

Your Impact



People



Planet



Potential



£2.39m
raised

in 2021/22



UNIVERSITY OF
BATH

2,189
donors

from 40
countries



Your Impact: People

Your support is saving lives with smart wound swabs.



Antimicrobial resistance – when bacteria, viruses and fungi adapt to no longer respond to medication – causes at least 700,000 deaths worldwide annually. By 2050, that's predicted to rise to 10 million deaths per year. The World Health Organization has declared the problem one of the top 10 global public health threats facing humanity.

Thanks to funding from alumni and friends, our researchers are working to prevent this crisis by finding alternatives to the current over-prescription of antibiotics. Professor Toby Jenkins from our Department of Chemistry has developed a game-changing wound swab that provides clinicians with confirmation of infection within just one hour. It is quick, cheap and simple to use.

The swab, SmartWound RESOLVE, is placed into a vial containing a chemical that reacts to bacteria commonly found in wounds at critical densities, turning luminous green. It provides a definitive answer on whether infection is present, minimising the need for antibiotics out of an abundance of caution.

His research began with work on a colour-changing dressing to flag up infection in burns patients, and was kickstarted by support from the James Tudor Foundation,

the Annett Trust, the Frances & Augustus Newman Foundation, the Hospital Saturday Fund and alumni. These gifts in turn enabled Toby to unlock further grants from research councils.

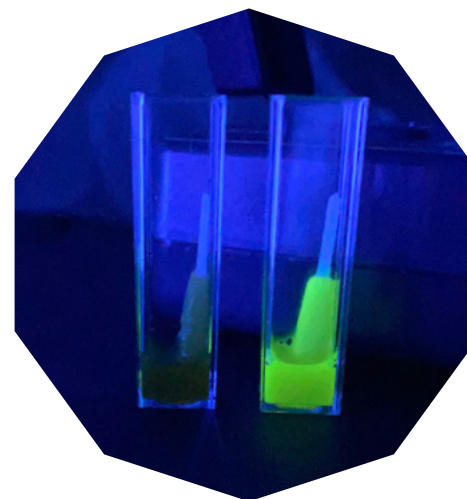
“Donor support was hugely impactful because it paid for research nurses and PhD students, which are hard to fund on conventional research grants,” he explains. “With these nurses, working at Bristol Royal Hospital for Children, we did a lot of the early work, such as getting wound data from burns, and we also had to test that our system didn’t react to healthy material. PhD students are the ‘foot soldiers’ of research; we can’t do without them.”

In November 2021, SmartWound Limited was established as a spin-out company, for which Toby is Principal Investigator. The company is now working to scale up production of the bacteria-detecting solution and obtain regulatory approval. “We’re hoping for the product to be commercially available in late 2024 or early 2025,” he adds.

Toby is also using the same technology to develop a new rapid detection system for Group B Streptococcus in pregnant women, which will help to tackle the UK’s leading cause of neonatal infection.



“Donor support was hugely impactful because it paid for research nurses and PhD students.”



Supporting spin-outs

More Bath research heading out into the wider world:

EnsiliTech

Led by Dr Asel Sartbaeva in our Department of Chemistry, the firm’s pioneering solution enables vaccines to remain stable without refrigeration – preventing wastage, increasing accessibility globally and saving lives.

CiteAb

Originating from a research project by Dr Andrew Chalmers in the Department of Life Sciences, the antibody database received the Queen’s Award for Enterprise in 2022.

Naturbeads

Founded by members of the Institute for Sustainability, the company uses a novel method to create biodegradable microbeads from plant sugars.



Your Impact: Potential

How Gold Scholarships change lives and unlock promise.

“Thanks to the Gold Scholarship Programme’s networking events and speaking to mentors, I came across the wonderful world of healthcare communications! I wouldn’t have known it existed before, so I am very thankful,” explains Georgia Young, an Andrey Berzins Gold Scholar (MChem Chemistry 2022).

