



## ANNEXURE - 1

### STATEMENT ON RECOGNITION OF IN-HOUSE R&D UNITS

Month	Year	Receipts	Cumulative Receipts*	Disposal	Cumulative Disposal
January	2019	40	40	23	23
February	2019	37	77	41	64
March	2019	20	97	44	108
April	2019	22	119	15	123
May	2019	15	134	25	148
June	2019	29	163	30	178
July	2019	25	188	17	195
August	2019	18	206	24	219
September	2019	23	229	31	250
October	2019	19	248	35	285
November	2019	19	267	30	315
December	2019	32	299	15	330

\*Includes 30 applications for additional R&D centers during the year 2019.



## ANNEXURE - 2

### STATEMENT ON RENEWAL OF RECOGNITION OF IN-HOUSE R&D UNITS WHO'S RECOGNITION WAS VALID UPTO 31.03.2019

Month	Year	Receipts	Cumulative Receipts	Disposal	Cumulative Disposal
January	2019	248	248	-	-
February	2019	270	518	-	-
March	2019	95	613	-	-
April	2019	40	653	98	98
May	2019	15	668	175	273
June	2019	10	678	98	371
July	2019	3	681	80	451
August	2019	4	685	80	531
September	2019	1	686	40	571
October	2019	10	696	40	611
November	2019	8	704	54	665
December	2019	2	706	14	679
January	2020			14	693
February	2020			03	696



**LIST OF IN-HOUSE R&D UNITS IN INDUSTRY REPORTING  
ANNUAL R&D EXPENDITURE MORE THAN RS. 5000 LAKHS.**

Sl No	Name of the Company	R&D Expenditure Reported (Rs. in lakhs) *
1.	Dr. Reddy's Laboratories Ltd.	107524
2.	Maruti Suzuki India Ltd.	95092
3.	Sun Pharmaceutical Industries Ltd.	85999
4.	AurobindoPharma Ltd.	74273
5.	Micro Labs Ltd.	45149
6.	LA Renon Health Care Pvt. Ltd.	25980
7.	Macleods Pharmaceuticals Ltd.	24717
8.	Ajanta Pharma Ltd.	19558
9.	Aurigene Discovery Technologies Ltd	16390
10.	Emcure Pharmaceuticals Ltd.	15176
11.	Asian Paints Ltd.	11799
12.	Minda Industries Ltd.	10373
13.	Enzene Biosciences Ltd.	8723
14.	CNH Industrial (India) Pvt. Ltd (Formerly New Holland Fiat (India) Pvt. Ltd.)	8253
15.	Tejas Networks Ltd.	8184
16.	AryaVaidya Pharmacy (Coimbatore) Ltd.	6500
17.	Nektar Therapeutics (India) Pvt. Ltd.	6480
18.	Indbro Research and Breeding Farms Pvt. Ltd.	6368
19.	Kirloskar Oil Engines Ltd.	6169
20.	Maharashtra Hybrid Seeds Co. Pvt. Ltd.	5940
21.	Comviva Technologies Ltd., Pune	5695
22.	ShanthaBiotechnics Ltd.	5613

\* R&D Expenditures Reported are as claimed by the firms in their available Annual reports in DSIR/ renewal applications.



**LIST OF IN-HOUSE R&D UNITS IN INDUSTRY REPORTING**  
**ANNUAL R&D EXPENDITURE IN THE RANGE OF**  
**RS. 500 LAKHS TO RS. 5000 LAKHS**

<b>Sl No</b>	<b>Name of the Firm</b>	<b>R&amp;D Expenditure Reported (Rs. in lakhs) *</b>
1.	Hetero Drugs Ltd.	4990
2.	Eastman Exports Global Clothing (P) Ltd.	4649
3.	Hikal Ltd.	4485
4.	Teva API India Ltd.	4400
5.	Astra Microwave Products Ltd.	4366
6.	Sanofi - Synthelabo (India) Pvt. Ltd.	4303
7.	Daikin Airconditioning India Pvt. Ltd.	3943
8.	Tevapharm India Pvt. Ltd.	3797
9.	Granules India Ltd.	3715
10.	Gland Pharma Ltd.	3669
11.	Varroc Engineering Pvt. Ltd.	3620
12.	LG Electronics India Pvt. Ltd.	3591
13.	Gharda Chemicals Ltd.	3516
14.	JB Chemicals & Pharmaceuticals Ltd.	3484
15.	Tally Solutions Pvt. Ltd.	2981
16.	Bharat Serums and Vaccines Ltd.	2873
17.	Britannia Industries Ltd.	2854
18.	Sahajanand Medical Technologies Pvt. Ltd.	2850
19.	Mando Automotive India Pvt. Ltd.	2809
20.	Amber Enterprises India Ltd.	2733
21.	Gennova Biopharmaceuticals Ltd.	2667
22.	Monsanto India Ltd.	2644
23.	Biophore India Pharmaceuticals Pvt Ltd.	2446
24.	Subros Ltd.	2420
25.	Nuziveedu Seeds Pvt. Ltd.	2408
26.	PPG Asian Paints Pvt. Ltd.	2252
27.	DCM Shriram Ltd.	2225
28.	Mahindra Reva Electric Vehicles Ltd. (name change)	2211
29.	Tata Elxsi Ltd.	2184
30.	Bharat Bio- tech International Ltd.	2107
31.	Siechem Technologies Pvt. Ltd.	1980
32.	Kuantum Papers Ltd.	1964



Sl No	Name of the Firm	R&D Expenditure Reported (Rs. in lakhs) *
33.	Mylan Pharmaceuticals Pvt. Ltd.	1891
34.	Ajeet Seeds Pvt. Ltd.	1884
35.	Nagarjuna Fertilizers & Chemicals Ltd.	1853
36.	Sudarshan Chemical Industries Ltd.	1850
37.	Centaur Pharmaceuticals Pvt. Ltd.	1842
38.	Medha Servo Drives Pvt. Ltd.	1838
39.	Ather Energy Pvt. Ltd.	1829
40.	Navin Fluorine International Ltd.	1787
41.	Godavari Biorefineries Ltd.	1697
42.	Shalimar Paints Ltd.	1690
43.	Matrix Comsec Pvt. Ltd.	1659
44.	Bigtec Pvt. Ltd.	1648
45.	Alphamed Formulations Pvt. Ltd.	1636
46.	Berger Paints India Ltd.	1594
47.	Emerson Climate Technologies (India) Pvt. Ltd.	1512
48.	RA CHEM PHARMA Ltd.	1500
49.	ZIM Laboratories Ltd.	1493
50.	Genus Power Infrastructures Ltd	1472
51.	AspiroPharma Ltd.	1403
52.	Mindarika Pvt. Ltd.	1400
53.	Piramal Enterprises Ltd.	1386
54.	Kaveri Seed Company (P) Ltd.	1376
55.	Incozen Therapeutics Pvt. Ltd.	1358
56.	Carborundum Universal Ltd.	1331
57.	SH Kelkar & Company Pvt.	1331
58.	SundaramFastners Ltd.	1331
59.	Case New Holland Construction Equipment (India) Pvt. Ltd.,	1330
60.	Phillips Carbon Black Ltd.	1271
61.	Cavinkare Pvt. Ltd.	1254
62.	Luminous Power Technologies Pvt. Ltd.	1251
63.	Altheon Enterprises Ltd	1228
64.	Godrej Agrovet Ltd.	1224
65.	Ittiam Systems Pvt. Ltd.	1216
66.	Advanced Enzyme Technologies Ltd.	1206
67.	RPG Life Sciences Ltd.	1194
68.	Clariant India Ltd.	1181
69.	Enaltec Labs Pvt Ltd.	1170
70.	Chennai Petroleum Corpn. Ltd.	1151



Sl No	Name of the Firm	R&D Expenditure Reported (Rs. in lakhs) *
71.	Tapadia Diagnostic Centre Pvt Ltd.	1127
72.	Hetero Healthcare Ltd.	1117
73.	NRB Bearings Ltd.	1102
74.	KMS Health Center Pvt. Ltd.	1059
75.	Thermax Ltd.	1043
76.	Lincoln Pharmaceuticals Ltd.	1042
77.	Krish Biotech Research Pvt. Ltd.	1039
78.	Oxygen Healthcare Research Pvt. Ltd.	1001
79.	Action Construction Equipment Ltd.	995
80.	Piaggio Vehicles Pvt. Ltd.	994
81.	Suguna Foods Pvt. Ltd.	991
82.	Rex- Tone Industries Ltd.	983
83.	Caplin Point Laboratories Ltd.	977
84.	Synapse Labs Pvt. Ltd.	961
85.	Gujarat State Fertilizers & Chemicals Ltd.	956
86.	United Spirits Ltd.	945
87.	Xcelris Labs Ltd.	916
88.	Hitachi Hi- Rel Power Electronics Pvt. Ltd. (name change)	915
89.	Sanden Vikas (India) Ltd.	912
90.	SKI Carbon Black (India) Pvt. Ltd.(name change)	894
91.	Johnson Controls-Hitachi Air Conditioning India Ltd., Ahmedabad (Formerly Hitachi Home & Lite Solutions (India) Ltd.)	891
92.	Ace Designers Ltd.	883
93.	PHI Seeds Ltd.	864
94.	Amoli Organics Pvt. Ltd.	862
95.	Indo- American Hybrid Seeds (India) Pvt. Ltd.	860
96.	VasudhaPharma Chem Ltd.	844
97.	Linkwell Telesystems (P) Ltd.	842
98.	TATA AutoComp Hendrickson Suspensions Pvt. Ltd.	835
99.	MitraRxDx India Pvt Ltd.	810
100.	Sundaram Clayton Ltd.	808
101.	Ion Exchange (India) Ltd.	800
102.	Accord Software & Systems Pvt. Ltd.	795
103.	JSL Ltd.	791
104.	Grind Master Machines Pvt. Ltd.	757
105.	SMS Pharmaceuticals Ltd.	756
106.	NeuheitPharma Technologies Pvt. Ltd.	748
107.	Sigma Electric Manufacturing Corporation Pvt. Ltd.	748



