A voice for young scientists

Science, research and engineering exist in every thread of society. Now more than ever, young scientists are finding their voice and stepping up to make science real and relevant for South Africans. By Caradee Wright, Genevieve Langdon and Penny Moore

Born out of a worldwide movement to give young scientists a voice, twenty founding members (see table below) were inaugurated into the newly established South African Young Academy of Science (SAYAS) in September 2011. These young scientists were selected on the basis of their academic excellence and record of service to society. Founding members are committed to serving and meeting the goals of SAYAS for a period of five years.

SAYAS founding members come from a range of disciplines including pure sciences, law, medicine, public health, environmental sciences, engineering, and economics but, for many, it’s difficult to identify a single discipline because their work is so multidisciplinary. Science isn’t just about test tubes and white lab coats. It permeates all of life. Science is about trying to understand how the world works – whether it is human behaviour, the economic markets, a nuclear power station or the way the earth moves around the Sun. Science is also about finding solutions to the challenges faced by humankind, such as poverty, starvation, disease, war and environmental damage.

Whether it is teaching others, uncovering new knowledge through research or creating something completely new, SAYAS members are passionate about finding ways to integrate their work into real life and many feel strongly that their research is driven by a desire to improve society. This ranges from developing new drugs or working towards vaccines, to protecting animals from harmful diseases, finding better ways to grow crops or preventing climate-related disasters. Although many of the SAYAS members have studied and worked outside South Africa, they believe that their work, and that of the many excellent young scientists in institutes across South Africa, can contribute to issues that are specific to developing countries – the role and responsibility of South African scientists in tackling South African and African problems is crucial.

Now that SAYAS founding members have come together to be a young voice for science in South Africa, they will go beyond their individual specialties and contribute to discussions and debates. SAYAS has four immediate strategic objectives:

- To promote science as a career of choice among young people
- To contribute actively to science policy
- To translate science for society and promote science awareness
- To encourage the development of novel and innovative approaches to problems of national and international importance.

Promoting science and social science as a career of choice among young people

Pursuing a career in science or social science does not necessarily mean that you will be a university professor. There are many different sectors in the job market where scientists play a crucial role, such as in government, medicine, education, industry, consulting, entrepreneurship, and more. Those who choose a more academic route have the opportunity to combine their passion for research with teaching the next generation of young scientists. However, for school learners interested in choosing a future in the sciences, there are often no clear role models who can engage with learners, answer their questions and address their concerns. One of the priorities of SAYAS founding members is therefore to connect with school learners.
in South Africa

Caradee and Genevieve at work. Image Credit: SAYAS

— to better understand your joys and challenges, and to foster a passion for science and the world around us.

Being a young scientist at school can be tough. SAYAS asked school learners to describe some of the challenges. Sometimes ‘a person is regarded as being a nerd if you are good at science’ (Sarah, Grade 7) and at a time in life when your peers’ opinion counts most, this can be difficult to deal with. On the other hand, science is often perceived as too difficult — ‘science is a totally new way of thinking’ (Kristen, Grade 12). Often, how learners perceive science is far from the truth. For Prof Alta Schutte (North West University), one thing she wished she had known about science when she was at school was ‘that science does not always equal funny-coloured bubbling bottles in a chemistry lab’. For example, environmental scientists spend much of their time outdoors in nature, archaeologists and palaeontologists rely on fieldwork, and social scientists spend much time interacting directly with people to improve their lives.

Young scientists from around the world will descend on South Africa in May 2012

From the 20 to 24 May 2012 members of the Global Young Academy (GYA) will visit South Africa for their annual general meeting, organised in collaboration with SAYAS. The GYA is an international group of around 170 young scientists from 54 countries and five continents. The GYA aims to empower and mobilise young scientists to address issues of importance to early career scientists.

The GYA general assembly theme is ‘Sustainability — lesson on the road between Rio and Rio+20’. In addition to tackling this broad subject, GYA and SAYAS members will also jointly participate in outreach activities aimed at school learners, and GYA member will visit local academic institutions to foster research partnerships and identify possibilities for collaboration.

Do you have ideas about how SAYAS can promote science in South Africa?

SAYAS founding members are on the lookout for good ideas about how we can promote science in South Africa and be a voice for young scientists in our society. If you have ideas on how we can do this then please contact SAYAS (Email: Dorothy Mutheu, mutheu@sasaf.org.za), no matter how old or young you might be.

Later this year there will be a call for ten additional members to join SAYAS. Criteria include being in possession of a PhD or equivalent degree in any field of scientific enquiry, where science is defined broadly as encompassing natural sciences, social sciences and humanities, medical sciences and engineering.

Evidence of scientific excellence through a proven publication record, and receipt of honours and awards; evidence of activities demonstrating service to society, and be under the age of 40 years and/or within seven years from receipt of a PhD at the time of nomination. If you would like to apply, watch out for the call through your institution — SAYAS will welcome your application.


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SAYAS founding members with the Minister of Science and Technology, Naledi Pandor. Image: DST

SAYAS founding members say that their science or career is cool because...

... like a detective, I get to figure out why people act the way they do, with the added bonus that when their behaviour is not working for them, I help figure out how to change it (Prof Bronwyn Meyers, Medical Research Council/University of Cape Town).

... I get to blow things up (Prof Genevieve Langdon, University of Cape Town).

... Occasionally, just occasionally, there is a ‘eureka’ moment, where I see, or understand something for the first time. And that moment is completely addictive! (Dr Penny Moore, National Institute for Communicable Diseases/University of the Witwatersrand).

... It allows me to combine natural and socio-economic scientific principles to provide nutritious, functional and safe food for people (Prof Voster Muchenje, University of Fort Hare).

... It connects people — babies with mothers, grandparents with children, friend with friend — through communication. The sense of hearing connects us (Prof De Wet Swaapweer, University of Pretoria).

... my days are filled with variety and interactions with people — students and academics — who usually are much smarter than me and always keen to share knowledge. My main research aim is to understand how animals will cope with climate change and I love the satisfaction of discovering important new insights, through undertaking innovative field work in southern Africa and other parts of the world (Prof Andrea Fullet, University of the Witwatersrand).

... I get to meet incredible people, see new places, express unanswered questions, but also see my work published and read by others (Dr Caradee Wright, CSIR).

SAYAS members answered school learners’ questions

Question: What made science so appealing to you, and why did you decide to make it your career? (Kirsten, Grade 12)

Answer: My career in science has given me opportunities to generate new knowledge, contribute to conservation and environmental issues, and train students who are passionate about science and conservation. At the same time, it has been a whole lot of fun, and has allowed me to travel to some of the most amazing places on Earth (Prof Andrew McKenzie, University of Pretoria).

Question: What inspired you to be an engineer when you were little and who guided you? (Meagan, Grade 7)

Answer: I loved science and maths as a child and was fascinated by how things worked. I was inspired to do engineering by the way they use science and maths to make a difference in the real world. I took advice from my school careers advisor, my university lecturers and read a lot of websites to find out more information (Prof Genevieve Langdon, University of Cape Town).