

Chikkanna Government Arts College, Tirupur – 641 602

3.5.2.1 - Number of functional MoUs with Institutions e-Copies of the MoUs with institution/ industry/corporate houses

A Memorandum of Understanding was signed between Dr. K. B. Rajesh, Associate Professor of Physics, Chikkanna Government Arts College, Tiruppur and Dr. V. Ravi, Associate Professor of Physics on 16 day of August -2017 and was revived in 2023, **for the use of Computational Nano Optics Laboratory Facility at Chikkanna Government arts College, created under SERB Project.** Two students were beneficiaries and the MOU is still continuing.

There is a LOU (Letter of Understanding) With **IRSHA Pune** (one of the three labs in India equipped with biosafety level 3) and Chemistry Department in the **COVID 19 Drug analysis.** Apart from **IRSHA and Chikkanna Governmnt Arts College,** Tiruppur, **A.E.S. College of Arts and Science (AESCAS),** Dharmapuri and **Chitkara College of pharmacy (CCP)** Chandigarh, Punjab was also involved.

We have a functional MoU with **Sports Development Authority of Tamilnadu (SDAT),** Tirupur from the year 2012 onwards, which help the students in their sports activities.

We too have a functional MoU from 2014 onwards, for Yoga with very renowned **Maharishi Manavalakali Manram,** Aliyar with benefits thousands of students every year which trains them physically and mentally.

We have collaboration with **DRDO,** our faculty and students from physics department have undergone training with DRDO unit for their collaborative activities in the previous years.



Signature
PRINCIPAL
Chikkanna Govt. Arts College
Tirupur

Chikkanna Government Arts college, Tiruppur - 641 602

3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship during the year 2022-23

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration	Nature of the activity	Link to the relevant document
1	Computational Nano Optics Laboratory Facility at Chikkanna Government arts College, created under SERB Project	CHIKKANNA GOVERNMENT ARTS COLLEGE, TIRUPPUR	Dr.K.B.RAJESH,	2017-2018 and continuing Revived in 2022-23	6 Years and Continuing	Computational Studies	Document Attached
		GOVERNMENT ARTS COLLEGE, SALEM	Dr.V.RAVI	2017-2018 and continuing Revived in 2022-23	6 Years and Continuing	Computational Studies	
	COVID 19 Drug	Interactive Research School For Health Affairs (IRSHA), Pure, a constituent unit of Bharati Vidyapeeth (deemed to be University)	Dr. A.C. Mishra and Team (IRSHA)	2021-22 and Continuing	2 years and Continuing	In Vitro Covi19- Virus Strain Testing of the synthesised drug	Document attached in
		Chkkanna Governemnt Arts College, College Road, Tiruppur - 641602, Tamilnadu	Dr.N. Sampathkumar and Mr. A.Franklin Ebenazer	2021-22 and Continuing	2 years and Continuing	Drug Synthesis	

2	COVID 19 Drug Analysis	A.E.S. College of Arts and Science (AESCAS), Dharmapuri Affiliated Periyar University, Tamilnadu	Dr Saravanabhavan	2021-22 and Continuing	2 years and Continuing	DFT Studies	Additional Information
		Chitkara College of pharmacy (CCP) Citkara University, Patiala National Highway, Chandigarh -Punjab 140 401,India.	Dr. Vishnu Badwath Nayak	2021-22 and Continuing	2 years and Continuing	Molecular Docking Studies	
3	Sports Training and Games	CHIKKANNA GOVERNMENT ARTS COLLEGE, TIRUPPUR	Mr. T. Rajaram(Physical Director)	2012	Alive	Sports Training and Games	Document Attached
		SDAT(Sport Development Authority of Tamilnadu)	District Sports Officer	2012	Alive	Sports Training and Games	
4	Yoga Teaching and Praticce	CHIKKANNA GOVERNMENT ARTS	Dr. G. Ravindharan	2014	Alive	Yoga Teaching and Praticce	Document Attached
		Maharishi Manavalakali Manram, Aliyar	Maharishi Yoga Teacher	2014	Alive	Yoga Teaching and Praticce	
5	Modelling of acoustic wave devices	CHIKKANNA GOVERNMENT ARTS COLLEGE, TIRUPPUR	Dr. Harash Pandiya	2020	Alive	Modelling of acoustic wave devices	Document Attached
		DRDO (Defence Reseach and Development Organization), Delhi	M. U. Sharma Scientist "G"	2020	Alive	Modelling of acoustic wave devices	