Sl No	Name of the Firm	R&D Expenditure Reported (Rs. in lakhs) *
108.	Central Electronics Ltd.	745
109.	India Glycols Ltd.	745
110.	Hester Biosciences Ltd.	730
111.	Mistral Solutions Pvt. Ltd.	710
112.	MegafinePharma Pvt. Ltd.	670
113.	Hero Cycles Ltd	641
114.	NACL Industry Ltd. (Formerly Nagarjuna Agrichem Ltd.)	640
115.	Bliss GVS Pharma Ltd.	629
116.	Saksin Lifesciences Pvt. Ltd.	621
117.	Vidya Herbs Pvt. Ltd.	614
118.	ZCL Chemicals Ltd.	610
119.	Rane TRW Steering Systems Pvt. Ltd.	607
120.	VST Tillers Tractors Ltd	603
121.	FEV India Pvt Ltd.	600
122.	Zuventus Healthcare Ltd.	600
123.	Kancor Ingredients Ltd.	598
124.	Sapala Organics Pvt. Ltd.	586
125.	Allengers Medical Systems Ltd.	582
126.	Bata India Ltd.	579
127.	Minda Vast Access Systems Pvt. Ltd.	575
128.	Tergene Biotech Pvt. Ltd.	560
129.	Devashish Polymers Pvt. Ltd.	557
130.	S Kant Healthcare Ltd.	556
131.	BioCOS Life Sciences Pvt. Ltd., Bangalore	541
132.	Malwa Oxygen & Industrial Gases Pvt. Ltd.	538
133.	NOCIL LIMITED	534
134.	AMI Life Sciences Pvt. Ltd.	523
135.	Bench Bio Pvt. Ltd.	521
136.	JSW Steel Ltd.	521
137.	SAVA Healthcare Ltd.	516
138.	Integral Biosciences Pvt. Ltd.	510
139.	Bry- Air (Asia) Pvt. Ltd.	509
140.	IOL Chemicals and Pharmaceuticals Ltd.	504

\* R&D expenditures reported are as claimed by the firms in their available Annual reports in DSIR/renewal applications.



## ANNEXURE - 5

**LIST OF IN-HOUSE R&D UNITS IN INDUSTRY REPORTING ANNUAL R&D  
EXPENDITURE IN THE RANGE OF  
RS. 200 LAKHS TO RS. 500 LAKHS.**

<b>Sl no</b>	<b>Name of the firm</b>	<b>R&amp;D Expenditure Reported (Rs. in lakhs) *</b>
1.	Natural Remedies Pvt. Ltd.	498
2.	Arvind Ltd.	493
3.	Alkyl Amines Chemicals Ltd.	492
4.	Avantel Ltd.	485
5.	BioconPharma Ltd.	468
6.	Tata Hitachi Construction Machinery Company Pvt.Ltd.	467
7.	AshapuraMinechem Ltd.	465
8.	Kusum Healthcare Pvt.Ltd.	460
9.	Symphony Pharma Life Sciences Pvt. Ltd.	459
10.	Electrolab India Pvt. Ltd., Mumbai	458
11.	Achira Labs Pvt Ltd.	457
12.	Kajaria Ceramics Ltd.	455
13.	CTX LifesciencesPvt. Ltd	445
14.	Radiant Corporation Pvt. Ltd.	445
15.	Envision Scientific Pvt. Ltd.	435
16.	NovaleadPharma Pvt. Ltd.	435
17.	General Industrial Controls Pvt. Ltd.	433
18.	EmmennarPharma Pvt. Ltd.	431
19.	Tata International Ltd.	418
20.	Polyplex Corporation Ltd.	412
21.	VeeraVahanaUdyog Pvt. Ltd.	412
22.	Precision Automation and Robotics India Ltd.	406
23.	AVT Natural Products Ltd.	405
24.	Buhler (India) Pvt. Ltd.	402
25.	RoopAutomotives Ltd.	400
26.	Deccan Enterprises Ltd., Balanagar (formerly Deccan Enterprises Pvt. Ltd.)	397
27.	Metrochem API Pvt. Ltd.	394
28.	Noble Seeds Pvt. Ltd.	390
29.	Camlin Fine Sciences Ltd.	387
30.	ALP Nishikawa Company Pvt. Ltd.	382
31.	H&R Johnson (India) (A division of Prism Cement Ltd.)	382
32.	Premier Medical Corporation Pvt. Ltd.	369
33.	Pulse Pharmaceuticals Pvt. Ltd.	369





Sl no	Name of the firm	R&D Expenditure Reported (Rs. in lakhs) *
34.	Jamna Auto Industries Ltd.	361
35.	Polycab India Ltd.(Formerly Polycab Wires Pvt. Ltd.)	361
36.	JSW Steel Coated Products Ltd.	358
37.	Naprod Life Sciences Pvt. Ltd.	356
38.	Remidio Innovative Solutions Pvt. Ltd.	350
39.	The Indian Hume Pipe Company Ltd.	346
40.	T Stanes & Company Ltd.	343
41.	SMR Automotive Systems India Ltd.	338
42.	Indo Colchem Pvt. Ltd.	337
43.	Pinnacle Industries Ltd.	337
44.	Triton Valves Ltd.	335
45.	HMC MM Auto Ltd.	334
46.	CharakPharma Pvt. Ltd.	330
47.	Parle Elizabeth Tools Pvt. Ltd.	323
48.	Kirloskar Ferrous Industries Ltd.	322
49.	Celon Laboratories Pvt. Ltd.	321
50.	HeubachColour Pvt. Ltd.	318
51.	EimcoElecon (India) Ltd.	312
52.	Hind Rectifiers Ltd.	312
53.	Vrinda Technologies Pvt Ltd.	310
54.	Stumpp, Schuele and Somappa Springs Pvt. Ltd.	301
55.	BEC Chemicals Pvt. Ltd.	300
56.	ANCHOR MARK Pvt. Ltd	297
57.	Anthea Aromatics Pvt. Ltd.	294
58.	Raptakos, Brett & Co. Ltd.	289
59.	Toshniwal Enterprises Control Ltd	287
60.	V.B. Medicare Pvt. Ltd.	286
61.	Pharmazz India Pvt. Ltd.	285
62.	Connectwell Industries Pvt. Ltd.	280
63.	Mangalam Alloys Ltd.	280
64.	Everest Blower Systems Pvt. Ltd.	278
65.	Rashtriya Chemicals & Fertilizers Ltd.	278
66.	Desiccant Rotors International Pvt. Ltd.	273
67.	Nova Integrated Systems Ltd.	271
68.	Axxonet System Technologies Pvt. Ltd.	270
69.	Jayant Agro- Organics Ltd.	268
70.	Ace Manufacturing Systems Ltd.	263
71.	Parle Global Technologies Pvt. Ltd.	263
72.	Accuster Technologies Pvt. Ltd.	262



Sl no	Name of the firm	R&D Expenditure Reported (Rs. in lakhs) *
73.	Elecon Engineering Company Ltd.	254
74.	Laxmi Hydraulics Pvt. Ltd.	253
75.	SRL Ltd.	251
76.	Chromo Laboratories India Pvt. Ltd.	250
77.	Frontier Lifeline Pvt. Ltd.	250
78.	ABI Showatech (India) Pvt. Ltd.	240
79.	Siri Seeds (India) Pvt. Ltd.	236
80.	Deepak Novochem Technologies Ltd.	234
81.	Ideal Cures Pvt. Ltd.	233
82.	Survival Technologies Pvt. Ltd.	233
83.	L&T Construction Equipment Ltd.	232
84.	GlaxoSmithKline Pharmaceuticals Ltd.	231
85.	Bharat Fritz Werner Ltd.	230
86.	Zenith Industries Rubber Production Pvt. Ltd	230
87.	Balaji Amines Ltd.	228
88.	Metropolitan Eximchem Ltd.	226
89.	EMCO Ltd.	222
90.	RusanPharma Ltd.	222
91.	Shakti Vardhak Hybrid Seeds Pvt. Ltd.	221
92.	Symmetrix Biotech Pvt. Ltd.	215
93.	Tablets (India) Ltd.	214
94.	Simson Life Sciences Private Ltd	211
95.	Gangwal Chemicals Pvt. Ltd.	210
96.	Saveer Biotech Ltd.	209
97.	Gensynth Fine Chemicals Pvt. Ltd.	208
98.	AstecLifesciences Ltd.	207
99.	Encardio- Rite Electronics Pvt. Ltd.	207
100.	Metallizing Equipment Co. Pvt. Ltd.	207
101.	Keggfarms Pvt. Ltd.	203
102.	Blue Cross Laboratories Pvt. Ltd.	201
103.	Neurosynaptic Communications Pvt. Ltd.	200
104.	Zeon Lifesciences Limited	200

\* R&D expenditures reported are as claimed by the firms in their available Annual reports in DSIR/renewal applications.



