

# ziggurat

2014/15

*in this issue\_*

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ANTibiotics

*Unlocking the medical potential of ants*

International aid

*What's the true impact of aid after a disaster?*

Art Nouveau

*A style that was nearly forgotten*

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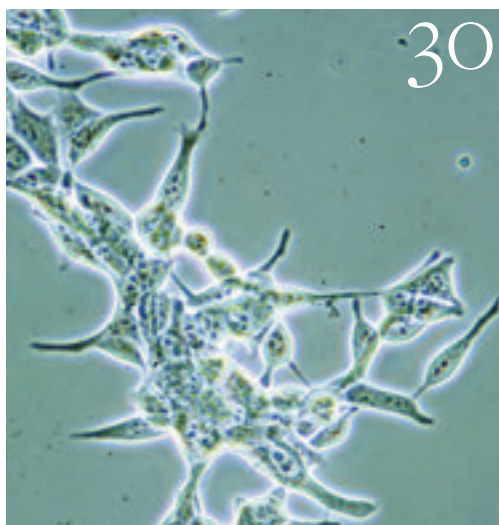
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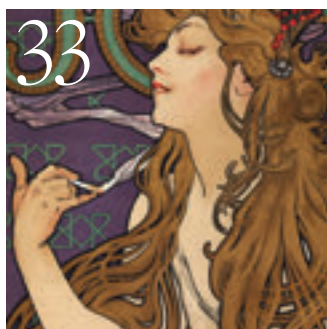
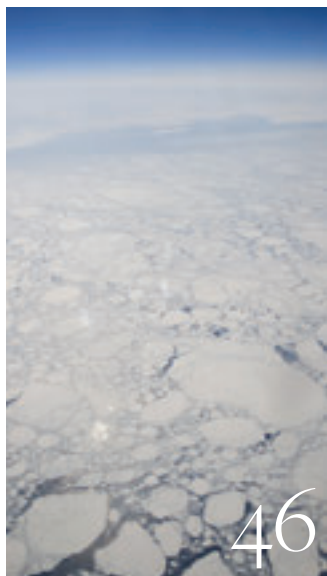
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The editors wish to thank the Ziggurat working group





# EDITORS' WELCOME

One of the best things about working at a university, particularly UEA, is the sheer breadth of activity going on around you. From teaching and research across four Faculties and 20 Schools to business ventures, student volunteering and philanthropy and literary festivals, there is always something exciting happening on campus. In Ziggurat we bring you highlights of these many pursuits and introduce some of the ground-breaking thinking and working that goes on behind the concrete walls.

The Prime Minister has recently drawn public attention to the significant challenge presented by antibiotic resistance. In this new-look Ziggurat you'll learn how academics at UEA hope that leafcutter ants could hold the key to new antibiotics, as we share with you research recently showcased at the Royal Society Summer Science Exhibition. There is also a whistle-stop tour of news from 2013/14 and you will hear from academics undertaking research into prostate cancer and climate change.

We bring you stories from students and alumni and reveal some of the exhibits from the breath-taking Sense and Sensuality exhibition at the Sainsbury Centre for Visual Arts. Helena Gillespie takes an educator's look at MOOCs – the new trend taking education by storm – and Vanessa Morton, an alumna of the Life Writing MA, takes the time to lead us through the history of Earlham Hall, sharing some of the highlights of its extraordinary past.

Whatever your connection to UEA, we hope that Ziggurat inspires you the way that UEA inspires us. You'll find details of how to let us know what you think of this issue on page 51.

**Charlotte Burford** (alumni relations manager)  
and **Fiona Billings** (communications officer)

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Wherever you see this symbol, visit [www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat) to see more.





# University News<sup>★</sup>



**Image\_**  
Head of the Emperor Claudius or Nero, Unknown maker (1st century, Romano-British) Copper alloy; 31.5 x 24.5 x 25 cm. Loaned by the British Museum © The Trustees of The British Museum.

## Thousands visit East Anglian treasures



A record number of visitors attended the Masterpieces: Art and East Anglia exhibition which focused on East Anglian art, craft and design treasures at the Sainsbury Centre for Visual Arts.

The exhibition attracted more than 45,000 visitors, and featured 277 exhibits including items such as a 700,000-year-old flint handaxe and a bronze head of Roman emperor Claudius.

**Images\_**

Colman House residence on campus. Far right: Dr Johannes Laube. Below right: Dr Jose Marin Altaba with her award.



### National curriculum sinking

Britain needs to do more to encourage swimming after research by Dr Craig Avieson discovered that 51 per cent of British children aged seven to 11 were unable to swim 25 metres. Children should be able to swim at least that length by the time they leave primary school as a requirement for the current national curriculum.



### Eco Campus

The leading national environmental management award scheme, Eco Campus, has given UEA a Platinum Award, the highest level for environmental management. The award is a step towards reducing the carbon emissions on campus by 35 per cent. The University's Risk and Sustainability Team continues to develop policies to manage carbon reduction and deliver a range of supporting projects to raise awareness of sustainability issues across the University.

### Malaysia office opens

A new office based in Kuala Lumpur, Malaysia has been established as part of UEA's strategy to broaden its international reach. As well as working on student recruitment, the office will support UEA graduates' employability in the region and build on existing international links including study abroad programmes, summer schools, exchange trips and research collaborations.





### Calling alumni

In 2013/14 student callers contacted more than 20,000 alumni and raised more than £80,000 in donations. The money is used to enhance the student experience with projects such as the technical upgrade of the Drama Studio, and also supports academically excellent students from low-income backgrounds through scholarships.

### Paramedic pioneers

A new three-year Paramedic Science degree developed collaboratively with the East of England Ambulance Service NHS Trust (EEAST) has recently been launched. This innovative, research-led programme will produce graduates who are fit to work at the frontline of the NHS.

### Gold award for golden flu test

Dr Maria Jose Marin Altaba won the Gold Medal Award for Chemistry at the SET for Britain competition held at the Houses of Parliament. The competition promotes early-stage and early-career research scientists, engineers, technologists and mathematicians and encourages them to continue developing the future of UK research. Maria won the award for developing a rapid colour-change test that uses gold nanoparticles to detect and distinguish between human and bird flu.



### CFCs on ice

Dr Johannes Laube has found new ozone-destroying chemicals in the earth's atmosphere. He compared air trapped in polar firn (unconsolidated snow) – which provides a century-old natural archive of the atmosphere – with today's air to find seven new gases that are being released into the atmosphere. These gases are the main cause of the hole in the ozone layer over Antarctica.



### Off with a bang

Universities Week 2014 saw 28,000 visitors explore exhibits from more than 40 universities at the Natural History Museum in London. Volcanologists from UEA and Oxford erupted a scale model of Soufrière volcano, St. Vincent on the museum's West Lawn and used an 'explosive bin bang experiment' to demonstrate the science behind a volcanic eruption.

[www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat)

### Arctic chamber models global warming

A sea ice chamber that can be used to simulate global warming effects on the Arctic is to be funded by a €2M grant from the European Research Council. Prof Roland von Glasow will lead the research, which involves building the 2m<sup>3</sup> ice chamber in a special cold room at UEA using state-of-the-art computer modelling.



### Make a difference

Since 2009 The Difference Campaign has received gifts and pledges in excess of £30 million, supporting four areas in which UEA has already achieved exceptional strength (Health, Climate, Creativity and Opportunity). Philanthropy has helped more than 250 students to attend UEA, and is enabling the creation of the Norwich Medical Research Building.

### Dodge diabetes with chocolate and berries

Flavonoids found in chocolate, red wine, tea and berries may have beneficial health effects in women, according to research conducted by Prof Aedin Cassidy. These food groups are associated with lower insulin and better blood glucose regulation and could offer protection from type 2 diabetes.



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**#ueaopenday**





# Student News

## Tasty idea



 A new student cook book has been produced featuring recipes from UEA students past and present to help those new to campus get used to life away from home.

The book, titled *A Taste of UEA Residences*, has been placed in each residence kitchen and features recipes for a wide range of tastes and dietary needs.

## Barrows away

The Union of UEA Students' annual Pimp My Barrow event raised more than £10,000 for local charity the Big C in 2014, with around 2,000 students taking part on the day. Students dress themselves and their barrows in their chosen theme, parading around the Golden Triangle area of Norwich before heading back to campus. The total raised over the last six years has now reached £48,283.

 [www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat)

## Hair-raising amounts of money

Matthew Morton, an International Relations student, boldly shaved off his long curly hair to raise £7,000 for charity STOP THE TRAFFIK. The organisation works with community groups to tackle trafficking at a local level.



## Supporting silver surfers

UEA students worked with Age UK to teach members of the local community how to use new technology – such as iPads and social media – so they can stay in touch with family and friends. It was part of the national Student Volunteering Week where students organised a range of activities at the Phoenix Centre in Norwich.

## Bringing faiths together

The Union of UEA Students held the first Interfaith Day on campus, with a number of student societies showcasing and discussing their work. In the evening, students from different faiths met in the Julian Study Centre to discuss interfaith relations and build stronger ties between societies.

## Alumni donations fund new media facilities

In celebration of UEA's 50th anniversary, the Union of UEA Students has received a special award of £50,000 from the Student Experience Fund to equip their new Student Media Centre. The funding will provide new state-of-the-art equipment for Concrete, UEA's official student newspaper, Livewire, the student radio station, and UEA:TV, formerly Nexus. The award was made possible by the many alumni and friends of UEA who make generous donations to the fund each year through the alumni call campaign. The students would like to send their thanks to everyone who has donated. Find out more at [www.uea.ac.uk/annualfund](http://www.uea.ac.uk/annualfund).

## Commonwealth hopeful

Biology student, Charlie Roe, came an amazing fourth in the National Heptathlon Championships. Charlie has been training for decathlon and heptathlon ever since joining the UEA Athletics club and has set his sights on competing at the Commonwealth Games in Australia in 2018.

## App-etite for prudence

An app developed by Norwich Business School undergraduate, Nick Rogers, will help students budget. After putting it on a crowd-funding platform backed by 19 investors, the app had more than 400 downloads in the first month. It calculates a weekly budget by measuring a student's income against their spending throughout the semester.

More than  
**400**  
downloads  
in the first month



Images\_

Below: Nominee creative writing student, Anna Metcalfe.  
Below left: Matthew Morton following the charity event.  
Below right: Nick Rogers with his new app.

## Short story success

Creative Writing student, Anna Metcalfe, was shortlisted for the £30,000 Sunday Times EFG Private Bank Short Story Award, where she faced two Pulitzer prize-winning American writers. Anna's short story focused on a British teacher working at a Chinese school, with cultural differences resulting in devastating consequences for his young Chinese host.

## Business graduate grabs the prize

Business Management student, Mary Leishman, won a national snowboarding competition at the BUDS Dryslope Championships in Edinburgh. Mary won the 'Big-Air' competition with her second run when she landed a jump which impressed judges enough to give her the title. Since learning to snowboard at the Norfolk Snowsports Club five years ago, she has trained regularly and also instructs others wanting to take up the sport.



**Image\_**

Two penguins play in front of the trapped Russian vessel MV Akademik Shokalskiy off the Antarctic.







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## Antarctic media star

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Environmental Science PhD student, Umberto Binetti, joined a cruise to the sub Antarctic islands to mark the 100th anniversary of the first Australasian Antarctic survey. Umberto had a science communication role on board the cruise, exploring how oceanography technology and knowledge has evolved over a century. The cruise featured heavily in worldwide media after becoming trapped in ice floes near Antarctica, unable to move for 10 days until it was rescued by Chinese ships.

# MY NORWICH YOUR NORWICH

**Charlie Higson** graduated from UEA in 1980 with a BA in English and American Literature. While there he met fellow musicians Paul Whitehouse and David Cummings who played together in punk bands and later created the award winning comedy series *The Fast Show*. He has gone on to have a varied career as an actor, novelist, writer and TV producer.

**Pete Bye** has just completed his second year as a medical student. Alongside this, he is an accomplished blues/folk musician and was last year's winner of the UEA student radio 'battle of the bands' contest *LiveWire Presents*. He spent the past year as treasurer for UEA's rebooted Live Music Society (LMS).



The live music scene at UEA may have changed since writer and comedian Charlie Higson graduated, but one thing remains the same: it is very much alive.



Charlie Higson arrived in 1977 at the height of punk and immediately formed a punk band with fellow student and new friend Paul Whitehouse. "We were called The Right-Hand Lovers" says Charlie, "It was pretty wild." He was living on the old RAF base at Horsham in his first year. "We played our first proper gig there," he recalls.

Pete Bye's first gig, by contrast, was at a Green Party Society event. "Despite having no political motives and not having played for a while, I thought I'd give it a go," says Pete.

