

FORM RDRM C

PROPOSAL FOR APPROVAL FOR TAKING UP CONSULTANCY

Please refer to Statues SA38 for more details

1. TITLE OF PROPOSED PROJECT:

Synthesis of an important heterocyclic intermediate of industrial significance

2. Principal Consultant

a. Name: **Dr. Bidhan A. Shinkre**

b. Designation: **Associate Professor**

c. Department: **School of Chemical Sciences, Goa University**

3. CLIENT:

a. Firm: **InnoVin LLC**

b. Address for Communication: **Georgia USA**

c. Contact person in the Organization: **Dr. Krishnamoorthy Sivakumar**

4. Names, Designation and Department of the staff members involved in this consultancy

(including students): **Dr. Bidhan A. Shinkre, Associate Professor, SCS, Goa University**

5. Name and Address of Outside Expert (if any) involved in the Consultancy: **N/A**

6. Whether the Consultancy shall make use of any University facilities such as equipment or

Laboratory: **Yes**

7. Time Schedule

a. Duration (Weeks, months or years) – **3 months**

b. Starting Date – **Once approval is granted and project assistant (chemist) selection is done.**

8. Estimate of Charges

a. Honoraria to consultant(s), staff of laboratory and others.

Consultant Share – **165000 Rs.**

Other members Share – 45000 Rs. (Honoraria to staff or manpower for 3 months)

University Share (as per SA38.2.vii) – Nil

b. Cost of materials used in carrying out consultancy. 80000 Rs. (inclusive of Consumables and contingency)

c. Computer charges. N/A

d. Charges for use of laboratory equipment and instruments. N/A

e. T.A./D.A. for visits to sites. Nil

f. Administrative/overhead charges to be paid to the University (@20%): 8000 Rs. (Client has agreed to pay 10% of overheads only on Consumables and Contingency)

g. Miscellaneous. Nil

9. Give a brief description of the work to be done that includes scope of the work, Receivables from the client and Deliverables to the client. (As annexure I)

Scope of work: The work would be in the area of heterocyclic compound synthesis. The synthesis would be done by optimizing conditions to get the desired product in good yield. The process steps need to be scalable which can have further wide applications in industry.

Receivables from the client: Project specific technical details and knowledge sharing on chemistry wherever required. Some chemicals may be also ordered by client if required or if there is difficulty in sourcing from Goa University within timeline.

Deliverables to the client: Final project report along with scanned copies of the lab note book pages carrying experimental details, procedures and analytical data. The shipment of the final compound to be done to US which will be coordinated with the client.

Declaration by Consultant(s)

A. I/we shall ensure that the proposed consultancy project does not affect my/our regular academic, research and related activities and other duties which are assigned to me/us by the University.

B. Number of Consultancies at present with me/each one of us do not exceed four in number.

C. This is to certify that there is no close relationship between me/us and the client funding the consultancy project, or any vendor to whom payments are to be made from the consultancy project funds, or any such issue leading to conflict of interests.

D. We have agreed to share the Honorarium as per following distribution.

Name	Proposed share
Dr. Bidhan Shinkre	210000 Rs (inclusive of honoraria to staff 45000 Rs)

E. I/we undertake to abide by all the provisions of Statute SA-38 in connection with the Consultancy project proposed herewith.

Bidhan A. Shinkre
26/08/2021

Signatures of Consultants

(separate forms may be submitted if the consultants are from different department)

Declaration by Head of the Department

A. For the present consultancy the CLIENT **Dr. Krishnamoorthy Sivakumar**

has requested the services of **Dr. Bidhan A. Shinkre**

(letter may be placed for records) and these faculty members may be permitted to take up the consultancy work.

B. Based on the expertise available in the Department, following member(s) of the Department have been assigned the present consultancy work.

a. **Dr. Bidhan A. Shinkre**

b. —

c. —

Radua
27/08/21 Deanses

Signature of the Head of the Department

The present consultancy project has been registered in RDRM and the reference number is

GU/D-RDRM/Consult-Innovin LLC/BAS/SCS/15/2021-22.

[Signature]
03/09/2021

Signature of In-charge RDRM

Approved/~~Not Approved~~

Vice Chancellor

H. A. B. Meen
07/09



Bidhan A Shinkre <bidhan.shinkre@unigoa.ac.in>

Re: MoU draft copy approval

Krishnamoorthy Sivakumar <sivakrish0768@gmail.com>
To: Bidhan A Shinkre <bidhan.shinkre@unigoa.ac.in>

Thu, Aug 26, 2021 at 9:35 PM

Dear Bidhan,
Thank you for the edited MOU, please proceed for the next steps as I am fine with this revised document.
Regards,
Sivakumar

Sent from my iPhone

On Aug 26, 2021, at 7:31 AM, Bidhan A Shinkre <bidhan.shinkre@unigoa.ac.in> wrote:

Dear Sivakumar,

As discussed, please find enclosed the final edited MoU copy. Please go through the same and reply if it is approved from your end. I will then proceed accordingly to take approval of the University authorities.