**LIST OF SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATIONS (SIROS)  
RECOGNIZED BY DSIR DURING THE PERIOD  
JANUARY 2019 TO DECEMBER 2019**

S. No.	Name of the Organization	Recognition granted up to
<b>Natural and Applied Sciences</b>		
1	Maharaj Alak Narayan Society of Arts and Sciences (MANSAS). Vizianagaram, Andhra Pradesh	31.03.2021
2	Birla Archaeological and Cultural Research Institute, Hyderabad	31.03.2020
3	Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal	31.03.2021
4	Indian Institute of Information Technology, Kalyani	31.03.2021
5	GLA University, Mathura	31.03.2021
6	Charotar University of Science & Technology (CHARUSAT), Anand, Gujarat	31.03.2021
7	Bhandary Foundation, Mangalore, Karnataka	31.03.2022
8	Indian Centre for Advancement of Research & Education (ICARE), Haldia, West Bengal	31.03.2022
9	JMJ Education Society, Bangalore, Karnataka	31.03.2022
10	Shree Sahkar Education Trust, Kim (East), Surat, Gujarat	31.03.2022
11	Ramakrishna Mission Vivekananda Centenary College, Kolkata, West Bengal	31.03.2022
12	Ramanandha Adigalar Foundation, Coimbatore, Tamil Nadu	31.03.2022
13	Academy of Maritime Education and Training (AMET), Chennai, Tamil Nadu	31.03.2022
14	Himalayan Pharmacy Institute Of Rhenock Educational Society, Majhitar, Sikkim	31.03.2021
15	TERI School of Advanced Studies, New Delhi, Delhi	31.03.2022
16	Anekant Education Society, Baramati, Pune, Maharashtra	31.03.2022
17	Chhattisgarh Biofuel Development Authority, Raipur, Chhattisgarh	31.03.2022
18	Adamas University, Kolkata, West Bengal	31.03.2022
19	Nansen Environmental Research Centre (India), Kochi, Kerala	31.03.2022
20	The Indian Pharmaceutical Association - Maharashtra State Branch (IPA-MSB), Mumbai, Maharashtra	31.03.2022
21	Chandigarh Educational Trust, Mohali, Punjab	31.03.2022
22	Dr. D.Y. Patil Educational Enterprises Charitable Trust, Pune, Maharashtra	31.03.2022



S. No.	Name of the Organization	Recognition granted up to
23	Dr. B.V. Raju Foundation, Hyderabad, Telangana	31.03.2022
24	Besant Centenary Trust, Chennai, Tamil Nadu	31.03.2021
25	Krishna Charitable Society, Ghaziabad, Uttar Pradesh	31.03.2022
26	JIS University, Kolkata, West Bengal	31.03.2022
27	Manipal University Technology Business Incubator Society, Manipal, Karnataka	31.03.2021
28	Palavi Trust, Pune, Maharashtra	31.03.2021
29	Vimal Research Society for Agro-Biotech & Cosmic Powers, Rajkot, Gujarat	31.03.2022
30	The Indian Planetary Society, Mumbai, Maharashtra	31.03.2022
31	Ahmedabad University, Ahmedabad, Gujarat	31.03.2022
32	Gandhi Institute of Engineering & Technology University, Gunupur, Rayagada, Odisha	31.03.2022
33	Suganthi Devadason Marine Research Institute of Suganthi Devadason Trust, Tuticorin, Tamil Nadu	31.03.2022
34	REVA University, Bengaluru, Karnataka	31.03.2022
35	Alva's Institute of Engineering & Technology of Alva's Education Foundation, Moodbidri, Dakshina Kannada, Karnataka	31.03.2022
36	Bio Valley Incubation Council, Visakhapatnam, Andhra Pradesh	31.03.2022
37	Consortium for DEWATS Dissemination Society, Bengaluru, Karnataka	31.03.2022
38	Eshwar Trust, Coimbatore, Tamil Nadu	31.03.2022
39	Aristotle Educational Society, Ranga Reddy District, Telangana	31.03.2022
40	VIT Bhopal University, Sehore, Madhya Pradesh	31.03.2021
41	Martin Luther Christian University, Shillong, Meghalaya	31.03.2022
42	Ramakrishna Mission Vivekananda Educational & Research Institute (Deemed to be University), Howrah, West Bengal	31.03.2022
43	Sarvasumana Association, Bengaluru, Karnataka	31.03.2021
<b>Agricultural Sciences</b>		
44	Centers of Excellence for Advance Research, New Delhi	31.03.2021
<b>Social Sciences</b>		
45	Foundation for Research in Health Systems, Bengaluru, Karnataka	31.03.2021
<b>Medical Sciences</b>		
46	UKA Tarsadia University, Bardoli, Gujarat	31.03.2021
47	Shri Vithalrao Joshi Charities Trust, Ratnagiri, Maharashtra	31.03.2021
48	Alpha Health Foundation, Madurai	31.03.2021
49	India HIV/AIDS Alliance, New Delhi	31.03.2021
50	People's University, Bhopal	31.03.2021



<b>S. No.</b>	<b>Name of the Organization</b>	<b>Recognition granted up to</b>
51	Vinayaka Mission's Research Foundation (VMRF, Salem, Tamil Nadu)	31.03.2022
52	Parul University, Vadodara, Gujarat	31.03.2022
53	Sri Balaji Vidyapeeth, Pillyakuppam, Puducherry	31.03.2022
54	Dr. Vidyasagar Kaushalya Devi Memorial Health Centre, New Delhi	31.03.2022
55	Balaji Utthan Sansthan, Patna, Bihar	31.03.2022
56	Believers Eastern Church, Thiruvalla, Kerala	31.03.2022
57	Sajja Heart Foundation, Hyderabad, Telangana	31.03.2022
58	Karpaga Vinayaga Educational Trust, Pudukkottai, Tamil Nadu	31.03.2022
59	North Eastern Cancer Trust, Guwahati, Assam	31.03.2022
60	Gene Research Foundation, Bengaluru, Karnataka	31.03.2022
61	Cancer and Allied Ailments Research Foundation (CARE Foundation) MVR Cancer Centre & Research Institute, Kozhikode, Kerala	31.03.2021
62	H.K. Kalchuri Education Trust, Bhopal, Madhya Pradesh	31.03.2022
63	Krishna Institute of Medical Sciences (Deemed to be University), Karad, Satara, Maharashtra	31.03.2022
64	Manipal Academy of Higher Education, Manipal, Karnataka	31.03.2022
65	COCHLEA Pune for Hearing & Speech, Pune, Maharashtra	31.03.2022



ANNEXURE - 7

**CERTIFICATES FOR CLAIMING ACCELERATED DEPRECIATION ALLOWANCE  
ISSUED BY DSIR UNDER RULE 5(2) OF I.T. RULES VIDE NOTIFICATION NO.  
133/342/86-TPL DATED 1.4.1987**

Sl. No.	Name of the Company	Source of Know-how/Technology	Item of Manufacture	Investments Certified (Rs. In Crores)
1.	M/s. Bharat Electronics Ltd., Bangalore	M/s. Bharat Electronics Ltd., and jointly with Defense Research and Development Laboratories	Manufacture of electronic equipment and components	F.Y. 2016-17 Rs. 88.30 Crores
Total				Rs. 88.30 Crores

**LIST OF COMPANIES APPROVED U/s 35(2AB) OF INCOME TAX ACT, 1961 DURING THE YEAR**

S.N	Company Name
1.	M/s. Aimil Ltd.
2.	M/s. Ajax Engineering Ltd.
3.	M/s. Alivira Animal Health Ltd.
4.	M/s. Allied Engineering Works Pvt. Ltd.
5.	M/s. Ambe Phytoextracts Pvt. Ltd.
6.	M/s. Amber Enterprises India Pvt. Ltd.
7.	M/s. Bangalore Integrated Systems Solution Pvt. Ltd.
8.	M/s. Barrix Agro Science Pvt. Ltd.,
9.	M/s. Catalysts Bio Technologies Pvt. Ltd.
10.	M/s. Chemspec Chemicals Pvt. Ltd.
11.	M/s. Consul Neowatt Power Solutions Pvt. Ltd.
12.	M/s. Criyagen Agri & Biotech Pvt. Ltd.
13.	M/s. D&H India Ltd.
14.	M/s. Ducom Instruments Pvt. Ltd.
15.	M/s. Dynavac India Pvt. Ltd.
16.	M/s. eClerx Services Ltd.
17.	M/s. Ellora Natural Seeds Pvt. Ltd.
18.	M/s. Everest Organics Ltd.
19.	M/s. Fertis India Pvt. Ltd.
20.	M/s. Galpha Laboratories Ltd.
21.	M/s. Geeco Enercon Pvt. Ltd.
22.	M/s. Glenmark Life Sciences Ltd.
23.	M/s. Globion India Pvt. Ltd.
24.	M/s. Health Caps India Ltd.
25.	M/s. Hical Technologies Pvt. Ltd.
26.	M/s. HLL Lifecare Ltd.
27.	M/s. Holostik India Ltd.
28.	M/s. Ideal Sheet Metal Stamping and Pressings Pvt. Ltd.
29.	M/s. Innovare Labs Pvt. Ltd.
30.	M/s. Jamna Auto Industries Ltd.



