Annual Report 2014-15

- 1. Chairman of Board of Governor/ Steering Committee (with period): **Formation of BOG is Pending.**
- 2. Director/ Project Director (with period);

(a) Project Director

(i) Dr Harish Padh : Oct 2007 to 04 Jul 2010 (ii) Dr Neeta Shrivastava : 05 Jul 2010-15 Nov 2014

(b) Director

(i) Dr KiranKalia : 16 Nov 2014 till date

3. Historical Milestones (incl.Inauguration date)

(i) Inaugration / Arrival of 1st Batch to NIPER Gandhinagar: 01 Oct 2007

(ii) 1st Convocation: 25 Jun 2010 (iii) 2nd Convocation: 03 March 2013

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

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

6. Manpower-Academic and Non-Academic staff-Sanction/In-position/Vacancy

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

Details of faculty& staff is appended below:

Regular Faculty: 01, Director
 Contractual Faculty: 13
 Contractual Admin staff: 06

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

Year	Allocation	Allocation	Total Release	Expenditure	Exp.% to
	BE in INR	RE in INR	in INR	in INR	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					

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

8. Learning Environment/ Academics

A. Number and Names Departments/ Disciplines (with opening year)

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

^{**2012-13} ConstructionGrant Rs.157,00,000/- is not included

B. Students

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

Doctral	Ph.D	NIL	NIL	NIL
Masters	MS	7 Disciplines	38	36
			2013-14	2014-15
LevelMasters/ Doctoral	Degree/MS/MBA/M. Tech/Ph.D	Discipline	No.of students admitted	

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

Year	Ma	sters level	Do	ctoral level
Batch wise	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	continued	NIL	NIL .
2014-16	36	continued	NIL	NIL

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.

- 3. Teacher-Student ratio: Presently 1: 4.5 (14 Faculty: 64 students)
- 4. Student Satisfaction surveys and Employers perceptions: student's satisfaction: **Good**,
 - Employers Perception: Training imparted is of reasonably good standard
- 5. Employability/ Placements Status
- 1. 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 PVt Ltd,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, Indegenelifesciences, O2H Lifesciences, Corona Remidies	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, Indegenelifesciences	14

^{*} All figures indicate students placed in campus

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

	z. Last z years placements status. In campus/on campus					
		2013 batch				
Stream	Total No of student	Opted for placement	IN campus	Off campus	Total placement	
PE	11	11	2	8	10	
MCD	5	5	2	1	3	
NP	8	8	2	2	4	
ВТ	9	9	4	2	6	
PC	5	3	1	2	3	
PA	6	6	5	1	6	
total	44	44	16	16	32	
		2014 batch	1			
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	
ВТ	10	8	3	3	6	
PC	6	5	0	0	0	
PA	5	4	2	2	4	
total	52	46	14	10	24	

6. Ranking by Subject if any. First preference of students is Pharmaceutics

B. Teachers

- 1. Recognition to Faculty: Sardar Patel University has recongnised two faculty as Ph.D. guides
- 2. Peer review system: Not in force, To be implemented in near future
- 9. Research
 - 1. 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
- Expression of therapeutic protein
- Plant tissue culture and identification of molecular markers
- Development of novel vaccine against infectious diseases
- Gene silencing through siRNA and shRNA

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-Alzhiemer'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

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:

- 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&PDand 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 polymeric
- Development of polymer based implants for peripheral nerve regeneration
- Development of matrix for biosensor
- Surface modification of nanomaterials for biomedical applications
- Fabrication of artificial cornea and contact lens with newer approach
- Synthesis of 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

- 2. Research Publications/ Institution and per Faculty and High Impact factor
- 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].
- Mahapatra A, Maheswari V, Kalia NP, Rajput VS and Khan IA. Synthesis and antitubercular activity of berberine derivatives. Chemistry of Natural Compounds, 50(2), 321-325 (2014) [Impact Factor: 0.599].
- 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].
- Chauhan N, Padh H. Intra and inter ethnic variations for *NAT2* polymorphisms. African Journal of Biotechnology13: 4639-46 (2014)[Impact Factor: 0.57].
- Jansari S, Devashri N, Dhanani A, Chauhan N. Differentiation of stem cells into pancreatic -cells: regenerative medicine for diabetes. International Journal of Biological and Pharmaceutical Research, 5: 901-9 (2014) [Impact Factor: 1.34].
- 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].
- 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).
- Pathak R, Dash RP, Misra M and Nivsarkar M. Role of mucoadhesive polymers in enhancing delivery of nimodipinemicroemulsion to brain via intranasal route. ActaPharmaceuticaSinica, 4(2):151-160 (2014).
- 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).
- Dokania S and Joshi AK. Self-microemulsifying drug delivery system (SMEDDS) challenges and road ahead. Drug delivery, Informa healthcare (2014)

