



ICMR/EoI/PM/38/Cervical Cancer Drug/2026

Invitation for Expression of Interest (EoI)

For

Transfer of Technology

**SHetA2 Cervical Cancer Drug useful in treatment of HPV induced
Cervical Dysplasia and/or Cervical Cancer
(Drug Candidate)**

By ICMR-Hqrs

Indian Council of Medical Research
(Department of Health Research, GoI)
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New Delhi - 110029, India

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Letter of Invitation

1. Invitation for Expression of Interest

Indian Council of Medical Research ((ICMR), New Delhi invites Expression of Interest (EoI) from the eligible organizations, companies, manufacturers for undertaking ‘**Transfer of Technology**’ for commercialization of **SHetA2 Cervical Cancer Drug** useful for the **treatment of HPV induced Cervical Dysplasia and/or Cervical Cancer**.

The EoI document containing the details of qualification criteria, submission details, brief objective & scope of work and evaluation criteria etc. can be downloaded from the ICMR website (<https://www.icmr.gov.in>).

Schedule for the Proponents is as under:

EoI Document Number	ICMR/EoI/PM/38/Cervical Cancer Drug/2026
Date of Publication	Date: May 04, 2026
Last date of submission	Date: May 20, 2026

Note:

Interested applicants are invited to submit their Expression of Interest (EoI) through the Medical Innovation Patent Mitra portal (<https://patentmitra.icmr.org.in/companyeoiregistration/>). Applicants must first register by providing requisite company information, including details of the authorized representative. Upon successful registration, applicants are required to complete and submit the e-EoI form available on the portal.

ICMR reserves the right to cancel this EoI and/ or invite afresh with or without amendments, without liability or any obligation for such EoI and without assigning any reason. Information provided at this stage is indicative and ICMR reserves the right to amend/add any further details in the EoI, as may be desired by the Competent Authority ICMR and duly notified on its website.

2. Background

The Indian Council of Medical Research (ICMR), New Delhi, the apex body in India for the formulation, coordination and promotion of biomedical research, is one of the oldest medical research bodies in the world. The ICMR has always attempted to address the growing demands of scientific advances in biomedical research on the one hand and the need of finding practical solutions to the health problems of the country, on the other.

ICMR- National Institute of Cancer Prevention Research (ICMR-NICPR), one of the constituent Institutes of the Indian Council of Medical Research (ICMR), New Delhi has

collaborated with U.S.-based The Board of Regents of the University of Oklahoma (hereinafter) referred to as the “**Collaborator**” to develop the technology entitled “**SHetA2 Cervical Cancer Drug**” useful in treatment of HPV induced Cervical Dysplasia and/or Cervical Cancer (hereinafter) referred to as “**Technology**”.

ICMR is lawfully entitled to enter into any form of **exclusive/non-exclusive agreements** with eligible manufacturing companies hereinafter referred to as the “**Company**” through a defined agreement for Licensing/Commercialization of “**SHetA2 Cervical Cancer Drug**” useful in treatment of HPV induced Cervical Dysplasia and/or Cervical Cancer, hereinafter referred to as the ‘**Product**’, which shall be governed by ICMR IP Policy, as revised and approved by the Competent Authority.

3. Objective

To license the ‘Technology’ “SHetA2 Cervical Cancer Drug” effective/useful in treatment of HPV induced Cervical Dysplasia and/or Cervical Cancer, for commercialization and marketing activities.

4. Scope of Work

- i. ICMR is willing to collaborate with eligible organizations, companies, and manufacturers for undertaking Transfer of technology “SHetA2 Cervical Cancer Drug” useful in treatment of HPV induced Cervical Dysplasia and/or Cervical Cancer
- ii. The Company would be granted rights to undertake further development, manufacture, sell, and commercialize the “Technology” entitled “SHetA2 Cervical Cancer Drug” useful in treatment of HPV induced Cervical Dysplasia and/or Cervical Cancer (Details of technology/Product).
- iii. An Agreement following EoI is proposed to be executed on a “Non-Exclusive” basis with single/multiple companies to enable wider outreach of the “Technology” entitled “SHetA2 Cervical Cancer Drug” for societal benefit and public health use. All the related issues shall be governed by ICMR IP Policy, and as per the terms of the existing Memorandum of Agreement (MoA), dated March 16, 2026 executed between ICMR and the Collaborator, wherein the terms of the MoA shall be binding on the Parties and shall supersede any other Agreements / policies.
- iv. ICMR-National Institute of Cancer Prevention Research (ICMR-NICPR) and the collaborator has expertise in various techniques, methods and information relating to aforesaid technology which could be used for the production of “**SHetA2 Cervical Cancer Drug**”.