Thanks.
Best regards,

Bidhan A. Shinkre, Ph.D.

Associate Professor (Organic Chemistry)
School of Chemical Sciences
Goa University
Email: bidhan.shinkre@unigoa.ac.in
Contact: 9689921846

Disclaimer visit: <https://www.unigoa.ac.in/docs/disclaimer.html>.
<MoU.docx>

Research Proposal for USA collaboration project

Name/Address: Dr. Bidhan A. Shinkre, Associate Professor, School of Chemical Sciences, Goa University

Title of the project:

Synthesis of an important heterocyclic intermediate of industrial significance

Origin of the research:

The core research activities would be in the field of Synthetic Organic Chemistry. The project would be in the field of synthesis of heterocycles and/or aryl derivatives. The compounds would be synthesized in 1 g quantity and later scaled up to 5 grams. The final compound would be characterized with the spectroscopic techniques. After characterization is complete, final compound would be shipped to US to the collaborator.

Objective:

Initial objective of the project is to optimize the chemistry for synthesis of the intermediate and then deliver 1 g quantity of the compound with desired purity. Later as an extension to the work the scale-up would be done to deliver few more grams of the target compound.

Significance:

The initial project collaboration will enhance the academia-industry collaboration with sharing of technical know-how of the synthesis and characterization of the final compound. The timeline based delivery of the key intermediate would pave way for further extension of the collaboration to deliver other molecules of interest as per the need basis.

Methodology:

The research will be planned for optimizing the chemistry to deliver the intermediate in a process that is easy and scalable. Instrumental facilities (NMR, Mass, IR) will be used to characterize the compounds. Purification of the intermediates and final compounds would be done by crystallization, chromatography or distillation as is required. The target compound/compounds will be shipped to US for the further follow-up studies.

References:

- 1) S. Chandrasekar, S. Rajam, C. Stella, Maruthamuthu. Synthesis, characterization and antimicrobial activity of N-substituted 2-substituted-benzimidazole derivatives. *Journal of Chemical and Pharmaceutical Research* 2012, 4(11), 4937-4940.
- 2) V. Jeankumar, S. Saxena, R. Vats, R. Reshma, R. Janupally, P. Kulkarni, P. Yogeeswari, D. Sriram. Structure-Guided Discovery of Antitubercular Agents That Target the Gyrase ATPase Domain *ChemMedChem* 2016, 11(5), 539-548.
- 3) R. Mohareb, A. Abdallah, A. Mohamed. Synthesis of novel thiophene, thiazole and coumarin derivatives based on benzimidazole nucleus and their cytotoxicity and toxicity evaluations *Chem. Pharm. Bull.* 2018, 66(3), 309-318.

Budget details for short term (3 months) collaboration project:

Sr. No	Details	Budget (Rs)
1	Manpower	45000
2	Consumables (Glassware, Consumables, chemicals)	40000
3	Contingency	40000
4	Honoraria to consultant	165000
5	Administrative/overhead charges to be paid to the University/College (10%)*	8000
	Total	298000

*The client is ready to pay 10% of Administrative /overhead charges on Consumables and Contingency.

Contact:

Dr. Bidhan A. Shinkre

Associate Professor (Organic Chemistry)

School of Chemical Sciences, Taleigao plateau

Goa University

bidhan.shinkre@unigoa.ac.in

Ph. 9689921846

Application for approval

(a) Name and address of the client / organization.

Dr. Krishnamoorthy Sivakumar

InnoVin LLC,

Georgia, USA

(b) Title of the consultancy service.

Synthesis of an important heterocyclic intermediate of industrial significance

(c) A brief description of the work to be done.

The work would be in the area of heterocyclic compound synthesis. The synthesis would be done by optimizing conditions to get the desired product in good yield. The process steps need to be scalable which can have further wide applications in industry.

(d) Names of the staff members and other outside experts who may be involved in giving their consultancy.

Dr. Bidhan A. Shinkre, Associate Professor, SCS, Goa University

(e) Whether the consultancy shall make use of any University/College facilities such as equipment or laboratory.

