



Freestanding, Innovation and Scarce Skills Postdoctoral Fellowships

Framework

Directorate: Human and Infrastructure Capacity Development

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1. Purpose

The purpose of this framework document is to outline the funding principles and implementation of three postdoctoral fellowships, namely, (i) the Freestanding Postdoctoral Fellowships, (ii) the Innovation Postdoctoral Fellowships and (iii) the Scarce Skills Postdoctoral Fellowships. The Freestanding and Innovation Fellowships are funded by the Department of Science and Innovation (DSI), while the Scarce Skills Fellowships are financed by the National Skills Fund (NSF) through the Department of Higher Education and Training (DHET). This document outlines the objectives of the funding instrument, eligibility criteria, funding principles, application process and governance—including management of the fellowships.

2. Background and Rationale

The National Research Foundation (NRF) is an agency mandated by an Act of Parliament (Act no. 23 of 1998, as amended), for the implementation of human capacity development initiatives, knowledge production and the provisioning of research infrastructure.

The National Research and Development Strategy of 2002 identified the need for a new generation of scientists to underpin the central thrust of innovation. The South African research and academic system is faced with a challenge of having an ageing productive scientific population. Strategic interventions are needed to reverse these trends to ensure correct positioning of the country for competing in the global research and innovation arena. In response to this need, the DSI and NRF supports postdoctoral fellowships to promote research and research capacity development in all knowledge fields.

In addition, the South African government passed the Skills Development Act (Act no. 97 of 1998), which provided a framework for addressing the severe shortage of skills in the country. The legislation provided guidelines for increasing the overall level of skills in the country and for improving access to quality learning, especially for the previously disadvantaged sectors of the population. It also aimed to ensure that the learning system is more responsive to the skills requirements and needs of industry. Emanating from the abovementioned Act, the Departments of Labour (DoL), Education (DoE) and the DSI were mandated to advance capacity development in scarce skills disciplines at higher education and training institutions. In response to this mandate, the DoL, allocated funding from the NSF, and entered into a contractual agreement with the NRF for management of the Scarce Skills Development Fellowships (SSDF) postgraduate and postdoctoral funding. The Scarce Skills Development Fellowships supports students at Honours, Masters and Doctoral levels as well as Postdoctoral Fellows. The NSF has migrated to the Ministry of Higher Education,

Science and Technology (HEST) and funding for postgraduate and postdoctoral training is made available to the NRF through annual budget proposals submitted to the Ministry.

3. Objectives of Postdoctoral Fellowships

The objectives for the postdoctoral fellowships supported by the NRF are listed below:

- Increase the number and quality of Postdoctoral Research Fellows in South Africa in all fields of research, with a focus on specified scarce skills areas;
- Expand transformation initiatives through career growth opportunities for South African designated groups;
- Support young scientists and professionals—in conjunction with universities, public research institutions and industry—to support the development of basic, strategic and applied research, for knowledge and socio-economic impact;
- Enable young scientists and professionals to access world-class research training opportunities to strengthen their research profiles and thereby improve their prospects of employment within the national science system;
- Enable South African Postdoctoral Fellows to obtain international research training opportunities and exposure; and
- Enable outstanding international Postdoctoral Research Fellows to undertake research in South Africa and contribute to the national research enterprise.

Postdoctoral fellowships are aimed at providing a comprehensive training, development and mentorship programme for the establishment of an independent researcher involved in engaged research. In addition, the postdoctoral fellowship period should allow for and promote the professional development and competence of postdoctoral fellows in areas such as:

- develop independent research focus;
- produce research outputs with both knowledge and socio and/or economic impact;
- increase mentoring and postgraduate supervision capabilities;
- develop networking capabilities;
- obtain grantmanship skills to secure own research funding;
- develop the necessary administrative/managerial skills in research;
- engagement in science outreach and communication to the general public; and
- managing and leading research teams.

4. Application Process

Each institution may submit a maximum of thirty (30) applications from candidates who wish to pursue postdoctoral training at their university or research institution. Applications submitted by the institutions to the NRF must be aligned with the following equity targets:

- 80% South African citizens and permanent residents¹
- 80% Black (African, Indian and Coloured)
- 55% Female

Applications must be submitted through the NRF Connect system at <https://nrfconnect.nrf.ac.za/>.

Institutions are required to implement internal processes to ensure that, the NRF receives complete applications by the closing date; they do not exceed the maximum of thirty (30) applications per institution; and they adhere to the stipulated equity targets.

5. Areas of Support

Applications from candidates intending to pursue postdoctoral research in the specific areas listed below will be considered for the respective fellowships.