Role of ICMR:

- i. **ICMR-National Institute of Cancer Prevention Research (ICMR-NICPR) through its Collaborator** will provide expert guidance & technical support for the production of the “Technology” entitled “SHetA2 Cervical Cancer Drug”, in all phases. Such technical oversight by **ICMR-NICPR and the Collaborator** would accelerate the development of the technology and its commercialization
- ii. ICMR would provide technical support through its team of experienced scientists in study planning, product development, development of study protocol, results/data analysis, outcome assessment, safety & efficacy assessment, product improvement, etc., if deemed fit upon the mutual understanding between ICMR and collaborative company.
- iii. ICMR through its Institutes would provide support and facilitation to conduct the R&D/clinical study of new technology/ product in India through its Affiliates/ Institutes, in collaboration with the company/institutions in a professional and mutually agreed-upon manner and timelines, which will be decided later under the Agreement.
- iv. ICMR would provide technical support in development of technology/ product and will also facilitate the validation, if required, as per the terms & conditions of the Agreement.
- v. ICMR or the **Collaborator** shall have no financial implications unless otherwise specified.

Role of Company

- i. The Company shall have valid provisions to provide all necessary infrastructure/ material/ manpower required for product development/ validation/ scale-up either directly or otherwise.
- ii. The Company shall have provisions to undertake the scale-up as required, manufacturing and commercialization of the “SHetA2 Cervical Cancer Drug” in a set milestone.
- iii. The Company agrees to share the technical data with ICMR and participate in all discussions in a professional and mutually agreed-upon manner.
- iv. The Company agrees to allow authorized personnel/scientist/team of ICMR, ICMR NICPR and the Collaborator to visit the designated lab/ production facility as and when required, as envisaged under this EoI and subsequent Agreement.
- v. The Company shall be responsible for obtaining all the regulatory approvals required for commercialization or starting from R&D for product development to its commercialization.

5. Intellectual Property Rights

Intellectual Property (IP) rights shall be governed as per the terms and conditions of the

MoA executed between ICMR and the Collaborator dated March 16th, 2026.

6. Process involved in Partnership/Collaboration/Technology Transfer

Interested companies/manufacturers are invited to join hands with ICMR further development & commercialization of the Technology. Under this EoI, the manufacturers/companies who are responsive and fulfilling all the technical need will be shortlisted based on their R&D plan, facilities and capabilities. Qualified companies/manufacturers will only be contacted for execution of MoA/MoU/Agreement for partnership/collaboration/technology transfer, etc. Subsequent to the execution of the Agreement such companies/manufacturers shall be responsible to pay the Royalty @ 2% on Net sales, as applicable, according to the ICMR Guidelines for Technology Development Collaboration.

7. Publication

- i. In case of Co-development, the Parties shall have equal rights on the manuscripts/scientific publications (joint publication/acknowledgment /other credits as applicable) and in accordance with guidelines of International Committee of Medical Journal Editors (ICMJE.org).
- ii. Support of ICMR and the Collaborator must be duly acknowledged in all publications by the Company.
- iii. ICMR Scientists and the Collaborators shall be given due advantage of authorships in the publications arising out of Licensing/co-development.

8. Data Rights

- i. Data Rights will be exclusively with ICMR, if ICMR provide 100% funding.
- ii. Data rights shall be jointly owned by ICMR and Licensee/Co-developer, in case of joint funding.
- iii. Data rights in cases where Artificial Intelligence is involved shall be dealt separately.
- iv. Licensee/ Company to ensure that data is anonymized, kept confidential and strictly abide by the provisions of Information Technology Act, 2000 while dealing with such data

9. Details of documents to be furnished

Proponents are requested to go through all pre-qualification requirements, scope of work for execution & requirements with respect to technical capabilities for submission of interest, subject for verification by ICMR.