S.N	Company Name
31.	M/s. Jodas Expoim Pvt. Ltd.
32.	M/s. Kalash Seeds Pvt. Ltd.
33.	M/s. KALKI Communication Technologies Pvt. Ltd.
34.	M/s. Kalyani Forge Ltd.
35.	M/s. KEC International Ltd.
36.	M/s. Kimia Biosciences Ltd.
37.	M/s. Kinetic Green Energy & Power Solutions Ltd.
38.	M/s. Knorr-Bremse Systems for Commercial Vehicles India Pvt. Ltd.
39.	M/s. Lakshmi Rings Travellers (Coimbatore) Ltd.
40.	M/s. Lambda Therapeutic Research Ltd.
41.	M/s. MAAN Aluminium Ltd.
42.	M/s. Matrix Fine Sciences Pvt. Ltd.
43.	M/s. Microtek International Pvt. Ltd.
44.	M/s. MILLTEC Machinery Ltd.
45.	M/s. Mitra Industries Pvt. Ltd.
46.	M/s. Mitsui Kinzoku Components India Pvt. Ltd.
47.	M/s. MMTC-PAMP India Pvt. Ltd.
48.	M/s. Munjal Auto Industries Ltd.
49.	M/s. Naga Ltd.
50.	M/s. Nagravision India Pvt. Ltd.
51.	M/s. Okaya Power Pvt. Ltd.
52.	M/s. OptimusPharmaPvt. Ltd.
53.	M/s. Optrix Laboratories Pvt. Ltd.
54.	M/s. P J Margo Pvt. Ltd.
55.	M/s. Paras Defence & Space Technologies Ltd.
56.	M/s. Pellets Pharma Ltd.
57.	M/s. Phoenix Medical System Pvt. Ltd.
58.	M/s. Polycab India Ltd.
59.	M/s. Provimi Animal Nutrition India Pvt. Ltd.
60.	M/s. Rajratan Global Wire Ltd.
61.	M/s. Rapsri Engineering Products Company Ltd.
62.	M/s. Resinova Chemie Ltd.
63.	M/s. Rich Graviss Products Pvt. Ltd.
64.	M/s. Roto Pumps Ltd.





S.N	Company Name
65.	M/s. RusanPharma Ltd.
66.	M/s. Sakar Healthcare Ltd.
67.	M/s. Sanzyme Biologicals Pvt. Ltd.
68.	M/s. Savio India Ltd.
69.	M/s. SCOPE T&M Pvt. Ltd.
70.	M/s. Secure Meters Ltd.
71.	M/s. Shri Bajrang Power and Ispat Ltd.
72.	M/s. Skippers Seil Ltd.
73.	M/s. Snowbell Machines Pvt. Ltd.
74.	M/s. Solara Active Pharma Sciences Ltd.
75.	M/s. Soltex Petro Products Ltd.
76.	M/s. Soni Auto & Allied Industries Ltd.
77.	M/s. Steril-Gene Life Sciences Pvt. Ltd.
78.	M/s. Symbiotech Pharmalab Pvt. Ltd.
79.	M/s. Tatva Chintan Pharma Pvt. Ltd.
80.	M/s. Texcity Biosciences Pvt. Ltd.
81.	M/s. Themis Medicare Ltd.
82.	M/s. Theon Pharmaceuticals Ltd.
83.	M/s. THINQ Pharma-CRO Ltd.
84.	M/s. Tierra Agrotech Pvt. Ltd.
85.	M/s. Tierra Seed Sciences Pvt. Ltd.
86.	M/s. TOYO Springs Ltd.
87.	M/s. Trans ACNR Solutions Pvt. Ltd.
88.	M/s. Universal Speciality Chemicals Pvt. Ltd.
89.	M/s. Veejay Lakshmi Engineering Work Ltd.
90.	M/s. VOXO Pigments and Chemicals Pvt. Ltd.
91.	M/s. Voxtur Bio Ltd.
92.	M/s. VVDN Technologies Pvt. Ltd.
93.	M/s. Yansefu Inks and Coating Pvt. Ltd.



## ANNEXURE - 9

### DETAILS OF PROJECTS SUPPORTED UNDER PROMOTING INNOVATIONS IN INDIVIDUALS, START-UPS and MSMEs (PRISM)

[During the year 2019-2020]

Sl. No.	Name of the Project
PRISM Phase I /Phase II	
i.	Vermiwash from Bio-waste used as a Bio-pesticides as well as bio-fertilizers
ii.	Novel Automatic Energy Monitoring Device with Wirelessly Connected Multiple Mini unit
iii.	IoT based Affordable Cattle Monitoring System (working prototypes) for empowerment of Indian Farmers
iv.	Development of Working Model for Highly Miniaturized process Intensified Distillation Unit
v.	Modelling and fabrication of Security Gadget for Tirumala Pilgrims
vi.	Design and fabrication of Overdrive Enhancer for Four Wheeler
vii.	Thermal insulation, Fire Protection Materials and process of their Development
viii.	Development of Biomarkers based diagnosis kit for the diagnosis of Acute Respiratory Distress Syndrome (ARDS)
ix.	Design, development, fabrication, testing and validation of a 1000W calibration grade solid state power source with multiple unit synchronizing & IoT capabilities
x.	Count Cap : A small mechanized bottle's cap, providing features of direct measuring, controlling and pre-setting of fluid amount which passes through it
xi.	Safety locking device with emergency caller and recorder fixed on a garment
xii.	Development of a novel cell therapeutic product for the treatment of Diabetic foot ulcers and other non-healing wounds to prevent amputations
xiii.	Energy efficient Smart Transformer
xiv.	Power assisted Cement Bag Loader
xv.	Development of biochar based formulation and preparation for cattle feed supplement
xvi.	Flexi Datun
xvii.	Flexcrutch : Flexure and Kinetic Shape based crutches for enhanced mobility and reduced energy consumption
xviii.	Development of UAV Avionics for Drone Delivery - BVLOS Operation
xix.	Compact sand water separator for submersible & hand pumps
xx.	Breathable system for Boot (Footwear)
xxi.	Casil-O-Scope - the affordable & portable eye examining device
xxii.	Versatile hydraulic jack for rapid tyre change and maintenance
xxiii.	Light weight Portable Folding Stool
xxiv.	Development of Bi-Gender Electromagnetic Machine

**DETAILS OF COMPLETED PROJECTS SUPPORTED UNDER PROMOTING INNOVATIONS IN INDIVIDUALS, START-UPS and MSMEs (PRISM)**

Completed Projects during the year 2019-2020

Sl. No.	Name of the Project
PRISM Phase I /Phase II	
i.	Design and development of Compact, Low-cost Paper Carry Bag Making Machine
ii.	Artificial human-skin as an alternative to animal model for drug and cosmetic testing
iii.	Development of a Novel Animal Free reagent based prototype Blood Test Kit for Early Heart Attack Diagnosis
iv.	Solar Powered Farm Level Cold Storage with battery-less refrigeration and thermal storage [Phase-II]
v.	Effective & preventive prosthesis for treatment of multiple neck ailments
vi.	Solar operated Micro Irrigation Applicator
vii.	A prototype of solar connected new hybrid MLI with minimum number of switches using EAC switching technique
viii.	Solar Compass - An Accurate Drawing Aid
ix.	Development of Bio-degradable and compostable sapling bags and trays using agricultural wastes
x.	Development of Pedal Boat based Water Cleansing mechanisms
xi.	Low power portable Muga & Eri spinning machine
xii.	A mechanical powered transmission device
xiii.	Smart Nest Management system for small scale business in rural areas