Since graduating, Georgia has been working as an account executive, contributing to marketing campaigns for pharmaceutical companies. Her time as a Gold Scholar was key in helping her to land her dream graduate role.

Each year, we welcome 50 new Gold Scholars to our Bath community, funded by alumni and friends, corporate partners, and legacy gifts. Ten new Gold Scholars per year are also supported by your Alumni Fund. Since the Programme was launched in 2017, your gifts have enabled 294 promising young minds to attain an outstanding education, regardless of background or circumstances.

“My experience at university really wouldn’t have been the same without my scholarship,” says Georgia. “With the increased costs of living and the pandemic, I haven’t needed to worry about money, allowing me to focus on my degree.”

Gold Scholar
Georgia Young



But a Gold Scholarship offers more than just financial help. Gold Scholars are often the first in their family to proceed to higher education, and often don’t have anyone they can ask for advice on university life or career aspirations. That’s why they receive training in skills such as networking, as well as access to mentors and support with completing 50 hours of volunteering, fundraising or outreach work per year.

For Georgia, this led to her involvement with 1st Impressions, founded by School of Management senior lecturer, alumna and Gold Mentor, Dr Jane Ellis-Brush.

“I got interested in social media content and marketing from my time with 1st Impressions, a charity that provides vulnerable women with coaching and professional clothing for job interviews,” Georgia explains. “I met Jane through the Programme and got chatting about how I could get involved.”

“Georgia came to work for 1st Impressions in the early days of us setting up,” adds Jane. “She quickly became an integral part of our little team, taking responsibility for all marketing activity and helping us to create our online profiles. We were delighted when she was successful in getting a fantastic graduate opportunity!”

Georgia volunteering
for charity



“My experience at university really wouldn’t have been the same without my scholarship.”



In 2021, the Gold Scholarship Programme won the Highest Impact University Initiative Award at the upReach Student Social Mobility Awards.

Your 2021/22 Alumni Fund in numbers

13,255
gifts

£337,201
donated



- Students' Union: £20,000
- Engineering competition teams: £17,000
- Placement teams: £18,000
- Student Hardship Fund: £7,000
- Sanctuary Scholarships: £10,500
- 31 Gold Scholarships: £93,000
- Alumni Fund grants for 11 projects: £43,000




Your Impact: Planet


Developing a sustainable alternative to palm oil.


Palm oil is in approximately half of all packaged products in supermarkets, from cookies to cleaning supplies. The sheer scale of its production has led to mass deforestation that harms wildlife, ecosystems and the climate. But the solution is growing in one of our labs.



Three ways we're making the future more sustainable:

 **Growing cultured
meat using grass**

 **Using sugar to make
sustainable plastics**

 **Upcycling plastic
at room temperature**

A revolutionary yeast alternative has been developed over years of trial, error and even accelerated evolution, led by Chris Chuck (PhD Chemistry 2008). He became one of Bath's first Whorrod Research Fellows in 2011, supported by alumnus Roger Whorrod OBE and his wife, Sue. Chris is now a Professor in Chemical Engineering, teaching the next generation of innovators, and his palm oil substitute has been successfully commercialised. He credits the fellowship with the rapid trajectory of both his research and career.

"The fellowship was everything," Chris explains. "It paid my wages so that I could focus on developing my ideas, build up a group of PhD students and get to the point where I was able to secure a £4m government grant, which led to £1.8m in investment from the Clean Food Group. Ultimately, it enabled me to go the distance and really make a difference."

**"The fellowship was
everything; it paid my
wages so that I could focus
on developing my ideas."**

The Clean Food Group has established a dedicated lab on campus where Chris and a multi-disciplinary team are ramping up to industrial-scale production. His vision is to have this palm oil substitute in supermarket products within five years. "To get to this point, you need the work of chemists, biologists, engineers and food scientists," he adds. "We have the networks and expertise at Bath, which is why we have so much impactful research."