Music had attracted Pete to UEA in the first place. "During an open day, I've a clear memory of seeing two guys performing an acoustic set in the square," he says.

Charlie and Pete made their musical marks in the post-punk and folk genres respectively. "At the risk of blowing my own trumpet," says Charlie, "I was reasonably instrumental in getting a decent local music scene going." There were punks in Norwich in 1977, he says, "but none of them had really got it together to form bands and find places to play."

Charlie's first band went the way of many

student enterprises. "Unfortunately most of the members of my band were thrown out of University before the end of their first year (including Paul), so I had to start another band, which eventually became The Higsons," says Charlie. "At the start of the 80s some university friends started their own record label called 'Romans in Britain', and local bands recorded songs for a compilation album called 'Norwich – A Fine City'."

A certain East Anglian-based DJ heard it. "John Peel lived not far from Norwich and picked us out to record the first of many sessions over the years," says Charlie. It was a great kick-start to their career. "On the back of this we released our first single, 'I Don't Want to Live with Monkeys'," he says, recalling the track that got them to Number 5 in the UK Indie Charts in 1981.

Recording technology has changed a bit since Charlie was storming the charts, of course. Pete spends time playing music in his room and uploading tracks onto the internet. "It's worlds away from the technology of the 70s," he agrees.

The LMS, recently given a new lease of life, now aims to promote local talent by hosting gigs

in the Blue Bar on campus and The Ten Bells bar in the city centre.

"LMS had been around for a while but was almost completely defunct when I joined," says Pete. A friend of his put together a new committee and invited Pete to become treasurer on the grounds he was "his only friend who could be trusted with money." The society was built up from nothing, he says, and was nominated for most improved society at the Union Awards night in 2013.

"Being a part of LMS has given me opportunities to play live and contributed towards my (moderate) success on the University music scene," says Pete.

Music has always provided common ground for UEA students. "As far as I know there was nothing like the Live Music Society in the 70s," says Charlie, "but, as now, there was a very active music scene and a lot of opportunities. One of the great things about UEA was that it had a full time ENTS officer – a great guy called Nick Rayns, who sadly died recently.

"I remember seeing U2, Madness, The Specials, Echo and the Bunnymen, The Fall and many more."

Pete knew a bit about the music scene at UEA before he arrived. "I had heard rumours about the infamous LCR (recently re-named the Nick Rayns LCR) and some of the big names that had played there. The venue, along with The Waterfront and Norwich Arts Centre, remains the cornerstone of any Norwich music-lover's calendar."

Charlie and Pete were both involved in UEA's 50th anniversary celebrations in 2013. "I think UEA was different to a lot of other universities," says Charlie, "it certainly had a very forward-thinking feel to it." Pete agrees: "You see a lot of that in the Live Music Society, too," he says. ✦



Images...  
Second year medical student Pete Bye is an accomplished blues/folk musician.





John Peel picked us out to record the first of many sessions over the years

*Charlie Higson*

*Actor, novelist, writer and TV producer*



Images\_  
Pete Bye with actor, novelist,  
writer, TV producer and UEA  
graduate Charlie Higson.

# ANT IBIOTICS!



Could the patter of tiny feet in Dr Matt Hutching's lab mean there's a new... antibiotic? Bea Perks investigates.

*Words* Bea Perks | *Pictures* Richard Davenport







*Hundreds of Patagonian immigrants are working like slaves for Matt Hutchings, Reader in Molecular Microbiology at UEA's School of Biological Sciences. Stashed into hand baggage on flights from South America to East Anglia, they ask for little on arrival but a handful of leaves and a mouldy (it has to be mouldy) place they can call home. These are the Patagonian leaf-cutter ants, and what they offer in return for their leaf and fungus supply could revolutionise medicine as we know it.*





*Matt's research is focused on mankind's ongoing and increasingly urgent need for new antibiotics. We've been using the same antibiotics for too long, and the pathogenic bacteria we've been fighting off have worked out ways of fighting back.*

### Hospital super bugs

Take for example the bacterium *Staphylococcus aureus*, normally harmless but occasionally a cause of skin infections such as impetigo, which accounts for about one in 10 of all reported skin conditions in children. Traditionally, a dose of penicillin would sort out most staph infections. But bacteria have evolved a range of clever ways to resist these long-used, sometimes overused, antibiotics. *S. aureus* bacteria that are resistant to a type of penicillin called methicillin (and, as it turns out, many other antibiotics) are particularly notorious under another name: methicillin resistant *S. aureus* (MRSA). MRSA doesn't pose a risk to healthy individuals, but can cause life-threatening infections in people with compromised immune systems. For this reason it is extremely dangerous in hospitals. Outbreaks have forced hospital wards to close.

"There are only about 100 antibiotics in clinical use," says Matt, "but we estimate there are around 100,000 out there waiting to be discovered, probably more." The first problem is where to find them. Nearly all antibiotics are made by bacteria that live in the soil, but it's becoming clear that bacteria living in sometimes quite unexpected environments offer real potential in the hunt for new, improved drugs.

### A bit of give and take

So where do the leaf-cutter ants fit in? This is a story of collaboration on a fabulous scale. The way any ant community works is extraordinary, but the leaf-cutters take it a step or two further. Leaf-cutters, as their name suggests, cut up leaves. They take them back to their nests, not for their own food or shelter, but to feed the fungus that lines their nests. It's not a selfless act – the fungus provides food, in the form of fats and sugars, for the ants' queen and her larvae. As if that isn't symbiotic enough, the ants also protect the fungus from infection by treating it with an array of antibiotics. The antibiotics are produced by bacteria that coat the surface of each ant.



The ants' nest, which Matt calls a fungus garden, is the perfect environment for infection. So, to ensure that the ants and their chosen fungus are protected from harmful infections, the ants patrol their living quarters using a fascinating system evolved over millions of years.

### Green fingers

The ants crawl through the tunnels of their honeycomb shaped gardens sniffing out any foreign fungi or bacteria. When they find unwanted material they cut it out and throw it on a 'compost heap'. The ants then sterilise the compost heap with their antibiotics.

The antibiotic-producing bacteria that live on the ants belong to a group called the actinomycetes. Actinomycetes are widespread in nature, and they make most of the antibiotics used in medicine today. But while many actinomycetes and the antibiotics they produce are not new to medicine, novel antibiotics produced by the actinomycetes living on the surface of leaf-cutter ants are being discovered right now in Matt's lab, with potentially exciting results.

His team remove the bacteria from the ants, and grow them on using culture dishes to see what antibiotics they produce. The researchers infect the cultured bacteria with pathogenic bacteria or fungi that are known to infect humans. If the cultured bacteria manage to kill off the pathogen, the team moves in to study the antibiotics that might be being produced by those bacteria.

### Drug discovery

They have found more antibiotics than they can possibly study, but the proportion of those that could ever become successful drugs in the clinic will be tiny. Many will be toxic to humans, for a start. Even if one antibiotic out of thousands really does turn out to be useful, it will take at least 10-15 years before it makes it into mainstream medicine. Nevertheless, despite these caveats, the tortuous hunt for new antibiotics – by Matt's team and by other research groups in the UK and around the world – is already turning up promising candidates, any of which could become key to our continued health and wellbeing.

Images\_

Matt Hutchings at the Royal Society Summer Science Exhibition.







The unique selling power of leaf-cutter ants is that they have been picking up different bacterial strains over the years and therefore carry several different antibiotics at once. They are using multidrug therapy. Multidrug therapy holds great promise in overcoming antibiotic resistance – pathogens are extremely unlikely to overcome two or three different antibiotics at once. In fact leaf-cutter ants have been using the multidrug approach for about 50 million years, says Matt, and there are no reported problems with antibiotic resistance in their ant colonies. Compare that with us humans, he says: “We’ve been using antibiotics for less than 100 years and we have drug resistance everywhere.”

### Putting on a show

Looking for new antibiotics in previously unstudied environments is giving cause for optimism. While Matt’s team are studying leaf-cutter ants from the rain forests of Panama, other teams are studying different species of insect and plant that also form close associations with bacteria. Some research teams are going into previously inaccessible environments like the deep sea. It was the theme of Matt’s display at the Royal Society Summer Science Exhibition in London.

Every year, the Royal Society hosts a week-long exhibition of the most exciting cutting-edge science and technology in the UK. Exhibits are selected on the basis of the quality of their science and their likely appeal to a broad audience. The July 2014 exhibition was free and open to all – with over 10,000 members of the public and 2,000 school students visiting.

It’s not difficult to see why Matt’s exhibit was chosen. His team took a live leaf-cutter ant colony, along with a so-called ‘mantis’ microscope to London. “They’re quite cool,” he enthuses. “Instead of having binocular vision like a normal microscope, they have a big scuba-diving mask-size screen that you look down. They’re on big flexible arms so you can move the view finder and follow the ants around and magnify them 20 times.”

### Lucky dip

But that was just one of the attractions. They also took some bacterial cultures so visitors could see the different coloured antibiotics they produced, together with a slick animation that explained very clearly what antibiotics are and how Matt’s research is spearheading the search for new ones. “And we had an antibiotic discovery zone!” says Matt. This involved three big Perspex tubes: one to represent the marine environment, filled with sand and pretend water droplets; one to represent the soil, filled with pretend soil; and one filled with leaves and pretend soil to represent the rainforest (where his leaf-cutter ants live, although



**There are only about 100 antibiotics in clinical use, but we estimate there are around 100,000 out there waiting to be discovered, probably more.**

*Dr Matt Hutchings*  
Reader in Molecular Microbiology



## Research Students

Behind every great principal investigator, as Matt Hutchings knows, there's a great research team including postdocs and research students. Matt's lucky; he is currently the main supervisor of four PhD students working on several of his ongoing research projects. One is funded by UEA, and the others by the Biotechnology and Biological Sciences Research Council (BBSRC) and the Natural Environment Research Council (NERC).

Students start a four year PhD project having graduated with an MSc or BSc in a relevant subject. To be selected, they must convince their potential supervisor and an independent selection panel that they are dedicated to the subject they have chosen, have a clear understanding of what the project is likely to involve, and can demonstrate an inquisitive mind ready to find out more.

The UEA-funded PhD student who worked with Matt on the ant project right from the start, Joerg Barke, graduated last year and has moved back home to the Netherlands to work as a university research assistant. Joerg began the project with a trip to French Guiana to collect the ants and bring them back to the lab. He streaked the first ants onto agar plates in order to discover which actinomycete bacteria, and crucially which bacterial antibiotics, they harboured. Now Matt and his team are building on the discoveries Joerg made.

Matt's group currently includes one BBSRC-funded PhD student, Rebecca Lo, who is working on antibiotic resistance, and another BBSRC-funded student, Nicolle Som, who is working on the regulation of antibiotic biosynthesis and cell division in actinomycete bacteria, the same group of antibiotic-producing bacteria which live on the ants. He also has a NERC-funded student, John Munnoch, who has helped build a collection of hundreds of antibiotic producing actinomycete strains that are currently being screened. Matt's UEA-funded PhD student, Felicity Knowles, was preparing for her viva exam as this article was being written.



If you are interested in discussing PhD opportunities with Matt you are invited to email him at [m.hutchings@uea.ac.uk](mailto:m.hutchings@uea.ac.uk).

### Images

Matt Hutchings with visitors to the Royal Society Summer Science Exhibition and leafcutter ants.



At the moment we're really excited, we're just trying to solve the structure of something that kills a multi-drug resistant pathogen.

*Dr Matt Hutchings*  
Reader in Molecular Microbiology

not in this particular tube). "We had different coloured poker chips representing different classes of antibiotic buried in these tubes so kids and members of the public could dig their hand in the tube, and find a poker chip, which will have a printed code on it that will tell them what the antibiotic is." It was a brilliant way of teaching people of any age where antibiotics have been – and are being – discovered.

If you didn't make it to the Royal Society's exhibition, fear not. Matt's lab has its very own antcam where you can view the activities of their leaf-cutter ant colony online, with a second camera view planned so you will soon be able to watch ants either collecting leaves or tending their garden.

### Team work

Of course it isn't really the ants that Matt's research is focused on. He is interested in the bacteria that hitch a ride on the ants and the antibiotics that those bacteria produce. He is not an entomologist or an ecologist, he's a microbiologist. Nevertheless he relies very much on input from researchers who do know about ants, and on how and where they live.

The collaboration between ants, fungi and bacteria is mirrored by the close collaboration between Matt's group and fellow research teams. "As microbiologists, we collaborate with genome sequencing centres such as The Genome Analysis Centre (TGAC) in Norwich, we have ecologists that lead the field collections, and we have chemistry



collaborators that do the really hard core chemistry, like nuclear magnetic resonance (NMR) to solve structures," he says. His team has found a couple of novel candidates from known classes of antibiotics. "At the moment we're really excited," says Matt, "we're just trying to solve the structure of something that kills a multi-drug resistant pathogen." Their candidate antibiotic is effective against a pathogen that is resistant to every other known antibiotic. "We've sequenced the genome, we can't predict what it might be, and now I have chemistry collaborators led by Prof Barrie Wilkinson at the John Innes Centre (also part of the Norwich Research Park), who are trying to find enough of the compound to put into an NMR machine and solve the structure."