## CUMULATIVE LIST OF TDDP/ PATSER PROJECTS COMMERCIALIZED SO FAR

S. No.	Company	Project title
1	Abilities India Pistons & Ring Limited, New Delhi	Development of Small Size Pistons for Two Stroke Engines by High Pressure Die Casting Process
2	ACE Designers Pvt. Ltd., Bengaluru	PC Based CNC System
3	Aesthetic Technologies Pvt. Ltd., Kolkata	Dev. of an Interactive Multimedia Package for Intellectual Property Rights Training
4	Aishwaraya Telecom Pvt. Ltd., Hyderabad	Design & Development of Optical Power Meter (Type A & B) and Optical Talk Set
5	Aishwaraya Telecom Pvt. Ltd., Hyderabad	Hand Held Optical Test Equipments (Optical Power Meter, Optical Light Source 1310/1550NM, and Fiber Identifier)
6	Andrew Yule & Co. Ltd., Kolkata	Dev. of Rough Top Conveyor Belting
7	Anu's Lab Ltd., Hyderabad	Development of process for manufacture of 1-Bromo-3-chloropropane (B.C.P.) and 1-3-dibromo Propane (D.B.P.) in pilot plant
8	Arch Pharmalabs Ltd., Mumbai	Scale up Studies for Polymorphic Form-I of ClopidogrelBisulphate Process
9	Ardee Technologies Pvt. Ltd. (Formerly Ardee Business Services Pvt. Ltd.), Vishakhapattanam	Dev. of a Mobile, Four Channel Modular, RAMDARS System for Dry Beneficiation of Coal.
10	Ardee Technologies Pvt. Ltd. (Formerly Ardee Business Services Pvt. Ltd.), Vishakhapattanam	Development of Higher Dimension Aluminum Granules Coded Wire along with Complete High speed Wire Feeder
11	Ardee Technologies Pvt. Ltd. (Formerly Ardee Business Services Pvt. Ltd.), Vishakhapattanam	Manufacture of Magnesium & Calcium Metal Power
12	Aron Universal Limited, Bengaluru	Bench and pilot Scale process Development for UV Reflective Security Inks and Pigments (UVRIP)
13	ATCOM Technologies Ltd., Mumbai	Dev. of Microbalance of 200 gm. Capacity with 1 mg. Accuracy
14	BelOptronics Devices Ltd., Pune	Development of High Sensitivity Photo Cathode for 18mm SUPERGEN Image Intensifier Tubes
15	Bharat Earth Movers Ltd. (BEML), Bengaluru	Dev. of Crankshaft for Engines by Casting and machining process



S. No.	Company	Project title
16	Bharat Earth Movers Ltd. (BEML), Bengaluru	Upgradation of 50 T Dumper 200 HP Front end loader
17	Biocon Ltd., Bengaluru	Glargin Process Improvement
18	Celestial Labs Ltd., Hyderabad	Development of Toxicity Prediction Module and Integration with CELSUITE - A Computer Aided Drug Design Tool
19	Central Electronics Ltd., Sahibabad	Digital Axle Counter for Railway Signaling
20	Delta Agro Chemicals Ltd., Krishna	Dev.of process for manufacture of Furfural Alcohol by Hydrogenation of Furfural
21	Dolphin Industrial Co-operative Society Ltd., Vizianajaram	Glazing of terra-cotta Clay Products
22	Eddy Current Controls Ltd., Kerala	Development of 90KW Brushless Eddy Current Clutch Gear Unit for Radiator Cooling fans in diesel electric locomotives of the Indian Railways.
23	ELICO Ltd., Hyderabad	Development of Indigenous development of FT-IR Spectrophotometer
24	Elkay Chemicals Limited, Pune	Development of Next Generation Amino Silicone based on Hydrosilation Technology
25	Encon Thermal Engineers (P) Ltd., Faridabad	Dev. of Technology for Design and Manufacture of Improved Industrial Natural Gas Burners
26	Enercon Systems Pvt. Ltd., Bengaluru	Development of Centralised Electrical Energy Management System
27	Engineers India Ltd. (EIL), New Delhi	Development of Membrane Technology for Natural Gas Separation
28	Genus Power Infrastructure Ltd., Jaipur	Smart Closed Loop Energy Management Solution
29	Gland Pharma Ltd., Hyderabad	Hyaluronic Acid and Formulation
30	Goldstone Teleservices Limited, Secundrabad	Designing and developing the technology for manufacturing of EHV Composite Insulator for application in 132KV, 22KV & 400KV electric power T&D line.
31	Gujarat Mineral and Dev. Corporation	Dev. of Column Flotation Technology
32	GujaratNarmadaValley Fertilizers Co.Ltd., Bharuch	Dev.and Demo. of Liquid Phase Oxidation Process for Hydrogen Sulfide Removal
33	Haryana Leather Chemicals Ltd., Haryana	Technology Development and Demonstration for application of Cross Linkables Aqueous Aliphatic Polyurethane Dispersions for Leather and Shoe Finishing



S. No.	Company	Project title
34	Haryana Leather Chemicals Ltd., Jind	Development of technology for polymeric fatliquors for upholstery leather
35	HERO Cycles Ltd., Ludhiana	Design, Development, Installation and Commissioning of 6-Hi Cold Rolling Mill
36	Hexagon Product Development Pvt. Ltd., Vadodara	Development of Prototype of 3-dimensional Mixer
37	Hindustan Zinc Ltd., Udaipur	Extraction of Cobalt to Extract Copper Sulphate
38	Hi-Tech Robotic Systemz Ltd., Bhiwadi	Smarter Material Handling Automated Guided Vehicles (AGVs)
39	IBP Co. Ltd., Gurgaon	Detonating Cord for Shaped Charges
40	Innovation Communications Systems Ltd., Hyderabad	Development of Interactive Voice Response System With Multilingual Capability
41	Insecticides (India) Limited, Bhiwadi	A new approach to synthesis of an import substitute 3-methyl-N-nitroimino perhydro-1,3,5-oxadiazine (MNIO), an intermediate for the manufacture of Thiamethozam.
42	Intas Pharmaceuticals Ltd., Ahmedabad	Development of Endoxifen as a new efficacious and safe therapeutic agent for the treatment of breast cancer
43	JSL Industries Ltd., Anand	Dev. of Air Circuit Breaker
44	Klas Technology Ventures Ltd., Bengaluru	Research & Development of Aluminium Cylinders for Liquefied Gases for Domestic, Automotive Applications
45	Lifecare Innovations Pvt. Ltd., New Delhi	Liposomal Amphotericin-B
46	Litex Electricals Ltd., Pune	Laser Pumping Lamps
47	The Maharashtra State Seeds Corporation Ltd., Mumbai	Design, Development and Fabrication of Mini Dry Gas Cotton Seed Delinting Plant (0.5 TPH Capacity)
48	Maini Materials Movement Pvt. Ltd., Bengaluru	Development of In-plant Material Handling Equipments
49	MECPRO Heavy Engineering Ltd., New Delhi	Demonstration of an Efficient Solvent Extraction Plant & Technology with the Vent Air Cracking system
50	MECPRO Heavy Engineering Ltd., New Delhi	Development and Demonstration of Eco-friendly and Efficient Edible Oil Refining technology of Twin Bleaching system and Deacidification-cum-Deodorization System



S. No.	Company	Project title
51	MIC Electronics Ltd., Hyderabad	Development of Fraud Management and Control Centre (FMCC)
52	Minda Industries Ltd., Delhi	Development of Auto Electrical Switches using Rapid Prototyping Facility of I.I.Sc.
53	Minda Industries Ltd., Delhi	Innovative electronic control system for PNG (Pipeline Natural Gas) Fueled Stationary Engine.
54	Mishra Dhatu Nigam Ltd., Hyderabad	Development of Technology for Welding Molybdenum Coils to make coils in single coil weight of 20 kgs.
55	Mishra Dhatu Nigam Ltd., Hyderabad	Development of Technology for producing Wires With Superior Surface Finish employing Wet Drawing Technique
56	NALCO, Bhuvneshwar	Dev. of Technology at Pilot Scale Production of Special Grade Alumina
57	NatcoPharma Ltd., Hyderabad	Dev. of Anaerobic Reactor System for Pharmaceutical waste at pilot plant level
58	NED Energy Ltd., Bangaluru	Development of High Energy Density Valve Regulated Lead Acid Batteries
59	Neuland Laboratories Ltd., Hyderabad	Innovative process development for the manufacture of peptide APIs
60	Nirmal Seeds Pvt. Ltd., Jalgaon	Development of novel Biopesticides from antagonistic microbes Bacillus subtilis and Trichoderma viride using Dextrose as a Carrier
61	Ogene system India P. Ltd., Hyderabad	Nano Labelled DNA/RNA compounds
62	Organic Coatings Ltd., Mumbai	Development of (I) Water-based flexo inks used for alscorgent stock (craft paper) and Coated Stock (aat paper) (ii) U.V. radiation curing inks used for coated stock and non-alsarlentufistrates such as PVC Polyester etc.
63	Oriental Engg. Works Pvt. Ltd., Yamunanagar	Solid Handling Fluid Transfer Pump
64	Pan India Electromech Pvt. Ltd., Gurgaon	Development and Demonstration of Complete Automated Solution for Hydrography
65	Pennwalt Ltd., Mumbai	Development of Tech. for coating of Chemical process equmt. with fluoropolymers and other high performance polymeric products.