Documents to be furnished are as follows:

- i. Declaration - Expression of Interest (Format – 1)
- ii. Authorization Letter (Format – 2)
- iii. Undertaking with regard to Blacklisting (Format-3)
- iv. Undertaking with regard to Non-Conviction (Format – 4)

- v. EoI document with each page duly stamped and signed by the Authorized signatory.
- vi. Undertaking with regard to laboratory facility (Format – 5)
- vii. Production Capacity Undertaking (Format-6)
- viii. Supporting documents, as mentioned in Format-1
- ix. MSME Certificate (if applicable)
- x. Concept note on business plan- A brief concept note on R&D, clinical studies, planning & execution, production, marketing etc. with timeline (not more than 5 pages)
- xi. Any other information which proponent may wish to provide to support the EoI.

ICMR reserves the right to call for any clarifications confined in the broad scope, wherever such a clarification become necessary for proper judgement in evaluation.

10. Rejection Criteria

The application is liable to be rejected if:

- i. The proposal is not submitted as per the requirements indicated in the EoI.
- ii. Not in the prescribed format.
- iii. Not properly stamped and signed.
- iv. Received after the expiry of due date and time.
- v. All relevant supporting documents are not furnished with the Pre-Qualification Criteria (PQC).
- vi. The proposal shall be substantially responsive without any material deviation, failing which the proposal shall be summarily rejected.
- vii. Applications not fulfilling the terms of the document will be summarily rejected.
- viii. Any other non-compliance.

11. Evaluation Methodology

Screening of EoIs shall be carried out as per Pre-Qualification criteria mentioned in the EoI document and based on verification of documents submitted.

12. Pre-Qualification Criteria (PQC)

The following will be the minimum Pre-Qualification Criteria (PQC). Responses not meeting the minimum PQC will be summarily rejected and will not be evaluated further:

Sl. No.	Pre-Qualification Criteria (General)	Supporting copy of documents required (All documents must be self-attested by the authorized person of the proponent)
General Criteria		

1	The proponent shall be a legal entity, registered as Institution/Company/ LLP/ Society/ partnership firm/ proprietorship firm under respective acts in India and shall have more than 51% of Company stakes by promoters from India.	Registration of firm/ organization/Company Incorporation Certificate from Registrar of Companies (ROC) /Partnership deed etc. whichever is applicable
2	The proponent must be registered in India with taxation and other administrative authorities.	GST Registration or GST exemption certificate/ PAN Card
3	The proponent should have proven prior experience of manufacturing and/or R&D with manufacturing during the last three years, either in-house or through agreed collaboration and must have marketed same/similar products in the past with a good track record.	Research paper/Pamphlet / brochure of the product/DCGI License for existing product. Supporting documents for collaboration, if any.
4	The proponent has to be profitable and should not have incurred overall loss in past three (3) years. (applicable on commercial firms/organizations only)	Certificate from the Chartered Accountant of the Organization/ Audited Balance sheets for last three financial years or Income Tax return.
5	The proponent should have good track record and currently not black-listed/ barred by any Central / State Government / Public Sector Undertaking, Govt. of India, (applicable on commercial firms/organizations only).	Undertaking on the Letter Head of the Proponent duly signed & Stamped by Authorized Signatory (As per format – 3).
6	The proponent should have a manufacturing unit in India.	Registration copies/ factory license/ DSIR certificate, if have any.
7	The proponent and its promoters should not have been convicted for any offence in India by any competent court or judicial body during the past 3 years.	Undertaking on Proponent's Letter Head, duly signed and stamped by the Authorized Signatory (As per format – 4)
8	GMP/ quality certification (ISO or approved Indian certification) of manufacturing facility and GLP/ necessary certifications for R & D	Copies of Certificates
Specific Criteria (Based on the nature of the Proposal)		
9.	The proponent should have functional laboratory to carryout R&D for the product development	Undertaking on Proponent's Letter Head, duly signed and stamped by the Authorized Signatory (As per format – 5)
10.	Capacity to produce at least.....(quantity) per week	Undertaking (As per format – 6)

NOTE- For MSMEs and Start-ups, Start-Up-India, Make-in-India and other relevant guidelines of Government of India shall be applicable

13. Disclaimer

- i. ICMR shall not be responsible for any late receipt of applications for any reasons whatsoever.
- ii. ICMR reserves the right to cancel the call for EoI without assigning any reasons thereof.
- iii. ICMR may relax or waive any of the conditions stipulated in this document as deemed necessary in the best interest of the ICMR without assigning any reasons thereof.
- iv. To include any other item in the Scope of work at any time after consultation with proponents or otherwise.
- v. For International Clients, please note that EoI and other necessary correspondences shall be submitted in English only.

