

**Annual Report 2015-16**  
**NIPER Ahmedabad**

**Chairman of Board of Governor/ Steering Committee (with period):** Formation of BOG is pending.

**Director/ Project Director (with period):**

**Project Director**

Dr Harish Padh : Oct 2007 to 04 Jul 2010

Dr Neeta Shrivastava : 05 Jul 2010-15 Nov 2014

**Director**

Dr KiranKalia : 16 Nov 2014 till date

**Historical Milestones (incl.Inauguration date):**

Inauguration / Arrival of 1st Batch to NIPER Ahmedabad: 01 Oct 2007

1st Convocation: 25 Jun 2010

2nd Convocation: 03 March 2013

3rd Convocation: 19 Oct 2015

**Mentor Institute if any:** B.V.Patel PERD Centre

**Achievements till date:** Department of Pharmaceutical has recognized NIPER – Ahmedabad as National Centre for Medical Devices

**Manpower-Academic and Non-Academic staff-Sanction/In-position/Vacancy**

Till date posts are not sanctioned for NIPER Ahmedabad. All faculty and staff are on contract basis.

Details of faculty & staff are appended below:

Regular Faculty: 01, Director

Contractual Faculty: 12

Contractual Technical staff: 03

Contractual Admin staff: 07

**Finances: Government- Allocations, releases, utilization, balance during the last 5 years.**

Year	Allocation BE in INR	Allocation RE in INR	Total Release in INR	Expenditure in INR	Exp.% to RE
2009-10*	53,429,000	44,820,000	30,000,000	31,593,670	70.49%
2010-11	92,570,000	37,225,000	11,000,000	29,086,620	78.14%
2011-12	84,412,000	50,000,000	33,700,000	32,427,146	64.85%
2012-13**	82,000,000	122,900,000	50,000,000	43,460,615	35.36%
2013-14	121,100,000	121,100,000	67,900,000	49,207,145	40.63%
2014-15	120,874,000	42,621,700	45,000,000	51,919,343	121.81%
2015-16	217,600,000	197,600,000	197,600,000	184,900,000***	93.57%***

\*2009-10 Core construction Rs. 130,00,000/- & incubator Grant Rs. 100,00,000/- is not included

\*\*2012-13 Construction Grant Rs.157,00,000/- is not included

\*\*\* The expenditure shown is till 29 Feb 2016

## Learning Environment/ Academics

Number and Names Departments/ Disciplines (with opening year)

Sr No	Department	Year of opening
01	Biotechnology	2007
02	Natural Products	
03	Pharmaceutics	
04	Medicinal Chemistry	2010
05	Pharmaceutical analysis	
06	Pharmacology & Toxicology	
07	Medical Devices	2012

## Students

Degrees/programmes offered and Subjects offered (with year) with admission status

Level Masters/ Doctoral	Degree/MS/MBA/ M.Tech/Ph.D	Discipline	No. of students admitted	
			2014-15	2015-16
Masters	M.S.	7 Disciplines	36	56
Doctoral	Ph. D.	NIL	NIL	9

**Completion rates: Students pass out year wise against capacity and admission at PG, Ph.D, PDF since the beginning**

Year Batch wise	Masters level		Doctoral level	
	Admission	Completion with Year	Admission	Completion
2007-09	31	31 (2009)	NIL	NIL
2008-10	36	33 (2010)	NIL	NIL
2009-11	42	35 (2011)	NIL	NIL
2010-12	63	58 (2012)	NIL	NIL
2011-13	46	44 (2013)	07 (2011)	Nil completed 02 Continues 05 drop out
2012-14	53	52 (2014)	09 (2012)	Nil Completed 04 Continues 05 drop out
2013-15	38	31	NIL	NIL
2014-16	36	continued	NIL	NIL
2015-17	56	Continued	09	Continued

Note: The institute has 100% pass result for all the batches.

The difference of admission and completion is due to drop out of students for personal reasons or not reporting at all after taking admission in the counselling.