Yes

(f) An estimate of the charges proposed to be recovered from the client under the following heads:

(i) Details of expenses to be incurred. **Total 298000 Rs**

(ii) Honoraria to consultant(s), staff of laboratory and others. **165000 Rs**

(iii) Cost of materials used in carrying out consultancy. **40000 Rs**

(iv) Computer charges. **Nil**

(v) Charges for use of laboratory equipment and instruments. **N/A**

(vi) T.A./D.A. for visits to sites. **Nil**

(vii) Administrative/overhead charges to be paid to the University/College. **8000 Rs**

(viii) Miscellaneous. **(See details under the table for Budget details for short term project)**



Bidhan A Shinkre <bidhan.shinkre@unigoa.ac.in>

Industrial Project Assistance

Krish Siva <sivakrish0768@gmail.com>

To: Bidhan A Shinkre <bidhan.shinkre@unigoa.ac.in>

Sat, Jun 26, 2021 at 9:26 PM

Dear Dr. Bidhan Shinkre,

Greetings from Georgia.

We are a startup based in Georgia USA focused in developing new materials for the specialty Chemicals field. In this connection and as a Scientist for over 20 years, I found your expertise in Organic Chemistry would help bring things to fruition.

I would like to work with you on a collaborative project in Synthesizing an important intermediate of Industrial Significance. The initial period of collaboration could be for 3 months and given the outcome, we can possibly work for an extended period. Our initial collaborative effort would be aimed at

- 1) Delivering the molecule within the timeline in 1-5 g quantities
- 2) Share the necessary lab and project completion reports along with details of instrumental characterization for the compound of interest.

I was extremely impressed to see the expertise at the School of Chemical Sciences of your esteemed institution, so felt it would be ideal to explore my research ideas towards a meaningful outcome.

The terms and conditions can be further discussed once you have the necessary approvals from Goa University. Being an Industrial project, the requirement would be that the IP and any publication rights will be owned by InnoVin LLC for the new molecules synthesized.

Please let me know your interest in supporting such a collaborative effort.

I will share the draft of the NDA (Non-disclosure agreement) and the agreement to collaborate after hearing from you.

Kind Regards,

Dr. Krishnamoorthy Sivakumar

CEO

InnoVin LLC

Georgia, USA

Cell: 001-410-982-9078

NONDISCLOSURE AGREEMENT

This NONDISCLOSURE AGREEMENT made on June 28 2021 between, InnoVin LLC having an address at 288 Caldecote Court, Sugar hill, Georgia, USA 30518 (hereinafter referred to as "Individual/company") and Bidhan A. Shinkre, Ph.D; Associate Professor (Organic Chemistry), School of Chemical Sciences Goa University Taleigao Plateau Goa, India, 403206 (hereinafter referred to as "Collaborator" representing a academic institution in the state of Goa). The Parties hereby agree as follows:

1. Purpose

To help InnoVin LLC in developing molecules of Industrial significance through synthesis to a scale of 5-10 g of the target candidates and deliver supporting documentations such as lab record notes and proof of characterization of the compounds synthesized. The details of molecule would be treated as confidential by both parties with IP rights and right to publish would be owned solely by InnoVin LLC.

2. Definition.

The representative from InnoVin LLC Dr. Krishnamoorthy Sivakumar approached Dr. Bidhan Shinkre for possible assistance in synthesizing a key intermediate for further exploration as an Industrially significant candidate of interest. The project timeline was agreed to be for three months after review of the target molecule by both parties for necessary approvals further as per Goa University industrial project guidelines concerning this collaborative effort.

3. Nondisclosure of Confidential Information.

The Collaborator agrees not to use any Confidential Information disclosed to it by representatives of InnoVin LLC for its own use or share such information to a third party. The Collaborator shall only share the disclosing Party (InnoVin LLC) confidential Information with its employees who are bound by the terms of this agreement and who are required to have the information necessary to carry out the work. The Collaborator will not publish or own any IP rights concerning the molecules synthesized.

4. Return of Materials.

The Collaborator may retain one copy of all Confidential Information solely for archival legal purposes after sharing all that needed by the Company.

5. Term.

The agreement validity will cover 5 years from the data of execution of agreement.

6. 11. Facsimile signatures and signatures transmitted as PDF files through email messages shall be treated as original signatures.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

InnoVin LLC

Name: Dr. Krishnamoorthy Sivakumar, Ph.D (Tech)

Title: CEO

Date: June 28, 2021

Signature:

Goa University School of Chemical Sciences

Name: Bidhan A. Shinkre, Ph.D

Title: Associate Professor (Organic Chemistry)

Date: June 28, 2021

Signature: