QUOTE OF THE MONTH

"Chemistry is necessarily an experimental science: its conclusions are drawn from data, and its principles supported by evidence from facts."

MICHAEL FARADAY

1791 TO 1867

Physicist

https://www.famousscientists.org/brilliant-chemistry-quotes/

CLIENT OF THE MONTH:

Andy Well Gold Project

Winners are chosen by our computer on a random basis. The prize is the client's choice of $100 worth of laboratory items from a supplied list.

From the Andy Well Gold Project:

The Andy Well Gold Project is located approximately 45km north of Meekatharra, in the Murchison region of Western Australia. Andy Well commenced production in August 2013 and produced approximately 317,000oz to the end of November 2017, when the operation was placed on care and maintenance.

In addition to the Wilber Lode, Doray has discovered other parallel high-grade lodes including the Judy and Suzie lodes which have added to the mine life at Andy Well. There remains a significant remnant resource of over 500,000oz in the ground at Andy Well, and further exploration upside within both in-mine extensions to mineralisation as well as near-mine exploration targets on the surrounding Mining Lease.

CLEVER PERSON'S QUIZ

Question:

What country was named after an element?

The answer to this will be in the next edition of the Rowe Scientific newsletter.

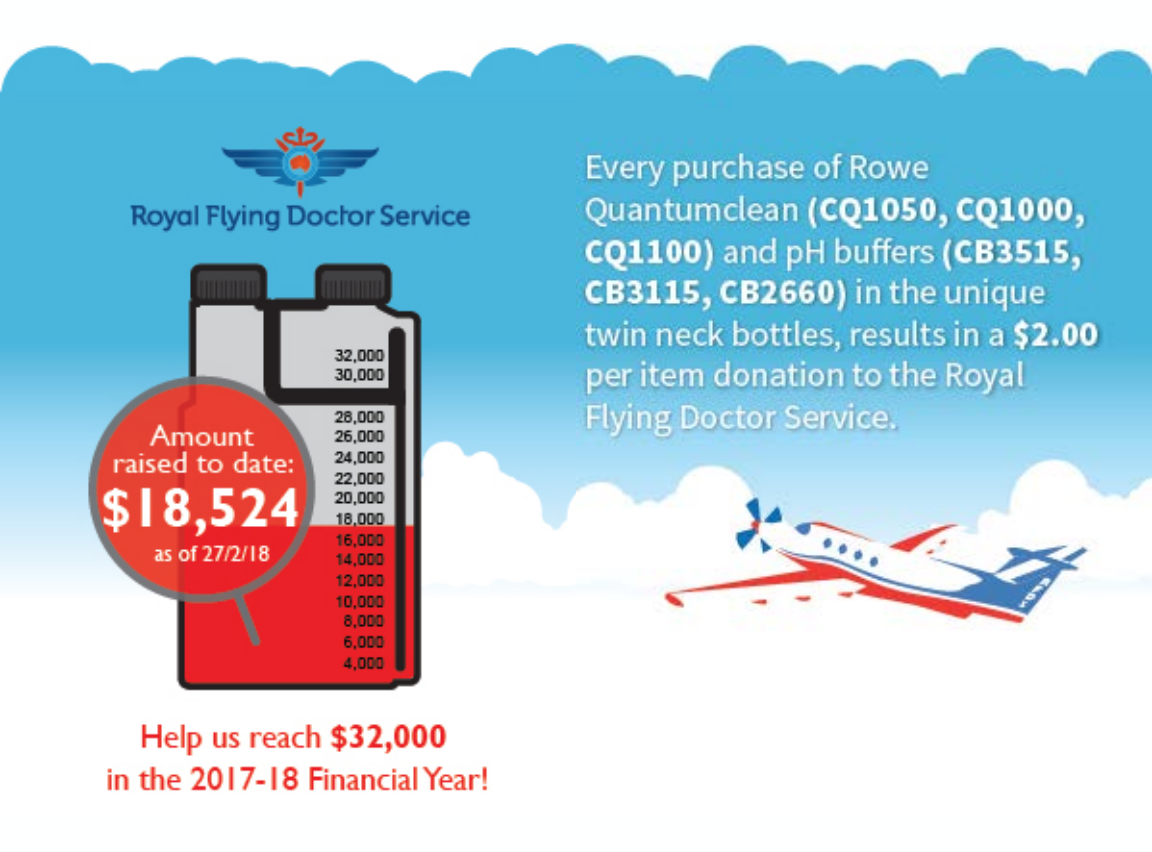
Did you know the answer to the last quiz question?

