

## List of MoU & MoA signed at CSIR-CDRI, Lucknow since 2004

Sl. No.	Title	Industry / Institution	Date of signing
1.	An approach towards identification and synthesis of antigenic epitopes of potential L. donovani Th1 stimulatory proteins for the development of synthetic vaccine against Visceral Leishmaniasis	DBT, New Delhi	14-10-2014
2.	Decoding the ncRNome & Epigenome for Breast Cancer using Big Data analytics on Next Generation Sequencing	IIIT, Allahabad	07-11-2014
3.	Mesenchymal stem cells with a polymeric scaffold may improve cardiac function in a mouse myocardial model	IIT, Madras, Chennai	08-10-2014
4.	Antimicrobial resistance analysis of gram-negative bacterial isolates from Micro-JNMC	Department of Microbiology, Jawaharlal Nehru Medical College under Aligarh Muslim University, Aligarh- 202002 (UP)	23-09-2014
5.	Cybernetics of platelet-rich fibrin (PRF) mediated regulation of human gingival fibroblasts (HGF).	Dept. of Periodontology, Faculty of Dental Sciences, KGMU, Lucknow	16-09-2014
6.	Non-ionizing radiation induced alteration in molecular signaling of ovulation and embryo implantation in mice model	BHU, Varanasi	08-09-2014
7.	Assembly of Iron-Sulphur [Fe-S] Clusters on Critical Proteins of the Plasmodium Apicoplast	DBT, New Delhi	27-08-2014
8.	To designate CTPL as its "Non Exclusive Technology Commercialization Agency" to find a suitable partner for the commercialization of CSIR-CDRI technologies, products and services	CSIR-Tech Pvt. Ltd. Pune	02-06-2014
9.	Phylogenetic studies of Mycobacterium tuberculosis isolates on the basis of insertion sequences, direct repeats and variable number of tandem repeats in pulmonary and extra-pulmonary patients	Dept. of Pulmonary, KGMU, Lucknow	05-08-2014
10.	Role of p53 codon 72 polymorphism on risk of juvenile nasopharyngeal angiofibroma (JNA)	KGMU, Lucknow	18-07-2014
11.	An indigenous amalgamated/single unit alveolar distractor implant system for oral rehabilitation	KGMU, Lucknow	17-07-2014

12.	Mechanistic studies on the anticancer effects of candidate CSIR-CDRI compounds in myeloid leukemia and solid cancers	Dept. of Biochemistry, KGMU, Lucknow	16-07-2014
13.	Design, synthesis and anticancer activities of peptide based molecules	IISc Deemed University, Bangalore	15-07-2014
14.	Design, synthesis and evaluation of antitubercular compounds	National Jalma Institute of Leprosy & other Mycobacterium Diseases, Tajganj, Agra	11-07-2014
15.	Augmentation of effector immune responses using immunomodulators in conjunction with chemotherapy against experimental Visceral Leishmaniasis	KGMU, Lucknow	02-07-2014
16.	Collaborative research program in specific field of mutual interest	BBDU, Lucknow	18-06-2014
17.	Delineation of Rac1 signaling association with PCOS pathophysiology	KGMU, Lucknow	15-04-2014
18.	To find out role of oxidative stress and inflammatory markers in rat cerebral venous sinus thrombosis model	SGPGIMS, Lucknow	03-02-2014
19.	Effect of Curcumin on IGF signaling and memory deficit in aging streptozotocin rats	KGMU, Lucknow	24-01-2014
20.	Nanoparticulate drug delivery for poorly soluble drugs	Amity University, Lucknow	25-02-2014
21.	To provide higher education opportunities for faculty, support staff and students of CSIR-CDRI and LU, promote institutional linkage between CSIR-CDRI & LU to explore other avenues for possible collaboration of mutual interest	Lucknow university, Lucknow	27-02-2014
22.	In silico screening and computational toxicity prediction studies on HIV and SrtA inhibitors	Alagappa University, Tamilnadu	11-03-2014
23.	Centre of excellence on flow cytometry	Beckman Coulter India Pvt. Ltd, New Delhi	01-02-2014
24.	To conduct assay for elucidation of human metabolic pathways using different in-vitro and in-vivo methodologies	Advinus Therapeutics Ltd. Bangalore	21-04-2014
25.	Dereplication study of Indian medicinal plants using MS and LCMS techniques and to compare seasonal variations of bioactive constituents	Dr Y S Parmar University of Horticulture and forestry, Nauni - Solan H.P.	21-11-2013
26.	Solution structure and dynamics Unc-60 ADF/Cofilin proteins of Caenorhabditis elegans	DBT, New Delhi	21-10-2013