5.1 NRF Freestanding Postdoctoral Fellowships

- Natural Sciences;
- Engineering;
- Technology;
- Social Sciences; and
- Humanities.

In allocating funds for Postdoctoral Fellowships at South African public research institutions, priority will be given to Science, Engineering and Technology (SET) disciplines. The percentage of Fellowships awarded towards the SET domain will be between 70 – 80%; and between 20 – 30% for the Social Sciences and Humanities (SSH).

5.2 Innovation Postdoctoral Fellowships

- Biotechnology;
- Cellular and Molecular Biology;
- Engineering;

¹ At the time of application, only persons with a valid South African ID number will be considered as a South African Permanent Resident, and not those in the process of applying for permanent residency. The latter will be considered as International candidates.

- Computer Science;
- Physics;
- Astronomy;
- Mathematical Sciences;
- Nanotechnology;
- Chemistry;
- Earth Science;
- Ecology;
- Medical Sciences;
- Social Sciences; and
- Humanities

5.3 Scarce Skills Development Fund Postdoctoral Fellowships

- **Management:**
 - Financial Management
- **Financial sector:**
 - Accounting, Auditing, Statistics, Actuarial Science
- **Biological sciences:**
 - Biotechnology
- **Physical sciences:**
 - Mathematical Sciences, Physics, Geology, Computer Science, Information Systems, Chemistry
- **Engineering:**
 - All fields of Engineering
- **Sector specific:**
 - Agricultural Sciences, Transportation Studies, Tourism, Demography

6. Eligibility

The eligibility criteria applicable to all the Postdoctoral Fellowships supported by the NRF are listed in section 6.1. In addition, sections 6.2, 6.3 and 6.4 list eligibility criteria for each category of fellowships relating to citizenship requirements.

6.1 General eligibility criteria for all Postdoctoral Fellowships

- Applicants must have graduated with their doctoral degree within four (4) years of applying to the NRF. For this Call, applicants must have graduated with their doctoral degree no later than 31 December 2017;

- Applicants who are currently completing their doctoral dissertation for submission may apply. They should however complete their doctoral degree by 31 December 2022, as all **awards that are not taken up by 30 June 2023 will be cancelled by the NRF**;
- Full-time employees of Higher Education Institutions (HEIs) or other research institutions are only eligible to apply **if they intend to take unpaid leave for the duration of the postdoctoral fellowship**;
- Applicants who are applying for a second NRF Postdoctoral research placement will be eligible if they intend undertaking research on a new project;
- Applicants who are applying for a second NRF Postdoctoral research placement to continue with research on the **same project are not eligible**; and
- Applicants who are applying for a third NRF Postdoctoral research placement **are not** eligible.

6.2 NRF Freestanding Postdoctoral Fellowships in South Africa

Fellowships are open to **South African citizens, permanent residents as well as international candidates** who intend to undertake research at a public research institution in South Africa.

6.3 Innovation Postdoctoral Fellowships:

Fellowships are open to **South African citizens or permanent residents and foreign citizens**, from the African continent and other countries, intending to undertake postdoctoral research in South Africa.

6.4 Scarce Skills Development Fund Postdoctoral Fellowships

Fellowships are open to **South African citizens and permanent residents only**.

7. Global Knowledge Partnerships (GKP)

International exposure for postdoctoral fellows is an integral component of the NRF strategic goal to create an internationally competitive, transformed, and representative South African research system. The NRF intends to source new and realign existing support programmes to offer opportunities for outstanding postdoctoral fellows in South Africa to spend from three (3) to twelve (12) months abroad. The international training opportunity will enable outstanding postdoctoral fellows to enhance their theoretical and practical knowledge, to

form international networks, and to access mentorship and global research funds and infrastructures.

All fellows receiving NRF funding for postdoctoral studies in South Africa are encouraged to incorporate a period of international training that forms an integral part of their postdoctoral training programme. International training opportunities must be identified and financed in consultation with the support of the postdoctoral supervisor(s) and the university.

Successful candidates for the postdoctoral fellowship are in addition eligible for a once off travel grant. The travel grants may be used to contribute towards the costs of attending local or international conferences, workshops, visiting a laboratory, or any other activity that supports the beneficiaries' research training.

The existing international training opportunities for NRF funded postdoctoral fellows are outlined below. Preference will be given as per stipulated equity targets.