6	Science Training Program	CHIKKANNA GOVERNMENT ARTS COLLEGE, TIRUPPUR	Co-Ordinator- Science Training	19/12/2019	19/12/2019	Science Training Program	Document Attached
		TNSTC (Tamilnadu Science & Technology Centre, Chennai) sponsored One	Co-Ordinator - Tamilnadu Science & Technology	19/12/2019	19/12/2019		
7	SAW Sensor Multi Vapour Generator System Training at SSPL, DRDO, Delhi	CHIKKANNA GOVERNMENT ARTS COLLEGE, TIRUPPUR	Dr. Harash Pandiya	23/06/2018	25/06/2018	SAW Sensor Multi Vapour Generator System Training at SSPL, DRDO, Delhi	Document Attached
		SSPL, DRDO , Delhi	M. U. Sharma Scientist "G"	23/06/2018	25/06/2018		

**MEMORANDUM OF UNDERSTANDING
BETWEEN
Dr.V. RAVI, DEPARTMENT OF PHYSICS, GOVERNMENT ARTS COLLEGE –
SALEM-7
AND
Dr.K.B. RAJESH, DEPARTMENT OF PHYSICS, CHIKKANNA GOVERNMENT
ARTS COLLEGE-TIRUPPUR**

This Memorandum of Understanding (hereinafter referred to as "MoU") made on this 16th day of August -2017.

witnesseth as follows:

RECOGNISING the mutual interest in the fields of research, development, education, training, transfer of technology and dissemination of knowledge on long term non-commercial basis, and also

RECOGNISING the importance of institutes of higher education's role in promoting research collaboration and increased contribution of social development.


HEREBY agree to establish collaboration according to terms and conditions set out in the articles following hereunder.

The words "the two" in the MoU refer to the DR.V.RAVI, GOVERNMENT ARTS COLLEGE, SALEM and Dr.K.B.RAJESH, CHIKKANNA GOVERNMENT ARTS COLLEGE, TIRUPPUR

Field of Co-operation


Co-operation between the two may be established within any field related to science and technology of mutual interest and in particular –

1. Joint research activities, including joint research projects, in fields of mutual interests.
2. Exchange of scientific information, numerical investigations, academic publications, and reports
3. Organization of joint symposia, workshops, lecture and conferences
4. Permitting Research scholars to utilize the Computational Nano optics Laboratory of Chikkanna Government Arts College established under DST-SERB project of Dr.K.B.Rajesh.


(Signature) 16/08/2017

Dr. V. RAJU, B.A., B.M., B.P.H.I., P.H.D.,
Asst Professor in Physics,
Government Arts College,
Salem T.

Date: 16/08/2017


16/08/2017

(Signature)
Dr. K.B. RAJESH

Assistant Professor / Principal Investigator,
DST - SERB YSS Project, Department of Physics,
Chikkanna Government Arts College,
Tirupur, Tamilnadu - 641 602.

Email: kbr@gsmsil.com Mob: +91 99424 60031.

Date: 16/08/2017

LETTER OF UNDERSTANDING (LoU)

BETWEEN

Interactive Research School For Health Affairs (IRSHA), Pune, a constituent unit of Bharati Vidyapeeth (deemed to be University) is dedicated to research and has a well-established high containment, GCLP compliant facility for assessment of viral vaccines and antivirals. The unit has its place of business at Bharati Vidyapeeth Dhankwadi campus, Pune –Satar Road, Katraj, Pune 411043, Maharashtra, India, herein after referred to as “IRSHA”.

and

Chikkanna Government Arts College (CGAC) is to provide quality education, with focus on the learners from the downtrodden sections of society. The department of chemistry serve in the broadest, innovative and most liberal manner towards the advancement of Chemistry through academics, research, and service missions upholding the values and entrepreneurial skills. The college is located at the heart of the dollar city, college road, Tiruppur 641602, Tamilnadu, India, herein after referred to as “CGAC”.

