sabha

11. Shri Narayan Lal Panchariya
12. Dr. Sanjay Sinh

SECRETARIAT

- | | | | |
|----|----------------------|---|---------------------|
| 1. | Smt. Rashmi Jain | - | Joint Secretary |
| 2. | Shri U.B.S. Negi | - | Joint Secretary |
| 3. | Shri A.K. Srivastava | - | Additional Director |

2. At the outset, the Hon'ble Chairperson welcomed the members of the Committee.
3. The Committee thereafter took up for consideration the Subject report on 'Functioning of National Institutes of Pharmaceutical Education and Research (NIPERs)' of the Ministry of Chemicals and Fertilizers (Department of Pharmaceuticals).
4. The draft Report relating to the Department of Pharmaceuticals was adopted by the Committee with minor corrections.
5. The Committee authorised the Chairperson to make consequential changes, if any, arising out of the factual verification of the Report by the Department of Pharmaceuticals of the Ministry of Chemicals and Fertilizers and present the same to both the Houses of Parliament on 12th August, 2015.

6. XXXXX XXXXX XXXXX XXXXX

The Committee then adjourned.

XXXXX Matters not related to this Report