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**CSIR/TIA/DSI Industrial Biocatalysis Hub (IBH)**

**Call for Expressions of Interest (EoI) - Product and process development support to Enterprises**

Biocatalysis entails the use of enzymes and microorganisms in manufacturing processes to produce products such as industrial biologics, biopharmaceuticals and bio-veterinary compounds, flavours and fragrances, food additives and extraction of natural compounds from plants which can be used in the formulation of dietary supplements, nutraceuticals, food and feed products and cosmetics. The IBH is an initiative of the Technology Innovation Agency (TIA) and the Department of Science and Innovation (DSI) and is hosted by the Council for Scientific and Industrial Research (CSIR). The IBH was established to provide technical product and process development support to Enterprises in the biomanufacturing sector using biocatalysis technologies, with the aim of creating and expanding biocatalysis capacity and uptake in industry.

This EoI call is targeted at companies, including SMMEs entering the biocatalysis sector, to grow and expand biomanufacturing capacity. This initiative is aligned with the National Bio-economy Strategy of the DSI which aims to drive economic growth and socio-economic development in South Africa.

**Background to the IBH**

The DSI has identified biocatalysis as one of the key enabling technologies to support the development of a sustainable industrial bio-economy sector in South Africa. The CSIR has been tasked with implementing the IBH by the DSI and TIA. The CSIR’s strategy focusses on industrialisation of technology and finds strategic alignment with the IBH objectives, with biocatalysis research and development (R&D) and commercialization being an important focal area within the CSIR Chemical Cluster.

The CSIR Biocatalysis Group has extensive experience in R&D which has resulted in transfer of technology demonstrators and technology packages for implementation by industry. The Biocatalysis Group is supported by the Biomanufacturing Industry Development Centre at the CSIR, which offers bioprocess development infrastructure from laboratory to pilot scale, including upstream reactors from 1 L to 1000 L, as well as the necessary downstream processing, formulation and analytical support for process development.

The key objectives of the IBH are:

* To provide a platform for industrial assimilation of biocatalysis technology
* Selection and support of Nodes to support biocatalysis activities and capacity building
* Embarking on collaborative projects with enterprises to localize and develop technology in biocatalysis for implementation on commercial scale

The IBH has been capacitated with funding to offer the following:

* Use of infrastructure and skilled human resource support (scientists, technologists, process engineers) related to Biocatalysis and Biomanufacturing
* Technology development, technology validation, scale-up support and techno-economic analysis
* Bio-based product development, formulation, and labelling/ packaging
* Mentoring and training in manufacturing skills
* Expert analytical support and method development (e.g. UPLC-MS, GC and NMR)

**Submission requirements**

To apply for support through the EoI process, please complete the attached EoI form and e-mail the PDF versions of completed forms, CV’s, BBBEE certificate /affidavit and proof of CIPC registration to ibh@csir.co.za .

Please use the following naming convention for attached documents:

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| **Application:** | **CV’s, Certificates etc**: |
| Name of Enterprise\_EOI- May 2021 | Name of Enterprise\_CV Jane Smith\_Nov\_2021, Name of Enterprise\_CIPC proof of registration\_ Nov\_2021 |

The ability to co-fund this application and commitment to transformation will be an advantage.

**Exclusionary Criteria:**

* EoIs will **NOT** be considered if they do not involve biocatalysis and do not have a clear path to commercialisation.
* Enterprise not registered with the CIPC (proof of CIPC registration must be provided with the application or be excluded from the process)
* Applications not accompanied by a BBBEE certificate or affidavit will be excluded
* Applications not accompanied by CV’s will be excluded
* Applications sent to any e-mail address other than ibh@csir.co.za will be excluded
* Closing date for applications:close of business **Wednesday 17 November 2021**, no late submissions will be considered

**(Please note that purchase of equipment for enterprises or direct monetary support of enterprises is not provided for in this call.)**

**For more information please contact:** Lara Kotzé-Jacobs E-mail (ibh@csir.co.za)

**Terms and conditions apply.**

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**CSIR/TIA/DSI Industrial Biocatalysis Hub (IBH)**

**Expression of Interest proposal**

***Successful bidders may be invited for a more detailed interview***

**Closing date for applications: close of business Wednesday 17 November 2021**

**Please e-mail PDF versions of completed submission forms to:** ibh@csir.co.za

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| **Enterprise name:** |  |
| **CIPC registration number:** |  |
| **Contact person(s):** | **Name and surname:****Position in enterprise:** |
| **Contact details** | **E-mail:****Landline:****Cell number:****Physical address of enterprise:****Postal address of enterprise:** |
| **Ownership arrangement** |  | Demographic | Gender |
| Black | White | M | F |
| **Directors/members** |  | Attach CIPC registration certificate |
| **Years in business** |  |
| **Annual Revenue**  |  |
| **Number of current employees** | Permanent:  |  | Temporary: |  |
| **Applicable industry sector:**(E.g. nutraceuticals (food, beverages etc), industrial (e.g. speciality chemicals), cosmetic, flavours and fragrances, biopharmaceuticals, veterinary products/technologies etc.). |  |
| **BEE status level** |  | Attach BBBEE certificate/ or affidavit |
| **Date of application:** |  |

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| 1. **Specify the project you are interested in for research and development using Biocatalysis and what support you would require from the Hub. Be as specific as possible.**
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| **2. Describe your core business and whether you are currently manufacturing and/or selling products. Provide your current turnover.** |
| **Core Business:****Current status of manufacture and scale at which manufacturing:****Current turnover:** |
| **3. Describe the market need addressed by your product/processes and the potential market size (try and be as specific as possible)** |
| **Market Need:****Market Size:****Route to market (identified or already in place?):** |
| **4. Describe the technology or product(s) you wish to manufacture and what differentiates it from competitor technologies/products.** |
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| **5. What is the expected development time to market?** |
| **What R&D has been done on the technology?****What is the expected time to market?****Do you own the technology or have you licenced it and from whom?** |
| **6. Please indicate the potential social and economic impact of the proposed development.** |
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| **7. Please list all sources and value of funding/support received to date.**  |
| **Source** (E.g. TIA, IDC, Government, venture capital, incubator support etc.) | **Programme** | **Nature of support** (funding/training/mentorship etc.) | **Value of support if known** | **Period of support** |
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| **8. If successful, will you co-fund the proposed project? Indicate source and amount of funding.** |
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| **9. Please attach short resumes/CV’s (1/2 page each) of key personnel in your enterprise** |

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| **10. Team composition (both business/technical management; if not identified, proposed):***List your team: What is the team’s background, expertise & experience (business & technical)* |
| **Name** | **Highest academic qualification** | **Position in proposed entity** | **Previous business management/technical positions/experience** | **Previous experience in proposed business area** |
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| **11. Please disclose any engagements or agreements you have with the CSIR regarding the proposed technology.** |
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