A.E.S. College of Arts and Science (AESCAS) is affiliated Periyar University, herein after referred to as “AESCAS”. The Department of Chemistry A.E.S. College of Arts and Science, krishnagiri provide well platform for both education and research. Currently research is being pursued in a wide spectrum of disciplines.

Chitkara College of pharmacy (CCP) is at the forefront of both education and research in the field of drug discovery and development. We combine hands on experience and creative teaching methods to expose students to contemporary practices and challenges they’ll face as qualified pharmacists and pharmaceutical scientists. We are leading the way in innovative pharmacy and pharmaceutical science education. The campus placed at Citkara University, Patiala National Highway, Chandigarh – Punjab 140 401, India. herein after referred to as “CCP” .

IRSHA, CGAC, AESCAS, and CCP are herein after also referred to individually as the “Party” or collectively as the “parties”.

- **WHEREAS** IRSHA is dedicated to research and has a well-established high containment, GCLP compliant facility for assessment of viral vaccines and antivirals.
- **AND WHEREAS** CGAC is to involve in synthesis, purification and characterization of imidazolo quinoline derivatives.
- **AND WHEREAS** AESCAS will be responsible for theoretical interpretation of the results from the characterization study.

- **AND WHEREAS** CCP will contribute for doing molecular docking studies of newly synthesis quinoline compounds
- **AND WHEREAS** IRSHA is desirous of evaluating Antiviral activity of prospective drug molecules in Therapeutic, Prophylactic and Virucidal Mode.
- **AND WHEREAS** IRSHA both have represented to each other that the parties have the experience, expertise and capability to carry out the required research work and therefore IRSHA, CGAC, AESCAS, and CCP have agreed to enter into an LoU for carrying out collaborative research project on such terms and conditions detailed below;

1. PROJECT DETAILILS:

Project Title:	Antiviral activity assessment of Imidazolo quinoline compounds against SARS-CoV-2 viruses.			
Name of institutes involved	Chikkannna Government Arts College (CGAC)	A.E.S. College of Arts and Science (AESCAS)	Chitkara College of pharmacy (CCP)	Interactive Research School For Health Affairs (IRSHA)
Study Director			-----	Dr A.C. Mishra
Scientific Advisor			-----	Dr. Vidya Arankalle A
Principal Investigator	Dr. N. Sampathkumar	Dr. M. Saravanabhavan	Dr. Vishnu Nayak Badavath	Dr. Sudha Ramkumar Dr. Rashmi Virkar
Project Funding	Own fund	Own fund	Own fund	Intramural

Roles of Collaborators			
Chikkannna Government Arts College (CGAC)	A.E.S. College of Arts and Science (AESCAS)	Chitkara College of pharmacy (CCP)	Interactive Research School For Health Affairs (IRSHA)
Will synthesis, purification and characterization of 7 derivatives of Imidazolo quinoline compounds	will be responsible for theoretical interpretation of the results from the characterization study.	will contribute for doing molecular docking studies of newly synthesis quinoline compounds.	Will performe the antiviral assessment of the 7 NCE's in Prophylactic Therapeutic and virucidal mode

2. PROJECT PROTOCOL:

The details of the project protocol will be mutually designed and will be attached as an annexure I.