14. Arbitration

That any dispute and/ or any part of the dispute which couldn't be resolved through mutual consultation, the same shall be referred to the sole arbitrator as per the Arbitration & Conciliation Act, 1996 and any amendment thereafter. The Venue and Seat of the arbitration proceedings shall be New Delhi and the courts at New Delhi will have exclusive jurisdiction.

15. Contacts

In case of any clarification required, please contact:

For scientific issues-

Dr. Showket Hussain

Email: showket.hussain@gov.in

For Technical issues-

Medical Innovations Patent Mitra Team,

Email: patentmitra.hq@icmr.gov.in

Format-1

Expression of Interest

(To be submitted on Company's Letter Head)

To,

The Director General,
Indian Council of Medical Research,
Ansari Nagar, New Delhi.

Subject: Submission of Expression of Interest (EoI) for Transfer of Technology “**SHetA2 Cervical Cancer Drug**” useful in treatment of HPV induced Cervical Dysplasia and/or Cervical Cancer.

Ref: ICMR/EoI/..... /202X dated

Sir,

The undersigned having read and examined in detail all the EoI documents pertaining to your transfer of technology, and do hereby express the interest to undertake the research & development/manufacture/ sale /commercialization of the product as mentioned in the EoI document. The details of the Company and contact person are given below:

Name of the Proponent	
Address	
Name, designation & address of the person (to whom all communications shall be made)	
Telephone No. (with STD code)	
Mobile No. of the contact person	
Email ID of the contact person	

The following documents are enclosed:

Sl. No.	Documents required	Type of document attached	Page No.
1	Company Incorporation Certificate from ROC/Partnership deed etc.		

2	GST Registration or GST exemption certificate/ PAN Card.		
3	DCGI/CDSCO license for the existing products available in the market		
4	Certificate from the Chartered Accountant of the Organization/ Audited Balance sheets for las three financial years, Income Tax return.		
5	Proof of a registered office and a manufacturing Unit in India. Including DSIR certificate		
6	GMP / GLC and ISO Certification. Registration copies of both		
7	Authorization Letter	As per format – 2	
8	Undertaking on the Letter Head of the Proponent duly signed & Stamped by Authorized Signatory	As per format – 3	
9	Undertaking on Proponent’s Letter Head, duly signed and stamped by the Authorized Signatory	As per format – 4	
10	MSME Certificate (if have any)		
11	Business Plan	A brief concept note on planning & execution, production, marketing etc. (not more than 5 pages)	

I/we hereby declare that my/our EoI is made in good faith and the information contained is true and correct to the best of my/our knowledge and belief.

Thanking you,

Yours faithfully,

(Signature of the Authorized signatory)

Name:

Designation:

Seal:

Place:

Format-2

Authorization Letter

(To be submitted on Company's Letter Head)

To,

The Director General,
Indian Council of Medical Research,
Ansari Nagar, New Delhi.

Subject: Letter for Authorized Signatory

Ref: EoI No. ICMR/EoI/..... /202X dated

Sir,

This has reference to your above-mentioned Expression of Interest (EoI) for Transfer of Technology "**SHetA2 Cervical Cancer Drug**" and commercialization of Drug against HPV induced Cervical Dysplasia and/or Cervical Cancer disease.

Mr./Ms./Mrs./Dr.....is hereby authorized to submit the EoI documents and participate in the processing on behalf of M/s..... (Company Name), who's signature is below.

(Specimen Signature of Representative)

Date:

Place:

Yours faithfully,

(Signature of the Authorized signatory)

Name:.....

Designation:.....

Seal:.....

Format-3

Undertaking with regard to blacklisting
(To be submitted on Company's Letter Head)

To,

The Director General,
Indian Council of Medical Research,
Ansari Nagar, New Delhi.

Subject: Undertaking regarding Blacklisting / Non-Debarment.