27.	Studies on effect of different herbal preparations on wound healing and angiogenesis	DBT, New Delhi	15-07-2013
28.	Validation of the cancer testis biomarker CABYR in cervical squamous cell carcinomas	DBT, New Delhi	03-07-2013
29.	Biotechnological interventions for pharmaceutically valuable compounds from forest resins	DBT, New delhi	10-05-2013
30.	Studies on initial interaction of M. tuberculosis and its host	Dept. of Cell Biology & Immunology, IMTech, Chandigarh	06-05-2014
31.	Polymorphisms in CD14 & IL6 genes associated with chronic periodontitis in smokers and non-smokers	Babu Banarsi Das College of Dental Sciences, BBD University, BBD City, Lucknow	20-05-2014
32.	To promote institutional linkage between CSIR-CDRI and GIPER	Global Institute of Pharmaceutical Education and Research, Kashipur, Uttarakhand	14-11-2013
33.	Functional characterization of genes expressed in Plasmodium pre-erythrocytic stages through genetic manipulation and drug targeting approaches	University of Hyderabad, Hyderabad	05-11-2013
34.	Development of intradermal animal model of visceral leishmaniasis with fluorescent L.donovani: relevance to vaccine development.	MNNIT Allahabad & AIIMS New Delhi	30-09-2013
35.	Investigation on application of innate immune system for the development of novel drug molecules for infectious disease	SRM University, Kattankulathur, Kancheepuram	23-09-2013
36.	To carry out the antifilarial evaluation of compounds synthesized.	Banaras Hindu University, Varanasi.	18-09-2013
37.	To Study the activation of glial cells in chronic hypertension (National initiative on glial cell research in health and disease)	DBT, New Delhi	03-09-2013
38.	Study of brain Insulin/Insulin Receptor in glial cell during neuro inflammation (National Initiative on Glial Cell Research in Health and Disease).	DBT, New Delhi	03-09-2013
39.	Studies to investigate the modulation of inflammatory cytokine(s) mediated effector responses in visceral leishmaniasis.	MNNIT, Allahabad	07-08-2013

40.	To impart training as per CPCSEA and other regulatory authorities for laboratory professionals	National Institute of Animal Welfare, Ballabgarh, Faridabad, Haryana	06-08-2013
41.	Collaborative Research & Development	Panacea Biotech Ltd., New Delhi.	25-07-2013
42.	Structure-function characterization of ADF/cofilin proteins using NMR spectroscopy	Centre of Bio-Medical Research, SGPGIMS, Lucknow	03-07-2013
43.	Design, Synthesis and Development of Aromatic, Hetero aromatic and Glyco-conjugates as Anti therapeutic Agents and Cholinesterase Reactivators	Defence R&D Establishment and Pt. Ravishankar Shukla University, Raipur	24-06-2013
44.	An open label, Single-centre, Two Period, crossover, Drug interaction study to Assess the Effect of Multiple Oral Administration of Cap Memory Sure (150 mg BD) on the Pharmacokinetics, Safety and tolerability of antidiabetic drugs Gliclazide 80mg and Metformin 500mg in Indian patients with Type 2 Diabetes.	KGMU, Lucknow	14-06-2013
45.	Discovery and Development of Novel bone Anabolic agents for Accelerated Fracture Healing	Enem Nostrum Remedies Pvt.Ltd.,Mumbai	21-06-2013
46.	Screening of a series of 4-amino quinoline derivatives for identifying more potent and/or functionally altered ligands	Tufts Medical centre Bostan,MA	28-06-2013
47.	Molecular characterization and epidemiological modeling of antimicrobial resistance at the interface of animal-human-plant pathogen continuum	DBT, New Delhi	01-05-2013
48.	Characterization of Novel CTA Markers	Dr. R. M. L. Institute of Medical Sciences, Lucknow, KGMU, Lucknow	09-04-13 (received in May 2013)
49.	Development and characterization of novel drug delivery systems for controlled and targeted drug delivery with special reference to leishmaniasis and cancer	Amity Institute of Pharmacy, Lucknow	03-04-2013
50.	Drugs against central body fatness and insulin resistance (high peri / post-menopausal prevalence). (RGYI)	Dr. Jiaur R. Gayen	10-12-2012
51.	Investigation of effect of polysaccharide in modifying leishmanicidal potential of nanoparticulate system bearing chemotherapeutics agent	Dr. Manish K. Chourasia	17-01-2013

