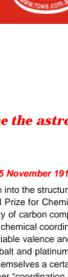


NEWSLETTER



QUOTE OF THE MONTH:

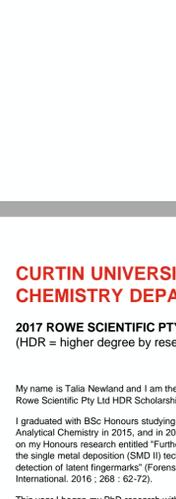
"Chemistry must become the astronomy of the molecular world."

Alfred Werner (12 December 1866 – 15 November 1919)

Swiss chemist whose founding research into the structure of coordination compounds brought him the 1913 Nobel Prize for Chemistry. He demonstrated that stereochemistry was not just the property of carbon compounds, but was general to the whole of chemistry. His theory of chemical coordination (1883) recognized that many metals appeared to show variable valence and form complex compounds. Certain metals, such as cobalt and platinum, were capable through their secondary valences of joining to themselves a certain number of atoms or molecules. These were termed by Werner "coordination compounds," and the maximum number of atoms or groups to which he called them that can be joined to the central metal is its coordination number.

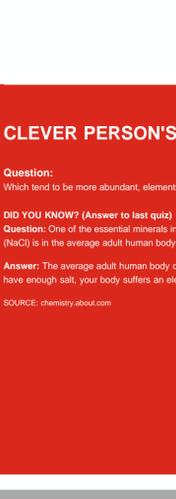
SOURCE: www.encyclopedia.com

UNIVERSITY OF WA CHEMISTRY AND BIOCHEMISTRY 2016/17 VACATION AWARDS



Lachlan Marie

The project I am contributing to intends to lay the foundation for the observation and validation of the combinatorial effects of transcriptional regulators in mammalian cells by creating an "all-in-one" plasmid with the genetic information required to build the Cas10 system in vitro. The Cas10 system is comprised of a CRISPR-Cas9 targeting construct, a guide RNA with Pumilio protein binding sites, Pumilio proteins, and a large library of interchangeable transcriptional regulators. This system will allow for gene-targeted and modular recruitment of multiple different transcriptional regulators simultaneously, serving as a valuable tool for the systematic study of epigenetics. I am humbled and extremely grateful to be the recipient of this award from Rowe Scientific Pty Ltd in recognition of my part in the Cas10 project and I hope to make a valuable contribution to the study of epigenetics with my continued involvement in the development of Cas10.



Larissa Opperman

I would like to extend my heartfelt appreciation and thanks to the members of Rowe Scientific Pty Ltd for this award and the opportunity it provides me to participate in ongoing research. Previous studies within Arabidopsis thaliana on the protein KARRIKIN INSENSITIVE 2 (KAI2) has found that it plays a central function in plant development, with many lines of evidence suggesting it acts as a receptor for an unknown plant hormone. I will be investigating the function of KAI2 in the grass Brachypodium distachyon in particular, its relation to the Arabidopsis KAI2 as well as the effect loss of KAI2 has on a plant.

Every purchase of Rowe Quantumclean (CQ1050, CQ1000, CQ1100) and pH buffers (CB3515, CB3115, CB2660) in the unique twin neck bottles, results in a \$2.00 per item donation to the Royal Flying Doctor Service.

Amount raised to date: \$19,258

Help us reach \$32,000 in the 2016-17 Financial Year!

CURTIN UNIVERSITY SCHOOL OF SCIENCE CHEMISTRY DEPARTMENT

2017 ROWE SCIENTIFIC PTY LTD HDR SCHOLARSHIP (HDR = higher degree by research)

My name is Talia Newland and I am the proud recipient of the Rowe Scientific Pty Ltd HDR Scholarship for 2017.

I graduated with BSc Honours studying Forensic and Analytical Chemistry in 2015, and in 2016 I published a paper on my Honours research entitled "Further investigations into the single metal deposition (SMD) technique for the detection of latent fingerprints" (Forensic Science International, 2016, 268: 2-62-72).