Can an unreactive dye be used to improve the visual detection of the colour change of an indicator at a titration endpoint?

Answer:

Yes, by adding a dye of the complementary colour of the indicator being used, the visual end point detection is improved by the formation of grey colour. For example, visual detection of the red-yellow colour change of methyl red can be improved by adding a blue dye to give a more contrasted violet-green colour change with a grey colour at the end point.

SUPPORTING THE RFDS



THE TELETHON KIDS INSTITUTE

Everytime you purchase a Sigma Aldrich product from Rowe Scientific, it results in a $2 donation to the Telethon Kids Institute, which is our Western Australian charity of choice.

Click on the letter to the right to read our recent correspondance from Tim McInnis, Head of Development at the Telethon Kids Institute.

It outlines the research initiatives that are possible due to the generous support they receive from the wider community.

DEAKIN UNIVERSITY ROWE SCIENTIFIC SCHOLARSHIPS

Congratulations to the following two winners of the Rowe Scientific scholarship, covering the years 2017 and 2018, from the staff of Rowe Scientific Pty Ltd.

Mr Stephen Delwig

Mr Stephen Delwig

In Stephen's own words;

"I completed both primary and secondary education in the Victorian western districts town of Camperdown. Neither of my parents were able to work during this time; my father is disabled and my mother cares for him.

After completing my final year of VCE, I acquired financial support in the form of a Dafydd Lewis Scholarship and moved to Ballarat to pursue my tertiary studies. I initially pursued a Bachelor of Mechanical Engineering at the University of Ballarat (which has since changed names to Federation University) but after two years, I decided that engineering was not my desired profession and changed courses to study a Bachelor of Science at Federation University.

I have now completed my Bachelor of Science degree (biochemistry major, microbiology minor). I have now moved to Geelong to pursue a chemistry Honours degree at Deakin University (Geelong Waurn Ponds campus).

Ms Catherine Fraser

Ms Catherine Fraser

In Catherine's own words;

"I have recently completed a Bachelor of Science with Distinction from Deakin University. I will be undertaking an Honours year in 2018, and following this I intend on completing a PhD.

I have learnt a great deal about myself in my three years of undergraduate study. I have also developed professional skills that are applicable to any career path, and most significantly I found where my passion lay; chemistry.

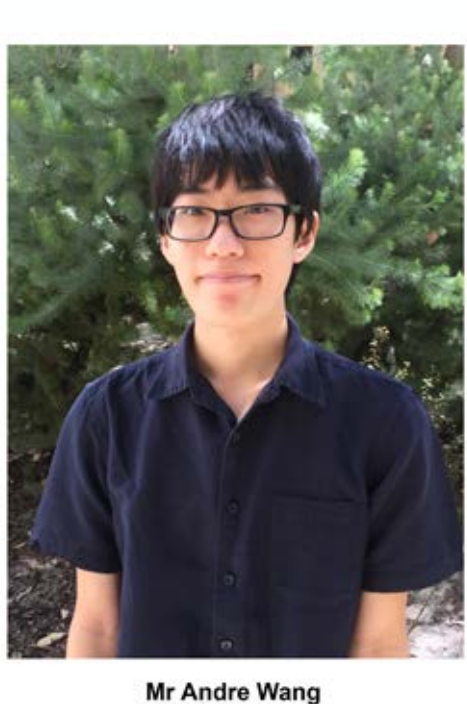
Having a passion for my field has enabled my skill development. Naturally, my discipline specific skills have developed greatly, most notably, I believe, are the skills I have acquired and improved in teamwork, self-management, and critical thinking.

Pursuing a career in chemistry has pushed and challenged me to take on any opportunity to learn.