S. No.	Company	Project title
66	Poona Health Services Ltd., Pune	Development of Implants for Knee Joints
67	Praj Industries Ltd., Pune	Development of Energy Efficient Pilot Ring Dryer
68	Pricol Limited, Coimbatore	Design and Development of Capacitance Type Fuel Level Sensor for Flexi Fuels
69	PriyaKlay Pvt. Ltd., New Delhi	Development of Technology, Equipment and related "Product(s)" for Production of Stone Ware/ Vitrified Clay Pipes and other Pipes of other materials, made/ produced as a result of this Project having large Diameters of 600 mm to 1000 mm and above and length
70	Punjab Chemicals & Pharmaceuticals Ltd., Delhi	Development of process for the manufacture of Ethyl 2(2-aminothiazol-4-yl)-2-methoxyiminoacetate and 2-formylamino-4-thiazole acetic acid ethyl ester in pilot plant
71	Pure Tech India, Trichy	Liquid Coolant Recovery Systems
72	Radiant Cables Pvt. Ltd., Hyderabad	Development of (a) Low loss RF cables for higher frequency above 10GHZ,(b) Data Bus cable with fire survival, low capacitance dielectric properties and © Laser marked loom assemblies.
73	Rajasthan Electronics & Instruments Limited	Development of small PV-Wind Hybrid power plant for rural application
74	Rishabh Instruments Pvt. Ltd., Mumbai	Design, development & manufacture of (i) 5 3/4 digit multimeter & (ii) 6 3/4 digit multimeters
75	RishangKeishing Foundation for Management of Tribal Areas, New Delhi	Ginger Oil
76	Sai Life Sciences Limited (formerly Sai Advantium Pharma Limited), Hyderabad	Manufacture of Corey's Lactone and Prostanoids: Iloprost, Lubiprostone and Travoprost
77	Sami Labs Limited, Bengaluru	Development and Pilot Plant Trials Towards Commercialisation of two Products, namely (I) A pentapeptide with a Natural Triterpenoid Conjugate (ii) Extraction of Pterostilbebe from PterocarpusMarsupium& Conversion to Resveratrol





S. No.	Company	Project title
78	Sami Labs Limited, Bengaluru	Optimization and Pilot Plant Trials Towards Commercialisation of standardized Colcynthin extract from the medicinal plant "Citrulluscolocynthin"
79	Select Packaging Machines Ltd., Thane	Special Blister Packaging Machines/Form Fill-seal Machine
80	Sequent Scientific Ltd., Thane	Development of Nitroscanate
81	Sequent Scientific Ltd., Thane	Development of Dorzolamide HCl
82	SM Telesys Ltd (SMTL), Noida	Dev. of Two Line Indian Language Multilingual Pager (ILP)
83	Solaris Chemtech Ltd. (formerly BILT Chemicals), Mumbai	Dev. and demo. of Technology for the manu. of Tetra Bromo Bisphenol-A (TBBA) on a pilot plant level
84	Som Shiva (Impex) Ltd., Ahmedabad	New Process Development for Special Elastomer compound
85	Sonodyne Technologies Pvt. Ltd., Kolkata	DSP Based High-end professional Audio Speakers
86	Steel Strips Wheel Ltd., Chandigarh	Technology Development and Demonstration of Improved Manufacturing Process for Automotive Wheel Discs
87	Sundaram Clayton Limited, Chennai	Development of Magnesium alloy pressure die castings for automotive applications
88	T. Stanes & Company Ltd., Coimbatore	Establishing and Producing bio Control Agents on Pilot Plant Scale
89	T. Stanes and Company Limited, Coimbatore	Development of Biofertilizers (Emulsifiable concentrate) for Nutrient Management of Agricultural Crops
90	T. Stanes and Company Ltd., Coimbatore	Dev. of technology for manufacture of Digested Organic Supplement (DORs)
91	Tejas Networks Limited, Bengaluru	Development of LTD Macro eNodeB Base Stations
92	Transasia Bio-Medicals Ltd., Mumbai	Fully automated high speed blood chemistry analyser for through put of around 1000 tests/hour
93	Tropilite Foods Pvt. Ltd., Gwalior	Upscaling and commercial production of Lactic Acid Bacteria Starter culture for Yogurt/Curd production



S. No.	Company	Project title
94	Uday Computer Aided Manufacturing (P) Ltd, Bengaluru	Develop and demonstrate the Large Size CNC Rotary Table 2500 x 2500 with Translation Movement - Model URH - SQ 2500 - X Cance
95	Uniproducts (India) Ltd.	Development of UNI-Density Insulator for Vehicles
96	United Telecom Ltd., Bengaluru	Asymmetric Digital Subscriber Line (ADSL) System
97	United Telecom Ltd., Bengaluru	Development of AAM (ATM Access Multiplexer)
98	VINS Biproducts Ltd., Hyderabad	Purification of Gas Gangrene Causing Clostridium Toxins and Development of Monovalent and Polyvalent Antitoxins
99	Zen Technologies Ltd., Hyderabad	Design and Development of 6 DoF Electrical Motion Platform
100	Zen Technologies Ltd., Hyderabad	Interactive Small Arms Training Simulator (ISAT)
101	Zim Laboratories Ltd., Nagpur	Development and demonstration of technology to manufacture a new dosage form namely - Oral Thin Films



## CSIR Establishments

### BIOLOGICAL SCIENCE

CSIR-CCMB	Centre for Cellular and Molecular Biology, Hyderabad
CSIR-CDRI	Central Drug Research Institute, Lucknow
CSIR-CFTRI	Central Food Technological Research Institute, Mysore
CSIR-CIMAP	Central Institute of Medicinal & Aromatic Plants, Lucknow
CSIR-IGIB	Institute of Genomics & Integrative Biology, Delhi
CSIR-IHBT	Institute of Himalayan Bioresource Technology, Palampur
CSIR-IICB	Indian Institute of Chemical Biology, Kolkata
CSIR-IIIM	Indian Institute of Integrative Medicine, Jammu
CSIR-IMTECH	Institute of Microbial Technology, Chandigarh
CSIR-IITR	Indian Institute of Toxicology Research, Lucknow
CSIR-NBRI	National Botanical Research Institute, Lucknow

### CHEMICAL SCIENCES

CSIR-CLRI	Central Leather Research Institute, Chennai
CSIR-CECRI	Central Electrochemical Research Institute, Karaikudi
CSIR-CSMCRI	Central Salt & Marine Chemicals Research Institute, Bhavnagar
CSIR-CIMFR	Central Institute of Mining & Fuel Research, Dhanbad
CSIR-IICT	Indian Institute of Chemical Technology, Hyderabad
CSIR-IIP	Indian Institute of Petroleum, Dehradun
CSIR-NCL	National Chemical Laboratory, Pune
CSIR-NEIST	North-East Institute of Science and Technology, Jorhat
CSIR-NIIST	National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram

### ENGINEERING SCIENCES

CSIR-AMPRI	Advanced Materials and Processes Research Institute, Bhopal
CSIR-CBRI	Central Building Research Institute, Roorkee
CSIR-CGCRI	Central Glass and Ceramic Research Institute, Kolkata
CSIR-CMERI	Central Mechanical Engineering Research Institute, Durgapur
CSIR-CRRI	Central Road Research Institute, New Delhi
CSIR-IMMT	Institute of Minerals and Materials Technology, Bhubaneswar
CSIR-NAL	National Aerospace Laboratories, Bengaluru
CSIR-NEERI	National Environmental Engineering Research Institute, Nagpur



CSIR-NML	National Metallurgical Laboratory, Jamshedpur
CSIR-SERC	Structural Engineering Research Centre, Chennai

### INFORMATION SCIENCES

CSIR-NISCAIR	National Institute of Science Communication and Information Resources , New Delhi
CSIR-NISTADS	National Institute of Science Technology and Development Studies, New Delhi
CSIR-4-PI	Fourth Paradigm Institute, Bengaluru

### PHYSICAL SCIENCES

CSIR-CEERI	Central Electronics Engineering Research Institute, Pilani
CSIR-CSIO	Central Scientific Instruments Organisation, Chandigarh
CSIR-NGRI	National Geophysical Research Institute, Hyderabad
CSIR-NIO	National Institute of Oceanography, Goa
CSIR-NPL	National Physical Laboratory, New Delhi

### Units

CSIR-HRDC	Human Resource Development Centre, Ghaziabad
CSIR-TKDL	Traditional Knowledge Digital Library, Ghaziabad
CSIR-URDIP	Unit for Research and Development of Information Products, Pune
CSIR-OSDD	Open Source Drug Delivery, New Delhi
CSIR-TRISUTRA	Translational Research and Innovative Science through Ayurgenomics, New Delhi



## ANNEXURE - 13

### PROCESSES ASSIGNED TO NRDC BY INSTITUTIONS ( Nos.109)

#### **Centre for Indian Bamboo Resources and Technology, New Delhi**

- Development and standardization of Technologies for Extraction and Value Addition of Fibers of Himalyan Nettle (Dans Kandali)
- Bamboo Fiber
- Bamboo tea with stevia, with lemon grass, with mulberry leaves
- Bamboo Cream (anti-ageing)
- Bamboo Sanitary Napkin