### Where next?

It's a long way from the rainforests of Panama, but it's no less exciting. It's very, very early days in the life of a possible antibiotic, but it's clear that Matt and his team are getting closer to their ultimate goal. In April 2014, the World Health Organization published the first global report on antibiotic resistance, and it didn't make for comfortable reading. "A post-antibiotic era—in which common infections and minor injuries can kill—is a very real possibility for the 21st century," warned the report. Let's hope that era will never come. ✨







# MOOC

## to the future

*Universities from around the world are now offering free, online courses to very, very large numbers of people.*

*UEA student numbers have soared by tens of thousands, boasts Helena Gillespie, Academic Director of Learning and Teaching Enhancement.*

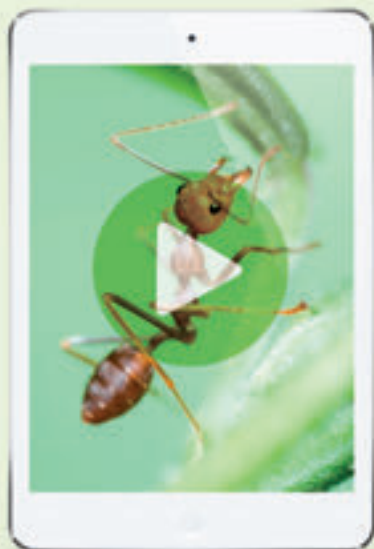


▶ [www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat)

### See for yourself

Want to know more about these amazing ants, keep up to date with the project and see these fascinating creatures working on our live web cam?

Visit our website to find a wealth of information and images. You can read about collecting ants in the rainforests and view a 3D model of a leafcutter ant.



On 14 October 2013, UEA became the first UK university to offer a 'massive open online course', or MOOC, via FutureLearn.com. It was with a real sense of pride that at 7am that morning, I logged on to find learners from San Francisco to Sao Paulo watching video lectures and discussing their ideas on *The Secret Power of Brands*. As the day wore on, more and more people joined in until we had a global conversation taking place, with learners from over 130 countries. It was a very exciting time, for both me and Robert Jones of Norwich Business School who created the course. Over just two runs *The Secret Power of Brands* recruited more than 26,000 students and became, in a few months, UEA's biggest ever course.

Spurred on by our passion for this globally connected learning experience, we have since offered courses to equip both home and international students with the relevant skills for university, specialist courses for teachers and healthcare professionals, as well as 'try at home' modules shedding light on *Kitchen Chemistry*. Our online courses have attracted 60,000 students and counting, putting UEA at the forefront of UK developments in free flexible online teaching.

So what do we know? Where does this all take us? In many ways, the model for return on investment on MOOCs is still emerging. We are aware that the courses can enhance an institution's reputation, act as recruitment tools and improve public engagement.



We are aware that the courses can enhance an institution's reputation, act as recruitment tools and improve public engagement.

*Helena Gillespie*

*Academic Director of Learning and Teaching Enhancement*

In the fast paced world of technology and education, I know that it is best for UEA to play an active part in this debate rather than to be a bystander; we are committed to innovating online and in the classroom in the future.

It is difficult to know where free, open learning will eventually take us, though it is likely that any developments will be customer-led. For now, however, we would like to invite our students – past, present and future – to join us as participants in this brave new method of learning. Hope to see you online soon.



If you'd like to know more about UEA's MOOCs, visit [www.futurelearn.com](http://www.futurelearn.com).

# Ambitious vision<sup>✦</sup>

*Prof David Richardson, new Vice-Chancellor of the University of East Anglia, spoke to Mark Nicholls about his vision for the University amid the changing landscape and challenges of higher education.*

**Words** Mark Nicholls / **Pictures** David Kirkham

 David Richardson took over as Vice-Chancellor in September 2014 with a strategy to lead the University of East Anglia to new heights. His vision, as a man who has seen the institution evolve and grow over the past two decades, is shaped by desire, drive and determination.

An even more exceptional student experience, ambitious research goals, an enhanced global reputation and innovative partnerships – internal and external – sit at the core of this vision for UEA.

It is the word ‘campus’ that resonates throughout; while the outlook may be global, research and teaching on the Norwich campus, and the associated student experience, remain central themes. The University’s readiness to adapt to meet the demands of a changing higher education landscape will be a critical factor in its success.

Pivotal to David’s vision is ambition; to take UEA from a university ranked in the UK top 15 and leading 200 in the world, to a university ranked in the UK top 10 sitting within the world’s top 100.

“It is important for this University to have a strong global reputation and a wide reach into the student market. I think we are starting to achieve that, but we need to do more to sustain it,” says David.

He has identified a range of ways for UEA to strengthen its international reputation, including continued research in areas that impact on big global questions such as climate change; promoting the University’s excellence in research, with academic staff travelling and speaking worldwide; ensuring that UEA gains greater recognition for its research; and building strong relationships with UEA’s international alumni in order to help them further their careers, network effectively and benefit from the strong research profile of their alma mater.

Central to the development of this global reputation are international UEA offices, such as the one recently opened in South East Asia. David is keen to build on this Malaysia model and use country offices as a base from which to build international relationships, counsel prospective students and provide a point of



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*Prof David Richardson,  
Vice-Chancellor*

contact for alumni.

A “strong, vibrant, internationally-recognised university attracts high quality students and the best staff,” says David, who promoted internationalism in his previous roles as Pro-Vice-Chancellor and Deputy Vice-Chancellor at the University.

A growing international standing, he adds, will have local and national benefits and is enhanced by UEA’s record in developing partnerships with other institutions, particularly on the Norwich Research Park.

“We have laid down strong foundations and want to see those develop so that the Norwich Research Park is known as a place that is at the forefront of work on earth and life systems, food and health, and industrial biotechnology – all big areas we are well-placed to pursue.

“Those alliances are in place but we need to expand the understanding of what Norwich Research Park can offer so that we can begin to embrace social sciences, and arts and humanities in this vision,” says David,



**Image\_**

New Vice-Chancellor of  
the University of East Anglia  
Prof David Richardson.



**The University's readiness to adapt to meet the demands of a changing higher education landscape will be a critical factor in its success.**

**Pivotal to David's vision is ambition; to take UEA from a university ranked in the UK top 15 and leading 200 in the world, to a university ranked in the UK top 10 sitting within the world's top 100.**



*I am passionate about campus universities, campus-based student education and about universities that can bring together different disciplines in a real way. That is what attracted me 23 years ago and that is why I have stayed here.*

*Prof David Richardson,  
Vice-Chancellor*

who in the last five years helped develop the Research and Innovation Vision for the research park.

With the cap on student numbers being lifted, could rapid student population growth lead to quantity usurping quality? “I can answer that in three words,” says David: “Quality, quality, quality.”

The University will recruit high-quality students and provide them with a high-quality student experience, he explains. “That does not mean that we won’t grow when the time is right ... but we will only allow growth if we can maintain quality and not damage the student experience at the same time.”

Chasing student numbers just because the cap has come off would not be consistent with the strategy to ensure that UEA is in the UK top 10 and the world top 100, he says.

With an international reputation as a microbial biochemist, David’s research has been recognised with a Royal Society Wolfson Merit Fellowship and the Society for General Microbiology’s Fleming Medal. His research group studies the mechanism by which

bacteria produce and consume potent greenhouse gases and the possibility of using bacteria to produce electricity from waste. His expertise in the way microbes interact with minerals in harsh environments also saw him work alongside the late planetary scientist Prof Colin Pillinger on an advisory panel for European space exploration of Mars.

David, 50, began his research career as a PhD student in the University of Birmingham (1985-88) and moved on to undertake post-doctoral research at the University of Oxford (1988-91). He is a Council member of the Biotechnology and Biological Sciences Research Council (BBSRC), and intends to maintain his work studying the biochemistry of environmental biogeochemical cycles and greenhouse gas emissions.

Before succeeding Prof Edward Acton as Vice-Chancellor, David held a range of senior positions at UEA, from lecturer in the School of Biological Sciences to Dean of the Faculty of Science and Professor of Bacterial Biochemistry.

“I am passionate about campus universities, campus-

based student education and about universities that can bring together different disciplines in a real way, and this campus is very much one of those universities,” he says. “That is what attracted me to UEA 23 years ago and that is why I have stayed here.

“I have done many jobs in this University and to now have the opportunity to lead a vision as Vice-Chancellor is very exciting for me.”

The role of Vice-Chancellor is diverse, he says: leading a vision and ensuring ‘buy-in’ to that across the University community; developing the University’s corporate plan; and combining an internal-facing role with an external presence to help develop strategic relationships and improve the University’s international reputation.

Alongside this, he will be working with local partners and local authorities, meeting government ministers, helping shape national policy and working with other universities and UEA alumni.

Somewhere in amongst all this, he finds time to relax at home in Norwich. Coming from the seaside resort of Whitley Bay near

Newcastle, he naturally gravitates to the sea. “I spent my formative years exploring the coastline,” he says. “I find the coast and the sea invigorating; I love the North Norfolk coast and try to get there as much as I can.”

He is married to Dr Andrea Blanchflower, director of Learning and Teaching Services at UEA, and has a daughter studying electrical engineering at Imperial College London and a son studying economics at Sheffield University.

Although he is a Newcastle United supporter, David is also a regular at Carrow Road to watch Norwich City. He has an eclectic collection of art and relaxes by playing guitar or walking his dog.

Following the 50th anniversary of UEA in 2013, David looks to a bright future for the University. A new UEA Enterprise Centre will open in spring 2015, showcasing continued investment in career support and providing opportunities for students to develop their business acumen. “We are attracting enterprising, high-quality students,” he says. “We owe it to them to help them graduate with very strong prospects.” ✦



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# EARLHAM HALL UNWRAPPED

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*UEA Law School returned to a renovated Earlham Hall in spring 2014. Vanessa Morton, English and American studies and MA in Life Writing alumna, traces the social and architectural history of this great house.*

**Words** Vanessa Morton







**Summer 1578** and Queen Elizabeth I is making an extravagant Royal Progress through Norfolk and Suffolk.

In August, the city of Norwich – cleaned up and improved for the occasion – entertained her for days, the Queen delighted at the show of children spinning and weaving in a city that had been in the grip of economic depression.

It is about this time that the original Earlham Hall is being built in its prominent position overlooking the River Yare, perhaps to replace a more modest manor house nearby. Detective work suggests that this was a tall, narrow, east-west construction of two storeys and an attic.

### Fast forward to 1642

It is the start of the English Civil War. Thomas Houghton is virtually rebuilding the original house which his family bought in 1616. It is extended on the north side, and cross wings intersect the Hall at each end. Its north front has a symmetrical appearance, with three central dormers in the roof flanked by tall chimneys, and it has been re-arranged internally to provide access to the new rooms, with fine, flat-balustered stairs. Inside, a mason leaves a mysterious and hidden mark – perhaps a signature or even a protective curse. Outside, Houghton leaves his mark, with tie bars on the west wall of the house proclaiming the year.

### Move forward to the 1760s

Earlham Hall is being substantially altered by its current owners, the Bacons, in the second of two phases. The look of the north front of the house has changed again, and on the south side, two matching pavilions are built out. “The workmen are here but nothing quit done,” writes Mrs Bacon in 1761, somewhat desperately.

In October 1766, Earlham Hall narrowly escapes being burnt to the ground. Its owner, Edward Bacon, is a senior member of Norwich’s forces of law and order – its Recorder – and, in further difficult times for the textile industry, there are riots over the high price of bread. The house is saved only by his distribution of handbills spelling out his arrangements for corn to be available at below market price.

Edward is not the first in his family at Earlham to take on a civic and political role in the city, giving the Hall political significance. His father, Waller Bacon, had twice been MP for Norwich and a Deputy Lieutenant for the city. His great-grandfather, Thomas Waller, who first acquired the Hall from the Houghtons, had been a Sergeant-at-Law.

### Move now to 19 August 1800

Elizabeth Gurney, aged 20, is marrying the tea merchant and banker Joseph Fry, at the Quaker meeting house in Upper Goat Lane, Norwich.

She has lived at Earlham Hall since her



Images\_ “Earlham Hall South”, Undated; Richenda Cunningham (British, 1782-1855); Reproduction of pencil on board drawing (original 10 X 14 in.); Norfolk Museums & Archaeology Service (Norwich Castle Museum). Bottom left: Earlham Hall, Norwich by Doris Canter. Bottom right: Photograph of interior room (1899).