This year I began my PhD research with Professor Simon Lewis within the Nanochemistry Research Institute in the Department of Chemistry at Curtin University.

My work involves investigation into the application of spectroscopic techniques and chemometrics to the forensic analysis of soil for forensic identification purposes and will be carried out in collaboration with ChemCentre."



Mr Reg Rowe MD of Rowe Scientific Pty Ltd presents a Curtin University School of Science certificate to the 2017 Rowe Scientific Pty Ltd HDR Scholarship winner, Ms Talia Newland

CLEVER PERSON'S QUIZ:

Question: Which tend to be more abundant, elements with an odd or even atomic number?

DID YOU KNOW? (Essential to last quiz)
Question: One of the anatomic minerals in the human body is salt. How much salt (NaCl) is in the average adult human body?

Answer: The average adult human body contains about 250 grams of salt. If you don't have enough salt, your body suffers an electrolyte imbalance called hyponatremia.

SOURCE: chemistry.about.com

WE SUPPLY CERTIFIED REFERENCE MATERIALS & STANDARDS

- Including
- High Purity Standards(USA)
 - CANMET® (Canada)
 - SARM® (S.Africa)
 - NIST® (USA)
 - BASIS & ICS® (UK)
 - SEISHINI®(Japan)
 - BAM®(Germany)
 - Ultra (USA)

Are you using Karl-Fischer reagents to test for water content?

We offer a wide range including Merck Aquastar™, Hydramil Apura™ and Honeywell (formerly) I™.

Find out more about the Merck Aquastar range:

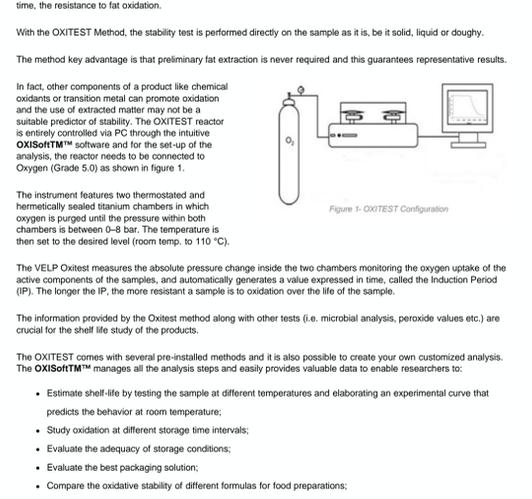
SCIENCE TEACHER'S ASSOCIATION OF QUEENSLAND (STAQ)

The following are two winners from the 2016 STAQ Queensland Science Contest, which was partially sponsored by Rowe Scientific Pty Ltd.



Our congratulations to (left to right) Skye Every and Bella James. Their science projects were entitled "Evolution of the Human Skull" and "The Carbon Cycle", respectively.

ROWE SCIENTIFIC PTY LTD SCHOLAR MS ELLEY RUDEBECK, AT DEAKIN CHEMISTRY



Elley is from Albany, which is a regional town on the NSW side of the NSW/VIC border. She graduated with a Bachelor of Forensic Science and a Bachelor of Criminology, both with Distinction, in 2015, from Deakin University.

The scholarship will assist in her medicinal chemistry studies towards her PhD. Elley's work is looking at the synthesis of compounds that will be tested for their ability to treat metabolic disorders such as diabetes. Congratulations Elley."

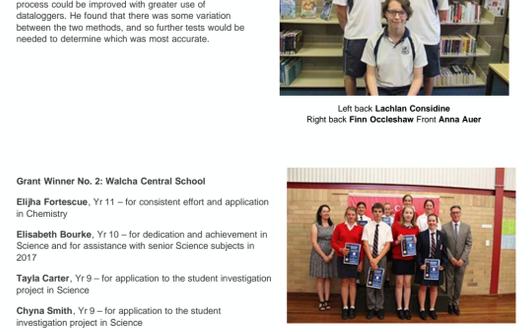
Did you know that we offer?

