

Bright young minds

have a lot to say about developing

nanomedicine

What makes a healthy, lively debate?
Different perspectives and different points of view!



EASY SCIENCE



The finalists:

Nine teams, of five learners each, from high schools across South Africa stood up and had their voices heard in a vibrant debate at the South African Agency for Science and Technology Advancement's (SAASTA's) National Schools Debates finals on Friday 6 October 2017.

How do we make sure that the benefits of nanomedicine are benefits for everyone in the country? Is better nanomedicine going to be affordable for all? Are there risks, as with any technology, that we need to first understand more about before we develop these medicines? Are we doing enough to inform people about nanomedicine so they can be part of decisions about how nanomedicine is used in South Africa? The debaters talked about how nanomedicine can benefit society, the money, the social and cultural issues and the politics. They are smart, young people who care a lot about issues that South Africa faces.



Be open, wise and humble

Mr Michael Ellis, manager of the Science Communication Division at SAASTA, says "It is quite easy to be ignorant and have an opinion. It is much more difficult to be informed, well read and educated on a topic and to be able to distil this information into an argument and to then deliver this argument in a manner that everyone understands. One also needs to be open, wise and humble enough to hear other people's arguments and possibly even adjust one's own perspective based on these arguments."

Choosing the Champion

On the day the panel of adjudicators, including nanoscientists and debating experts, judged the Limpopo provincial champions, the team from SJ Van Der Merwe Technical High School, to be the most well-rounded debaters, presenting well-balanced content and persuasive arguments, and they were awarded the title of the 2017 SAASTA National Schools Debates champions. The Square Kilometre Array (SKA) is awarding the team and their educator an all-expenses-paid science tour to the East Coast of the USA. The tour will include, amongst others, a site visit to the Greenbank Radio Astronomy Observatory in West Virginia; guided tours of the NASA Goddard Space Flight Centre and Smithsonian Museums, including the Air and Space Museum, in Washington, DC; and an internship at the American Museum of Natural History in New York.

Small nano things are making big things happen for these learners!

These learners were talking about nanomedicine and "smart" nano drugs – a topic that used to sound like science fiction but is now becoming a reality, thanks to the research of scientists around the world, including South Africa. But, like all developments, making nanomedicine a reality needs investment. The teams were asked to consider different perspectives and to think about whether we should be investing more in developing nanomedicine in South Africa and whether it could really benefit all of us.

Nanomedicine helping South Africans

Have you ever thought about it? Do you have some of the same thoughts these young people have? Nanomedicine can potentially help all South Africans, with better medicine that we need to take less often and better ways of diagnosing a particular illness that can help us get treatment sooner.

SAASTA congratulates the top teams

NATIONAL WINNERS:

- SJ Van Der Merwe Technical High School, Limpopo
- Second place:** Port Shepstone High School, Kwazulu Natal
- Third place:** Kimberley Girls High School, Northern Cape

PROVINCIAL WINNERS:

- Mpumalanga** Mashishing High School
- Western Cape** Protea Heights High School
- Free State** Iketsetseng Comprehensive Secondary School
- North West** Potchefstroom High School for Girls
- Eastern Cape** Ntabenkonyane High School
- Gauteng** Rand Tutorial College



The winning team:

SJ Van Der Merwe Technical High School in Limpopo Province
Front (L-R) Mahlodi Lekoana, Tshagofatso Motlatla;
Back (L-R) Kabelo Maifadi, Morakoane Madiba, Itumelanga Katjedi;
Teacher (right back), Ms Onicca Lekgothoane; SKA SA (left back), Anja Fourie.

The Topic:

Nanotechnology in the field of medicine could transform the way we detect and treat damage to the human body and disease. Nanotechnology is being applied in the development of more effective drug delivery systems and "smart drugs" are now able to target particular areas in the human body. Introduction of nanoparticles into the human body comes with associated risks and not all of these risks are known. Should South Africa increase its investment in the development of medical nanotechnology and will this benefit everyone in South Africa?



The National Schools Debates Competition, implemented by SAASTA, gives learners in grades 9 to 11 the opportunity to develop their research, critical thinking and information literacy skills, as well as their ability to work as a team to present logical, clear arguments by debating high level topics in science and technology. The competition aims to encourage young people to address key issues around science and technology that are faced by their communities, through the medium of debate, and empower the learners to start other conversations about science in their own communities. It is supported by DST-funded public engagement programmes – HySA Public Awareness, Demonstration and Education Platform and the Nanotechnology Public Engagement Programme – and the Square Kilometre Array.

