



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



Call for Expressions of Interest (EOIs) to host the Industrial Biocatalysis Hub - 2020/2023

Closing date for the submission of EOIs: **15 August 2020**

(Late submissions will not be accepted).

For any queries relating to the EOIs contact: Samkelisiwe Mathonsi (IBHCall@tia.org.za)



1. Rationale for the Industrial Biocatalysis Hub (IBH) call for expressions of Interest (EOIs)

The Department of Science and Innovation (DSI) in partnership with the Technology Innovation Agency (TIA) is pleased to announce a call for Expressions of Interest (EOIs) to host the Industrial Biocatalysis Hub (IBH). The DSI has identified biocatalysis (the application of microorganisms and enzymes in industrial production processes) as one of the key enabling technologies to support the development of a sustainable industrial bioeconomy sector in South Africa. The DSI recognises the need for a long-term investment in the development of biocatalysis capabilities in the country in order to:

- Support a biocatalysis technology value chain that will increase the chances of commercial success for biotechnology and chemistry processes;
- Develop new cutting edge biocatalysis technologies with the objective of enhancing industrial competitiveness and encourage private sector investment in biocatalysis technologies;
- Establish active and long-term partnerships with industry to encourage the licensing, successful technology implementation and commercialisation of Biocatalysis RDI outputs;
- Create a platform for institutional relationships, collaborations and industry partnerships to facilitate technology uptake by Industry; and
- Develop human capital that can be absorbed by the industry.

It is under this premise that the DSI intends to establish industry-facing research and innovation instruments to build biocatalysis capabilities as well as a critical workforce with relevant skills base as required by a number of key sectors (chemicals, pharmaceuticals, cosmetics and fragrance industries etc.), that can benefit from biocatalysis synthetic routes and processes.

2. Background

In 2013, the DSI approved the establishment of the National Biocatalysis Centre (NBC), which is a network of universities, science councils and industry partners aimed at providing a platform for industrial assimilation of biocatalysis technology through supporting industry-led



research and innovation and the development of human capital. Key achievements of the NBC included the establishment of critical industry/science council/university partnerships, creation of a network of local universities linked to international biocatalysis laboratories and development of human capital.

On 25 February 2019, DSI organised a close-out workshop to discuss the future of the initiative. The purpose of the workshop was to reflect on the achievements and challenges experienced during the first phase of the initiative and to provide recommendations on the way forward for the initiative. The workshop unanimously recommended continuation of the Biocatalysis Initiative and further emphasised the need to restructure the original model to focus more on technology translation and commercialisation with strong industry participation.

The DSI conceptualised the establishment of the IBH to serve as a technology platform that adds value to South African Chemical and Biotechnology Industries by supporting biocatalysis-related technical development to generate new technologies and new technology-driven businesses. The IBH is envisaged to have a significant impact on the manufacturing sector through technology-based renewal of chemical and related industries, environmental and resource sustainability, international competitiveness and industrial diversification.

3. Eligibility and selection criteria

The current EOI call is open to any of the South African Higher Education Institutions (HEIs) and Science Councils with distinguished leadership in the discipline of biocatalysis. A Steering Committee (to be established) will evaluate all applications received and select the most suitable institution to host the IBH for an initial 3-year period. The criteria for selection of the host of the IBH include the following:

- An established reputation in the field of biocatalysis with a substantial number of peer-reviewed publications and suitable patents;
- An international network with other biocatalysis research centres;



- A clear track record of human capital development and relevant outputs in the biocatalysis field;
- A track record of multidisciplinary research and development and industrial collaboration on biocatalysis projects;
- Availability of relevant infrastructure and support structures to realise the priorities of the IBH;
- Relationship with speciality and fine chemical industry clusters that could benefit from biocatalysis to increase sector competitiveness;
- Sound institutional financial management systems and compliance with PFMA; and
- A letter of support from the host institution.

Note that preference will be given to previously disadvantaged individuals.

Minimum Requirements for IBH Director:

- PhD in Microbiology, Biochemistry, Biotechnology, Chemical Engineering or Organic Chemistry;
- Evidence of established expertise in the field of biocatalysis;
- Demonstrated track record of working at the interface between research and innovation with the private sector;
- A record of successful human capital development;
- Demonstrated experience in leading and commercialisation of biocatalysis technologies;
- Ability and experience in managing multi-stakeholder research programmes and grants;
- Demonstrated ability to attract additional funding to expand utility of the IBH; and
- A proven track record of research and Innovation demonstrated by research outputs, patent filed, technology upscaling and demonstrations.



4. Submission requirements

To apply to host the IBH, interested institutions are requested to complete the attached EOI form and e-mail the PDF version of completed forms to Samkelisiwe Mathonsi at IBHCall@tia.org.za

5. Post-screening and selection requirements

5.1. Contractual relations

The successful applicant will serve as the director of the IBH responsible for management and implementation of the IBH objectives and will be required to enter into a written contractual agreement with TIA.

5.2. Implementation plan

The IBH director from the successful institution would be expected (within one month of the finalisation of the contractual agreement) to develop a Business Plan (based on the submitted application) that will include an Implementation Plan detailing:

- Implementation of industry-facing biocatalysis-based-innovation programmes through support and enhancement of commercially viable technologies;
- Stimulation of bio-entrepreneurship and ability to offer technical incubation to suitable enterprises;
- Enhancement of synergies between the IBH, industry players and relevant professional associations;
- Establishment of biocatalysis hub nodes to expand the reach of the IBH initiatives;
- Leveraging of additional funding from other sources to support IBH activities; and
- How inclusion of PDIs will be promoted at the IBH.

6. Value

The DSI has made an allocation R3 million in 2020/21 (VAT Inclusive) to support the establishment and implementation of the IBH. The management fee levied by the successful institution shall not exceed 10% of the allocated amount.

7. Reservations

The Technology Innovation Agency (TIA) reserves the right to accept, reject all or any proposals submitted.

8. Contact details:

For any queries relating to this EOI please contact Samkelisiwe Mathonsi at IBHCall@tia.org.za