Inside, a mason leaves a mysterious and hidden mark – perhaps a signature or even a protective curse. Outside, Houghton leaves his mark, with tie bars on the west wall of the house proclaiming the year.

Vanessa Morton

English and American studies and MA in Life Writing alumna



father John Gurney, wool stapler and banker, took on the tenancy in 1786. The owners (the Franks, descendants of the Bacons) are now living in Yorkshire. The move from the city centre brings John the status of his brothers, both of whom have substantial houses on the edge of Norwich: Keswick Hall, and the Grove at Lakenham. Acquiring land nearby, John settles into a pleasant combination of hobby farming and riding into the city to direct business.

A great deal is known about the Earlham of the Gurneys, thanks to their extensive journal-writing. This is a place to be enjoyed, with its wilderness to the north-west front, terrace walks around the edge of pleasure gardens, and a box parterre to the south-east of the house. Though only tenants, the Gurneys themselves may have undertaken alterations to the house, for example the raising of the roof-level and wall of the south front, giving more light to the attics.

Despite being Quakers, the Gurneys have decidedly secular habits – plenty of non-Quaker friends and radical reading matter, the daughters attending Quaker meeting on Sundays in their most colourful and fashionable clothes. They flirt with the officers stationed in Norwich, dance for hours at the Assembly House, perform a wicked take-off of a Quaker meeting to the visiting Duke of Gloucester, and grow skilled in drawing under the tutelage of landscape artist John Crome.

The Hall has seen its share of grief and upsets, not least the death of Elizabeth's mother in 1792, leaving the eldest daughter to bring up her 10 siblings. More recently, there has been the dampening effect on them all of Elizabeth's conversion to a new evangelical version of Quakerism, causing her to put aside fashion, dancing and singing. "We all feel it alike," writes her sister Rachel gloomily, as Elizabeth (Betsy), gradually adopts Quaker dress, and begins to do "good works," gathering up the children of the neighbourhood for lessons. "My father not appearing to like all my present doings has been rather a cloud over my mind," she writes in January 1799. With her marriage, she leaves Earlham for her new London home – and greater things.

#### 29 December 1847

Fifty carriages are following the hearse of Joseph John Gurney of Earlham Hall to the Quaker burial ground at the Gildencroft, Norwich. Crowds line the streets.

This Earlham, which Joseph John took on when his father died in 1809, has continued to be a gentleman's seat, but also a place where reforming campaigns are planned. Meetings have dominated the regular life of the house as Gurney divides his time between business at the family's bank, and religion, charities and reform. Bible and missionary societies assemble

regularly in the south-facing library or first floor drawing room. Visiting friends, family and colleagues – including his sister Elizabeth Fry, brother-in-law Thomas Fowell Buxton and friend William Wilberforce – deliberate on slavery and prison reform, but also electoral corruption and elementary schooling. JJ Gurney is an intensely religious man, an evangelical Quaker, but also political, even considering becoming an MP after the 1832 Reform Act, Gurneys Bank being always of the Whig party.

The Earlham of this period looks beyond Norfolk, particularly to London, and Quaker and family connections help shore up Gurneys Bank in time of financial crisis. Joseph John also travels to the continent and, in 1837, to the United States where he visits with Quakers, observing the violence around slavery and from those who defend it. He brings back Eliza Kirkbride of Philadelphia to be his third wife. It is she who, according to family opinion, wreaks unidentified but "appalling vandalism" on the decor of the hall.

#### Forward again, to the 1890s

The young Percy Lubbock and his family are visiting his grandmother, Laura Pearce's Earlham Hall. Laura came first to the house around 1850 as the wife of John Gurney, Joseph John's nephew, staying on after his death and her re-marriage to Rev William Nottidge Ripley, then Rector of St Giles, Norwich.

The hall looks quite different from the familiar one, with a plastered frontage painted buff-white, and a straight, formal eighteenth century look at the back, many flower-beds cut into the lawn.

Lubbock's prize-winning memoir, *Earlham* (1922), evokes the house of his childhood: his grandmother's "ante-room" overlooking the lime tree avenue; the "east room" where a previous Gurney had installed an early shower bath, the "scary" 11-sided room; the horse-drawn pump in the yard creating a "measured thumping and thudding" each morning. This is a cheerful house, but no longer politically significant, essentially a wealthy private family home. It is also Anglican – most of the Gurney clan have now left the Friends or lapsed – Lubbock's grandfather presiding over morning prayers in the panelled hall, quizzing family visitors and young clergy over meals. The family use the sunny "outlying" room on the south-side as their dining room. Photographs reveal that it was a house full of accumulated treasures – and clutter – from earlier periods.

#### July 1924

The last private owner of the house, Mrs Frank, is visiting Earlham Hall. She has never lived there, her ancestors having leased it out since the 18th century. Driving up, she notes the way the

city now extends out right up to the boundaries of the estate, the Council's house-building proceeding rapidly. She finds Mrs Morris, the widow of the last tenant, sadly packing to leave. Six years on from the end of the Great War and Mrs Frank wanders round the house and gardens in nostalgic mode for all the past associations of the hall, uncertain whether she will find someone to take it on in these modern times.

There have been big changes since the turn of the century. Mr and Mrs Morris have had the gardens professionally landscaped since they arrived in 1912. The rock garden, rose garden and herbaceous border have been created in the style of Edward Lutyens and Gertrude Jekyll where formerly there was only a paddock, the flower beds cleared from the eastern side of the great lawn.

The previous tenant, Reginald Gurney, who took on the lease around 1899, made substantial alterations to the house itself, using the services of prominent local architect Edward Boardman. The whole north-facing front was radically altered, stripped of its creamy paint. A new dining room was built to the left of the front door, a matching billiard room on the right. Inside, the panelled entrance hall may also have been extended during this time, and Jacobean ceiling panels installed. But perhaps the biggest change has been the addition of three Dutch gables to the facade on the south, lawn-facing side, essentially imitating 17th century style.

The service side of the hall has also been greatly enlarged. Hardly an easy house to keep up formerly – no water laid on above the ground floor and the dining room at the far end of the house to the kitchen – there are now all the latest conveniences. With these alterations, the affluent Mr and Mrs Gurney had employed 13 live-in servants, but in 1912, they chose to move on to Spixworth Hall.

Only a matter of weeks after Mrs Frank's visit to Earlham and the family are in negotiation, not with a prospective private tenant, but with the City Council for its sale. Soon 356 acres of farmland, park, gardens and the Hall itself become public property in what, for the corporation, is a far-sighted and canny purchase.

It is 1961 and plans for the new University of East Anglia are accelerating after years of local campaigning. Norwich City Council is donating 160 acres of the former Earlham estate to provide the site, and will shortly agree to lease Earlham Hall itself to provide the Vice-Chancellor with administrative offices.

The Earlham estate has proved a significant asset, enabling the Council to extend its house-building programme, develop schools and community amenities, and create a municipal golf course. The park and gardens belonging to the Hall have been largely left alone.



Image\_  
Photograph of north  
elevation (1899).



## LAW had to move out of the building in 2010 due to necessary urgent restoration work, and finally returned to the building in March 2014 following major refurbishment.

Padding in the river, chasing round the rockery and bamboos and rolling down the slope of the lawn have become an essential part of a local childhood.

The Hall has been used as council and nurses accommodation before the war, had air-raid protection installed in its kitchen and scullery in 1939, provided maternity beds when bombs smashed the city maternity home in June, 1942, and housed a school while the Council built new accommodation on Bluebell Lane and at West Earlham.

In October 1962, Vice-Chancellor Frank Thistlethwaite and his staff move into the Hall – and a whole new chapter in the story of Earlham begins.

### In recent history

On 25 April 1963, architect Denys Lasdun, accompanied by UEA's first Vice-Chancellor, Frank Thistlethwaite, presented his plans for the University to 'an appreciative press' at Earlham Hall.

For many years after UEA opened its doors, Earlham Hall remained the main administrative

hub of the new University. Students dropped in and out of Earlham to visit the library, which was originally housed in the building's Jacobean hall, and later relocated to the Georgian dining room. All that changed in 1964, when a suitable space was found on the site of the original University Village.

Down the road, the central campus – as we know it today – was taking shape and, in 1975, the Vice-Chancellor's offices and central administration moved to the Registry.

Earlham was used by the Centre for East Anglian Studies in the intervening years, before becoming home to the UEA Law School in 1984. LAW had to move out of the building in 2010 due to necessary urgent restoration work, and finally returned to the building in March 2014 following major refurbishment.

A second wave of development will bring into use the outbuildings of Earlham Hall to provide a new setting for the UEA Law Clinic, additional rooms for teaching and seminars, as well as providing additional office space for student mentoring. ✦





# INTERNATIONAL AID: HELP OR HINDRANCE?

*UEA's School of International Development is helping humanitarian agencies evaluate the impact of their aid efforts in response to disasters across the world*

**Words** Martin Ashcroft





**What is the best way to support a community in a crisis? How can you be sure that any assistance you provide is going to help (and not hinder) a population's recovery after a major disaster? What impact are you making?**

Impact evaluation has become a vital issue for humanitarian policy makers and practitioners in recent years. Donor agencies with limited funds need to be sure that their resources are being deployed in the best possible ways, so it is vital they have an understanding of who benefits from their interventions, by how much, why, and under what circumstances.

It isn't just a question of counting the number of new schools built after an earthquake. Measuring changes in people's lives requires a great deal of subjective assessment.

"Humanitarian disasters are difficult places for rigorous scientific evaluation trials," says Daniel McAvoy, Senior Lecturer in the University of East Anglia's award-winning School of International Development. "Measuring impact presents a real challenge for NGOs and charitable agencies."

In an attempt to make the process easier, Daniel, together with UEA colleagues, Dr Roger Few and Dr Marcela Tarazona, has co-authored a guide to help organisations evaluate their contribution to overall recovery efforts. *Contribution to Change: an approach to evaluating the role of intervention in disaster recovery*, published in 2013, is the result of two and a half years of research and preparation, including pilot studies trialling the approach in India, Guatemala and Sri Lanka.

"In partnership with Oxfam we've developed a methodology that accepts that recovery from disasters involves a multitude of organisations," says Daniel. "Positive changes in a community's recovery may be the result of any one of a number of NGOs acting in the area, or of efforts by the affected communities themselves. Local people are not simply passive victims, dependant on external assistance; it is important to remember that they play a large part in their own rehabilitation."

The involvement of multiple agencies, though often vital to an aid effort, clearly makes impact evaluation much more complex. *Contribution to Change* presents a combination of survey and interview based quantitative and qualitative methods that measure recovery across a range of sectors, Daniel explains.







**Images\_**  
International volunteers help refugees at Aceh Indonesia following the devastating tsunami.

**5 MILLION  
PEOPLE WERE  
LEFT WITHOUT  
ADEQUATE  
SHELTER.**



It takes time to get truly rigorous methods. First you need to invent them and then you need to apply and test them.

**Daniel McAvoy**  
Senior Lecturer, School of International Development

After the tsunami in Indonesia in 2004, thousands of schools were destroyed, resulting in massive disruption to the education system.

“The Indonesian government was involved, UNICEF was involved, and Save the Children was involved in rebuilding and training new teachers,” says Daniel. “It was implausible for a single agency to claim that the recovery was a result of their efforts alone. The guidebook’s emphasis is on contribution to recovery processes rather than impact, per se.”

In November 2013, the Philippines experienced its most deadly typhoon, Typhoon

Haiyan, with over 6,201 deaths and 5 million people left without adequate shelter. Oxfam GB, in partnership with 11 other humanitarian member agencies of the UK Disasters Emergency Committee, is planning to use *Contribution to Change* to assess the impact of their collective response.

By assessing the effectiveness of their aid efforts, agencies will be able to see how close the islands are to recovery. “We should be able to see where the gaps in the assistance are,” says Vivien Walden, Global Monitoring Evaluation and Learning Advisor at Oxfam GB who was a

co-author on *Contribution to Change*. “We will be able to monitor whether there have been any negative efforts from the typhoon response. It will mean that we will be more honest in our assessment of our programmes and we will hopefully be more realistic about how much we can contribute to the overall recovery.”

UEA’s School of International Development (DEV) has a world-class reputation for its pioneering teaching and research into the links between resources management, poverty alleviation and wider political economy. In recognition of over 40 years’ sustained contribution to global development, DEV was awarded a Queen’s Anniversary Prize for higher education in 2009.

The interdisciplinary approach in DEV takes in climate change, behavioural and experimental economics, environmental justice, social protection and wellbeing.

Most academic staff in DEV are involved in hands-on development programmes which directly inform their teaching and research, regularly working with national and international development agencies, governments, NGOs, international research centres, as well as private clients. In any one year, staff and their students are engaged in 100 or more projects on a global scale; it is vital for them to be at the forefront of advances in policy and decision-making and impact evaluation.