- ON SITE SERVICING** - Whether metro, regional or rural, we will travel to site.
- CALIBRATION** - for accuracy.
- REPAIRS** - to most broken instruments.
- MAINTENANCE PLANS** - cost efficient service plans to keep your laboratory instruments operating.



JUST SOME OF THE BRANDS WE CAN HELP SERVICE OR REPAIR:

STEMX (SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS, EXCHANGE/EXCELLENCE)



(Milling around the globe) Robert Womson (QLD), Nick Davis-Poyner (QLD), Catherine Morris (WA), Veronica Ross (NT) (Congratulations we got it out of the bottle) Broderick Matthews (Queensland), Lutana Sayed (NSW), Sanja Hrnec (NSW), Ken Silburn - alumni (NSW)

STEMX is a federal government initiative, to promote Excellence and the exchange of ideas between the areas of Science, Technology, Engineering and Mathematics, with reference to science education. A "STEMX Academy" was held in Canberra in January, 2017, by the Australian Science Teachers Association (ASTA), Queensland (a "science discovery centre" for students in Canberra), and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

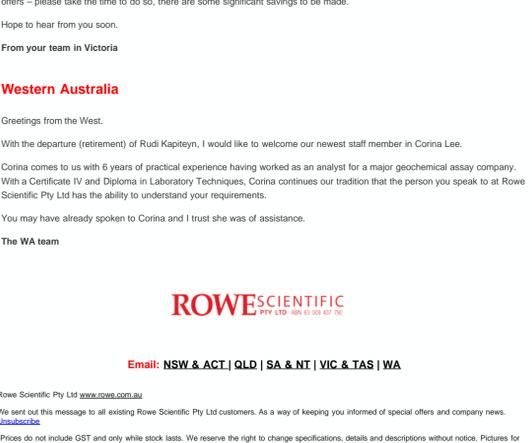
The Academy program was designed to encourage science teachers from each state to work with research scientists and science educators, and also with fellow teachers—to swap ideas and collaboratively brainstorm and co-create activities and content that is suitable for their students back home.

Rowe Scientific Pty Ltd was pleased to be able to partially contribute towards the event, and to provide scholarships to assist the following science teachers to attend the STEMX Academy from each state.

- Louise Edwards - Woodridge State High School, Brisbane, Qld
- Joanne Moar - Alice Springs Schools of the Air, NT
- Jodie Lawson - Santos - Garen Primary School Canberra
- Margaret Jackson - Wudimna Area School SA
- Olivia Belshaw - Jindabyne Central School NSW
- Slava Escobar - New Norfolk High School TAS
- Stephanie Fairhead - St Norfolk College WA
- Staceyann Hann - Warrnambool Primary School VIC

"Supporting Australian science education helps to secure Australia's future economy."

WHAT MAKES AN ENDECOTT'S SIEVE A MARKET LEADER



Contact your local Rowe Scientific Pty Ltd office, or click [HERE](#) to find out more.

BEST BEFORE...

The Oxitest Method for the determination of oxidation stability of food fats and oils

The Oxitest Method is an internationally recognised analytical technique for the determination of the oxidation stability of food, fats and oils.

Every food, feed and other products containing lipids (creams, lip balms, body lotions, wax, etc...) undergoes oxidation of the contained fat portion, which causes unpleasant flavor, bad smell and the loss of its natural sensorial qualities.

Many factors influence lipid oxidation (and the shelf life of the sample) such as the ambient temperature, exposure to heat, the composition of Fatty Acids and its degree of saturation, the concentration of oxygen etc.

Predicting oxidation stability of raw material and finished products is crucial information for the food industry with operational and economic implications.

The stability tests performed with the VELP OXITEST reactor accelerates the oxidation process which in normal conditions would take weeks or months and provide fast, accurate and reliable results.