UNIVERSITY OF WESTERN AUSTRALIA (UWA)

Rowe Scientific Vacation Awards at UWA Chemistry and Biochemistry

Congratulation to Andre Wang and Samuel Alsop who were the recipients of the 2017/18 UWA Vacation Awards in Chemistry and Biochemistry.



Mr Andre Wang

Mr Andre Wang

In Andre's words on the description of his project,

"Mitochrondria are one of the most viral organelles in eukaryotic organisms such as humans and plants.

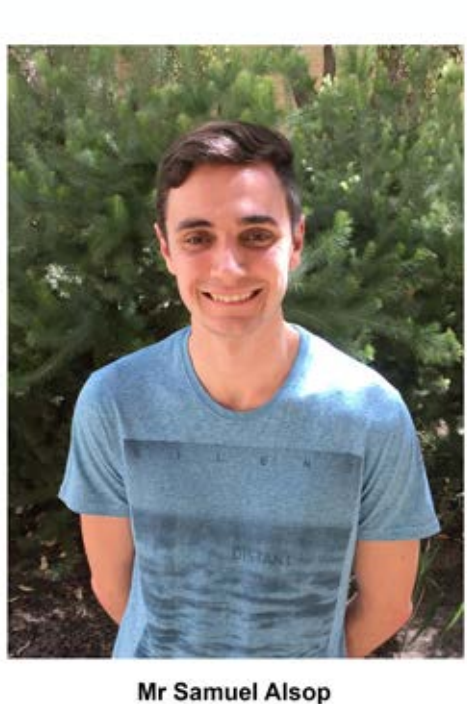
Originating from an endosymbiotic event and the subsequent loss of genes to the nucleus, thousands of mitochondrial proteins are thus required to be imported from the cytosol (Dudek et al., 2013).

These proteins have highly specialised mechanisms and utilise several receptors and transporters located in the mitochrondrial membranes. Recent studies suggest that several of these transporters are key regulators in controlling the rate of transport and thus mitochondrial function (Wang et al., 2013).

The Murcha lab within the School of Molecular Sciences have generated a range of Arabidopsis thaliana transgenic lines that overexpress certain key protein transporters such as Tim17, Tim22 and Tim23 from 2-10 fold. The functionality of this overexpression will be tested.

By isolating mitochondria from these lines, protein uptake ability can be assessed and quantifiably measured. Furthermore, a range of substrates can be investigated to identify the consequences of manipulating these transporters on the various known protein import pathways.

This project aims to therefore identify key regulators of protein uptake ability in plant mitochondria. This will elucidate targets that can be used to regulate mitochondrial biogenesis and activity resulting in plants with bigger biomass, faster growth and resistance to a range of environmental stresses."



Mr Samuel Alsop

Mr Samuel Alsop

Samuel describes his project as follows,

"The project will involve investigating a biosynthetic gene cluster in the wheat pathogen Parastagononspora nodorum, using a variety of biochemical techniques. P. nodorum is the fungus responsible for Septoria nodorum blotch, and it is believed that it produces a number of secondary metabolites which contribute to its virulence.

As with other fungi, many of the biosynthetic gene clusters that produce these secondary metabolites are transcriptionally silent under normal growth conditions.

The aim of the project is to heterologously express genes in a biosynthetic gene cluster to produce intermediates and products of a biosynthetic pathway that has been shown to be expressed exclusively during infection of the host plant.

This will allow for the identification of the compounds using LC-MS and NMR spectroscopy. This will hopefully improve our understanding of the role that the secondary metabolite produced by this pathway may play in virulence, as well as providing insight into how it is synthesised by the fungus.

This project will be a continuation of work on this gene cluster conducted in a research project for BIO3003/BIO3005 throughout semester 2."

Introducing our new range of PERISTALTIC PUMPS from LEADFLUID

Rowe Scientific is pleased to introduce the LeadFluid range of peristaltic pump drives, heads and tubing.

Complementing the peristaltic pumps are a range of syringe pumps.