**Teacher-Student ratio:** Presently 1: 8.4 (12 Faculty: 101 students)

**Student Satisfaction surveys and Employers perceptions:**

Student's satisfaction: Good,

Employers Perception: Training imparted is of reasonably good standard

**Employability/ Placements Status**

Year wise Companies participated in campus selection/placements

S.no	Year	List of companies participated	Placement
1	2009	Zydus Healthcare, Ranbaxy Labs, Sun Pharmaceuticals	18
2	2010	Mylan Labs Hyderabad, Cadila Pharma, Troikaa Pharmaceuticals Intas biopharmaceuticals, Sun Pharmaceuticals, Laila Pharmaceuticals	32
3	2011	Mylan Labs Hyderabad, Intas biopharmaceuticals, Sun Pharmaceuticals, Laila Pharmaceuticals, Eris Pharmaceuticals, Alembic pharmaceuticals Piramal Pharmaceutical Development services PVt Ltd,	19
4	2012	Mylan Labs Hyderabad, Intas biopharmaceuticals, Sun Pharmaceuticals Laila Pharmaceuticals, Eris Pharmaceuticals, Alembic pharmaceuticals Piramal Pharmaceutical Development services PVtLtd, Vyome International, Zydus Healthcare, Perkin, Amneal Pharmaceuticals	22
5	2013	Intas biopharmaceuticals, Sun Pharmaceuticals, Laila Pharmaceuticals Eris Pharmaceuticals, Alembic pharmaceuticals, Piramal Pharmaceutical Development services PVt Ltd, Vyome International, Zydus Healthcare Perkin, Amneal Pharmaceuticals, Indegenlifesciences, O2H Lifesciences, Corona Remedies	16
6	2014	Intas biopharmaceuticals, Sun Pharmaceuticals, Laila Pharmaceuticals, Eris Pharmaceuticals, Alembic pharmaceuticals, Piramal Pharmaceutical Development services PVt Ltd, VyomeInternationa, Zydus Healthcare, Perkin, Amneal Pharmaceuticals, Indegenlifesciences	14
7	2015	Torrent pharmaceuticals, Zydus Healthcare, INTAS Pharma, Oxygen Healthcare, Relisysy, Envision Pvt Ltd.	25

\* All figures indicate students placed in campus

**Last 2 years placements status: in campus/off campus**

2014 batch					
Stream	Total No of student	Opted for placement	IN campus	Off campus	Total placement
PE	12	11	6	0	6
MCD	5	5	2	1	3
NP	9	9	0	4	4

MD	5	4	1	0	1
BT	10	8	3	3	6
PC	6	5	0	0	0
PA	5	4	2	2	4
total	52	46	14	10	24
2015 batch					
Stream	Total No of student	Opted for placement	IN campus	Off campus	Total placement
PE	6	6	6	0	6
PA	5	3	3	0	3
BT	5	5	3	0	3
MC	3	2	2	0	2
MD	5	5	5	0	5
PC	3	3	2	0	2
NP	4	3	3	0	3
total	31	28	25	0	25

**Ranking by Subject if any:** First preference of students is Pharmaceutics

#### **Teachers**

Recognition to Faculty: Sardar Patel University has recognised two faculty as Ph.D. guides

Peer review system: Not in force, To be implemented in near future

Research

#### **Active Research Areas**

##### **Department of Biotechnology:**

Generation of induced Pluripotent Stem Cells (iPSCs)

Pharmacogenetics studies and population based genome analyses

Proteomics and genomics biomarkers for secondary complications of DM

Targeted drug delivery using nanoparticles, to overcome chemoresistance and prevention of relapse by Cancer Stem Cells (CSCs) re-differentiation

##### **Department of Natural Products:**

TOS based development of NCEs of natural scaffolds against MDR-TB

Lead based design and development of NCEs of natural pharmacophores

DOS of small molecules as anti-HIV, anti-Alzheimer's and anti-inflammatory

Molecular docking and Structure Activity Relationship (SAR study) of NCEs

Discovery of new natural products as anticancer and neuroprotective leads

Development of National repository of secondary metabolites

Development and standardization of herbal formulations

Development of pharmacokinetic profile of plant extracts

Screening of standardized plant extracts for cytochrome p- 450 mediated herb-drug interaction potential.

**Department of Pharmaceutics:**

Development of specialized delivery systems including Taste masked formulation, Pellets, Microneedle, Transdermal, SLN, NLC and SMEDDS

Physical characterization of pharmaceuticals

Identification and formulation of novel adjuvants and compatibility screening

Formulation development and stability of biotherapeutic agents

Targeted lymphatic delivery system for Cancer, Leishmaniasis and HIV

Solubility enhancement using nanocrystallization, complexation & co-crystallization

Nanotechnology based drug delivery system targeting brain

Formulation development of solid orals using Quality by Design (QbD)

**Department of Pharmaceutical Analysis:**

Analytical and bioanalytical method development and validation using traditional and Quality by Design (QbD) approaches