The Oxitest Method has been recognised as an AOCS International Standard Procedure (Cd 12c-16) for the determination of oxidation stability of fats, oils and oil and, effective from May 2017, will be published in the 7th Edition of the Official Methods and Recommended Practices of the AOCS, (American Oil Chemist's Society).

This is only the latest step of a long run that has been cooperation between VELP Scientifica and research centers, universities and laboratories from all over the world, for developing the instrument and the method and tailor it to their needs.

The OXITEST reactor subjects the sample to a high-oxidative stress environment in order to evaluate, in a short period of time, the resistance to fat oxidation.

With the OXITEST Method, the stability test is performed directly on the sample as it is, be it solid, liquid or doughy.

The method key advantage is that preliminary fat extraction is never required and this guarantees representative results.

In fact, other components of a product like chemical oxidants or transition metal can promote oxidation and the use of extracted matter may not be a suitable predictor of stability. The OXITEST reactor is entirely controlled via PC through the intuitive OXIsoft™ software and for the set-up of the analysis, the reactor needs to be connected to Oxygen (Grade 5.0) as shown in figure 1.

The instrument features two thermostated and hermetically sealed titanium chambers in which oxygen is purged until the pressure within both chambers is between 0-8 bar. The temperature is then set to the desired level (room temp. to 110 °C).

The VELP Oxitest measures the absolute pressure change inside the two chambers monitoring the oxygen uptake of the active components of the samples, and automatically generates a value expressed in time, called the Induction Period (IP). The longer the IP, the more resistant a sample is to oxidation over the life of the sample.

The information provided by the Oxitest method along with other tests (i.e. microbial analysis, peroxide values etc.) are crucial for the shelf life study of the products.

The OXITEST comes with several pre-installed methods and it is also possible to create your own customized analysis. The OXIsoft™ manages all the analysis steps and easily provides valuable data to enable researchers to:

- Estimate shelf-life by assaying the sample at different temperatures and elaborating an experimental curve that predicts the behavior at room temperature;
- Study oxidation at different storage time intervals;
- Evaluate the adequacy of storage conditions;
- Evaluate the best packaging solution;
- Compare the oxidative stability of different formulas for food preparations;
- Evaluate the oxidative stability of vegetable oils of different botanical origin;
- Evaluate the effectiveness of antioxidants;
- Control the quality of incoming raw materials and outgoing finished products.

Figure 1 - OXITEST Configuration

EDITH COWAN UNIVERSITY

ROWE SCIENTIFIC PTY LTD PRIZE IN CHEMISTRY

Mr Reg Rowe, MD of Rowe Scientific Pty Ltd, presenting award to Mr Luke Miles of ECU.

The Dean of the School of Science, Associate Professor Andrew Woodward, presented student winners at the Academic Prize Giving Ceremony on Thursday, 23 February 2017 at Edith Cowan University.

It was with great pleasure to inform all that the 2016 winner of the Rowe Scientific Pty Ltd Prize in Chemistry, which was awarded to the student with the highest weighted average mark (WAM) completing a major in Chemistry, was Mr Luke Miles. Luke plans to become a Chemistry teacher.

Congratulations Luke.

SCIENCE TEACHERS' ASSOCIATION OF NSW YOUNG SCIENTIST AWARDS 2016

Rowe Scientific Pty Ltd Equipment Prize - Awarded to the three secondary students who best utilise scientific equipment in designing their solution to a scientific or technological problem.

1st: Jennifer Xu (with Mr John Dwyer, NSW State Manager, Rowe Scientific Pty Ltd), PLC Sydney, Protobiotics or Nobiocin?

Can the probiotics touted for gut health make it through the hostile environment of the stomach? Jennifer tested the tolerance of the common probiotic Lactobacillus acidophilus by simulating the conditions in the stomach and small intestine and incubating the mixture on agar in an anaerobic environment. Her results showed that most of the bacterial cells survived.

2nd: Hingis Li, PLC Sydney, Fertiliser and its effect on lake water

Overgrowth of algae due to excess nutrients in waterways is a real problem associated with industrial farming. Hingis explored the effect of varying concentrations of fertiliser on the properties of water, including pH, light transmission and dissolved oxygen, making effective use of a variety of probes and meters in the process.