“In the current economic climate there’s an increased demand for the ability to demonstrate impact,” says Dr Paul Clist, an economics lecturer in DEV. There has always been monitoring and evaluation but the latest methods have been developed along with experience and advances in technology. “The ability to collect data in difficult environments is relatively new,” says Paul, “and it takes time to get truly rigorous methods. First you need to invent them and then you need to apply and test them.”

Applied research and other practical skills are incorporated into everyday teaching at UEA. “We provide students with the basic knowledge and skill sets that people who work in the sector need, from project management to setting budgets,” says Daniel McAvoy. “Organisations like Oxfam and government agencies are looking for people who aren’t afraid of numbers and who can account for resources.” DEV MSc students are now being given the opportunity to complete field work with Oxfam GB, CARE and Tearfund through a new internship scheme set up by Paul Clist.

“Many of our students go on to find stimulating careers in global development agencies,” says Daniel. “From Haiti to South Sudan, Rome to Durban, there is usually one of our DEV graduates seeking to make a positive change in the world.” ✨

# PROSTATE CANCER PUSSYCAT *or* TIGER?

*Colin Cooper, Professor of Cancer Genetics, discusses his pioneering work in the fight against prostate cancer with Mark Nicholls.*

**Words** Mark Nicholls



Prostate cancer is now the most common form of cancer in men, with 36,000 new cases diagnosed in the UK each year and 11,000 deaths from the condition.

Yet there is still so much about the disease that remains a mystery. What helps prevent prostate cancer, how can clinicians distinguish between aggressive and non-aggressive forms of the disease and how to understand more about the genetic profiles of prostate cancers, are all questions facing researchers.

Each of these mysteries is being tackled by research led by Colin Cooper, Professor of Cancer Genetics at UEA. His work forms part of a global drive in the fight against prostate cancer, with a focus on genetics, food and diet, and targeted and personalised therapies.

Colin's research, in collaboration with the Norfolk and Norwich University Hospital (NNUH) and the Institute of Food Research (IFR) on the Norwich Research Park, is underpinned by a desire to translate what is learned in the laboratory into the clinic to offer direct benefit to patients at the earliest opportunity.

A major strand of the research, funded by a £3.5m Cancer Research UK grant, involves whole genome sequencing of 250 prostate cancers under the International Cancer Genome Consortium initiative.

Colin, who serves on the Department of Health Prostate Cancer Advisory Board, is overseeing the project through the Institute of Cancer Research in London, but much of the work, particularly bioinformatics, is carried out at UEA.

# 36,000

New cases of prostate cancer diagnosed in the UK each year

# 11,000

Deaths from the condition







Cancer is a genetic disease, developing through a fault in the genes, which become mutated. At UEA, researchers are tapping into the enormous amount of information contained in the genetic material from cancer patients' cells and examining the mutations using modern sequencing technologies.

"The purpose of that is two-fold," says Colin. "Firstly, by getting the genetic profiles of the cancers you can predict how a patient will behave, depending on what combination of mutations they have, because every patient has their own characteristic mutation spectrum.

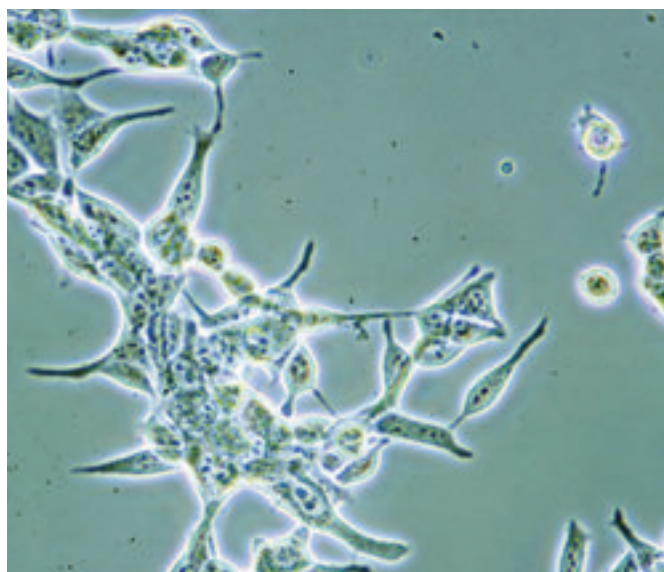
"From that we hope to be able to predict whether an individual cancer patient will have a poor outcome or a good outcome.

"Secondly, if you identify which genes are altered, there may be a drug that has already been developed that you can use on that particular patient against a particular mutation.

"It is about personalised therapy for cancer treatment – you get a treatment which is determined by the genetics of your cancer."

There are 800 new prostate cancer cases diagnosed annually in the NNUH clinics, and researchers are collecting clinical samples from many of them for their studies.

More than half of all men over 50 are thought to have cancer cells in their prostate, but only about 10 per cent of those will ever become clinically life-threatening. "Most of the cancer will never cause clinical symptoms and will just sit there in your prostate for the rest of your life," says Colin. "Those are the 'pussycat' cancers. In a proportion of cases the cancers will progress and become life threatening and those are the 'tiger' cancers.



More than half of all men over 50 are thought to have cancer cells in their prostate; there is no reliable test that will distinguish the 'tigers' from the 'pussycats'.

*Prof Colin Cooper*  
Professor of Cancer Genetics

**10%**

only about 10% of prostate cancer cells in men over 50 will ever become clinically life-threatening.



## The links with IFR are providing information that will allow us to prevent prostate cancer development or progression in the future using ‘super broccoli’.

**Prof Colin Cooper**  
Professor of Cancer Genetics

“Currently, when a man is diagnosed with prostate cancer, in a lot of cases there is no reliable test that will distinguish the ‘tigers’ from the ‘pussycats’, the aggressive from the non-aggressive cancers. This is the fundamental dilemma of someone presenting with prostate cancer.”

To help address this, his team is working with NNUH clinicians to develop tests that will distinguish the aggressive from the non-aggressive cancers. They are looking in samples of biopsy material and urine for biomarkers that will help distinguish between the disease forms. Genetic mutation information from biopsy material collected from some 600 patients is being analysed at The Genome Analysis Centre (TGAC) in Norwich.

As well as collaborating globally with teams in America, Canada, Australia, and across Europe, having a base on the Norwich Research Park offers access to world class expertise; from understanding how the disease develops to how to treat it.

One example is the collaboration with Prof Richard Mithen from the Institute of Food Research (IFR) looking at the ability of the cruciferous vegetable, broccoli, to prevent

prostate cancer. Richard’s group has been working on one particular variety of broccoli with enhanced health benefits.

The sequencing analysis by Colin’s group together with Richard’s work is making important progress. “The links with IFR are providing information that will allow us to prevent prostate cancer development or progression in the future using ‘super broccoli’,” says Colin.

While the bioinformatics analysis looking at patient classification is still very much in the research phase, the Norwich-based scientists and clinicians hope this, and particularly the gene screening, will begin to help patients within two years.

Colin’s team is working on several different projects with different clinical aims. “One is to prevent, the second is to distinguish aggressive from non-aggressive prostate cancer, and the third is to provide individualised therapy to patients,” he says.

Constantly underpinning the research is the translational focus: helping to provide real benefits in a clinical setting to prostate cancer patients as soon as possible. ✨



**Image\_**  
Prof Colin Cooper and his UEA team have been working closely with Prof Richard Mithen from the Institute of Food Research (IFR) on the potential health benefits of ‘super broccoli’.

### THE ANDY RIPLEY MEMORIAL FUND

Prof Colin Cooper’s research team at UEA includes PhD student Helen Curley. Helen’s instrumental role in the team is funded by the Andy Ripley Memorial Fund, established in memory of the former England rugby player and UEA alumnus who died of prostate cancer in 2010 aged 62. The fund, through philanthropic support, enables a postgraduate student to carry out research into the diagnosis, treatment or prevention of prostate cancer.

Helen, the recipient of the first Andy Ripley PhD studentship, has spent the last few months looking at expression data of potential biomarkers in urine and next year will continue the search for biomarkers by sequencing DNA extracted from preserved surplus biopsy material.

“The aim is to identify biomarkers that will help future clinical management of patients with prostate cancer biomarkers to aid in more specific diagnosis, and biomarkers that can predict response to certain drug types,” she says. She is also looking to identify potential drug targets for targeted therapies.

“It’s wonderful that Andy’s family and friends set up the studentship in his name to help with prostate cancer research,” says Helen, who studied a BSc in Biomedical Science at Keele University (2008-2011) and then an MSc in Bioinformatics at Lunds Universitet (2011-2013).



Over 340 people have already supported Colin and Helen’s research through philanthropic donations to the Andy Ripley Memorial Fund. To find out more, visit [www.uea.ac.uk/difference](http://www.uea.ac.uk/difference).



# Art Nouveau

a style that was nearly forgotten



**Image\_**

Maurice Bouval (1863-1916)  
Sommeil ou La Femme aux  
Pavots (Sleep or Woman with  
Poppies), 1900 Gilt bronze on  
marble base, 45 x 26 x 18 cm  
Pete Huggins, Arwas Archives.

*The Sainsbury Centre for Visual Arts is inextricably linked with Art Nouveau, the decorative art of the fin de siècle. With an exhibition on show, Prof Paul Greenhalgh, director of the centre, discusses the sensuality of the style and the controversies it fuelled.*



If you walk down to the Sainsbury Centre for Visual Arts just a few hundred metres from the heart of the campus, you will be able to lose yourself in our world-class collection of artworks, spanning thousands of years and the four corners of the globe.

The Sainsbury Centre was created to house the world art collection of Sir Robert and Lady Lisa Sainsbury, who presented the works to UEA as a gift in 1973, when the University was barely a decade old. The Centre, designed by the architect Sir Norman Foster, very quickly became one of Britain's leading institutions for the study of the arts of all nations, and remains so today – a fact reinforced by its recent placing in the UK's top ten cultural attractions by the Independent on Sunday.

Apart from the main Sainsbury gift, a number of other wonderful collections have been donated over the years, including the Anderson Collection of Art Nouveau which was given to the Sainsbury Centre by Sir Colin Anderson, a friend of Robert Sainsbury, not long after the building opened, in 1978.

In February 2014, following a proud tradition of fine displays of Art Nouveau going back through the decades, we launched the major exhibition *Sense and Sensuality: Art Nouveau 1890-1914*.

Whilst the exhibition contains a number of works from our own reserves, the majority are on loan from the legendary collection of Victor and Gretha Arwas, marking the initiation of a major collaboration between the Sainsbury Centre and Gretha Arwas to establish the Victor and Gretha Arwas Foundation, dedicated to the study and presentation of Art Nouveau. The creation of the Foundation will enable the Art Nouveau style to be studied, exhibited, collected, and preserved for posterity.

### A complex age

The period 1890 to 1914, which saw the rise and fall of Art Nouveau, has often been depicted as an age that represented the end of many things, but it was also an age of beginnings. It was a turbulent time: millions of people migrated to rapidly growing cities, becoming urban dwellers in a modernised environment. How people lived, worked, and took their pleasures was transformed in a single generation and, alongside the physical shift, how they thought about the world also began to change. It was an age of contradiction, in which aspiration sat alongside anxiety and doubt, and in which values of the past clashed and mingled with ideas about the future.

Works of the Art Nouveau often explore the intense emotional maelstrom of the period. Many pieces from *Sense and Sensuality* focus on personal and sexual liberation, women and the rise of feminism, youth revolution, the questioning of organised religion, eroticism and an exploration of mythology, novel art forms, psychology and dreams, narcotics and the concept of mass manufactured art. Thus Art Nouveau could be interpreted as a style of liberation and a widespread questioning of values.

Mythology and the emerging science of psychology provided inspiration and influenced many of the great Art Nouveau artists. We are lucky enough to have a number of their remarkable works on display in *Sense and Sensuality*. Jean-Joseph Carriès' 'Fawn' is thought to be based on a likeness of a Paris vagrant: the artist was renowned for experimenting with his realistic sculptures and this work presents a disturbing representation of a man's desperation. A cult figure during the period, Carriès' work deeply influenced contemporaries such as Paul Gauguin (1848–

### Images

Works from the Sainsbury Centre for Visual Arts' major exhibition *Sense and Sensuality: Art Nouveau 1890-1914*.







**Mythology and the emerging science of psychology provided inspiration and influenced many of the great Art Nouveau artists.**

*Prof Paul Greenhalgh  
Director, Sainsbury Centre for Visual Arts*

1903) and Georges Flamand (1895–1920). ‘Fawn’ also has the ambience of a self-portrait. Mythology and sexuality are often interlinked in Flamand’s ‘Le Fil d’Ariane’, which explores and re-imagines Greek mythology. One of the most enduring images of the period, Steinlen’s ‘The Black Cat’, a poster for the nightclub of that name, reflects an interest in mysticism and symbolism.