Use of micro-extraction techniques in simultaneous determination of drugs

Pharmacokinetic studies of drugs and metabolites

Impurity profiling of drug substances

Forced degradation studies and characterization of degradation products

Pre-formulation (physicochemical parameters & excipient compatibility) studies

Secondary metabolite profiling of herbal products

**Department of Medicinal Chemistry:**

Design and synthesis of target compounds: thiazoles, thiophenes, benzimidazoles as anti-inflammatory, anticancer and anti-diabetic agents

Synthesis of neuroprotective molecules and their PK & PD studies

Computer aided drug designing and study of Structure activity relationship

Design and synthesis of target compounds as anticancer and DPP-IV inhibitor

Ionic liquid mediated C-C and C=C bond forming reactions

Synthesis of Bax activating molecules to drag cancerous cells towards apoptosis

**Department of Pharmacology and Toxicology:**

Control diabetes mellitus and its complications especially nephropathy

Development of immunosuppressive human xenograft mice model

Neuroprotection against cerebral ischemia, traumatic brain injury, Alzheimer's, etc

Pharmacological screening of synthetic and herbal products

Behavioural studies on learning & memory, depression and anxiety

PK&PD and bioavailability studies of herbal drugs

Absorption Digestion Metabolism Excretion (ADME) and toxicological studies

In-vitro and in-vivo correlation

**Department of Medical Devices:**

Research on osteoconductive coating materials for bone tissue engineering

Studies on anti-proliferative and antithrombotic coatings for polymer.

Development of polymer based implants for peripheral nerve regeneration

Synthesis of nanofibres of biomaterials for various application like bone regeneration, nano coating and support for skin regeneration .

Surface modification of nanomaterials for biomedical applications

Fabrication of artificial cornea and contact lens with newer approach

Synthesis of magnetic nanoparticles for diagnostics and therapeutic applications

Chemical modification of polymers for thrombo-resistive blood bags and catheters

Development of microbe resistant polymer for hospital beds

### **Research Publications/ Institution and per Faculty and High Impact factor**

1. Shah Viral, Nair Anu, ChaudhariDashrath;”A concise review on carbon nanotube as a novel approach for vaccine delivery; world journal of Pharmaceutical Research; 2015, 4(6);698-713
2. Shah Viral, Raval Nidhi, JethwaAmruta, “A concise review on drug delivery through inner ear: emphasis
3. Sejal Shah, Siddharth Shah, Harish Padh, Kiran Kalia, 2015 Genetic alterations of the PIK3CA oncogene in human oral squamous cell carcinoma in an Indian population . Oral Surgery Oral Medicine Oral Pathology Oral Radiology 120(5) 628–635
4. DN Patel, K Kalia( 2015) Efficacy of urinary N-acetyl- $\beta$ -D-glucosaminidase to evaluate early renal tubular damage as a consequence of type 2 diabetes mellitus: a cross-sectional studyInternational Journal of Diabetes in Developing , 35, 1-9
5. S Shah, S Shah, H Padh, K Kalia 2015 Mutational landscape of PIK3CA gene and its association with oral squamous cell carcinoma in Indian populationCancer Research, 2015 – AACR
6. Mahapatra A, Shah P, Jivrajani M and Nivsarkar M. Synthesis and blastocyst implantation inhibition potential of lupeol derivatives in female mice. Records of Natural Products, accepted, under Revision (2014) [Impact Factor: 1.560].
7. Mahapatra A, Maheswari V, Kalia NP, Rajput VS and Khan IA. Synthesis and anti-tubercular activity of berberine derivatives. Chemistry of Natural Compounds, 50(2), 321-325 (2014) [Impact Factor: 0.599].
8. Mahapatra A, Chauhan N, Patel DR, Kalia NP, Rajput VS and Khan IA. Synthesis and anti-tubercular activity of oleanolic acid analogues. Pharmaceutical Chemistry Journal, 48(1), 39-43 (2014) [Impact Factor: 0.320].
9. Chauhan N, Padh H. Intra and inter ethnic variations for NAT2 polymorphisms. African Journal of Biotechnology13: 4639-46 (2014)[Impact Factor: 0.57].
10. Jansari S, Devashri N, Dhanani A, Chauhan N. Differentiation of stem cells into pancreatic  $\beta$ -cells: regenerative medicine for diabetes. International Journal of Biological and Pharmaceutical Research, 5: 901-9 (2014) [Impact Factor: 1.34].
11. Bhatt D, Chauhan N, Sharma A, Dhawan D, Bhatt R, Phatak S and Padh H. Plasma glucose concentration as a phenotypic marker for CYP2C9 genetic variants in diabetic population of Gujarat. Indian Journal of Pharmaceutical Sciences, 76: 72-77 (2014) [Impact Factor: 0.63].