3rd: William Harris (with Mr John Dwyer, NSW State Manager, Rowe Scientific Pty Ltd), Woolfendly Anglican Church, Accuracy of dataloggers and probes in Streamwatch

The Streamwatch program involves schools and other groups contributing to regular monitoring of our waterways. William investigated whether the monitoring process could be improved with greater use of dataloggers. He found that there was some variation between the two methods, and so further tests would be needed to determine which was most accurate.

Rowe Scientific Pty Ltd School Grants - STANSW Young Scientist awarded 3 school grants of \$1,000 to be distributed amongst a few hard-working science students from each school. To be eligible the school must have been located in a rural or remote location and had two or more entries from Year 7-12 students in the 2016 STANSW Young Scientist Awards

Grant Winner No. 1: Eden Marine High School (Southern-most high school in NSW)

The Streamwatch program involves schools and other groups contributing to regular monitoring of our waterways. William investigated whether the monitoring process could be improved with greater use of dataloggers. He found that there was some variation between the two methods, and so further tests would be needed to determine which was most accurate.

Left back Lachlan Considine, Right back Finn O'Callaghan, Front Anna Auer

Grant Winner No. 2: Walcha Central School

Elizha Fortescue, Yr 11 – for consistent effort and application in Chemistry

Elisabeth Beurke, Yr 10 – for dedication and achievement in Science and for assistance with senior Science subjects in 2017

Tayla Carter, Yr 9 – for application to the student investigation project in Science

Chyna Smith, Yr 9 – for application to the student investigation project in Science

Murdoch Chawner, Yr 8 – for the application of Mathematics in Science and his student investigation project

Chloe Swanton, Yr 8 – for dedication in her student investigation project and presentation skills

Kloe Levington, Yr 7 – for dedication in her student investigation project and presentation skills

Thomas Micallef, Yr 7 – for the application in his student investigation project

Back row from left to right: Samantha Bayley (Teacher), Thomas Micallef, Kloe Levington, Chyna Smith, Tayla Carter and Mark Hall (Principal) Front row from left to right: Chloe Swanton, Murdoch Chawner, Elisabeth Bourke and Elizha Fortescue

Rowe Scientific Pty Ltd School Grants - STANSW Young Scientist awarded 3 school grants of \$1,000 to be distributed amongst a few hard-working science students from each school. To be eligible the school must have been located in a rural or remote location and had two or more entries from Year 7-12 students in the 2016 STANSW Young Scientist Awards

Grant Winner No. 3: MET School Wagga Wagga (Southern-most high school in NSW)

\$500 Reuben Wallace, Yr 12 – achieved highest overall MET School state rankings, been came 6th in the state in 2015 and he is completing both Chemistry and Physics in Stage 6. He ranked second in chemistry and third in physics for the preliminary year. He also was part of the team who came 2nd at NSW State Finals of Brian Bee and came 2nd in the Individual section in 2015. He receives special awards in ICAS competitions and happy mentors younger students in science.

\$250 Chelsea Stead, Yr 9 – commended for her outstanding attitude and application towards science. Her persistence in asking questions and pushing through when it all seemed too difficult is inspirational. She has increased over 30% on average in her assessment tasks from Year 7. During her Young Scientist Project she made connections with industry through interviews with the manager of Coles to see the need and viability of her shopping trolley scanner.

\$250 Lawson Stead, Yr 9 – entered the Young Scientist Competition in 2016 and came 3rd in 2015 with a Handball Line Monitor. His attitude to science has improved through his involvement in the Young Scientist Competition and he has improved in rankings markedly since Year 7.

MET School Wagga Wagga Campus regional student grant recipients from left: Chelsea Stead, Lawson Stead & Reuben Wallace.