3. CONFIDENTIALITY

- 3.1 Either Party may disclose to the other Party either orally or in any recorded medium, information comprising or relating to its / or its affiliates, techniques; schematics; designs; contracts; pricing; ("Confidential Information"). Confidential Information shall include all nonpublic information furnished, disclosed or transmitted regardless of form.
- 3.2 Either Party shall use the Confidential Information solely in furtherance of the actual or potential business relationship between the parties. The parties shall not use the Confidential Information in any way that is directly or indirectly detrimental to the other Party or its subsidiaries or affiliates, and shall not disclose the Confidential Information to any unauthorized third Party.
- 3.3 Parties shall ensure that access to Confidential Information is granted only to those of its employees or agents ("Representatives") who have a demonstrated need to know such information in order to carry out the business purpose of this Agreement.
- 3.4 Each Party and its Representatives will immediately notify the other Party of any use or disclosure of the Confidential Information that is not authorized by this Agreement. Each Party and its Representatives will use its best efforts to assist the other Party in remedying any such unauthorized use or disclosure of the Confidential Information.
- 3.5 Upon written request of either Party, Parties and its Representatives shall promptly return to the other Party all copies of Confidential Information in its possession including, without limitation, all copies of any analyses, compilations, studies or other documents prepared by Receiving Party or its Representatives containing or reflecting any Confidential Information.
- 3.6 No license expressed or implied in the Confidential Information is granted to Recipient other than to use the Confidential Information in the manner and to the extent authorized by this Agreement.

4. Financial Involvement: For the current project that comes under the terms and conditions of this LoU.

- 4.1 Cost for identification, synthesis, purification, processing, storage and transportation to IRSHA of prospective drug molecules [test compound(s)] will be beared by CGAC.
- 4.2 Cost of antiviral activity assessment of the test compound(s) against SARS-CoV-2 virus strain(s) will be beared by IRSHA.
- 4.3 No direct financial assistance (except sharing of reagent / consumable / information / software / documents required for current project if any) will be provided by either party to the other recipient.
- 4.4 If LoU is terminated prior to completion of project by CGAC, without any valid scientific reason, CGAC shall pay to IRSHA the charges incurred for the work that was completed as per the annexure I.
- 4.5 If LoU is terminated by IRSHA prior to completion of the project, IRSHA shall pay the charges incurred for synthesis of test compound(s).
- 4.6 In both 4.4 and 4.5, the party asking for compensation needs to provide in-real financial expenditure details to the party paying.

5. TERM AND TERMINATION of MOU

- 5.1 This agreement shall commence from the date of signing of the LoU by both the signatory authorities ('the Effective Date') and shall remain in force till completion of the project ('the Term of the Agreement'). In case of extension of this project with addition of mutually agreed new objectives, written annexure II shall be prepared with all the technical details. Annexure II will be duly signed by the respective institutional authorities and attached to undersigned LoU prior to execution of additional work. In this case terms agreed under this LoU will be applicable to project work carried out following annexure II.
- 5.2 This LoU may be terminated by mutual written consent at any time upon occurrence of following events:
- (i) The other Party breaches any material term of this LoU and the other Party not remedying the breach within 14 (fourteen) days written notice from the Party notifying them of the breach and seeking corrective action.

6. PUBLICATION and Intellectual Property Rights

The data generated under this LoU belongs to IRSHA, CGAC, AESCAS, and CCP. Any publication including data generated by both the parties or based on data generated by either party must contain appropriate credentials. Authorship or co-authorship and contributory role in the publications must be approved from study director prior to submission.

Patent filing planned prospectively or done retroactively must include appropriate credentials. IRSHA, CGAC, AESCAS, and CCP the parties involved in the current project under this LoU must be part of patent filing and the sole authority for inclusion of credentials persist with respective party's study director.

Any conclusive results/ information/ data generated from current project must be published or used for patent filing immediately after completion of task(s) enlisted in annexure(s) under this LoU.

4. COMMUNICATION ADDRESS

Any notice given as above, will be deemed effective, when received by the addressee if delivered in person, if sent by registered post on acknowledgement receipt. E-mail, WhatsApp and other forms of electronic communication shall not be accepted as valid legal notice by either Party. All communications including invoices shall be sent to

If to IRSHA,	If to CGAC	If to AESCAS --	If to CCP -
Name: Dr. A.C. Mishra Interactive Research School for Health Affairs (IRSHA) Pune Satara Road, Katraj Dhankawadi,	Name: Dr. N. Sampathkumar Address: Assistant professor, Department of Chemistry, Chikkannna Government Arts College,	Name: Dr. M. Saravanabhavan Address: Assistant Professor, Department of Chemistry, A.E.S.	Name: Dr. Vishnu Nayak Badavath Address:

