

## **CSIR COOPERATION FUND FOR SCIENTIFIC AND TECHNOLOGY DEVELOPMENT**

### **1. OBJECTIVES**

The objective of the CSIR Fund for Cooperation and Scientific and Technology Development (Cooperation Fund) is to facilitate the relationship between the CSIR and TEIs in South Africa by funding collaborative projects within the themes identified in the MoUs.

### **2. WHAT THE FUND CAN BE USED FOR**

The grant will assist researchers in CSIR Units and Centres to establish relationships with their counterparts at the TEIs, to initiate quality research relationships and strengthen programmes aimed at building human capacity.

The grant can be used for research in areas specified in the MoU between the TEI and the CSIR. The funds can be used for:

- i. Time spent on research by CSIR researchers and mentors.
- ii. The use of research facilities
- iii. Exchange visits by CSIR researchers and visiting researchers.
- iv. Running expenses, including travel and accommodation.

### **3. EXPECTED OUTPUTS**

The expected output of the funding is an initial research idea that will need to be developed further through a larger amount of additional funding obtained from other funding sources. It is expected that after a period of three years, 20 percent of these research ideas will mature into full projects.

### **4. CRITERIA FOR SELECTION**

The criteria for selecting proposals for funding are:

- i. Alignment of proposal with the CSIR strategy and relevant MoU.
- ii. Technical merit of proposal including clear statement of purpose, outputs, and methodology.
- iii. Budget covering legitimate expenses.

Preference will be given to proposals which include co-funding by the collaborating institutions.

### **5. ELIGIBILITY**

- i. The collaborating institution must have a memorandum of understanding with the CSIR or such and MoU must be under negotiation.
- ii. The application must include researchers from the CSIR and the respective TEI.
- iii. A senior researcher must have the main responsibility for the scientific and financial reporting, as well as the technical and administrative co-ordination of the project.

## **6. PROJECT MONITORING AND REPORTING**

The following will apply:

- A time sheet system of reporting will be implemented on PeopleSoft; regular progress will be monitored by the Units/ Centres.
- A final report is expected at the end of the funding.

## **7. LIMITATIONS**

- The CSIR Running vs. Manpower guidelines for PG shall apply to the TEI grant.
- External running expenses should not exceed 30 percent of the total budget of the project, while internal running expenses should not exceed 20 percent of the total budget of the project.
- The maximum grant per project will be R 100,000.
- All projects should be completed within the financial year in which they are approved.

## **8. TERMINATION OF FUNDING**

The grant will be withdrawn on the basis of lack of performance.

Failure to submit the project proposal on SIMS within the given time period will result in withdrawal of the funding.

### Projects Funded by the CSIR Fund for Scientific and Technical Cooperation (2007)

| Title                                                                                          | Project Leader               | Purpose                                                                                                                                                                                                                           | Research Area                       | Collaborating Institution        | Budget   |
|------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------------------------------|----------|
| 1. Assessing the environmental performance of agriculture in South Africa                      | Dr. Constansia Musvoto (NRE) | To gain understanding of and insights into the status-quo of agriculture and the environment in South Africa and to develop a proposal for a research programme on the environmental performance of agriculture in the country.   | Environmental management            | University of Venda              | R100,000 |
| 2. Analysis of isotopes in marine manganese deposits from the Mozambique Ridge.                | Dr. Samantha Perrit (NRE)    | To analyse isotopes in marine manganese deposits from the Mozambique Ridge in order to reconstruct the patterns of ocean circulation and assess their relationships to change in climate and paleogeography.                      | Coastal and marine science research | University of KwaZulu Natal      | R100,000 |
| 3. Environmental fate of manganese arising from automobile emissions.                          | Patricia Forbes (NRE)        | To determine the concentrations of lead and manganese in traffic dense areas in order to understand whether possible effects are likely or not.                                                                                   | Air quality monitoring              | Tshwane University of Technology | 100,000  |
| 4. Establishment of a Trans-disciplinary Sustainability Analysis, Modeling and Assessment Hub. | Dr. Alex Weaver (NRE)        | To establish an innovation centre that will foster trans-disciplinary dialogue about complex socio-ecological systems and facilitate its translation into models for supporting effective decision-making and management systems. | Sustainability Science              | University of Stellenbosch       | R100,000 |

| Title                                                                                                                                                       | Project Leader                                  | Purpose                                                                                                                                                                                                                                                                                                                                                   | Research Area             | Collaborating Institution              | Budget   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------|----------|
| 5. Mobile Courier Robot.                                                                                                                                    | Dr. Nkgatho Tlale (MSM)                         | Proposes the development of an autonomous, two wheeled vehicle that can be used for the delivery of parcels from building to building within the CSIR campus. The developed autonomous vehicle will be able to operate indoors and outdoors. The purpose of the research is to focus on the development of autonomous systems to guide the service robot. | Mechatronics and robotics | University of KwaZulu Natal            | R100,000 |
| 6. Unsteady supersonic aerodynamics of rapidly accelerating bodies.                                                                                         | Kavendra Naidoo (DPSS)                          | To develop and test computational and experimental capabilities for the investigation of accelerating bodies and practical interest at supersonic speeds in future years.                                                                                                                                                                                 | Aerospace                 | University of Witwatersrand            | R100,000 |
| 7. Effect of maternal egg cytoplasm and organelles on rooting ability of <i>Eucalyptus</i> pure species and hybrid cuttings used in vegetative propagation. | Dr. Annabel Fossey and Dr. Stephen Verryn (NRE) | To investigate cytoplasmic maternal effects/inheritance on the rooting ability of <i>Eucalyptus</i> species and hybrid cuttings used in vegetative propagation.                                                                                                                                                                                           | Forestry                  | University of KwaZulu Natal            | 100,000  |
| 8. Modeling of nonwoven assemblies.                                                                                                                         | Dr. Rajesh Anadjiwala (MSM)                     | The project aims at modeling nonwoven fabrics which is an assembly of randomly-oriented fibres for dry/liquid filtration applications.                                                                                                                                                                                                                    | Fibres and Textiles       | Nelson Mandela Metropolitan University | 100,000  |
| 9. Heterologous expression of carbohydrate binding proteins (lectins) for design of flocculent <i>Yarrowia Lipolytica</i> yeast.                            | Dr Bethuel Ntangani (Biosciences)               | To design a yeast strain whose flocculation can be used an controlled using external stimuli.                                                                                                                                                                                                                                                             | Biosciences               | University of Limpopo                  | 100,000  |