#### **CSIR-IHBT, Palampur**

- Developing L-Asparaginase with low glutaminase activity for therapeutic applications
- Technology for 4-substituted cyclohexane-1,3-dione Synthesis
- Technology for Preparation of Tea Wine

#### **ICAR-Indian Institute of Spices Research (IISR), Kozhikode**

- A novel method of storing and delivering PGPR / microbes through biocapsule
- A seed coating composition and a process for its preparation
- A micronutrient composition for ginger and a process for its preparation (for soils with pH above 7)
- A micronutrient composition for ginger and a process for its preparation (for soils with pH below 7)
- A micronutrient composition for turmeric and a process for its preparation (for soils with pH above 7)
- A micronutrient composition for turmeric

and a process for its preparation (for soils with pH below 7)

- A micronutrient composition for black pepper and a process for its preparation
- A micronutrient composition for cardamom and a process for its preparation
- *Trichoderma harzianum*, a biocontrol agent against *Phytophthora* foot rot
- *Pochonia chlamydosporia*, a biocontrol agent against nematodes
- *Pochonia chlamydosporia* liquid formulation
- PGPR microbial consortium for growth promotion in black pepper
- PGPR talc formulation for ginger
- PGPR talc formulation for seed spices
- Zinc solubilizing PGPR for soil drenching

#### **IOCL-R&D, Faridabad**

- A process for the removal of metals from vegetable oils & animal fats
- Multi utility solar led lighting device
- Novel catalyst composition for biodiesel production and a process for producing biodiesel and the product thereof
- A modified Giant Impedance (GMI) based sensing device for detection of carburisation in austenitic stainless steel
- A catalyst composition for transesterification of originally/naturally derived oils and fats to produce alkyl esters and process for preparing the same

#### **Lovely Profesional University**

- A drilling machine and a method of drilling
- A plug guage
- A fitness bracelet



- Method of preventing baggage theft and facilitating hassle free collection of baggage at airports

### **National Institute of Ocean Technology (NIOT)**

- Robocoastal observer
- Remotely Operated Vehicle (ROV)
- Wireless Expandable Bathythermograph Conductivity Temperature and Depth Profile System (WXCTD)
- Drifter Buoy System (DBS)
- Autonomous Underwater Profiling Drifter for 200m water depth
- Deep Water Moored Ocean Buoy System (Deep Ocean Moored Data Buoy System)
- Moored Data Buoy System (MDBS)
- Robo Boat Technology (RBT)
- Multiplex PCR detection kit for detecting virulent genes of *Enterococcus faecalis* in water and seafood.
- Process for the production of Lutein from marine microalgae
- Pharma-coactive nutrient and a process of production thereof from marine algae
- A Microalgal harvesting system for separating and concentrating marine microalgae biomass from culture water.

### **S. N. Bose National Centre for Basic Sciences**

- A method and system for non-invasive quantitative estimation of Billirubin in human body
- A method and system for non-invasive quantitative estimation of Haemoglobin in human body
- A method and system for non-invasive quantitative estimation of Oxygen content in human body

- Non-invasive system to detect hyperbilirubinemia

### **Tejpur Univsity**

- Catharanthus roseus leaf extract, method of producing Catharanthus roseus extract, and obesity improving agent.
- Mechanism for enhancing stability in female bicycle on sudden braking by tilting saddle nose automatically.
- Mechanism for enhancing stability of bicycle by steering back handlebar automatically.
- Development of a continuous jaggery making machine.
- Magnetic secondary nanostructure as contrast agent for Magnetic resonance imaging
- A portable optical fiber instrument for instant petrol purity detection
- Designed 2d graphitic sheet for viscous oil removal using magnet
- Integrated and automated set up for preparation and vending of panipuri
- Toxin-epitope based detection of species-specific snake envenomation
- Synthetic anticoagulant peptides derived from *Naja naja* snake venom
- A smokeless multifunctional and multipot solid fuel stove
- Magnetic secondary nanostructure as contrast agent for Magnetic resonance imaging
- Selective para-hydroxylation of substituted aromatic hydrocarbons using H<sub>2</sub>O<sub>2</sub> catalyzed by waterborne hyperbranched polyurethane/carbon quantum dot
- Smartphone based system for detection and measurement of chemical and



biological species in liquids

- A Two Way Ratchet
- Intelligent Helmet
- Novel Soil Conditioners
- Casein Nanoparticles for Colon Targeted Controlled Delivery of Biologically Active Agents in Foods
- Microwave mediated processing of turmeric
- Anticoagulant actives and synergistic anticoagulant composition and method of producing the same
- A Synthetic hyperbranched epoxy surgical sealant and a process for preparation thereof.
- Nanocatalyst for bio oil production
- Mesoporous secondary nanostructures as multifunctional heavy metal scavenger
- A tough synthetic low dielectric hyperbranched epoxy thermoset and a process of preparation thereof.
- Multifunctional nanoparticles, methods of synthesis thereof, and methods of biomedical uses thereof.
- Eco friendly dry chilli spray from Bhot Jalakia of Assam
- Digital Occupancy Meter for Commercial Passenger Vehicles
- Single step process for synthesis of polyaniline nanofiber reinforced polymer nano composites
- Vehicle on board alignment detection and correction system (For Mac Pherson and Double Wishbone type)
- A Reduced Size Linearly Tapered 3dB (Half Power Splitter) Multimode Interference (MMI) Coupler

**TRIFED-Birla Institute Of Technology,**

**Mesra, Jharkhand (Implementing Institution)**

- A personal care compositions (such as shaving cream, cold cream, sunscreen cream and liquid soap) of pongamia seed oil, process for preparing the same and method of use.

**TRIFED-Shriram Institute For Industrial Research, Delhi (Implementing Institution)**

- Sal Leaves Extract based Aqueous Degreasing and Cleaning Formulation

**TRIFED-IIT, Delhi**

- Nutrabeverage from Mahua flower blending with Guava, Pomegranate, Mango etc
- Candy from Mahua and Tamarind
- Chutney from Mahua and Tamarind
- Squash from Mahua, Tamarind and Amla

**CSIR-Central Mechanical Engineering Research Institute**

- Ginger Processing Technology
- Cotton Picking Head
- Multi-Fab Micro Fabrication Machine Technology
- 12 HP Krishishakti Tractor
- Intelligent and Powered Wheelchair
- Mobile Bridge Inspection Unit (MBIU)
- Scaled-up graphite oxide production technology starting from natural flake graphite
- Scaled-up Technology for Graphite Oxide Production from Natural Graphite
- 20kW Grid Interactive Solar Inverter

**CSIR-Central Food Technological Research Institute**

- Bioactive Molecular Rich Green Coffee Concentrate



- Foods for Diabetics
  - Bioactive Molecular Rich Green Coffee Concentrate
  - NutraChikki with Added Spirulina
  - A Process for Low Glycemic Index Noodles
  - A Process for Gluten Free Bakery Products
  - Low GI Beverage for Diabetics
- CSIR - Central Scientific Instruments Organisation**
- Process Technology for Separation of Phosphor Material from CFL Waste/ Recycling of Waste CFLs and Tubelights
  - Industrial Energy Management System based on LonWorks Technology
  - Industrial Energy Management System based on MODBUS Technology
  - Induction Motor Efficiency Monitoring System (IMEMS)
  - Pump Efficiency Monitoring System (PEMS)
  - Finger Gesture based Control Module for Intelligent Patient Vehicle
  - Exoskeleton Device (ExoD) for Rehabilitation of Mobility Impaired Patients
  - Economical Production of Highly Porous Metal Organic Frameworks (MOF) from Zinc Scrap
  - Development of Patient Specific Orthopaedic & Maxillofacial Implants



**PROCESSES LICENSED DURING 2018-19 BY NRDC ( Nos.22)**

	No.of Parties
<b>Annamalai University</b>	
• Seaweed Extract Fertiliser	1
<b>CSIR-NPL</b>	
• Recycling of Waste Plastic Bags into useful tiles	1
<b>CSIR-SERC, Chennai</b>	
• Geopolymer Blocks	1
<b>CSR&amp;TI (CSB), Berhampore</b>	
• Ghar Sodhan - a room disinfectant for disinfecting silkworm rearing house and appliances	1
<b>CSR&amp;TI (CSB), Mysuru</b>	
• Amruth - an eco friendly formulation for control of silk worm Grassier and Flacherie Diseases	1
• Powder duster	1
<b>DRDE</b>	
• Test kit for microbiological quality of drinking water	1
<b>NIOT Chennai</b>	
• Unmanned Remotely Operated Vehicle (ROV)	1
• Robocoastal observer	1
• Wireless expandable Bathythermograph conductivity temperature and depth profile system	2
• Ocean Drifter Buoy with INSAT communication	2
<b>NLC, Neyveli</b>	
• Manufacture of Potassium Humate from Lignite, Liquid Product of 2 to 4% concentration	1
<b>UAS, Bengaluru</b>	
• Instant Ragi Muddemix	1
• Process for the Manufacture of Millet Bread (Loaf Type): from Millets namely, Jowar/Jola, Kodo/Harka, Proso/Baragu, Pearl/Bajra/ Sajje, Little/Same, Foxtail / Navane.	1
<b>VCRC (ICMR)</b>	
• Bti Larvicide	3
<b>S. N. Bose National Centre for Basic Sciences</b>	
• Non-Invasive Kit to detect Haemoglobin	1
• Non-invasive quantitative estimation of Billirubin & oxygen content in human body	1
<b>National Centre for Disease Control (NICD), New Delhi</b>	
• Evaporative cooling apparatus resistant to vector breeding	1