The LeadFluid brand, from China, is new to the Australian market and offers a very large range of peristaltic pump and head combinations, covering flow rates from 0.00011 – 13000mL / minute. There are various pump drive solutions available, from very basic speed variable only, right through to models incorporating;

- colour touch LCD screen
- programmable flow rates
- programmable volume dispensing
- timed dispense
- programmable delay between dispensing.
- Operation via optional foot switch, hand piece, remote control or via external signalling from another device.
- Calibration function
- 1 – 12 channels
- Pulse dampening

Our test rig with over 40 days of daily use, which has filled thousands of our twin-necked buffer bottles.

As with any new brand in the market there will always be concern regarding performance and reliability. So what better way to test something than try it yourself. For the last two months our manufacturing staff have been filling our very popular contamination proof, twin neck buffer bottle using a LeadFluid WT600F in combination with a DMD25 twin channel head. Since December last year they have filled thousands of bottles without an issue.

For you, our clients, the real benefit will come when you compare prices between LeadFluid and the expensive US and European brands. Simply obtain a quote for your traditional brand and then tell me, brett.maconachie@rowe.com.au or your Rowe Account Manager which model that you are considering. We don't want to know the price, just the brand and model and we will give you the price for similarly featured LeadFluid pump.

I think you will be impressed with the saving for your organisation. Alternatively, just tell us what your peristaltic pumping problem is and we will find a cost effective solution for you. Feel free to review the LeadFluid catalogue here.

EDITH COWAN UNIVERSITY ROWE SCIENTIFIC PRIZE IN CHEMISTRY (2017).

Our congratulations to Mr Thomas Sanfead, the 2017 winner of the ECU Rowe Scientific Prize in Chemistry,

In Thomas's words,

"I enjoy how logical chemistry is. How the structure and shape of compounds influence their properties, and how this affects the way different chemicals interact with each other.

The various chemicals throughout the human body and how they allow us to function is fascinating.

Different chemicals, such as medicines, and how they interact with the human body, altering it to either hinder or help us is exciting.

Overall I think the role which chemistry has in the natural world is wondrous."

Well done Thomas.

Mr Thomas Sanfead

STEM X ACADEMY, JANUARY 2018

From Left to Right Bronwyn Stanbury, Michael van der Ploeg, Nadia Hagberg, Sophie McConnell, Wendy Rowe, Chad Gramola, Hayley Laidlow and Sue Webber.

The STEM X (Science, Technology, Engineering, Mathematics Exchange) Academy is a five-day residential professional learning program for primary and secondary teachers (total of 70) of science developed in partnership between Questacon – The National Science and Technology Centre, CSIRO and the Australian Science Teachers Association (ASTA) to address the national need for improving teacher and student STEM skills and content knowledge.

The program is doing something no other program does. Rather than just providing teachers with a package of resources to use in the classroom, it is helping them to acquire the skills and confidence to design, develop and implement their own teaching resources.

STEM X Academy does this by partnering teachers with skilled educators from Questacon and CSIRO and expert researchers to collaborate on projects across the five days. This fosters the building of relationships between teachers, schools and the STEM Industry.

The vision for STEM X Academy teachers is to be inspired by research, foster innovation in the classroom, act as a catalyst for change and remain connected creating a national community of practice. Strong evidence exists to suggest that all these objectives are being fulfilled.

2018 STEM X Academy Rowe Scientific Pty Ltd Scholarship Winners:

Queensland: Hayley Laidlow, Osborne State School, Home Hill Qld
New South Wales: Nadia Hagberg, St. Bridgets College, Lake Munmorah, NSW
ACT: Bronwyn Stanbury, Radford College, Bruce, ACT
Victoria: Wendy Rowe, Greenvale Primary School, Greenvale, VIC
Tasmania: Michael van der Ploeg, Table Cape Primary, Wynyard, TAS
South Australia: Chad Gramola, Mt Compass Area School, Mt Compass, SA
Western Australia: Sue Webber, Kalgoorlie Boulder Community HS, WA
Northern Territory: Sophie McConnell, Darwin High School, Darwin, NT

STATE NEWS

NEW SOUTH WALES

Dear Clients,

It is difficult to believe that Easter is just around the corner.