#### **Move to the modern**

Art Nouveau is sensual and can be overtly erotic. It was a period of sexual awakening, and the organic, curling, rounded forms are clearly derived from the body – male and female – intermingling in a powerful but often disturbing way with the shapes of flora and fauna. Larche’s famous Loïe Fuller lamp perfectly encapsulates the form, depicting Fuller’s pioneering, sensuous, swirling dances. Bouval’s ‘Sommeil ou La Femme aux Pavots’ is clearly a depiction of a sexually liberated modern woman but with a powerful hint of the social undercurrents of addiction and narcotics, her eyes closed and poppies in her hair.

More overtly, the depictions of ‘the Art Nouveau woman’ in posters, paintings and sculptures were often sexually charged, sometimes exploitatively so. But with or without her clothes, and whether still, dancing, self-consciously posing, or smoking a cigarette, she was not a quiet, shy or unassuming character like her Victorian forerunner: she had confidence, with flowing hair, a coquettish smile, and eyes provocatively closed. Mucha’s famous images of women reflect this new attitude. Just below the surface in much of Art Nouveau’s architecture, furniture, glass, jewellery and ceramics, curving lines appear to be based on plants and landscapes but are often representations of limbs, breasts, buttocks and phalluses. There is a sense of sexual liberation running through the Art Nouveau style.

It is clear in retrospect that its erotic tone could work for and against Art Nouveau. Even in its own time, the style was considered by many to be, at best, a short-term movement and, at worst, just a fad. It was accused of being superficial, and of not penetrating deep levels of society and culture. By 1911, many critics openly attacked it as being decadent, promiscuous, and even debauched. Further into the new century, Modernists, many of whom were committed to a moral, even puritanical, vision of the role of design, castigated Art Nouveau for its promiscuity. Later into the 20th century, it was frequently dismissed as being degenerate, reactionary, and more to do with corrupted 19th century life rather than the modern age.

### Champions of style

However, Art Nouveau has always had its champions and, more than in any other decade, it was during the 1960s that it began to re-emerge. It was once again studied and collected, and a new generation of artists and graphic designers showed an interest in its organic forms and sensuality. It became the style of choice for the stage sets and record cover designs of progressive rock and pop musicians, and it clearly affected aspects of the Pop Art movement. Art Nouveau was a radical development in both art and design, as well as in attitudes to modern life. Its style is an examination of the intimate, and perhaps the more mystical and dark side of life.

The 1960s were important for the recovery of the heritage and meaning of Art Nouveau. It was then that a new generation of scholar-dealers began to re-establish the style, and key among these were that extraordinary couple, Victor and Gretha Arwas. Victor Arwas (1937-2010) was an acknowledged authority, broadcaster and lecturer on the fine and decorative arts of the late 19th and 20th centuries. He published over 20 books in which he explored aspects of various movements, and wrote exhibition catalogues and monographs on individual artists and groups. Several of his publications are now the standard works on their subject, such as his two-volume magnum opus: *Art Nouveau: From Mackintosh to Liberty* (2000) and *Art Nouveau: The French Aesthetic* (2002). Together with Gretha, herself a brilliant

thinker on the fin de siècle, Victor studied, exhibited, bought, sold and promoted the style at his Editions Graphiques Gallery in London as well as in the United States and Japan. Many of the Art Nouveau works in the world's greatest museums are there because of them. And now the wonderful Gretha is working with the Sainsbury Centre to continue the great work of studying this amazing period.

For Gretha, and for all of the staff at the Sainsbury Centre, the study of art is key. All too easily, art can get lost, ignored, and marginalised. This certainly happened to Art Nouveau at times during the twentieth century. That is why our scholars and students are so important to us: it is they who will carry the flame for art, and for Art Nouveau, into the next generation.

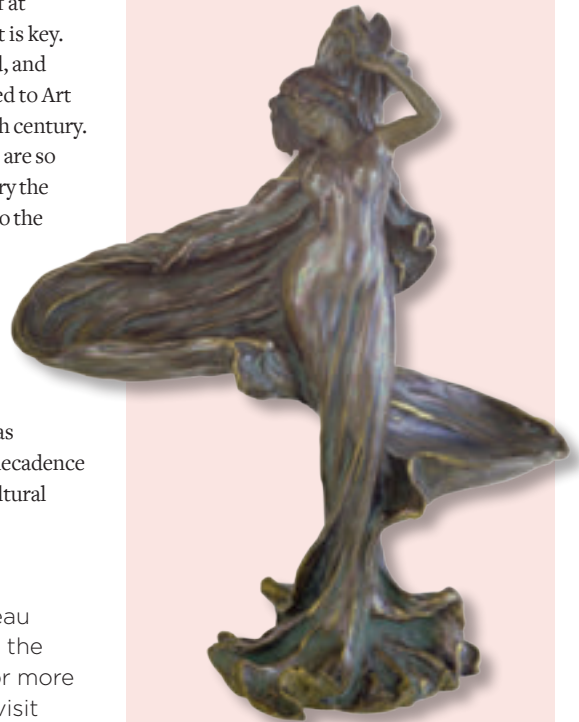
For over forty years now the Sainsbury Centre and UEA have been written into the history of the Art Nouveau style. From the wonderful donation of the Anderson Collection, to the creation of the Arwas Foundation, the beautiful, sensuous decadence of the fin de siècle has added to the cultural heritage of our region. ✦



Sense & Sensuality: Art Nouveau 1890-1914 will be on display at the SCVA until December 2014. For more information and ticket prices visit [www.scva.ac.uk](http://www.scva.ac.uk).

## Research students

**Vittorio Ricchetti is a postgraduate student on the MA in Museum Studies. Here he talks about his favourite piece from the Sense and Sensuality exhibition.**



Loie Fuller (1862-1928) was an American dancer living in Paris who reached international fame at the 1900 Universal Exhibition performing covered in yards of silk under the colourful lights that she designed. She is considered a pioneer of modern dance and, most importantly, stagecraft. As an open lesbian and promoter of ideas of sexual freedom, Fuller also became one of the earliest gay and feminist icons.

Many Art Nouveau artists tried to replicate her swirly gowns, sensuous moves and the iridescent colours produced by her lights. These portrayals mirror the movement's beauty and complexity. Although the period saw a rise in the representation of empowered women, and other previously secluded subjects, such as non-whites and homosexuals, this was often paralleled with misogyny, objectification and fetishisation.

In these beautiful works, Fuller is mostly remembered for her libertine spirit and the sensuality of her dances rather than for the technical innovations and incredible strength needed to perform them.



### Images

Left: Aubrey Vincent Beardsley (1872-1898) *Salome*, 1894, Artist's proof, 44.8 x 34.8cm.  
Above right: Figure of Loie Fuller c.1900, Reissner Stellmacher und Kessel, Austria, Anderson Collection of Art Nouveau.



# A BUSINESS VISIONARY

*Think academics are far too interested in higher learning to be interested in business? Emma Outten meets the very enterprising Prof Graham Finlayson from the School of Computing Sciences.*

**Words** Emma Outten



It is hardly surprising that Graham Finlayson, Professor of Computer Science, has emerged as one of the most enterprising professors at UEA. At 16, back home in Scotland, he and a school-friend started a company called HighTech Software, and developed a game that simulated the stock market (and was on sale in the high street at WH Smith).

Graham combines his entrepreneurial instinct with his excellence as an academic, being the youngest ever professorial appointment at UEA. "I was 30 when they offered me the job and 31 when I took up the post," he recalls. The University could clearly see the potential in him. "I've always been interested in the business side," he says, adding that the subject of spin-out companies even came up during his job interview in 1999.

It wasn't long before Graham had founded his first UEA company, Lightseer Ltd. "I came here ready to rumble," he admits. "Within six months we had a company up and running. Though, as often happens in business, this company did not

ultimately succeed. This was an important lesson both for the entrepreneur and the University. If at first you don't succeed you need to try again."

In 2006, with invaluable advice from UEA regarding intellectual property, Graham spun out his second company, Imsense Ltd (which produced ground-breaking software for 'making photos look better'). Imsense Ltd was acquired in 2010 by an undisclosed major blue chip trade buyer.

Recently, £300,000 of investment was raised for a new image fusion company, Spectral Edge Ltd, also spun out of the Finlayson lab. The investment came thanks to partnerships with the Icenii Seedcorn Fund, Rainbow Seed Fund, UEA, and funding from Business Angels. Graham believes the Spectral Edge image fusion techniques will become 'text-book' in time. A novel application of the technology is to help colour-blind people see more clearly. The detail in an image that a colour-blind observer can't see is made more accessible by fusing it with details that they can see.



**The number of colleagues interested in commercialising their research is increasing. I'm forever encouraging colleagues to spin out their research.**

*Prof Graham Finlayson  
Professor of Computer Science*

Crucially, the fused image looks good to colour-blind and non-colour-blind observers.

Graham has more than 25 patents to his name, with many implemented and used in commercial products. "I just can't keep count of them," he says. That might make him the most enterprising professor at UEA, but he hopes not for long. "The number of colleagues interested in commercialising their research is increasing. I'm forever encouraging colleagues to spin out their research," he says.

Graham's success was recognised by the Philip Leverhulme Prize in 2002 and by a Royal Society-Wolfson merit award in 2008. Both awards allowed him to focus more of his time on research and ultimately his research is at the foundation of his spin out companies.

There's no denying that Graham has enjoyed considerable success, and he is thankful for the support he has received, especially from UEA's Research and Enterprise Services. Nevertheless, he says: "UEA has the most to gain from spin out success." ✨

# Helping hand for student entrepreneurs

*Three fledgling businesses have started up following a boost from UEA's newly-formed Student Enterprise Service.*

**Words** Sara Hardy

**Images\_**  
Could this be the next fitness craze? UEA graduate Kate Batty has invested in 20 pairs with the help of the Student Enterprise Service.



For more information about student enterprise activity at UEA, including how to get involved, visit [www.uea.ac.uk/studententerprise](http://www.uea.ac.uk/studententerprise).



UEA is committed to offering students a broad experience whilst studying on campus – right down to helping them create their own business empires or social ventures.

Via the Student Enterprise Service, advice is available on applying for loans and grants, writing business plans, marketing ideas, and, perhaps most importantly, enlisting the help of fellow students.

Part of this Careers Service initiative was the creation of a new post, Enterprise and Activities Co-Ordinator, taken up by Victoria Cook who is now based at the Students' Union.

“We operate a real ‘open door’ policy,” says Victoria. “We like people to pop in and just talk through an idea that they have had – something that has perhaps been bubbling around in their head for a while and they just want to try and get it going.”

“I can provide plenty of practical help; pointing them in the right direction for grants and workshops here at UEA, as well as helping them access support from other students, university groups or people in the community.”

Victoria believes the service offers students a chance to develop skills and experiences that will help them in the future. “Their degree is at the centre of all they do but we offer them the chance to show other skills, something that will make them stand out from other applicants.

“I often see it as hidden learning as they enjoy themselves and tackle projects they are passionate about, whilst gaining numerous really valuable skills.”

Victoria gives one example of a student who was a keen jewellery maker. “I advised her to start off by having a sale at our Christmas fair and seeing how it went. She learnt a lot about marketing and the basic practicalities of running a stand – and gained a lot of confidence as people really liked her pieces.”



**Images\_**

Right: UEA graduate Meng Wang plans to set up a Mandarin learning centre. Far right: Kate Batty, UEA graduate in International Development and Spanish takes a KTroo class. Bottom: A T-Shirt design from the label Love from Matte, the creation of UEA business management student Matt Pate.

**Kate Batty**

Kate, originally from the south of England, is a keen sportswoman and has just completed a four-year degree in International Development and Spanish. It was while she was in Spain as part of her course that she saw a new fitness regime using rebound boots which absorb 80 per cent of all impact. She was fascinated by it.

“I love sport and thought this looked great. It is low impact and very easy to pick up,” she says.

Kate trained as an instructor in Spain and returned to Norwich determined to involve everyone here. “I spoke to the enterprise team and they were very supportive and helped me to get a start-up grant from Santander.

“I bought 20 pairs of boots and have been building up classes in the city. I started off with a pilot class at the University which sold out and it has really gone on from there. Now I want to start classes for children and ones for all the family.”

She adds: “I got so much help from the University – Victoria thought of asking the Photographic Society to help me with publicity pictures and the IT Society to help me with a website.”

Look out for KTroo classes in and around Norwich – Kate has even been featured on a local television channel.

[www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat)

More information is available at [www.ktroo.com](http://www.ktroo.com).



