RHODES UNIVERSITY

Rhodes University is nestled in the heart of Grahamstown and is home to more than 7,500 students from around the world. The university owes its unique character among South African universities to a combination of architectural, cultural, geographical and historical factors. Its history is a chronicle of those whose intellect, vision and courage created and sustained a university that grows from strength to strength each year. Successive generations of Rhodians have had an influence on Southern African and world affairs out of all proportion to their small number.

The Rhodes University Scifest Africa 2017 Programme is presented by the Faculty of Science. Find out more about the various departments, the world-class research done in each one, and why Rhodes University is “where leaders learn”.

Rhodes University
Somerset Street
Grahamstown
www.ru.ac.za

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Organisation</th>
<th>Title</th>
<th>Audience</th>
<th>Capacity</th>
<th>Price</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>09h00</td>
<td>17h00</td>
<td>Faculty of Pharmacy</td>
<td>Exhibit</td>
<td>All</td>
<td></td>
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<td>Monument, Booking Office</td>
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WEDNESDAY, 8 MARCH

<table>
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<tr>
<th>Start</th>
<th>End</th>
<th>Department of Human Kinetics and Ergonomics</th>
<th>Unpacking Human Performance</th>
<th>Gr 8+</th>
<th>20</th>
<th>R25</th>
<th>Rhodes University Department of Human Kinetics and Ergonomics</th>
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</table>

THURSDAY, 9 MARCH

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Department of Chemistry</th>
<th>Funky Fun Organic Chemistry</th>
<th>Gr 12</th>
<th>20</th>
<th>R25</th>
<th>Rhodes University Chemistry and Pharmaceutical Sciences Building</th>
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</thead>
<tbody>
<tr>
<td>08h50</td>
<td>09h00</td>
<td>Department of Biochemistry and Microbiology</td>
<td>Dr Tommy Bornman, Global Change and the Antarctic Circumnavigation Expedition</td>
<td>Gr 8+</td>
<td>200</td>
<td>R25</td>
<td>Monument, Olive Schreiner Hall</td>
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<tr>
<td>10h50</td>
<td>11h00</td>
<td>Department of Ichthyology and Fisheries Science</td>
<td>FishTastic</td>
<td>Gr 9</td>
<td>30</td>
<td>R25</td>
<td>Rhodes Department of Ichthyology and Fisheries Science</td>
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FRIDAY, 10 MARCH

<table>
<thead>
<tr>
<th>Start</th>
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<th>Department of Chemistry</th>
<th>DIY Titrations</th>
<th>Gr 10-12</th>
<th>30</th>
<th>R25</th>
<th>Rhodes University Chemistry and Pharmaceutical Sciences Building</th>
</tr>
</thead>
<tbody>
<tr>
<td>09h00</td>
<td>10h00</td>
<td>Department of Human Kinetics and Ergonomics</td>
<td>Unpacking Human Performance</td>
<td>Gr 8+</td>
<td>20</td>
<td>R25</td>
<td>Rhodes University Human Kinetics and Ergonomics Department</td>
</tr>
<tr>
<td>11h00</td>
<td>12h00</td>
<td>Department of Human Kinetics and Ergonomics</td>
<td>Ben Ryan, Professionalisation of Soccer</td>
<td>Gr 8+</td>
<td>200</td>
<td>R25</td>
<td>Monument, Olive Schreiner Hall</td>
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<tr>
<td>10h50</td>
<td>11h00</td>
<td>Department of Ichthyology and Fisheries Science</td>
<td>FishTastic</td>
<td>Gr 9</td>
<td>30</td>
<td>R25</td>
<td>Rhodes University Department of Ichthyology and Fisheries Science</td>
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SATURDAY, 11 MARCH

| Start   | End     | Department of Biochemistry and Microbiology | Biochemistry and Microbiology tour bus. Destination: unknown | Gr 8+ | 16   | R25   | Rhodes University Department of Biochemistry and Microbiology |

TUESDAY, 13 MARCH

<table>
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<tr>
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<th>Rhodes University Chemistry and Pharmaceutical Sciences Building</th>
</tr>
</thead>
<tbody>
<tr>
<td>09h00</td>
<td>10h00</td>
<td>Department of Human Kinetics and Ergonomics</td>
<td>Unpacking Human Performance</td>
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<td>20</td>
<td>R25</td>
<td>Rhodes University Department of Human Kinetics and Ergonomics</td>
</tr>
<tr>
<td>10h50</td>
<td>11h00</td>
<td>Department of Ichthyology and Fisheries Science</td>
<td>FishTastic</td>
<td>Gr 9</td>
<td>30</td>
<td>R25</td>
<td>Rhodes University Department of Ichthyology and Fisheries Science</td>
</tr>
</tbody>
</table>
This exhibit focuses on the rise in diseases such as hypertension, diabetes, cancer and other non-communicable diseases, and it's shocking burden and consequences in South Africa. This interactive, culture-sensitive and context-specific health promotion exhibit focuses on three current health challenges in South Africa—epidemic increase in non-communicable diseases; increasing Antimicrobial resistance and the need for sustainable environmental health. This exhibit is designed to create awareness amongst young students and everyone visiting the exhibit about, among others, a set of specific, effective and affordable actions to prevent and/or delay the onset of these health conditions by focussing on healthy lifestyle.