Over the last two months the NSW team were kept very busy assisting our major Tertiary institutions with the sourcing and suppling of various consumables that are required to kick start the undergraduate programmes which have commenced over the last two weeks.

In addition to focusing on the Tertiary sector, we continue to grow our presence by developing and understanding of our customer's needs within various research institutions throughout NSW and the ACT.

We are in awe of the progress Australian scientists are making in developing and understanding the issues surrounding heart health, immunology and cancer research.

The solutions which are currently under development will drive significant change in the way we manage common health related issues in the future.

We are truly honored to play, albeit a small part, in assisting Australian scientists in their journey of discovery and will continue to engage with the scientific research community.

We are constantly expanding our product portfolio and facilitating efficient methods of delivery by supplying the scientific community with the items they need to do their work.

Keep up the great work. We are with you on every step of your journey.

All the best from:
Allan, John, Julie-Ann, Kathryn, Ken, Rodney, Jim and Troy.

QUEENSLAND

Dear Clients,

January and February have been particularly busy months for us with lots of new products being despatched as well as core bulk chemicals.

Our manufacturing division in Perth have also been very well utilised in making those special solutions and mixtures that are not normally commercially available.

Your business is important to us and in order to improve our service to you, we will shortly be adding a new member to the internal sales team.

Easter is approaching fast and we wish you and your families a Happy Easter and good luck with the Easter egg hunt this year.

Reminder: Do you need an immediate supply of Dry Ice? We have the solution for you with a Dilvac Portable Dry-Ice Maker. You don't need any power; all you need is access to a cylinder of CO2. Contact our team for a quotation.

Cheers from the Queensland team:
Yvonne, Martin, Brian, Sean, Josephine, Leon, John, Steve, Adam, Colin and Robert.

SOUTH AUSTRALIA & NORTHERN TERRITORY

Dear Clients,

We are well into the New Year and are excited about the challenges ahead whilst looking forward to building on and continuing our relationships with all of our clients.

As I have mentioned in a previous newsletter, our continued growth will see our team increase in numbers here in Lonsdale with the appointment of Moreton Harding who will be starting on the 19th of March.

Steve is now back on deck and working from his home office after spending some time on annual leave and then extended sick leave.

We would like to take this opportunity to remind all of our clients that we are authorised distributors for both Merck and Sigma Aldrich? We also have a terrific range of chromatography vials and chillers. Please contact your Account Manager or the office for further information on any of these products.

All the best from:
Doug, Steve, Mark, Michael, Daniel, Jo, Dani and Paula.

VICTORIA & TASMANIA

Dear Clients,

We are now well into the first half of 2018 and the year races on.

We seem to have had a comparatively mild summer so far with relatively few fire events but, of course, there is still plenty of time to go – we trust you all take care.

Depending on your location, vintage will be a topical subject – don't forget to utilise the popular resource of our 2017-2018 13th edition Vintage catalogue both in hard copy and on our website under the Downloads section.

Talking about downloads, please take some time out to check our Website (it is getting better all the time). There are over 20 different catalogues you can download.

There are also 26 special offers are available on our site, from "Flash Point test equipment" to HPS standards to Millipore water systems. It will be time well spent.

For all you sport lovers out there, I hope you have been enjoying the Winter Olympics as in a few weeks' time all the telly channels will be packed with "footy" again.

Looking forward to hearing from you soon.

From your team in Victoria:
Garry, Nic, Mango, Amanda, Adam, Brian and Christine.

WESTERN AUSTRALIA

Dear Clients,

It is exciting times with business confidence certainly on the improve.

We are well placed to supply your increased volume of orders and are constantly replenishing stock from our suppliers.

I would like to remind you that if you have a difficulty obtaining product, please contact me directly.

Just a reminder, every time you buy our buffers in the special contamination proof bottles we donate to the Royal Flying Doctor Service. Additionaly when you buy a bottle of Sigma Aldrich product from us, it results in a $2 donation to the Telethon Kids Institute, our Western Australian charity of choice.

Thanks for your support for both of these worthy causes,

All the best from:
Peter Sommers and the Western Australian Team.

Email: NSW & ACT | QLD | SA & NT | VIC & TAS | WA