South African women postdoctoral fellows undertaking research in Biotechnology and attached to the **International Centre for Genetic Engineering and Biotechnology (ICGEB)** in Cape Town, will have an opportunity to spend between three (3) to six (6) months abroad at the ICGEB laboratories in Trieste, Italy or New Delhi, India. Further information on these short-term research fellowships may be accessed at: <https://www.icgeb.org/activities/fellowship/>

Through the **Mitacs Accelerate International** and **Mitacs Globalink Research Award** programme, the NRF and **Mitacs Inc.** will support South African and Canadian postdoctoral fellows to carry out joint internships in industry and strengthen international research collaboration between South African and Canadian companies and universities. Each academic year, postdoctoral fellowship-holders will be invited to apply for the Mitacs award. Further information on postdoctoral opportunities from Mitacs Inc. may be accessed at: <https://www.mitacs.ca/en/programs#postdoc>

8. Application Requirements

- Applicants should apply to undertake postdoctoral research (i) on a research project that is different from the doctoral research; (ii) located in a different department from that where the doctoral training was undertaken; or (iii) at a different institution to that where the previous study was undertaken, as fellowships will preferably be awarded to individuals that will be expanding their research training on a new project and/or at a new institution;

- Special consideration will be given to applicants who are applying for a first NRF postdoctoral research placement where the individual's research training and outputs may be enhanced by continuing with postdoctoral research at the same institution; department; or under the same mentor. In such instances the applicant must provide a **strong motivation** describing the benefits to the applicant and for advancing research and innovation. **Failure to provide a motivation will result in a rejection without review;**
- Applicants' must attach proof of their masters and doctoral qualifications to their application. For those who are in the process of completing their doctoral degree, a letter of confirmation from their current institution, stating that their doctoral qualification will be completed by December 2022 must be attached to the application;
- Requested information that is not included in the appropriate section of the online application form, but is submitted as an attachment instead, will render the application incomplete resulting in a rejection without review.

9. Value of the Postdoctoral Fellowships

9.1 Postdoctoral Fellowships in South Africa

Successful applicants will receive funding for a maximum period of two (2) years based on the initial commencement date of the project. Female Postdoctoral Fellows that take maternity leave during the tenure of the fellowship, are eligible for an additional four (4) months of support beyond the two (2) year fellowship period.

The Postdoctoral Fellowship in South Africa packages for 2023 are indicated in **Table 1** below.

Table 1: Postdoctoral Fellowship Values for 2023

Value per annum (Rand)	Category
Free-standing	
200 000	non-taxable stipend
50 000	contribution towards research costs
15 000	compulsory institutional contribution
Innovation	
255 000	non-taxable stipend
50 000	contribution towards research costs
15 000	compulsory institutional contribution
Scarce Skills	
255 000	non-taxable stipend
50 000	contribution towards research costs
15 000	compulsory institutional contribution

Host institutions will be expected to supplement the fellowship with a minimum of R15 000.00 per annum as part of the institutional commitment. In addition, the host institutions will ensure the provision of an enabling environment for Fellows' research training and skills development.

Successful candidates for the postdoctoral fellowships are also eligible for a once-off travel grant of up to R15 000, for local travel, and up to R50 000 for international travel. The travel grants may be used to contribute towards the costs of attending local or international conferences, workshops, visiting a laboratory, or any other activity that supports the beneficiaries' research training. This is the maximum amount permitted over the tenure of the fellowship. Postdoctoral Fellows who wish to access the travel grant, must consult the Scholarship- and Fellowship-holders Travel Grant Guideline which may be accessed on the NRF website at (<https://www.nrf.ac.za/funding/>).

9.2 Assistive Devices for Postdoctoral Fellows with Disabilities

All Postdoctoral Fellowship-holders with a disability may apply for additional funding for an assistive technology device of up to R20 000. This is the maximum amount allowed during the tenure of the fellowship. As defined by the Individuals with Disabilities Education Act Amendments of 1997 (IDEA), an assistive technology device is "any piece of equipment, or product system, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities".

10. Conditions of the Fellowship

- The grant must be taken up within two (2) months of receipt of the award letter, through submission of a signed Conditions of Grant (CoG), except in cases where the result of the doctoral degree is pending (refer to Section 6 on Eligibility);
- Carry-over of unspent funds will not be permitted for Postdoctoral Fellowships, except under extenuating circumstances, e.g., ill-health, and must be motivated for in writing.
- The awards must be taken up in 2023 and awards not taken up by 30 June 2023 will be cancelled by the NRF;
- The award, if successful, will be explicitly awarded for the research area as indicated in the application;
- The fellow is not permitted to engage in any other research project not approved by the NRF nor that which has not been subjected to a scientific review process by the NRF;