Awards

- Best Poster Award: BhavikKansara, 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
- Awarded Gufic prize: DilawarUphadhayay, SheetalAnandjiwala, Harish Padh, ManishNivsarkar. *In-vivo* pharmacokinetic and metabolism of Picroside I and II from Kutkin in rat plasma. at Indian pharmacological society conference 28-30 December, 2014
 - 4. 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 Ahmed Khan

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

Project/Proposal Title: In-situ gelling mucoadhesive system....Pgp inhibition **Principal Investigator**:Dr.ManjuMisra

- Source of Support: Department of Biotechnology (DBT), RGYI Project/Proposal Title: Design of Oral delivery system.... penetration enhancer Principal Investigator:Dr.ManjuMisra
 - 5. Research Student Completions: None
 - 6. Eminent Alumni: None
- 10. 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
 - 2. Campus development / Civil Work progress if any
 - a) PMC name: HSCL
 - b) Date of approval of Designs & Drawings:30 Dec 2014 by Steering Committee
 - c) Date of approval of Bill of Quantities: Bills of quantity is submitted by PMC and pending for third party evaluation.
 - d) Phase of construction: 1 st Phase
- 11. 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 Gandhinagar has been given mandate to establish National Centre for Medical Devices.

- 12. National Centres if any: National Centre for Medical Devices
- 13. Academia-Industry partnership
 - 1. Capacity utilization of Common facilities viz., Technology Development Centre/ SMPIC/National Bio-availability Centre etc.
 - 2. Consultancy projects/Knowledge Process Outsourcing (KPO)/Contract Research Organisation (CRO)/ Contract Research & Manufacturing Services(CRAM)/ IPRs etc.
 - 3. Entrepreneurship / Incubators

As per recent guidelines from the DOP, NIPER Gandhinagar is Likely to inter into MOU with Cadila Pharma in near future. 1st meetings of representatives have already taken place.

14. Innovation / knowledge transfer

- 1. Patents and Commericialisation :07 Patents have been filed where faculty or student of NIPER Gandhinagar is involved.
- 2. Research income earned from industry: NIL
- 3. Citation per faculty:

Name of the faculty	Citation	h index	i10 index
Prof. KiranKalia	666	13	18
Dr. Anita Mahapatra	324	9	9
Dr. Vinod Jairaj	49	5	2
Dr. Neelam Chauhan	408	3	2
Dr. ManjuMisra	32	3	0
Dr. Mukty Sinha	6	1	0
Dr. GovindaKapusetti	39	4	2
Dr. Viral Shah	151	7	6
Dr. BhagwatiSaxena	76	4	3
Dr. Shankar Katekhaya	58	5	1
Dr. Anurag Maheshwari	19	2	1
Dr. BhagyashreeKamble	41	5	1
Dr. Amit Shard	104	6	4
Dr. Lakshmi Sundar	190	8	8

- 15. Collaboration: With National and International Institutions: NIL
- 16. Institution leadership
 - 1. Institutional Recognition
 - 2. Collaboration/partnership with International Institutions: NIL
- 17. Impact of NIPER Total: 218.245
 18. Third party Evaluation if any: **NIL**
- 19. Events/ Workshops/ Conferences organised during the year

Date	Activity name	Target group	Sponsored by	Remarks
15 Aug 2014	Independence Day	Student and staff	Institute	
29 Aug 2014	Ganesh Utsav	Student and staff	Institute	
01 Sep- 15 Sep 15	Hindi Pakhwada	Student and staff	Institute	
20 Sep 2015	Sports Day	Student and staff	Institute	
02 Oct 2014	SwachataAbhiyan	Student and staff	Institute	
31 Oct 2014	Rastriyaektadiwas	Student and staff	Institute	
27 Oct-01 Nov 14	Vigilance Awaeness week	Student and staff	Institute	
26 Dec 2014	Christmas Celebration	Student and staff		
31 Dec 2014	New Year Celebration	Student and staff	Institute	
26 Jan 2015	Republic Day Celebration and Picnic	Student and staff	Institute	

Photographs:

1. Institute / Infrastructure



2. Faculty and Students



3. Convocation if any/ Student activity if any

First Convocation

Second Convocation



4. Visit of VIP/Sr.Official

Joint Secretary Dr. Ariz Ahmed visited NIPER-Gandhinagar on 4th December, 2014 and had brain stroming session with the students and faculty members. He also visited the site for NIPER-Gandhinagar campus in Gandhinagar.