52.	Role of E3 ubiquitin ligases in negative regulation of GCSFr signaling: Implication in myeloid leukemia	Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow (Dr. Arun Trivedi)	24-01-2013
53.	To explore avenues for possible collaboration between CSIR-CDRI and ICT	Institute of Chemical Technology, Mumbai	24-11-2012
54.	Association of single Nucleotide Polymorphisms in SERPINE I gene in patients With Chronic Periodontitis	Babu Banarasi Das College of Dental Sciences, Lucknow	30-11-2012
55.	<i>In vitro</i> cytotoxicity evaluation of anti-cancer activity of new natural molecules	KGMU, Lucknow Dr. Balapure	21-11-2012
56.	Evaluation of CSIR-CDRI lead compounds for their role in samples from leukemia patients.	C.S.M Medical University (Now KGMU), Lucknow	31-08-2012
57.	Creating an enabling framework for technological interventions in MSME clusters	Alathur Pharmaceutical Manufacturers Association, Alathur, Kancheepuram	11-10-2012
58.	Exploration of methylenetetrahydrofolate reductase (MTHFR) gene polymorphism as a marker in children afflicted with cerebral palsy in India	Nelson Hospital , Lucknow	31-07-2012
59.	Genomic Study of Leukemic Cancer Patients in India and Prevention by Plant Products	Mahavir Cancer Santhan, Patna	25-08-12
60.	Development of lymphatic targeted nanoparticulate drug delivery system as novel anti-wolbachial combination chemotherapy for the treatment of Lymphatic Filariasis	Jamia Hamdard, New Delhi	25-07-12
61.	Regulation of Pancreastatin: A novel approach to control Diabetes	DBT, New Delhi	29-06-2012
62.	Identification and characterization of uterine-specific blood biomarkers for monitoring uterine receptivity	C.S.M Medical University (Now KGMU), Lucknow	09-04-2012
63.	Nitrous oxide and Cu toxicity	Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow	21-05-2012
64.	Identification of urinary biomarkers for diagnosis, prognosis and follow up of patients with SLE nephritis.	Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow	23-02-2012
65.	Screening of Anti-filarial Compounds	Banaras Hindu University	23-02-2012

66.	To work on chemical fingerprinting of rare piper and other species	Jawaharlal Nehru Tropical Botanic Garden and Research Institute, Palode, Trivandrum	16-02-2012
67.	Significance of promoter polymorphism of interleukin-6, interleukin-8, interleukin-10 and interleukin-18 gene and their circulating levels in risk of ovarian carcinoma in Indian population	C.S.M Medical University (Now KGMU), Lucknow	16-01-2012
68.	Structural analysis of bacterial peptidyl-tRNA hydrolase enzymes and design of high affinity binders.	DBT, New Delhi	13-12-2011
69.	An innovation in distraction osteogenesis for mandibular regeneration using a refined transport distractor.	C.S.M Medical University (Now KGMU), Lucknow	13-10-2011
70.	Exchange of faculty, exchange of graduate students, collaborative search for external funding, Joint research projects and publications and joint conference, workshops and cultural programs.	University of California at San Diego	23-09-2011
71.	Isolation and characterization of antidiabetic secondary metabolites from two selected medicinal plants	C.S.M Medical University (Now KGMU), Lucknow	08-07-2011
72.	The assessment of prenatal exposure of newer antidepressant drug.	Allahabad University	11-07-2011
73.	Effect of Sulphadoxine – pyrimethamine co-administration on pharmacokinetics of $\alpha/\beta$ – Arteether, an Antimalarial agent in healthy male volunteers	C.S.M Medical University (Now KGMU), Lucknow	19-04-2011
74.	Synthesis of biologically potent bisphosphonates	Sri Venkateshwara University Tirupati	23-03-2011
75.	Nanoreservoirs carrying <i>Brugia malayi</i> recombinant proteins as potential vaccine against experimental lymphatic filariasis	Integral University	10-02-2011
76.	“Pharmacological evaluation of Homoeopathic Medicine under Drug Standardization Programme of CCRH	CCRH, New Delhi	02-02-2011
77.	Identification of ER alpha interacting protein from Tamoxifen induced and uninduced MCF7 cells: A mass spectrometry based proteomics approach”	DBT	28-12-2010