Ref: ICMR/EoI/..... /202X dated.....

Sir,

It is hereby confirmed and declared that M/s..... (Company Name) currently has not been blacklisted / debarred by any Government Department / Public Sector Undertaking / or any other company for which works/assignments/services have been executed / undertaken.

Yours faithfully,

(Signature of the Authorized signatory)

Name:

Designation:

Seal:

Place:

Format-4

Undertaking with regard to Non-Conviction

(To be submitted on Company's Letter Head)

To,

The Director General,
Indian Council of Medical Research,
Ansari Nagar, New Delhi.

Subject: Undertaking regarding Non-Conviction.

Ref: ICMR/EoI/..... /202X dated

Sir,

It is hereby confirmed and declared that M/s.....(Company Name) and owner of the firm / board of directors, have not been convicted for any offence in India by any competent court or judicial body during the past 3 years.

Yours faithfully,

(Signature of the Authorized signatory)

Name:

Designation:

Seal:

Place:

Format-5

Undertaking with regard to laboratory facility

(To be submitted on Company's Letter Head)

To,

The Director General,
Indian Council of Medical Research,
Ansari Nagar, New Delhi.

Subject: Undertaking regarding laboratory infrastructure.

Ref: ICMR/EoI/..... /202X dated.....

Sir,

It is hereby confirmed and declared that M/s..... (Company Name) do have

- i. Adequate laboratory infrastructure (equipped laboratory facility). Please tick BSL-2/BSL-3/ABSL-3/GMP/GLP/ Other* (if other please specify) and

Adequate no. of experienced staff/skilled manpower to undertake manufacture/ research/ commercialization of "**SHetA2 Cervical Cancer Drug**" useful against HPV induced Cervical Dysplasia and/or Cervical Cancer.

ii.

Yours faithfully,

(Signature of the Authorized signatory)

Name:

Designation:

Seal:

Place:

Format-6

Undertaking with regard to production capacity

(To be submitted on Company's Letter Head)

To,

The Director General,
Indian Council of Medical Research,
Ansari Nagar, New Delhi.

Subject: Undertaking with regard to production capacity.

Ref: ICMR/EoI/..... /202X dated

Sir,

It is hereby confirmed and declared that M/s..... does have the capacity in all mean (including infrastructure, fund, material, staff etc.) for manufacturing of (Name of Technology/ Product), minimum(mention the quantity per week/per month).

Yours faithfully,

(Signature of the Authorized signatory)

Name:

Designation:

Seal:

Place:

SCHEDULE-A

TECHNOLOGY DETAILS

i. **About Technology/Product/Process:**

The SHetA2 drug reverses HPV's stimulation of the cell cycle and cell survival leading to death of cancer and precancer cells without harming healthy cells. The drug's mechanism of action is through binding to the peptide binding domains of three novel targets, mortalin, hsc70 and Grp78. SHetA2 disrupts complexes of HSP70 with the human papillomavirus (HPV) E7 protein leading to degradation of HPV E7, which decreases cell and tumor growth. Importantly extensive preclinical data show that SHetA2 does not cause toxicity, skin irritancy, teratogenicity or carcinogenicity at doses 50 fold higher than the doses that reduce tumor growth. A phase 1 clinical trial has shown that the drug is safe, well tolerated and has oral bioavailability in patients with cancer. Market Need: Current treatment for cervical intraepithelial neoplasia 2/3 involves surgical resection or cryotherapy/ thermal ablation, chemo or radio therapies which are expensive and can cause side effects. If proven effective in the clinical trial, this drug has the potential to provide a safe and effective treatment that avoids these side effects.

ii. **Need and utility of the Technology from Public health perspective:**

The drug is available as an oral capsule. It has shown no toxicity in extensive preclinical studies. The patients can take the pills at home. A vaginal suppository version is being developed.

iii. **Technology Readiness level (TRL):**

TRL-5 (Technology under clinical trial in US- NCT04928508)

iv. **Validation Status and outcome:**

Technology is currently under Phase I clinical trial in US. Innovators shall provide all clinical, pre-clinical and in vitro data/publications including current status of US-FDA application consideration as new IND.

v. **IP Filing Status/Publications**

IP Filing: PCT/US2024/051215 filed 14 October 2024.