www.ru.ac.za/pharmacy

In December 2016, the Russian Research Vessel, Akademik Treshnikov, with 55 international scientists on board, embarked on a three-month cruise—the first ever Antarctic Circumnavigation Expedition. The aim is to study the marine and terrestrial environments of the Subantarctic to gain insight into the consequences of climate change in the region. Dr Bornman led a team of South African scientists on the first leg from Cape Town, South Africa to Hobart, Australia to study microbial communities—the unseen majority—of the Southern Oceans. These microorganisms (microscopic algae, bacteria, microzooplankton) form the basis of marine foodwebs.

Don't miss the ACE exhibition featured at Water World during Scifest Africa. See further details in the Water World programme.

www.aceprojectxii.wordpress.com/

This lecture will focus on the professionalization of soccer. It will provide a brief history of the sport, including its humble beginnings. It will then journey through professionalization and engage with the financial impact of modern football. It will highlight the role that science has played in understanding player performance and injury risk, and briefly break down the comprehensive analysis that ensures optimal performance of elite soccer players. South African football will then be discussed, with particular focus on our amateur players, and the role that soccer can play in social upliftment.

This is how science can make South Africa great!!!
A whirlwind tour of the world of biochemists and microbiologists. Look at cancer cells under the microscope like a cell biologist. Become a microbiologist and compare different brands of antibacterial hand soap and see what hidden bacteria lurk on door handles, keyboards and in restaurants. Analyse a DNA sample like a forensic biochemist. Hands on sessions for small groups in a functioning university laboratory.

**DEPARTMENT OF BIOCHEMISTRY AND MICROBIOLOGY**

**BIOCHEMISTRY AND MICROBIOLOGY TOUR BUS. DESTINATION: UNKNOWN**

**DATE:** 11 March  
**TIME:** 09h30-10h30, 10h45-11h45, 14h00-15h00, 15h15-16h15  
**VENUE:** Rhodes University Department of Biochemistry and Microbiology  
**AUDIENCE:** Grade 8+  
**CAPACITY:** 16  
**PRICE:** R25

Do your own acid-base titrations, and learn more about studying chemistry at Rhodes University, in this practical workshop hosted in the university’s laboratory.

**DIY TITRATIONS**

**DATE:** 10, 13 March  
**TIME:** 09h00-10h30, 11h00-12h30  
**VENUE:** Rhodes University Chemistry and Pharmaceutical Sciences Building, Artillery Road  
**AUDIENCE:** Grade 10-12  
**CAPACITY:** 30  
**PRICE:** R25

A take a look at Artemia, take a look at otoliths! In this workshop learners will be introduced to a variety of methodologies and orientation of what can be done in the Ichthyology and Fisheries Science department.

**FISHTASTIC**

**DATE:** 9, 10, 13 March  
**TIME:** 11h00-12h00  
**VENUE:** Rhodes University Department of Ichthyology and Fisheries Science  
**AUDIENCE:** Grade 9  
**CAPACITY:** 30  
**PRICE:** R25

The most important skills a young scientist can develop are observation, accurate recording and reasoned deduction. These skills will be developed in the context of changing colours, making new compounds and even smelling strange smells! Organic chemistry shouldn’t be so mysterious, so come and learn about how we test and ‘see’ them.

**FUNKY FUN ORGANIC CHEMISTRY**

**DATE:** 9 March  
**TIME:** 09h00-10h00, 11h00-12h00  
**VENUE:** Rhodes University Chemistry and Pharmaceutical Sciences Building, Artillery Road  
**AUDIENCE:** Grade 12  
**CAPACITY:** 20  
**PRICE:** R25
Rhodes University is proud of their association with the National Research Foundation’s South African Institute for Aquatic Biodiversity (NRF/SAIAB), and the Water World programme this institute presents during Scifest Africa. Water World includes the Department of Fresh Invertebrates (Albany Museum), Department of Biochemistry and Microbiology (Marine Natural Products Research Consortium), Department of Zoology and Entomology, and the Institute for Water Research. Details can be found in the following pages, and booked through the Scifest Africa ticket system at www.tickethut.co.za

Frontiers of Science: In addition to the above, Rhodes University also presents the Frontiers of Science programme on campus. Frontiers of Science is specifically aimed at specialists in various fields of science. Curious researchers and academics can contact b.tarr@ru.ac.za for more information.