78.	Protective immunogenicity of Centrin KO live attenuated <i>Leishmania</i> parasite in the animal models and in the human cells	Institute of Pathology, New Delhi & Institute of Molecular Medicine, New Delhi.	09-12-2010
79.	Study on promoter gene polymorphism of Interleukin-10, Interleukin-18 and assessment of GATA transcriptional factor expression in ovarion carcinoma in North Indian population	C.S.M Medical University (Now KGMU), Lucknow	07-12-2010
80.	Comparative proteomic analysis of human receptive versus non-receptive and defective endometrium	C.S.M Medical University (Now KGMU), Lucknow	03-12-2010
81.	To create centre of excellence in flow cytometry at CDRI by installing new two laser models of BD FACSCalibur	Becton Dickinson India, Pvt, Ltd., New Delhi	24/112010
82.	Acetylcholinesterase and cuticular collagen as potential vaccine targets for human lymphatic filariasis	Madurai Kamaraj University, Madurai	31-08-2010
83.	Cloning and over expression of Th 1 stimulatory Polyproteins Identified through Proteomics for their Prophylactic Potential against Experimental Visceral Leishmaniasis.	Department of Biotechnology New Delhi	13-08-2010
84.	Investigation of molecular mechanisms of antidiabetic action of Swertiamarin and its semi-synthetic derivatives	M.S. University, Baroda	22-06-2010
85.	Chemical biology approach for generation of knowledge base and therapeutics in breast cancer	National Centre for Cell Sciences, Pune	31-05-2010
86.	Molecular and functional characterization of nef gene isolated from HIV-1 patients at different stages of pathogenesis	C.S.M Medical University (Now KGMU), Lucknow	27-05-2010
87.	Development of nanocarrier based Curcumin, Amphotericin B and Curcumin – Amphotericin B combination formulations as immunomodulators and evaluation of their antileishmanial and antifungal efficacy	Institute of Chemical Technology, Mumbai	30-04-2010
88.	To understand the reactivity of formyl group for the Baylis-Hilman reaction in heterocyclic aldehydes	Indian Institute of Technology, Kanpur	26-03-2010
89.	Association of certain genetic factors with susceptibility and severity of periodontal diseases, alveolar bone loss, postcranial BMD and outcome of periodontal therapy in Indian population	Saraswati Dental College & Hospital, Lucknow	23-03-2010

90.	Aggregation studies on <i>Salmon calcitonin</i> in presence of metal ion promoters	Centre of Biomedical Magnetic Resonance, Lucknow	22-02-2010
91.	Impact of adipokene and chemokene gene polymorphism and its protein expression in metabolic syndrome	C.S.M Medical University (Now KGMU), Lucknow	08-12-2009
92.	Regular screening on human samples of infertility/benign prostatic hyperplasia/urinary bladder cancer.	C.S.M Medical University (Now KGMU), Lucknow	12-11-2009
93.	Optimization of anticancer leads	CIMAP Lucknow	27-10-2009
94.	“Development of siRNA therapeutics against myeloid cell infections by pathogens”	Meharry Medical college USA	23-10-2009
95.	Synthesis, Molecular Modeling and Development of ER Dependent anti-cancer Agents	Amity Institute of Pharmacy, AmityUniversity, Lucknow	14-09-2009
96.	Setting of Phase I clinical facility	SGSMC KEM Hospital, Mumbai	27-07-2009
97.	Anti-osteoclastogenic effect of 99/373 and its model of action”.	DBT	02-06-2009
98.	Association of CD36 locus with Type II Diabetes and related atherosclerosis	MHGL/ Lucknow University	19-05-2009
99.	To carry out the Antibacterial activities of samples.	UPDCRC, LKO	17-06-2008
100.	Synthesis of SBC analogs	SatsangRasaishanaMandir, Deoghar	23.08.06
101.	Training & screening of CDRI compounds against Human African Tripanosomiasis (HAT)	Drugs for Neglected Diseases initiative (DNDI), Geneva	17.08.2005
102.	Development of software for DNA Micro-array in diabetes	Connexios Life Sciences, Bangalore	29.10.2004
103.	Development of Software for HTS	Khandari Software, Lucknow	08.06.2004