I often see it as hidden learning as they enjoy themselves and tackle projects they are passionate about, whilst gaining numerous really valuable skills.

*Victoria Cook, Enterprise and Activities Co-Ordinator*

**Meng Wang**

Norwich-based Meng graduated from UEA last summer with a degree in Economics and Business and a masters in International Relations and Economics. Thanks to the help received from the University, she says, she is setting up a Mandarin learning centre in Norwich. “I plan to run classes for children aged three to 12 and also offer one-to-one classes for adults.

“Mandarin is a great language to learn as there is so much trade with China – and there will be more. And it is useful for children to start early as they find it so much easier to learn!”

Meng continues: “Victoria was a real help, showing me how to improve my website and talking me through everything from leaflet distribution to getting a good brochure together.”

Meng’s classes will be held at Matthew’s church, Thorpe Hamlet, Norwich.

[www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat)

Find out more at [www.norwichmandarin.com](http://www.norwichmandarin.com).

**Matt Pate**

Matt, from Essex, has just completed the second year of a Business Management degree and also runs a t-shirt making business where he both designs and sells his creations under the Love From Matte label, online and by word of mouth.

He explains: “I love music and art and wanted to produce clothes that really reflected this. Victoria was great – she encouraged me and just knows everything about setting up a business. She pointed me to the University’s Unlimited fund and I was lucky enough to get a social enterprise grant. I want to start using other designers – people who love art and tattoos as much as me.”

Matt’s range of clothing also includes a shirt and a jumper, and he is hoping to produce a women’s collection too.

[www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat)

Visit [www.lovefrommatte.co.uk](http://www.lovefrommatte.co.uk) to learn more.

# WHERE ARE THEY NOW?

*Since the mid-1990s, a highlight of the UEA sporting calendar has been the annual clash of Pirates and Parrots. For those of you not in the know, that's an American football match between the current UEA team, the Pirates, and an old boys team, affectionately known as the Parrots.*

**Pictures** Pete Huggins

 In 2014 the Parrots continued their 18-year winning streak, beating the student team 20 to 12. Whilst they were here, a few of the Parrots took the time to talk about what they are doing now, including Neil Morgan, who probably owes his current career to a moment of madness at the UEA sports mart. This year marked their last outing on the field, but it's almost certain that they'll be leading the support from the side-lines next time around.

  Neil Morgan graduated from UEA in 1996 with a degree in French Literature, and again in 1998 with a PGCE. He is now in the unusual position of being a Brit working in the fast-paced world of college football in the USA.

"I'm currently a video and IT assistant for the Northwestern Wildcats football team in Evanston, Illinois. So much of the preparation for college football is done away from the field that technology has a vital role in ensuring that coaches and players can communicate, even out of hours. I manage team-issued iPads for both coaches and players and ensure that they always have up-to-date playbooks and scouting videos wherever they go.

I've lived in the US for nearly eight years now but still come back to Norwich about once a year to catch up with old friends. The shining moment in my professional life since UEA was being a part of the Northwestern team that won the Gator Bowl 34-20 against Mississippi State on New Years Day 2013. I'd been on four previous Bowl trips with Northwestern and came up short in a variety of heart-breaking ways against the

likes of Missouri, Auburn, Texas Tech and Texas A&M. We finally got the monkey off our back in a relatively comfortable way and being part of the team that won Northwestern University's first Bowl game since 1949 was unforgettable. I will treasure my Bowl ring for ever."

  Dan Jackson graduated from the School of History in 1997 and currently works as a freelance promotions producer and TV creative.

"On leaving UEA I entered the world of television and this has been my livelihood ever since. I am now a self-employed TV trailer maker. I caught the travel bug soon after graduating, facing scorn and ridicule for the amount of time I spent overseas. But it was on my travels that I met my wife, Samantha, in Western Australia. We married in 2008 and have now travelled to all seven continents together; Antarctica completed the set in 2012.



And at least once a year I get together with this bunch of madmen to pretend that we're young again."

  Mark Jones studied Business Information Systems at UEA, graduating in 1995, and is now a Year 5 class teacher at the British School

in the Netherlands.

"After leaving UEA, I studied for my PGCE and then taught in Norwich schools before embarking on a career teaching abroad.

I moved to Malaysia where I worked for ten years as a teacher in a British international school, arriving as a single man and leaving married with two children. Family has brought me to the Netherlands so that grandparents and grandchildren don't have to endure any more 14 hour flights. Living in Asia was a whirlwind experience from learning to dive, visiting amazing countries and meeting some wonderful people along the way. An unforgettable time."

  Rob Kerr was an English and American Literature student until graduating in 2004, and currently works as Education and Public Engagement Officer at The Genome Analysis Centre, based at Norwich Research Park.

"I design e-learning modules to get kids interested in science. Currently I'm creating iPad games themed around genomes and DNA. This is a new path for me, having spent 10 years working in the voluntary sector as a fundraiser and marketer. I kept in touch with UEA, spending 10 years working on the coaching staff of the Pirates which was one of the most rewarding experiences of my life.

In July 2014, I'm getting married to a UEA alumna, Lisa Hoy, and then we're moving to China to work as teachers, hopefully seeing a bit of the world in the meantime.

My time at University was all a bit of a blur, but what stands out for me is the life-long friends that I made at UEA, while as a student and while coaching student athletes." ✨







# 20-12

The final score. The Parrots beating the Pirates for the 18th year running



I kept in touch with UEA, spending 10 years working on the coaching staff of the Pirates, which was one of the most rewarding experiences of my life.

**Rob Kerr**  
Education and Public Engagement Officer  
The Genome Analysis Centre

**Image\_**  
Back row, left to right: Dan Jackson,  
Mark Jones, Miles Innes, Rob Kerr  
Front row, left to right: Neil Morgan,  
Richard Mortimer, Ian Burchett.

# Remembering a comic tragedy



*Darkle, a black comedy by TV and film writer and former UEA student and lecturer Bill Gallagher, played to full-houses at the Edinburgh Fringe Festival in 1989. In 2014 the play returned to the Festival, directed by original cast member Sophie Vaughan – now teaching in the School of Literature, Drama and Creative Writing.*

*Another original cast member, James Frain, is now a sought-after Hollywood actor (True Blood, 24), but Darkle was his first taste of the actor's life. The role that James played, Brian, was recreated in 2014 by UEA student Michael Clarke.*

*Here, Michael and James reflect on their experiences of taking on the same part.*

**Images\_**  
Michael Clarke with  
the cast of the 2014  
production of *Darkle*.



Can you remember first reading the play?

**James** I remember Bill envisioning and communicating his ideas as he wrote it, and how excited he was during the writing process. Bill is a very inspiring and generous writer and collaborator. I performed Teddy in a Broadway production of *The Homecoming* in 2008, and I drew a lot from my first exposure to Bill's work.

**Michael** I remember feeling really unnerved. I wasn't initially sure why. I found it unsettling that I could relate to these bizarre, young, isolated characters. I also found it very funny.

What's your most vivid memory of *Darkle*?

**J** Performing at the National Student Drama Festival was the first time we played to a large theatre – the ADC Theatre in Cambridge. The production was always fun to act because of the antic theatricality Bill had built into the play.

**M** Carrying the enormous beanbag (a fairly significant prop) from rehearsal space to rehearsal space. It marked the prologue and epilogue of every rehearsal and became a ritual. Every day has been so different, but we always come back to that beanbag.

How did it help ignite your passion for acting?

**J** *Darkle* gave me a taste of what it was like to connect with a wide and varied audience, to be “in the moment” with them. I think it was when we were in Edinburgh that I felt most intensely that I wanted to be a professional actor, to the exclusion of everything else.

**M** I always knew that I wanted to act and perform. This show has given me the confidence and drive to pursue it as a career.

Did the play go well at the Edinburgh Festival?

**J** By the time we reached Edinburgh the production was a well-oiled machine. Setting up and striking the set was the most challenging and rewarding part of the process for me. I got a rush from the get-in and get-out. There were very accomplished comedians and actors playing at our venue,





I think of it as a satire about the tension between the individual and the collective that every audience has to feel their way through to find their own position. More importantly – it’s an absolute thrill ride!

*James Frain*  
Actor



the Assembly Rooms, who were supportive and complimentary about the show.

Can you remember the first night?

**J** I remember audible gasps of shock and a mounting sense of hysteria in the audience that took us by surprise with its intensity. It energised and inspired us.

**M** I was terrified before the first performance. I had no idea how people would react. Some people would laugh, others would gasp.

How did you get inside the character of Brian? Could you relate to him in any way?

**J** I didn’t have a clue at the time so I relied totally on instinct. It felt like he came into being when an audience was responding and he slipped away when the performance ended. There was loneliness and a yearning to belong that I related to in the character.

**M** There’s a childlike innocence about Brian. It was through exploring what Brian really wanted that I began to find a voice for the character. I got to do some work experience as a butcher, which was a lot of fun. I really like the character. He’s essentially a lost little boy.

There is a crucial scene where Brian kills an animal in a fit of desperation. How did you approach that?

**J** It is essentially a mime act and I remember having a lot of fun figuring out how to animate

a bag in my arms to create the illusion of a small dog struggling. It’s a bit of slapstick that became one of my favorite parts of the show.

**M** I tried to totally believe that the dog was in the bag. What really helped – what was fun – was to let the bag that the animal was in lead me. The bag was in charge. And then I tried to keep it down, keep it in the kitchen.

People disagree about the meaning of the ending. Some say it is horrific tragedy; others say it is necessary resolution into peace. What is your response to the ending?

**J** The combination of comic and tragic elements, a balance between political and psychological commentary, and ambivalence about the “meaning” of the play – especially the ending – are essential to its theatricality. It doesn’t dictate an interpretation. I think of it as a satire about the tension between the individual and the collective that every audience has to feel their way through to find their own position. More importantly – it’s an absolute thrill ride!

**M** I find the ending dark and unsettling. Mr Stringer (landlord to Brian and two fellow tenants) in the armchair seems reminiscent of images of Stalin or some other fascist dictator. Seeing these three young people surrender themselves to a broken old man is sinister and disturbing. ✨



**Images\_**

Top: Actor James Frain in the 1989 production of Bill Gallagher’s *Darkle*

Above: At the Premiere of HBO’s *True Blood* Season 3 in which he played vampire Franklin Mott.

# MAKE ME LAUGH

*TV comedy's a complex business, but does it have to be? Researchers at UEA's School of Art, Media and American Studies are taking a look behind the scenes.*

**Words** Keiron Pim



A BBC producer, a comedy writer and a University of East Anglia academic walk into a bar...

What happens next might not make a great punchline, but has led to a three-year research project headed by UEA aiming to inject life into the next generation of British television comedy.

Dr Brett Mills, a senior lecturer in UEA's School of Art, Media and American Studies, started the Make Me Laugh project in January 2012 with the aim of understanding the creative process behind comedy.

Bringing a comedy to our screens is complex, says Brett. His project examines the creative process and how it could be improved. Funded by the Arts and Humanities Research Council, the project also involves research associate Dr Sarah Ralph and PhD student Erica Horton.

"The aim is to go back to the industry and give them suggestions as to how [the process] can be better organised," says Brett. "There's a lack of clarity about how the commissioning process works, the amount of time it will take and exactly what it is the broadcaster wants. Communication might not be as full as it could

be, so we're trying to work out ways for there to be a better sense of community amongst everyone making these programmes."

The timing couldn't be more apt. With budgetary cuts, major changes in senior management and the uncertain future of BBC Three, the future of the television comedy industry is on shaky ground. Even to the experts, the way forward is far from clear.

Brett's team hopes that, through their research, senior members of the industry will be able to introduce more positive and efficient processes into their work.

Research on Make Me Laugh has led to interviews with a host of high-profile names from British TV comedy, including Adam Tandy, producer of *The Thick of It* and *Come Fly With Me*; BBC controller of comedy commissioning, Shane Allen; Channel Four's deputy head of comedy, Nerys Evans; *Peep Show* co-creator Sam Bain; and Ash Atalla, producer of shows such as *The Office* and *The IT Crowd*.

The researchers have also sought views from people just beginning in production and writing careers, including rising stars



#### Images

Shows such as BBC's *House of Fools*, political comedy *The Thick of It* and *Bluestone 42*, a comedy drama series set in Afghanistan, were all influences for Make Me Laugh.





**Sky, who never made comedy before, suddenly announced they were going to make loads of comedy, putting money into the industry.**

*Dr Brett Mills*  
Senior lecturer, School of Art, Media and American Studies



of screenwriting and UEA alumni, Molly Naylor and John Osborne, whose collaborative sitcom is set to hit Sky in the near future.

“The innovative thing about the project is that it is following production projects and careers over time,” says Brett.