**ANNEXURE - 15****GRANTED PATENTS in 2019-19: APPLICATIONS FILED BY NRDC (Nos.26)**

<b>S No.</b>	<b>Application No</b>	<b>Title of Invention</b>	<b>Granted No</b>	<b>Date of Grant</b>	<b>Applicant</b>
1	2272/CHE/2010 DT. 09.08.2010	A Process of Making Eco-Friendly Fabrics Bamboo and Modl for BodyWear (Beach Wear and Intimate Wear)	296622	08.05.2018	Bangalore University, Bengaluru
2	3010/CHE/2012 DT. 23.07.2012	Zeolite Suitable for Calcium Removal and a Process for Synthesis Thereof	297081	24.05.2018	NLC and IIT, Kharagpur
3	3393/CHE/2012 DT. 16.08.2012	Wood Preservatives and a Method for Protecting Wood and Wood Based Panel Products	297510	07.06.2018	Indian Plywood Industries & Training Research Institute, (IPIRTI), Bengaluru
4	1942/KOL/2008 DT. 01.09.2008	A Process for Dyeing Silk with Lac Dye	297511	07.06.2018	Central Tasar Research and Training Institute, (Central Silk Board) Ranchi
5	639/CHE/2009 DT. 23.03.2009	A Method of Manufacture of Bamboo Mat Ridge Cap, An Eco-Friendly Industrial Product for Roofing Purpose, Compatible with Bamboo Mat Corrugated Sheets	297517	08.06.2018	Indian Plywood Industries & Training Research Institute, (IPIRTI), Bengaluru
6	1440/KOL/2008 DT. 25.08.2008	Muga Cocoon Dryer	297680	15.06.2018	Central Muga Eri Research & Training Institute, (CSB), Jorhat.
7	1343/DEL/2009 DT. 30.06.2009	An Improved Solar Cooker	297732	18.06.2018	Punjab Agricultural University, Ludhiana
8	166/DEL/2010 DT. 28.01.2010	An Apparatus for Sensing Defects..... Boiler Tube	298334	29.06.2018	NTPC, LTD., NOIDA
9	1441/KOL/2008 DT. 25.08.2008	A Muga Weft Yarn Reeling Machine	300573	31.08.2018	Central Muga Eri Research & Training Institute, (CSB), Jorhat.



S No.	Application No	Title of Invention	Granted No	Date of Grant	Applicant
10	1752/DEL/2006 DT. 01.08.2006	A Process for Dyeing Textiles Using Plant Sources Polygonum Bistorata and Cyprus Rotundus	300816	06.09.2018	Punjab Agricultural University, Ludhiana
11	1003/DEL/2005 DT. 21.04.2005	A Process for Producing Modified Reconstituted Sendai Viral Envelope Specific for Drug and/or Gene Delivery to Liver Cells	300602	31.08.2018	National Research Development Corporation, New Delhi
12	2277/CHE/2009 DT. 18.09.2009	A Method of Manufacture of Flooring Tiles From Bamboo Strips	301153	19.09.2018	Indian Plywood Industries Research & Training Institute (IPIRTI)
13	1467/KOL/2008 DT. 27.08.2008	A Device for Preservation and Incubation of Silkworm Seed	301704	29.09.2018	Central Tasar Research and Training Institute (Central Silk Board)
14	1946/DEL/2010 DT. 17.08.2010	SCAR Primers and a Kit for the Authentication of Unani Medicine	303433	26.11.2018	Central Council for Research in Unani Medicine, New Delhi
15	728/CHE/2012 DT. 27.02.2018	A Process for Manufacturing NATA-DE-COCO	303710	29.11.2018	University of Agricultural Sciences, GKVK, Campus, Bangalore
16	1161/KOL/2008 DT. 03.07.2008	A Renewable Template in Supramolecular Chemistry and Nanoscience.	303825	30.11.2018	Shir Braja Gopal, Shaishab Kumar Dinda and P.P. Dey
17	AP/P/2012/ 006604 PCT/ IN2011/000432 DT. 29.06.2011 (Earliest Priority: IN 1292/DEL/2012 DT. 02.07.2010)	Novel Superabsorbents and the Method(s) of Obtaining the Same	AP 4528	07.03.2018	Indian Council of Agricultural Research, New Delhi
18	583/DEL/2010 DT. 12.03.2010	Three Stage Thin film Scraped Surface Heat Exchanger for Continuous Manufacture of Khoa	304816	21.12.2018	Indian Council of Agricultural Research



S No.	Application No	Title of Invention	Granted No	Date of Grant	Applicant
19	1411/DEL/2009 DT. 09.07.2009	A Process for Production of Non-Alcoholic Naturally Carbonated Beverage From Fruit Juice with Yeast	305767	16.01.2019	Punjab Agricultural University, Ludhiana
20	128/DEL/2011 DT. 19.01.2011	A Process for Preparation of Feta Cheese From Buffalo Milk Using Microbial Rennet	305768	16.01.2019	Indian Council of Agricultural Research
21	1939/CHE/2010 DT. 08.07.2010	An Improved Egg Candler	305814	17.01.2019	Tamilnadu Veterinary and Animal Science University, (TANUVAS).
22	0671/DEL/2012 DT. 07.03.2012	Novel Nycrobacterial proteins in urine of TB patients: Identification and serodiagnostic potential	303247		All Indian Institute of Medical Sciences, New Delhi
23	2358/DEL/2012 DT. 31.07.2012	A Solid Catalyst For Biodiesel Production and a Process for its Preparation	309701	22.03.2018	Thapar University, Patiala
24	1068/CHE/2010 DT. 16.04.2010	A Device for Male Annihilation of Bactrocera SP Using Paratheromone	304936	26.12.2018	Indian Institute of Horticultural Research
25	1701/ MUM/2007 DT. 06.09.2007	Stair Climbing and Descending Device	309230	14.03.2019	Riyaz Rafique, Distt., Singrauli, Madhya Pradesh
26	3308/ MUM/2010 DT. 06.12.2010	An Automatic Motor controller for Transferring An Optimum Quantity of a Fluid to a Targetted Area	309927	26.03.2019	HI HILL TECHNOLOGIES



ANNEXURE - 16

**REPRESENTATION OF SCs, STs AND OBCs  
AS ON 31<sup>ST</sup> January, 2020**

Groups	Number of Employees (As on 01-12-2017)					Number of appointments made during the Calendar year										
	Gen.	SCs	STs	OBCs	Total	By Direct Recruitment				By Promotion			By other Methods			
						SCs	STs	OBCs	Total	SCs	STs	Total	SCs	STs	OBCs	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Group A	28*	5	4	39*	-	-	-	-	-	-	-	-	-	-	-	-
Group B	14	4	2	3	23	-	-	-	-	-	-	-	-	-	-	-
Group C	04	8	1	2	15	-	-	-	-	-	-	-	-	-	-	-
Total	46*	17	3	9	77	-	-	-	-	-	-	-	-	-	-	-

Note: 1. DSIR recruits only Scientific and Technical posts.

2. \*Excluding one post of JS (Admn.) which is on notional basis.

**REPRESENTATIONS OF THE PERSONS WITH DISABILITIES  
AS ON 31<sup>ST</sup> January, 2020**

Group	Number of Employees				Direct Recruitment								Promotion							
	Total	VH	HH	OH	No. of Vacancies reserved				No. of Appointments Made				No. of Vacancies reserved				No. of Appointments Made			
					VH	HH	OH	Total	VH	HH	OH	Total	VH	HH	OH	Total	VH	HH	OH	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Group A	39*	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Group B	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Group C	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total	77*	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

\*Excluding one post of JS (Admn.) which is on notional basis.

**EXTRACTS OF AUDIT OBSERVATIONS BY CAG**

Audit paras pertaining to DSIR that appeared in the CAG report of 2019:

Audit Observations on DSIR:

- Nil -

Audit Observations on Autonomous Bodies under DSIR – Council of Scientific & Industrial Research (CSIR)

- Nil -

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**Pendency position of ATNs in respect of Audit observations**

Sl. No.	Year	No. of Paras/PA reports on which ATNs have been submitted to PAC after vetting by Audit	Details of the Paras/PA reports on which ATNs are pending.		
			No. of ATNs not sent by the Ministry even for the first time	No. of ATNs sent but returned with observations and Audit is awaiting their resubmission by the Ministry	No. of ATNs which have been finally vetted by Audit but have not been submitted by the Ministry to PAC
1.	2019	03	0	0	02