- The fellowship shall be held as the primary funding for the postdoctoral research training;
- Fellowships may not be held simultaneously with another fellowship from any other government or NRF source or NRF administered source;
- Postdoctoral Fellows may hold non-binding supplementary grants or emoluments from the South African government or from a private sector funder to the institutional capped value;
- Postdoctoral Fellows are permitted to spend a maximum of 20% of their time undertaking lecturing and student supervision;
- Postdoctoral Fellows may not concurrently hold the fellowship with any full-time salaried employment; and
- For the fellowship to be tax exempt, in compliance with section 10(1)(q) of the Income Tax Act No. 58 of 1962, *“at the time of the award, the candidate should have graduated with his/her doctorate degree no longer than within the previous five (5) years. The applicant must receive an institution Letter of Award within a period of having graduated with his/her doctorate degree no longer than within the previous five years.”*

11. Equity and Redress

In line with the national imperative of equity and redress, the programme prioritises support for appropriately qualified applicants from designated groups, viz. South African citizens (excluding permanent residents) who are Black (African, Coloured, and Indian), women and people with disabilities. The equity targets for the freestanding, Innovation and Scarce-Skills Postdoctoral Fellowships are:

- 80% South African citizens and permanent residents; and
- 20% citizens from other countries including Southern African Development Community (SADC).

12. Review Process

All applications will be screened based on the eligibility criteria and application requirements. Should an application not be eligible, it will be rejected without review. All eligible and appropriately completed applications are subjected to a competitive merit review process. The reviewers are selected by the NRF from existing reviewer databases and other sources and may include reviewers suggested by the applicant. In assessing the proposals, the reviewers' reports are referred to and, agreed assessment criteria are applied in the form of a scorecard during the panel review process.

The purpose of the scoring system is to evaluate applications in order to identify applicants that are most deserving of the limited number of Postdoctoral Fellowships available. All research proposals submitted to the NRF for funding are evaluated according to the pre-determined criteria. Each area is given a weighting to indicate its relative importance as indicated in **Table 2** below:

Table 2: Scorecard for the Assessment of Proposals for Postdoctoral fellowships

Criteria	Sub-Criteria	Weighting (Total = 100%)
Track Record of Applicant	Relevant expertise/training that will enable the applicant to successfully undertake the proposed research.	10%
	The applicant's research track record which could include peer-reviewed publications, conference proceedings, research prizes and awards.	10%
Scientific and Technical quality of proposed research	Literature review with citations; significance of the research in terms of the problem statement, aims and objectives. Scientific contribution; originality and new knowledge to be generated.	20%
	Research design and methodology developed to address the aims and objectives of the research. Provision of a work plan aligned to the objectives including feasible timelines and milestones for the research.	20%
	Alignment with national and institutional research priorities.	5%
Institutional Support	Institutional support for the postdoctoral fellowship through mentorship, infrastructure and facilities for an enabling environment.	10%
Potential Research Outputs and Impact of the research²	Details of envisaged realistic research outputs such as books, chapters in books, articles in refereed/peer-reviewed journals, refereed/peer-reviewed conference outputs, patents, articles in non-refereed / non-peer reviewed journals, Technical/Policy reports, products, artefacts, prototypes and other recognised research outputs.	5%
	Contribution to postdoctoral research skills development in a priority research area (human capacity development of the applicant).	10%
	Potential for impact of the research in South Africa realised through either: <ul style="list-style-type: none"> • Knowledge impact - scientific advances in understanding, interpretation, methods, theory and applications. • Societal impact - the value research adds to society through improvements in the social, economic or environmental spheres. 	10%
		100%

² Access the 'NRF Framework to Advance the Societal and Knowledge Impact of Research' document at: <https://bit.ly/3xrvx32>

13. Conditions of Award

The NRF will notify successful applicants of the outcome of their application by publishing a list on the NRF website and issuing of an award letter. Successful applicants will be required to sign a CoG document that will be forwarded with the award letter.

14. Reporting

For continuous monitoring of progress, the awardees will be required to submit a Progress Report (PR), on the NRF Connect system, against deliverables as outlined in the application form and the signed CoG.

15. Contact Details

When making an enquiry, please use “NRF Freestanding, Innovation and Scarce Skills Postdoctoral Fellowship Call” as the email subject line.

For funding instrument related enquiries, please contact:

Ms Edith Shikumo

Professional Officer: Human and Infrastructure Capacity Development (HICD)

Telephone: 012 481 4236

E-mail: EA.Shikumo@risa.nrf.ac.za

For technical NRF Connect enquiries, please contact the NRF Support Desk during office hours from 08:00 to 16:30 from Monday to Friday.

E-mail: supportdesk@nrf.ac.za

For grants management related enquiries, please contact:

Ms Nozine Nqeketo

Professional Officer: Grants Management and Systems Administration (GMSA)

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E-mail: N.Nqeketo@risa.nrf.ac.za