12. Shah BM, Misra M, Shishoo CJ and Padh H. Nose to brain microemulsion-based drug delivery system of rivastigmine: formulation and ex-vivo characterization. *Drug Delivery*, 1-13 (2014).
13. Pathak R, Dash RP, Misra M and Nivsarkar M. Role of mucoadhesive polymers in enhancing delivery of nimodipin microemulsion to brain via intranasal route. *Acta Pharmaceutica Sinica*, 4(2):151-160 (2014).
14. Kalavadia S, Dash RP, Misra M and Nivsarkar M. Design and in vivo evaluation of gastrointestinal mucoadhesive patch system (Gmps) loaded with chitosan nanoparticles. *International Journal of Pharmaceutical Development & Technology*, 4 (3) (2014).
15. Dokania S and Joshi AK. Self-microemulsifying drug delivery system (SMEDDS) – challenges and road ahead. *Drug delivery, Informa healthcare* (2014)

### **Awards**

**Best Poster Award:** Bhavik Kansara, Anita Mahapatra, Y. Venkat Raju, Lakshmi S. Glucose uptake activation in muscle cell line (C2C12) by *Cassia auriculata*. National conference on Herbal drugs: opportunities and challenges 5-7 Nov, 2014

**Gufic prize:** Dilawar Uphadhyay, Sheetal Anandjiwala, Harish Padh, Manish Nivsarkar. In-vivo pharmacokinetic and metabolism of Picoside I and II from Kutkin in rat plasma. at Indian pharmacological society conference 28-30 December, 2014

### **Competitive Research Grants**

Source of Support: Department of Biotechnology (DBT)

Project/Proposal Title: Development and Clinical Evaluation.... Tuberculosis

Collaborator: AIIMS, New Delhi

Principal Investigator: Prof. C. J. Shishoo

Source of Support: Department of Biotechnology (DBT)

Project/Proposal Title: Synthesis and Development of .... Inhibitors

Collaborator: IIIM, Jammu

Principal Investigator: Dr. Anita Mahapatra

Co-Investigator: Dr. Neelam Chauhan

Co-Investigator: Dr. Inshad Ali Khan

Source of Support: Department of Biotechnology (DST), Inspire fellowship

Project/Proposal Title: In-situ gelling mucoadhesive system.... Pgp inhibition

Principal Investigator: Dr. Manju Misra

Source of Support: Department of Biotechnology (DBT), RGYI

Project/Proposal Title: Design of Oral delivery system.... penetration enhancer

Principal Investigator: Dr. Manju Misra

**Research Student Completions:** None

**Eminent Alumni:** None

### **Land and Civil Works if any**

Land availability issues/challenges and alternatives : Lease agreement of 60 acres of land was signed on 08 Dec 2008 and Possession of the land was given on 06 Apr 2009

### **Campus development / Civil Work progress if any**

PMC name: HSCL

Date of approval of Designs & Drawings:30 Dec 2014 by Steering Committee

Date of approval of Bill of Quantities: 17 Sep 2015 steering committee approved the BOQ for phase-I

Phase of construction:Steering Committee approved the BOQ of phase-I and estimated cost for construction of for phase-I & II. (Phase-II and III have been merged and made Phase-II)

#### **Infrastructure: Central facilities/ Centres etc.**

A. Ex.Central Instrumentation laboratory/Center for pharmaceutical nanotechnology/ Computer center/National toxicology center/Library and information center/ Technology development center/Central animal facility/Impurity profiling and stability testing laboratory/National bioavailability center/National center for safety pharmacology/National center for pharmacokinetics/ Upcoming facilities etc.

NIPER Ahmedabad has been given mandate to establish National Centre for Medical Devices.

National Centres if any : National Centre for Medical Devices

#### **Academia-Industry partnership**

During Visitors Conference from 04-06 Nov 2015, MOUs were signed with Following Industries:

##### **Cadila Pharmaceuticals**

Objectives:

Research collaboration in the identified areas of mutual interest

Exchange of scientific personnel for Education and Training

##### **Zydus Healthcare Limited**

Objectives:

Research collaboration in the identified areas of mutual interest

Exchange of scientific personnel for Education and Training

##### **Sahjanad Laser Technologies**

Objectives:

Curriculum revision/ Development

Internship/Project Work and Partnership in Dissertations

##### **Johnson& Johnson**

Objectives:

Curriculum revision/ Development

Internship/Project Work and Partnership in Dissertations

##### **Hindustan Antibiotics Limited**

Objectives:

To provide opportunities of internship / project work to NIPER PGP students at manufacturing site.