5. Hindi Pakhwada/Swatch Bharat/ National Integration Day Independence Day Ganesh Utsav



Hindi Pakhwada

Sports Day



SwachataAbhiyan

Rastriyaektadiwas



Vigilance Awaeness week

Christmas Celebration





New Year Celebration

Republic Day Celebration and Picnic





Annual Report 2014-15

- 1. Chairman of Board of Governor/ Steering Committee (with period): **Formation of BOG is Pending.**
- 2. Director/ Project Director (with period);

(a) Project Director

(i) Dr Harish Padh : Oct 2007 to 04 Jul 2010 (ii) Dr Neeta Shrivastava : 05 Jul 2010-15 Nov 2014

(b) Director

(i) Dr KiranKalia : 16 Nov 2014 till date

3. Historical Milestones (incl.Inauguration date)

(i) Inaugration / Arrival of 1st Batch to NIPER Gandhinagar: 01 Oct 2007

(ii) 1st Convocation: 25 Jun 2010 (iii) 2nd Convocation: 03 March 2013

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

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

6. Manpower-Academic and Non-Academic staff-Sanction/In-position/Vacancy

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8. Learning Environment/ Academics

A. Number and Names Departments/ Disciplines (with opening year)

Sr No	Department	Year of opening
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02	Natural Products	2007
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05	Pharmaceutical analysis	2010
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B. Students

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

Doctral	Ph.D	NIL	NIL	NIL
Masters	MS	7 Disciplines	38	36
			2013-14	2014-15
LevelMasters/ Doctoral	Degree/MS/MBA/M. Tech/Ph.D	Discipline	No.of students admitted	

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

Year	Ma	sters level	Do	octoral level
Batch wise	Admission	Completion with	Admission	Completion
		Year		
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	continued	NIL	NIL
2014-16	36	continued	NIL	NIL

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.

- 3. Teacher-Student ratio: Presently 1: 4.5 (14 Faculty: 64 students)
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 - Employers Perception: Training imparted is of reasonably good standard
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^{*} All figures indicate students placed in campus

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

	Z. Last Z yea	2013 batch		r campus		
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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	

6. Ranking by Subject if any. First preference of students is Pharmaceutics

B. Teachers

- 1. Recognition to Faculty: Sardar Patel University has recongnised two faculty as Ph.D. guides
- 2. Peer review system: Not in force, To be implemented in near future

9. Research

1. 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
- Expression of therapeutic protein
- Plant tissue culture and identification of molecular markers
- Development of novel vaccine against infectious diseases
- Gene silencing through siRNA and shRNA

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-Alzhiemer'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

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- 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
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- 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:

- 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&PDand 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 polymeric
- Development of polymer based implants for peripheral nerve regeneration
- Development of matrix for biosensor
- Surface modification of nanomaterials for biomedical applications
- Fabrication of artificial cornea and contact lens with newer approach
- Synthesis of 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

- 2. Research Publications/ Institution and per Faculty and High Impact factor
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- Jansari S, Devashri N, Dhanani A, Chauhan N. Differentiation of stem cells into pancreatic -cells: regenerative medicine for diabetes. International Journal of Biological and Pharmaceutical Research, 5: 901-9 (2014) [Impact Factor: 1.34].
- 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].
- 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).
- Pathak R, Dash RP, Misra M and Nivsarkar M. Role of mucoadhesive polymers in enhancing delivery of nimodipinemicroemulsion to brain via intranasal route. ActaPharmaceuticaSinica, 4(2):151-160 (2014).
- 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).
- Dokania S and Joshi AK. Self-microemulsifying drug delivery system (SMEDDS) challenges and road ahead. Drug delivery, Informa healthcare (2014)

Awards

- Best Poster Award: BhavikKansara, 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
- Awarded Gufic prize: DilawarUphadhayay, SheetalAnandjiwala, Harish Padh, ManishNivsarkar. *In-vivo* pharmacokinetic and metabolism of Picroside I and II from Kutkin in rat plasma. at Indian pharmacological society conference 28-30 December, 2014
 - 4. 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 Ahmed Khan