Publications:

- i. Garland, J., Hussain, S., Rai, R., Kennedy, A. L., Isingizwe, Z. R., & Benbrook, D. M. (2024). Targeting HSP70-E7 Interaction With SHetA2: A Novel

- Therapeutic Strategy for Cervical Cancer. *Journal of medical virology*, 96(11), e70088. <https://doi.org/10.1002/jmv.70088>.
- ii. Ibrahim M, Hatipoglu MK, Garcia-Contreras L. Cryogenic Fabrication of Dry Powders to Enhance the Solubility of a Promising Anticancer Drug, SHetA2, for Oral Administration. *AAPS PharmSciTech* 2019;20:20.
 - iii. Sharma A, Benbrook DM, Woo S. Pharmacokinetics and interspecies scaling of a novel, orally-bioavailable anti-cancer drug, SHetA2. *PLoS One* 2018;13: e0194046.
 - iv. Sharma A, Li M, Thavathiru E, et al. Physiologically Based Pharmacokinetic Modeling and Tissue Distribution Characteristics of SHetA2 in Tumor-Bearing Mice. *AAPS Journal* 2020;22:51.
 - v. Sharma A, Thavathiru E, Benbrook DM, Woo S. Bioanalytical method development and validation of HPLCUV assay for the quantification of SHetA2 in mouse and human plasma: Application to pharmacokinetics study. *Journal of Pharmaceutical Technology and Drug Research* 2017;6:2.
 - vi. Mahjabeen S, Hatipoglu MK, Benbrook DM, Garcia-Contreras L. Pharmacokinetics and Pharmacodynamics of Escalating Doses of SHetA2 After Vaginal Administration to Mice. *J Pharm Sci* 2018;107:3179-86.
 - vii. Mahjabeen S, Hatipoglu MK, Chandra V, Benbrook DM, Garcia-Contreras L. Optimization of a Vaginal Suppository Formulation to Deliver SHetA2 as a Novel Treatment for Cervical Dysplasia. *J Pharm Sci* 2018;107:638-46.
 - viii. Mahjabeen S, Hatipoglu MK, Kosanke SD, Garcia-Contreras D, Benbrook DM, Garcia-Contreras L. Vaginal Suppositories Containing SHetA2 to Treat Cervical Dysplasia: Pharmacokinetics of Daily Doses and Preliminary Safety Profile. *J Pharm Sci* 2020;109:2000-8.
 - ix. Benbrook DM, Guruswamy S, Wang Y, et al. Chemoprevention of Colon and Small Intestinal Tumorigenesis in APCmin/+ Mice By SHetA2 (NSC721689) without Toxicity. *Cancer Prevention Research* 2013;6:908-16.
 - x. Rai R, Chandra V, Kennedy AL, Zuna RE, Benbrook DM. Distinct mechanism of cervical cancer cell death caused by the investigational new drug SHetA2. *Front Oncol* 2022;12:958536.
 - xi. Kennedy AL, Rai R, Isingizwe ZR, Zhao YD, Lightfoot SA, Benbrook DM. Complementary Targeting of Rb Phosphorylation and Growth in

Cervical Cancer Cell Cultures and a Xenograft Mouse Model by SHetA2 and Palbociclib. *Cancers (Basel)* 2020;12.

- xii. Kabirov KK, Kapetanovic IM, Benbrook DM, et al. Oral toxicity and pharmacokinetic studies of SHetA2, a new chemopreventive agent, in rats and dogs. *Drug and Chemical Toxicology* 2012;36:284-95.
- xiii. Doppalapudi RS, Riccio ES, Davis Z, et al. Genotoxicity of the cancer chemopreventive drug candidates CP-31398, SHetA2, and phospho ibuprofen. *Mutation Research* 2012;746:78-88.
- xiv. Mic FA, Molotkov A, Benbrook DM, Duester G. Retinoid activation of retinoic acid receptor but not retinoid X receptor is sufficient to rescue lethal defect in retinoic acid synthesis. *PNAS USA* 2003;100:7135-40.
- xv. Benbrook D, Kamelle S, Guruswamy S, et al. Flexible heteroarotinoids (Flex-Hets) exhibit improved therapeutic ratios as anti-cancer agents over retinoic acid receptor agonists. *Investigational New Drugs* 2005;23:417-28.
- xvi.