To provide career growth opportunities

Innovation / knowledge transfer

**Patents and Commercialization:** 07 Patents have been filed where faculty or student of NIPER Ahmedabad is involved.

**Research income earned from industry:** NIL

Citation per faculty:

Name of the faculty	Citation	h index	i10 index
Prof. Kiran Kalia	755	15	19
Dr D D Singh	100	6	6
Dr. Anita Mahapatra	592	11	13
Dr. Vinod Jairaj	49	5	2
Dr. Neelam Chauhan	443	3	2
Dr. Manju Misra	32	3	0
Dr. Mukty Sinha	6	1	0
Dr. Govinda Kapusetti	39	4	2
Dr. Viral Shah	204	9	7
Dr. Shankar Katekhaya	58	5	1
Dr. Anurag Maheshwari	19	2	1
Dr. Bhagyashree Kamble	41	5	1
Dr. Amit Shard	104	6	4

**Collaboration: With National and International Institutions:**

MOUs entered into with following Pharmaceutical Industries:

Zydus Healthcare, Ahmedabad

Cadila Pharmaceuticals, Ahmedabad

Johnson & Johnson, Mumbai

Sahjanand Laser technology ltd, Gandhinagar

Hindustan Antibiotics Limited, Pune

Indian Institute of Integrative Medicine(IIIM), Jammu

**Collaboration/partnership with International Institutions :** NIL

**Impact of NIPER Total:** 218.245

**Third party Evaluation if any :** NIL

**Events/ Workshops/ Conferences organised during the year**

<b>Date</b>	<b>Activity name</b>	<b>Target group</b>	<b>Sponsored by</b>	<b>Remarks</b>
04 July 2015	One day seminar on Academia Industry Linkage	Faculty & Students	Institute	Secretary, DOP was the Chief Guest
15 Aug 2015	Independence Day	Faculty & Students	Institute	
24 Aug 2015	One Day Seminar on Flow Cytometry	Faculty & Students	In Collaboration with B D Bioscience	
01 Sep- 15 Sep 15	Hindi Pakhwada	Faculty & Students	Institute	
02 Oct 2015	SwachataAbhiyan	Faculty & Students	Institute	
18 Oct 2015	2nd Alumni meet	Students, Alumni and Faculty	Institute	
19 Oct 2015	3rd Convocation	Students, Alumni and Faculty	Institute	
26 Oct-31 Oct 2015	Vigilance Awareness week	Faculty & Students	Institute	Address by Chief Manager SBI , Drive in Road branch
16 Dec 2016	Foundation Stone Laying Ceremony	Faculty, Students, Guests from Central Govt, State Govt, Industries and other educational Institutions like IITs, Central Universities, NIPERs etc.	Institute	Foundation Stone Laid By Hon'ble Union Minister for C & F Shri Ananth Kumar and Hon'ble CM of Gujarat SmtAnandiben Patel in presence of Hon'ble MOS for C & F Shri HansrajGangaramAhi r, Shri Nitin Patel , Minister for Health & Family Welfare GOG, Shri Bhupendra Singh Chuddasma ,Education Minister GOG & Dr Ariz

				Ahammed, Joint Secretary DOP
26 Jan 2016	Republic day Celebration	Faculty & Students	Institute	
26 Jan 2016	Sports day celebration	Faculty & Students	Institute	
29 Jan 2016	Seminar on Advances in Therapeutics	Faculty & Students	Institute	Dr C L Kaul, Founder Director of NIPER Mohali was Chief Guest and Speaker for Plenary Lecture

**Photographs:**

**Institute / Infrastructure**



**Faculty and Students**





**Convocation if any/ Student activity if any  
Third Convocation on 19 Nov 2015**



**Visit of VIP/Sr.Official : 4th July 2015**

Dr. V. K. Subburaj, Secretary Dept of Pharmaceuticals visited NIPER-Ahmedabad on 4th July 2015 and was chief guest for one day seminar on “Academia Industry Symbiosis, exploring new horizons for Indian Pharma”. He also visited NIPER Ahmedabad construction site at Gandhinagar.





**Hindi Pakhwada/Swathc Bharat/ National Integration Day**

**Independence Day:15th Aug 2015**



**Ganesh Utsav**



**2nd Alumni meet : 18th Oct 2015**



**Vigilance Awareness week (26-31 Oct 2015)**



**Seminar on Flow Cytometry(24 Aug2015)**



**MOUs during visitor's conference : 4th- NOV 2015**





## Foundation Stone Laying Ceremony : 16th December 2015



## 26th January 2016 – Republic Day at our NIPER Gandhinagar Site



## Seminar on Advances in Therapeutics on 29th Jan 2016

