

PISTORIUS



Message from the
Vice-Chancellor
and **Principal**

The University of Pretoria is one of South Africa's leading research universities. For a number of years it has led the field in South Africa with regard to research output in terms of accredited publications. We are delighted that the University is sustaining its lead, and in fact produced more research outputs than was ever attained by a South African university. In a similar vein, we were also happy to note that the University of Pretoria was again listed as one of four South African universities in the Shanghai Jiao Tong University's list of the world's top 500 universities.

The international stature of the University rests to a very large extent on its research activities which are reflected in its diverse publications. These together with its production of masters and doctoral graduates are a measure of the contribution that the University is making to the generation of new knowledge and the application of that knowledge to the development of economic activity in our region.

Given the importance which is attached to ensuring that the University plays a significant role in research and economic development on the African continent, the new strategic plan, *Innovation Generation: Creating the Future 2007-2011*, sees research and postgraduate education as two of the key drivers for the implementation of the plan. Indeed, key interventions of the plan are to grow the number of postgraduate students, particularly in the natural sciences and engineering, and to ensure that academic staff are able to enhance their research stature through an enabling research environment.

During the past year the University has made significant investments in capital equipment which have ensured that the research groups using the equipment remain internationally competitive and serve as a focus of attraction for postgraduate students. Furthermore, the University collaborates with a number of other universities and research councils in Gauteng in the Regional Expensive Equipment Forum (REEF) which allows for the creation of a pool of equipment that can enhance the productivity of the regions research groups. Another function of REEF is to allow the institutions to support each other in the acquisition of large items

of equipment that are funded by national programmes. These collaborative arrangements reflect the University's view that institutions in the region need to collaborate in order to ensure national competitiveness in a global research environment.

This report records the steady growth of the University's research activities. It is pleasing to note that the University's number of NRF rated staff has risen by 21% despite the fact that undergraduate student numbers continue to grow. In addition, a very important spin off of our research intensive activities is that our research active staff have strong interactions with industries that is reflected by the fact that we had research contracts with some 100 companies. These companies provided financial support, seconded staff to work in university laboratories and also supplied much needed logistic support. Research publications provide a measure of international competitiveness, while the interaction with industries and other institutions reflects the local impact of the work that we undertake.

During the period of the new strategic plan, the University intends to enhance its standing internationally and to ensure that its local impact has increased visibility. This report is an encouraging milestone on the journey to this goal.

Professor Calie Pistorius
Vice-Chancellor and Principal
May 2007

CREWE



Message from the
**Vice-Principal:
Research**

The efforts of the faculties and their research committees to encourage members of the academic staff to apply for NRF ratings is beginning to bear fruit. The past year has seen an increase in the number of rated researchers by 21% over the number in the corresponding period in 2005. Furthermore, the number of A-rated staff has almost doubled. Particularly pleasing is that two of the A-rated individuals are staff whose careers have been nurtured over a long period of service at the University.

The production of research publications has continued to grow, allowing the University to remain the most prolific producer of research publications of all the institutions in the higher education sector. The quantity of publications has not been achieved at the expense of quality, since 75% of published journal articles appeared in the two internationally recognised indices – ISI and IBSS. This represents a significant shift from publishing predominantly in local South African journals to producing work that is published in journals with more international impact.

The protection of intellectual property and the commercialization of research has been the focus of concerted attention by the Research Support Office. This is reflected in a significant increase in the number of disclosures made to the office during the year, the filing of nine provisional patents, the registration of two international patent families and the licensing of eight patents to industry. In addition, three companies were established to commercialize innovations that arose from basic research projects. It is the University's intention to ensure that these activities grow and provide academic staff with the opportunity to benefit from the commercialization of the intellectual property that they generate.

This report continues the recently established tradition of highlighting particular research endeavours through a focused essay.

These essays provide a vehicle for explaining the significance of the research activities in a brief and accessible form. I hope that readers will find these stories engaging and allow them to appreciate something of the scope and scale of the research enterprise at the University. The highlighted stories are complemented by the brief reports presented by each of the faculties that showcase their research strengths. Finally more detailed information is presented on the CD rom which is provided with this report, and the website of the Research Support Office contains a wealth of additional information.

This report is also a reflection of the commitment of the University and its executive to the support of research activities both by significant direct investment, particularly in support of postgraduate students and the provision of capital equipment, and the creation of the support structures that allow the research entities of the University to leverage significant amounts of external funding.

Professor R M Crewe
Vice-Principal
May 2007