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

Project/Proposal Title: In-situ gelling mucoadhesive system....Pgp inhibition **Principal Investigator**:Dr.ManjuMisra

- Source of Support: Department of Biotechnology (DBT), RGYI Project/Proposal Title: Design of Oral delivery system.... penetration enhancer Principal Investigator:Dr.ManjuMisra
 - 5. Research Student Completions: None
 - 6. Eminent Alumni: None
- 10. 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
 - 2. Campus development / Civil Work progress if any
 - a) PMC name: HSCL
 - b) Date of approval of Designs & Drawings:30 Dec 2014 by Steering Committee
 - c) Date of approval of Bill of Quantities: Bills of quantity is submitted by PMC and pending for third party evaluation.
 - d) Phase of construction: 1 st Phase
- 11. 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 Gandhinagar has been given mandate to establish National Centre for Medical Devices.

- 12. National Centres if any: National Centre for Medical Devices
- 13. Academia-Industry partnership
 - 1. Capacity utilization of Common facilities viz., Technology Development Centre/ SMPIC/National Bio-availability Centre etc.
 - 2. Consultancy projects/Knowledge Process Outsourcing (KPO)/Contract Research Organisation (CRO)/ Contract Research & Manufacturing Services(CRAM)/ IPRs etc.
 - 3. Entrepreneurship / Incubators

As per recent guidelines from the DOP, NIPER Gandhinagar is Likely to inter into MOU with Cadila Pharma in near future. 1st meetings of representatives have already taken place.

14. Innovation / knowledge transfer

- 1. Patents and Commercialisation :07 Patents have been filed where faculty or student of NIPER Gandhinagar is involved.
- 2. Research income earned from industry: NIL
- 3. Citation per faculty:

Name of the faculty	Citation	h index	i10 index
Prof. KiranKalia	666	13	18
Dr. Anita Mahapatra	587	10	11
Dr. Vinod Jairaj	49	5	2
Dr. Neelam Chauhan	408	3	2
Dr. ManjuMisra	32	3	0
Dr. Mukty Sinha	6	1	0
Dr. GovindaKapusetti	39	4	2
Dr. Viral Shah	151	7	6
Dr. BhagwatiSaxena	76	4	3
Dr. Shankar Katekhaya	58	5	1
Dr. Anurag Maheshwari	19	2	1
Dr. BhagyashreeKamble	41	5	1
Dr. Amit Shard	104	6	4
Dr. Lakshmi Sundar	190	8	8

- 15. Collaboration: With National and International Institutions : NIL
- 16. Institution leadership
 - 1. Institutional Recognition
 - 2. Collaboration/partnership with International Institutions: NIL
- 17. Impact of NIPER Total: 218.245
- 18. Third party Evaluation if any: NIL
- 19. Events/ Workshops/ Conferences organised during the year

Date	Activity name	Target group	Sponsored by	Remarks
15 Aug 2014	Independence Day	Student and staff	Institute	
29 Aug 2014	Ganesh Utsav	Student and staff	Institute	
01 Sep- 15 Sep 15	Hindi Pakhwada	Student and staff	Institute	
20 Sep 2015	Sports Day	Student and staff	Institute	
02 Oct 2014	SwachataAbhiyan	Student and staff	Institute	
31 Oct 2014	Rastriyaektadiwas	Student and staff	Institute	
27 Oct-01 Nov 14	Vigilance Awaeness week	Student and staff	Institute	
26 Dec 2014	Christmas Celebration	Student and staff		
31 Dec 2014	New Year Celebration	Student and staff	Institute	
26 Jan 2015	Republic Day Celebration and Picnic	Student and staff	Institute	

Photographs:

1. Institute / Infrastructure



2. Faculty and Students



3. Convocation if any/ Student activity if any





4. Visit of VIP/Sr.Official

Joint Secretary Dr. Ariz Ahmed visited NIPER-Gandhinagar on 4th December, 2014 and had brain stroming session with the students and faculty members. He also visited the site for NIPER-Gandhinagar campus in Gandhinagar.



5. Hindi Pakhwada/Swatch Bharat/ National Integration Day

Independence Day





Hindi Pakhwada

Sports Day



SwachataAbhiyan

Rastriyaektadiwas



Vigilance Awaeness week

Christmas Celebration



New Year Celebration

Republic Day Celebration and Picnic