Pune 411043, India Email ID: akhilesh.mishra@bharatividyapeeth.edu acm1750@gmail.com	College Road, Tiruppur. 641602. India. Email ID:natarajansampathkumar@gmail.com	College of Arts and Science, Periyapanamutlu, Anchoor, Krishnagiri-635203. Email ID:drmsbavan@gmail.com	Chitkara College of pharmacy (CCP), Chitkara University, Punjab. 140401. Email ID: vishnu.niper@gmail.com
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5. ENTIRE AGREEMENT

This LoU, represents the entire agreement between IRSHA, and CGAC, AESCAS, CCP supersedes all prior communications, representations either written or oral regarding the project referred in this LoU.

6. AMENDMENT

The Parties to the Agreement may add, delete, amend or alter all or any of the terms and conditions of the Agreement from time to time and such modification & changes shall not be effective until the same is in writing and duly signed by the authorized representatives of both the Parties.

11. COMPLIANCE WITH LAWS

Both Parties agree to comply with all Applicable Laws as they relate to their performance under the Agreement.

IN WITNESS OF THE ABOVE, THE RESPECTIVE PARTIES HAVE SIGNED THIS AGREEMENT ON THE DAY AND DATE FIRST AFOREMENTIONED

IRSHA,	CGAC,	AESCAS,	CCP,
<p><i>(Signature)</i></p> <p>Name: Dr. A.C. Mishra</p> <p>Function: Director</p> <p>Place: Pune, India</p> <p>Date:</p> <p><i>(Circular Stamp: Bharati Vidyapeeth (Deemed to be University) Pune-43. Director Bharati Vidyapeeth (Deemed to be University))</i></p>	<p><i>(Signature)</i> 2.3.2022</p> <p>Name: Dr. N. Sampathkumar</p> <p>Function: Assistant professor</p> <p>Place: Tiruppur, India</p> <p>Date:</p>	<p><i>(Signature)</i> 4.3.2022</p> <p>Name: Dr. M. Saravanabhavan</p> <p>Function: Assistant professor</p> <p>Place: Krishnagiri, India</p> <p>Date:</p> <p><i>(Text: Dr. M. SARAVANABHAVAN, Ph.D., ASSISTANT PROFESSOR, Department of Chemistry, A.E.S. ARTS & SCIENCE COLLEGE, Periyapanamuttu, Anchal, Po, Krishnagiri-635 203.)</i></p>	<p><i>(Signature)</i> 12/3/22</p> <p>Name: Dr. Vishnu Nayak</p> <p>Function: Assistant professor</p> <p>Place: Punjab</p> <p>Date:</p> <p><i>(Text: B. Vishnu Nayak, Chitkara College of Pharmacy, Chitkara University, Jhansia, Raipur (Pb.))</i></p>

Interactive Research School for Health Affairs (IRSHA)
Pune-Satara Road, Pune - 411 043.



தமிழ்நாடு தமில்நாடு TAMIL NADU

68AA 654690

9225 DISTRICT SPORTS OFFICER,
TIRUPPUR,

V. A.
V. அமிர்தவல்லி
மதுரை மதுரை மதுரை
உரிமம் எண் : 1/1996
திருப்பூர். (தமிழ்நாடு)

28.4.2014

MEMORANDUM OF UNDERSTANDING BETWEEN THE DISTRICT SPORTS OFFICER, TIRUPPUR DISTRICT UNIT AND THE PRINCIPAL, CHIKKANNA GOVERNMENT ARTS COLLEGE, THIRUPPUR.

Memorandum of Understanding entered into on this 10.12.2012 day of _____ between the District Sports Officer, Thiruppur District Unit (SDAT) (hereinafter called "Party of the 1st Part" which expression shall where the context so permits, include its successors in office and assigns) of the ONE PART, AND the Principal, Chikkanna Government Arts College, Thiruppur (hereinafter called "Party of the 2nd Part" which expression shall wherever the context so permits include the successors-in-office and assigns of the OTHER PART.



