

Save the rhino....save the blue crane.... save the surgical scientist!

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South Africa has had a proud tradition of surgical science, and in the past were leaders in surgical science fields led by names such as Chris Barnard featuring prominently in world literature. But why a surgical scientist; why not chop, chop, chop? This is a very one dimension and naive pint of view. Fortunately, to some degree, all surgeons are scientists whether they realize it or not. Everyone asks questions, gives thought to their practice, considers their outcomes; the foundation stones of science. The labeled scientist is only more formal in their activity, developing questions, and then ways of answering them, either through controlled observation or experimentation.

Unfortunately the clinician scientist has become an endangered species in our country. The University of Stellenbosch published an eye opening bibliometric analysis in 2010. Though South Africa's overall research publication output increased from 20 892 between 1990 and 1994 to 33 671 between 2004 and 2008 this was not due to the contributions of clinician scientists. The output of research papers in medicine, both general and internal dropped from 2 280 between 1990 and 1994 to 1 556 between 2004 and 2008. There is no published data regarding this for surgery, but one can assume it is at best similar to our medical colleagues. A headcount of researchers in all fields stood at 30 000, putting South Africa on a level Korea was 30 years ago. Between 1992 and 2007 full-time researchers in South Africa's business sector grew from 3 395 to 6 264, government (including the science councils) from 2 428 to 3 058 but higher education only went from 3 631 to 3 672. This data is dismal, and highlights how medical training in our country became solely focused on service delivery and lost its academic way. Fortunately universities and government have realized this and various initiatives are under way to correct the current situation. Gradually we are seeing PhD students appearing in the surgical ranks, but large volume publication output will take time.

In the modern South African surgical landscape we need to lose the stigma associated with the term 'academic' or 'researcher'. All surgeons, regardless of their life's vocation are able to ask questions. It is answering these questions that is science. We have an obligation to our patients, not only to care for them and relieve them of their distress, but also to pursue novel and improved treatment modalities. This can be done through observation, understanding the underlying physiology and pathology as well as interpreting outcomes; in other words through research. Clearly, not everyone is suited or able to perform all aspects of this and this is where collaboration comes into being. No one expects a clinician to become a flow cytometry expert, geneticist or biochemist. However, being well trained clinicians we are in a unique position to give direction and relevance to many laboratory scientists' findings. In other words translational research. Taking the science bench and setting it down next to the patient's bed is where we as South African surgeons are in an exceptional position. We have a phenomenal diversity and volume of pathology, the extent that it present's with are components being lost in First World research, hence their need for collaboration.

In conclusion, translational research, regardless to which degree one practices it is in each and every surgeon's ability. My advice to trainees is to see the compulsory MMed dissertation not as another hurdle in obtaining one's specialist degree, but rather as an opportunity. You have the possibility of asking a question and then going about answering it under the guidance of a supervisor with university support. By doing this you will appreciate that though it is not necessarily an easy endeavor, it may even be gut wrenching at times, seeing your name in PubMed, or on the MMed degree certificate is a very satisfying achievement. With an open mind you may surprise yourself and find the exercise stimulating, and who knows even go on and do a PhD. There are now several programmes that are available to facilitate this. What is one-dimensional is only to practice surgery, and not ask questions of your discipline. The playing field is changing, take advantage of it.