STATE NEWS

New South Wales and ACT

Following a very strong finish to the year and a promising start in January the NSW team priority is to continue to drive customer engagement & we progress on to the plan to building the Rowe business in NSW and Canberra.

We have just added new team members to our warehouse and customer service areas. This will allow us to continue our quest to scientists in sourcing the ongoing consumables or instrumentation they require.

In addition to new staff Rowe Scientific Pty Ltd continues to add new products and agencies to its portfolio. The latest addition is a range of instruments from European manufacturer ANALAB, the easy trace cleaner designed to clean vessels used in trace and ultra trace analysis and to produce ultrapure reagents using hot decontamination using extremely pure acid vapour condensate. Contact any member of your Sydney team to find how this new technology could benefit you as together we work to Advance Australia In Science.

Queensland

Dear Clients, We hope that you and your families enjoyed the festive season and that your New Year's resolutions come to fruition. It has been a particularly hot summer and we have been very grateful for our air conditioned office.

The year ahead will hold many challenges for all of us, and our team is here to support you.

Starting off the year we have some super promotions : Filter Paper, Sate, Porcelain Labware and Fantastic Plasticware Sales. If you did not receive our email brochures for these promotions, please contact our office for a copy or check them on our website: www.rowe.com.au

Queensland team: Yvonne Dive, Martin Bullock, Brian Bishop, Sean Wyatt, Josephine Cabagui, Leon Dive, John DeFuyter, Steve Taylor, Adam Bergman and Colin Silk.

South Australia & Northern Territory

Dear Clients, Greetings from the South Australian office.

It has been a strange start to our winter with year below average temperatures and more rain than I can remember in quite some time.

We hope all our clients had a fantastic Christmas and New Year and we look forward to your support in 2017. Good luck to all our Winery clients who are yet to start the vintage year. We look forward to seeing what you can produce in the years to come.

We are running a terrific promotion on plasticware at the moment. Hopefully all of you have seen and looked at the "Fantastic Plastic Bulk Buy Sale". We also have a great special on the TPS pH Meters and "GRADE" stomacher bags.

All the best from, Doug, Steve, Mark, Michael, Daniel, Paula, Goolby

Victoria & Tasmania

Dear Clients, Christmas and the New Year already seem like months ago but for those of you that haven't had the opportunity to touch base with us yet in 2017 get on the bandwagon and we trust you all had a great festive season.

We are committed to focusing on your needs throughout the coming year and look forward to the opportunities for forging and renewing relationships with yourselves.

Please remember for Laboratory Chemicals – we can supply you with products from Sigma, Merck, Ajax, ChemSupply and virtually any other brand you require along with customized solutions and standards from our in-house facility plus CRM's from High Purity Standards, Ultra Scientific to name just two.

I am sure you will agree that our website has improved in leaps and bounds. When last have you looked at the available special offers – please take the time to do so, there are some significant savings to be made.

Hope to hear from you soon.

From your team in Victoria

Western Australia

Greetings from the West.

With the departure (retirement) of Rudi Kaptein, I would like to welcome our newest staff member in Corina Lee.

Corina comes to us with 6 years of practical experience having worked as an analyst for a major geochemical assay company. With a Certificate IV and Diploma in Laboratory Techniques, Corina continues our tradition that the person you speak to at Rowe Scientific Pty Ltd has the ability to understand your requirements.

You may have already spoken to Corina and trust she was of assistance.

The WA team

Email: [NSW & ACT, QLD | SA & NT | VIC & TAS | WA](mailto:NSW@ACT.QLD@SA&NT.VIC&TAS@WA)

Rowe Scientific Pty Ltd www.rowe.com.au

We sent out this message to all existing Rowe Scientific Pty Ltd customers. As a way of keeping you informed of special offers and company news. www.rowe.com.au

*Prices do not include GST and only while stock lasts. We reserve the right to change specifications, details and descriptions without notice. Pictures for illustrative purposes only. Discounts do not apply to service, freight and or repair charges.

©2017 Rowe Scientific Pty Ltd. All rights reserved.