The Make Me Laugh team has been watching *Bluestone 42*, a BBC Three comedy drama series set in Afghanistan, and the Reeves and Mortimer BBC Two show *House of Fools*, which research associate Dr Sarah Ralph visited for a week of rehearsals. A new sitcom, *The Detectorists*, starring Mackenzie Crook, who also wrote and directed it, has also been studied. The series is filmed in Framlingham, Suffolk, and Brett has been on set during shooting.

“*Bluestone 42* has been really good because we’ve interviewed the writer, the editor, the director – we’re looking at the multiple people who are involved, at what point they come on board and what contributions they make,” says Brett.

A number of big changes occurred when Make Me Laugh was in its infancy. Shane Allen left his position as head of comedy at Channel 4 to become controller of comedy commissioning at the BBC. “At the same time,” says Brett, “Sky, who never made comedy before, suddenly announced they were going to make loads of comedy, putting money into the industry.” Sky’s change of policy led to a shortage of creative talent elsewhere as people flocked to work for them.

The biggest change to come about since the project began, however, was the announcement in March 2014 that BBC Three could become an online-only channel. A final decision from the BBC Trust is expected in the first half of 2015. “BBC Three currently commissions more comedy than the rest of the [industry] put together,” says Brett. “That has sent out shockwaves. Everyone has to work under the assumption that it’s going to happen.”


One major insight of the project, which might surprise some, is the amount of speculative work that is built into the industry’s current culture. It is not unusual for even prominent industry players to have up to 20 potential projects in the pipeline. “It’s a case of having lots of things in the air and hoping that one of them happens,” says Brett. “There’s a lot of stuff out there that people spend a lot of time and effort on that comes to nothing.” ✦



For more details about the project see [www.makemelaugh.org.uk](http://www.makemelaugh.org.uk).



# CAN WE AVOID DANGEROUS CLIMATE CHANGE?

 *To avoid dangerous climate change, we need  
to change the way we produce energy, write  
Dr Rachel Warren and Dr Konstantinos Chalvatzis.*





### At 2°C

If substantial and sustained efforts are made to reduce emissions, it may be possible to ensure that global temperatures

never rise by more than 2°C. This action to reduce emissions is called climate mitigation. However at 2°C, climate change risks are still significant with expected complete loss of Arctic summer sea ice, damage to coral reefs and other unique ecosystems, increased extinction risks for many animals and plants, and risks to food production and/or water security in tropical and even some temperate regions. This level of warming also increases the frequency and severity of extreme weather events such as droughts, floods, cyclones, and heat waves.

### At 4°C

At 4°C above preindustrial levels, the estimated impacts include risks to global and regional food security, high temperatures and humidity compromising normal human activities, including growing food or working outdoors in some areas for parts of the year, severe and widespread impacts on unique and threatened systems including the loss of most coral reefs, substantial species extinction risks (with increased risk for extinction for an estimated two thirds of widespread plants and for one third of animals), and further increases in extreme weather events.

The higher the temperature rise, the higher the risk of melting of large ice sheets and increases in forest fires, which both accelerate climate change.

Humans and ecosystems have limited capacity to adapt to climate changes. Because of this, risks to plants and animals become high when global temperatures rise beyond 2°C. Humans could, if they chose, prepare in advance for climate change, but there are both physical, psychological and financial limits to such

adaptation. While humans can adapt to some climate change, we cannot avoid all of the impacts even at 2°C. At 4°C we can adapt to far fewer of the impacts.

### Avoiding 2 to 4°C

If we are to avoid the climate change impacts associated with global temperature rises – within this century – of 3°C and 4°C and above, stringent, radical and sustained reductions in greenhouse gas emissions are necessary.

In 2010 in Cancun, world Governments agreed to a long-term temperature goal that global temperature rise should remain below 2°C. Some governments are lobbying that this be reduced to 1.5°C in the light of, for example, the impacts of sea level rise on low-lying small island states.

Rachel has worked closely with climate change decision makers by co-leading the Avoiding Dangerous Climate Change (AVOID) project to quantify the impacts that can be avoided by climate change mitigation that constrains global temperature rise to 2°C. An estimated 50 per cent of the economic impacts, 60 per cent of the impacts on biodiversity, and variously 20-65 per cent of the impacts in other sectors (such as agriculture, flooding and so on) can be avoided globally by such action. This requires global emissions to peak now, not in the future, and to be reduced rapidly at 5 per cent annually thereafter. If global emissions instead reach their global maximum in 2030 before being reduced, smaller percentages of impacts can be avoided (e.g. 40 per cent, rather than 60 per cent, of the impacts on plants and animals). Rachel also works on a new research project called HELIX which is studying impacts of climate change at 2, 4 and 6°C of global warming.



### Electricity is key

In the foreseeable future the way that we use energy, and in particular electricity,

is expected to provide much of the necessary reductions in emissions. This is for two reasons: the technology exists for electricity to be free of carbon and because electricity can supply the energy demands of almost everyone else. Low carbon energy sources include nuclear energy, renewables such as hydro, wind and solar power, and potential technology to capture and store the carbon from fossil-fuels burned for generating electricity. Nuclear power is developing rapidly in China and India, but only a handful of new nuclear reactors have been built in the last three decades in the developed world. The UK experience of nuclear demonstrates that financing nuclear energy is not cheap, but it is comparable with on shore wind in terms of the government's guaranteed price for electricity suppliers.

Wind and the other technically mature and available renewable energies such as hydro and solar can contribute significantly to supplying electricity, but their availability is constrained by available water and sunlight. Where available, they currently have limited capacity to make a large-scale and constant contribution. Combining hydro, wind and solar, with improvements in interconnecting electricity with other countries provides a promising and stable solution.

### Future fossil fuels

What then is the role of fossil fuels in generating electricity in the future? It seems unlikely that coal, oil and gas will be left in the ground. Carbon capture and storage technologies have a potential to enable burning of coal and gas without releasing greenhouse gases into the atmosphere, instead storing the excess carbon underground. But their long-term, large-scale potential has not been demonstrated yet.

In rich developed countries like the UK, the pressure for new investment in the energy sector is high because of the need to replace and upgrade ageing infrastructure and the ambition to electrify transport. In the meanwhile, inconsistent government policies, hesitant private sector financing and public “not-in-my-backyard” campaigning delay or prevent progress to evolve the energy system. Oversimplified public debate has mistakenly targeted renewable energy for giving expensive electricity bills, degrading landscape, and providing unreliable supply. More than ever there is a pressing need for science and research to help inform public policy of the choices available. At stake is a hospitable earth and secure and affordable energy supplies, upon which our livelihoods depend. Which global temperature would you choose? ✨



**In rich developed countries like the UK, the pressure for new investment in the energy sector is high because of the need to replace and upgrade ageing infrastructure and the ambition to electrify transport.**

*Dr Konstantinos Chalvatzis*  
Lecturer in Business and Climate Change



Further information  
[www.avoid.uk.net](http://www.avoid.uk.net)  
[www.helixclimate.eu](http://www.helixclimate.eu)

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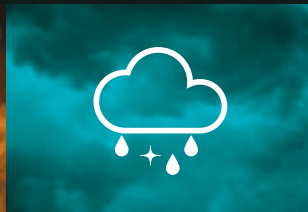
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### Will you help us make the difference?

**For more information, see the donation form included in this edition of Ziggurat.**

**Website:** [www.uea.ac.uk/difference](http://www.uea.ac.uk/difference)

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**Telephone:** +44 (0) 1603 592114



# Giving for life

*An innovative UEA programme provides support for young people who aspire to become doctors.*

**Words** Mark Nicholls

School leavers from low-income families and disadvantaged backgrounds have often found it difficult to pursue a career in medicine. A large proportion of physicians still come from families where there is already strong medical knowledge or a long tradition of studying at university. Now, an innovative UEA project is helping break the mould, striving to broaden the diversity of backgrounds of the next generation of medical doctors.

The UEA Medical Aspirations Programme is designed to offer career opportunities to school leavers who would not normally get a chance to enter medicine.

The programme is aimed at sixth-form students from Norfolk and North Suffolk who have ambitions to become doctors, and gain the necessary grades, but come from families with low-incomes or no tradition of entering higher education.

Taking the format of a three-day residential programme in the February half-term, eligible sixth-formers see life as a medical student and experience a wide variety of activities from medical ethics to hands-on patient assessment and visits to the Norfolk and Norwich University Hospital.

"Part of the programme sees junior doctors talking to the students to answer questions and allay fears," says UEA Enrichment Officer, Natalie Bailey. "The key purpose of the Medical Aspirations residential is to give students the support, guidance and confidence to pursue a career in medicine."

Candidates who meet the criteria can apply for the

programme in September by filling out an application with a personal statement on why they want to pursue a career in medicine. Thirty places are offered each year.

Those who subsequently achieve the necessary grades can then apply to study medicine at UEA, and this is where the UEA Medical Aspirations Scholarship Programme comes into play.

The initiative was made possible by a £100,000 donation in 2009 – then the largest donation by an individual to the University – by David Tibble who studied at the School of Economic and Social Studies between 1970 and 1973.

"The Medical Aspirations Programme fires these young people to study medicine," says David. Being able to afford a university place, particularly with five years of study ahead of you, can be daunting, he notes. Under the scholarship, students can receive 50–100 per cent off their fees.

The Medical Aspirations Programme was piloted in 2010, with the first residential course in February 2011. From that, students successfully applied to UEA courses.

David, who was brought up in a Dagenham council house and obtained A-levels from his local secondary school, says: "UEA took a gamble on me, and when I was in a financial position to do so I thought I would like to give something back to the University which effectively gave me a chance."

Having spent many years in senior finance roles in business, David set up WNS Global Services overseeing significant growth of the global supplier of business process outsourcing services. The company



**The key purpose of the medical aspirations residential is to give students the support, guidance and confidence to pursue a career in medicine.**

*Natalie Bailey  
Enrichment Officer*



**Image\_**  
Medical student, Kara Paisley.

was floated on the New York Stock Exchange in July 2006 at an \$800m valuation.

Currently a partner in private equity firm Somerton Capital LLP, he is also a trustee of the Inspiration Trust which runs a number of academy schools in Norfolk and Suffolk, and serves as Co-Chair of the Difference Campaign board at UEA.

David has increased his philanthropic support since 2009 to allow the programme to continue.

## **Life on the Medical Aspirations Programme**

Kara Paisley is a third-year student on UEA's five year medicine course.

Originally from Lowestoft, Kara is the first in her family to go to university. "I decided from a young age that I wanted to be a doctor," she says. "My family laughed when I first said it."

At sixth form, she applied for medical aspirations programmes. UEA's course focused on what it was like to be a doctor, rather than purely on the science, she says. "You find out how much work you'll have to do. It gives you a bit more exposure at the start."

Now, when she's not studying or completing professional placements, Kara is an active member of the Medics football team, alongside learning to scuba dive and kitesurf.

"Medicine itself is different to what I thought it would be. I thought it would be very science-y, but it's also an art. There is a lot of focus on how to be a doctor," she says.

At the moment Kara isn't set on a particular medical route. "I'm interested in general practice, and I really like ophthalmology, so if my eyesight is good enough to be an eye surgeon, I'd really like that, or maybe a rheumatologist," she says.



Philanthropic support to the University has a real impact on the lives of our current and future students. To find out how you can make a difference, visit

[www.uea.ac.uk/difference](http://www.uea.ac.uk/difference).

# Caught on Camera



*A big thank you to all who entered our photography competition and we are pleased to announce (drum roll please) that the winner, by unanimous decision, was this gorgeous shot from Holly Hancock. Our judges agreed it was technically excellent, an engaging and emotive subject with strong composition and good use of chiaroscuro. A worthy winner!*



**1st**

Holly Hancock

Commended

Holly Hayman



This was a very eerie morning down at the Broad earlier this year, as the mist slowly lifted - I loved how the reeds really stood out!

Holly Hancock



Send your pictures as an attachment or upload using a file sender such as Dropbox or Google Drive to [tweet@uea.ac.uk](mailto:tweet@uea.ac.uk).

Commended

Jodie Collins







### *Next issue*

The next issue of Ziggurat is due out in autumn 2015. To be added to the circulation list, email [ziggurat@uea.ac.uk](mailto:ziggurat@uea.ac.uk)



### *Feedback*

We'd love to know what you think of our new look magazine. Let us know by filling in our brief survey at [www.uea.ac.uk/ziggurat](http://www.uea.ac.uk/ziggurat)

You can also sign up to receive the latest news and events from the University via newsletter. Contact the Ziggurat team via [ziggurat@uea.ac.uk](mailto:ziggurat@uea.ac.uk)



### *Alumni*

Alumni, to find out more about reunions, events, the Alumni Association and fellow alumni, visit [www.uea.ac.uk/alumni](http://www.uea.ac.uk/alumni)



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