



The National Zoological Gardens of South Africa (NZG) is a national research facility reporting to the National Research Foundation (NRF). It has an impressive animal collection, two biodiversity conservation centres and a centre for Conservation Science. The following **three** challenging Post-Doctoral fellowship opportunities are available:

The National Zoological Gardens of South Africa invites well-qualified, experienced, hard-working, enthusiastic and motivated candidates to apply for the following positions:

Post-Doctoral Fellow 2012: Molecular Biology with a Bioinformatics focus

Technological innovations made it possible to read the complete genetic code of individuals. Understanding genomes and the biological consequences of the enclosed genetic variation remains a large challenge. The Parasitology unit of the NZG applies a range of high-throughput techniques and bioinformatic tools, including next-generation sequencing approaches to systematically discover and study genetic variation (SNPs, structural variation) and functional genomic elements. The successful candidate will be involved in a genome-wide project to integrate different genomic, genetic and epi-genetic data sets to eventually understand underlying molecular mechanisms of *Anaplasma marginale* strains in South Africa.

The successful candidate must be able to work independently and within a team, understand genetic databases, be responsible for leading the project and supervise post graduate students, and contribute to the scientific outputs of the Unit.

Minimum Requirements:

The candidate should have a PhD degree in preferably computer sciences or molecular biology and genetics with experience in genomics and/or next-generation DNA sequencing data analysis.

Remuneration is R300 000.00 per annum, renewable for a second and third year based on satisfactory performance. Enquiries can be directed to Dr S. Mtshali at sibusiso@nzg.ac.za or (+27) 012 328 3265 extension 222.

Post-Doctoral Fellow 2012: Molecular Genetics

A Postdoctoral Fellowship in the field of wildlife molecular genetics is available in the Bio-Molecular Genetics Unit. The unit undertakes cutting-edge research in understanding small and fragmented populations with regards to phylogeography, genetic diversity, hybridization and diseases..

The Postdoctoral Fellow will lead the development of new technologies and applications to understand the phylogeography, landscape genetics and evolutionary histories of flagship species that will include the Southern Ground Hornbill. The successful candidate will work with an established team in well-equipped laboratories. The applicant must be able to work independently, supervise post graduate students and make a significant contribution towards the scientific outputs of the unit. .

Minimum Requirements:

The candidate should have a PhD degree in Molecular Biology, Genetics, or Genomics. A strong background in statistical data analysis will be an advantage.

Remuneration is R300 000.00 per annum, renewable for a second and third year based on satisfactory performance.

Enquiries can be directed to Dr DL. Dalton at desire@nzg.ac.za or (+27) 012 328 3265 extension 234.

Post-Doctoral Fellow 2012: Molecular Biology (Parasitology)

Bovine anaplasmosis is caused by the pathogen *Anaplasma marginale*. It is the most prevalent tick-borne infection in cattle. Molecular assays such as PCR, real-time PCR and LAMP, have the ability to amplify target DNA and can differentiate between *A. marginale* strains. These assays are known for their high sensitivity, specificity and ability to detect the infection. Currently no molecular assay is developed specifically for the detection of South African *A. marginale* strains. The successful candidate will focus on the development of species-specific PCR, real-time PCR and LAMP assays to detect *A. marginale* strains.

Extensive knowledge of modern molecular biology techniques is essential. Experience working with real-time (quantitative) PCR and sequencing instrumentation is highly desired. The successful candidate must have excellent problem solving skills, be innovative, self-motivated and should enjoy working both independently and within a small and adaptive group with an interest in applying cutting-edge technologies to a diverse set of challenges. The unit is currently working with both National and International partners. We provide a dynamic, multidisciplinary environment and the opportunity to play an important role in different ongoing projects directly and by tutoring/guiding PhD and master students. It will be expected of the candidate to contribute significantly to the scientific outputs of the unit.

Minimum Requirements:

The suitable candidate will have a PhD in Molecular Biology, Biochemistry, Biotechnology or a related discipline. Experience in analysis of real time PCR and sequencing data is essential.

The successful applicant will be appointed at R300 000.00 per year, renewable for a second and third year based on performance.

Enquiries can be directed to Dr S. Mtshali at sibusiso@nzg.ac.za or (+27) 012 328 3265 extension 222.

Interested parties are requested to send applications (with a cover letter, full CV and qualifications) to the address below. Short-listed candidates who are invited to an interview will be expected to demonstrate proof of the above *Key Competencies* and *Minimum Requirements*.

Applications should be forwarded to:
HR PRACTITIONER: TALENT MANAGEMENT
P.O Box 754
PRETORIA
0001
Email: nzg.recruitment@nzg.ac.za

CLOSING DATE:**29 February 2012, 16h00**

The National Zoological Gardens of South Africa is committed to employment equity and redress. The NZG reserves the right not to fill this position.