சிவனார்,
தந்தவகுலாசி வேதாந்தி மகரிஷி

தீருப்பூர் சாமுண்டிபுரம் மனவளக்கலை மன்ற அறிக்கட்டளை
(யோகா மற்றும் ஒன்மீக கல்வி மையம்)

TIRUPPUR SAMUNDIPURAM MANAVALAKKALAI MANDRA ARAKKATTALAI
(An Institute for Yoga and Spiritual Education)

உலக சமுதாய சேவா சங்கத்துடன் இணைக்கப்பட்டது. இணைப்பு எண் : 488 / 15.06.2017



M.N.S. நடராஜ்
தலைவர்

R. ராஜேந்திரன்
செயலாளர்

A. ரவிச்சந்திரன்
பொருளாளர்

M. கோவிந்தசாமி
கிணை பொருளாளர்

MEMORANDUM OF UNDERSTANDING

We, Chikkanna Government Arts College, Tiruppur and Tiruppur Samundipuram Manavalakkalai Mandra Arakkattalai, hereby declare that both organizations are rendering social service in their respective capacity have come together to execute memorandum of understanding to carry on the activities noted below.

1. We, would like to organize the regular yogic exercise to our students such as Asanas, Pranayama, Meditation and Shatkriyas.
2. We would like to have yoga camp of two week once in a year for our students in college campus.
3. We want to help students to cultivate and develop the power of concentration with the cooperation of Tiruppur Samundipuram Manavalakkalai Mandra Arakkattalai.
4. We aim at physical fitness and overall development of students personality of both mental and physical.
5. The certificates would be issued to students, those who take part in various activities.
6. Both organizations do not have any commercial considerations, but will aim at rendering of social service. The agreement will be terminated as and when one of the organizations wish to do so.
7. This MOU is executed from 29.08.2014 to 23.03.2022 in the presence of both the parties and witness.

WITNESS

- 1) V. Sumathra
- 2) J. Jular

Date : 29.08.2014

Place: Tiruppur

PARTIES

செயலாளர்

அறிவுத்திருக்கோயில் - சாமுண்டிபுரம்

புந்தோட்டம், வளையங்காடு,

தீருப்பூர் - 641603.

செல் : 95140 11432 ;

PRINCIPAL

Chikkanna Govt. Arts College
Tiruppur



120/1, புந்தோட்டம், முருங்கப்பாளையம், தீருப்பூர் - 641603. போன் : 95140 11432, 99444 19909, 0421 - 4229333

samundipuramatk@gmail.com



M U Sharma

Scientist 'G'

Project Director 'e-Nasika'



GOVERNMENT OF INDIA
MINISTRY OF DEFENCE (R & D ORGN.)
SOLID STATE PHYSICS LABORATORY
LUCKNOW ROAD, TIMAR PUR, DELHI-54

Letter of Appreciation

Dear Prof. Haresh M. Pandya

On behalf of DRDO / NBC Forum / SSPL this is to place on records our sincere appreciation to you for the involvement, efforts and time invested by you on our highly important Mission Mode project 'e-Nasika' in the form of subproject on "**Modelling of Surface Acoustic Wave Devices and Sensors**".

With your contributions in the areas of

- a. Development of models for the temperature profile around different configurations of pre-concentrator of SAW E-Nose sensor so as to achieve optimum thermal and power management using COMSOL, and
- b. Development of MATLAB Programming codes to model SAW Devices such as delay lines, filters with Multi-Strip Coupler (MSC) and resonators with Impulse Response Model & Crossed Field Equivalent Circuit Model and Coupling of Modes (COM) Model,

our team was able to understand the mechanisms and realize SAW E-Nose.

It was a pleasure to work with your organization, your HOD Prof. P.R. Kumar and especially your students Mr. G. Pandiyarajan and Mr. T. Venkatesan who had spent long durations at SSPL working tirelessly for the project work.

We look forward for continuing working with you & your team as it is one of the most promising team that delivers.

Regards

(M U SHARMA)