Along the way, this work has also sparked other novel solutions, such as turning waste coffee grounds into biodiesel and using seaweed to produce plastic. "My research is all about addressing the need for more sustainable products by looking at what we have now and finding where the gaps are," Chris explains. "The yeast we've created is so versatile that we could eventually create foods with new flavours, textures and nutritional profiles – the future of food is really exciting."



**Find out more about our
Research with Impact at:**
[go.bath.ac.uk/
research-with-impact](https://go.bath.ac.uk/research-with-impact)



Your Impact: Potential

Our PhD students are bringing the future of healthcare to life.



Axial spondyloarthritis (axSpA) is a form of inflammatory arthritis in the lower back, affecting an estimated one in 200 adults in the UK. There's no cure, but exercise can be used to help with symptoms and maintain mobility.

A patient's condition is monitored via a score on the Bath Ankylosing Spondylitis Metrology Index (BASMI), which can currently only be measured by a trained professional such as a physiotherapist. With these appointments at a premium, wouldn't it be easier if people could accurately take their own BASMI score?

Violet Henderson is addressing this issue in her PhD in Computing, funded by the Royal United Hospitals Bath NHS Foundation Trust (RUH). She's developing a smartphone app that will calculate a person's BASMI score based on measurements taken by a friend or family member using a simple tape measure.

With the app providing guidance and feedback, patients are empowered to better keep on top of their prognosis and the most suitable exercises for their current condition.

"The project is touching on a lot of things that I find interesting – it's the human user side of computer science," explains Violet. "The research is working towards

something very positive, to help people with this chronic condition."

Violet's PhD scholarship has enabled her to continue her education at Bath after completing a degree in Computer Science in 2017 and a Master's in Digital Entertainment in 2018. She also works alongside the RUH as part of the Spondyloarthritis Research Consortium, which also includes academics from the University's Centre for the Analysis of Motion, Entertainment Research and Applications (CAMERA). Other PhD scholarships across the University are supported by philanthropic donations by individuals, trusts and foundations, and our corporate partners.

"Without the funding, this research wouldn't have happened," she says. "There have been quite a lot of expenses – obviously there are my living expenses, but there's also been equipment we had to buy for the research, particularly different smartphones for testing and evaluation."

The app is currently in its final stages of testing and has been distributed to a cohort of patients for feedback. So far, results have been promising, and Violet hopes this will act as a proof of concept to convince the NHS to invest in professional development of a similar app for widespread use in the future.



"The project is touching on a lot of things that I find interesting – it's the human user side of computer science."



Healthy partnerships

Our research with the RUH addresses a range of healthcare challenges:

Patient transportation

A team from our Department of Mechanical Engineering are working to improve trolley design.

Heart disease

Researchers in our Department for Health are testing a new 'Super Rehab' programme tailored to individuals.

Paediatric resuscitation

Staff from the University's Centre for Therapeutic Innovation designed custom storage to safely house equipment on trolleys.



Your Impact: Potential

Your gifts power student-athletes' performance in studies and sport.



In 2022, swimmer and Bill Whiteley scholar Tom Dean became England's most decorated athlete at a single Commonwealth Games

A snapshot of our student-athletes' successes:

★ Buchan Jones Sports Scholar Hannah Passmore helped Team Bath Netball to third place in the Netball Super League, as well as qualifying for the England Under-21s team.



★ Matrix Sports Scholar Orlando Bailey helped the England Under-20s rugby team to Six Nations title-winning success in 2021 and was called up to England's Six Nations squad in 2022.

★ Santander Sports Scholar Aleeya Sibbons led the University to a golden sprint double at the BUCS Outdoor Athletics Championships 2022.



“In those founding years, the scholarship was crucial in keeping me on the path to my Olympic gold.”

Modern pentathlete Joe Choong OBE



“Winning the Olympics was utterly incredible,” says modern pentathlete Joe Choong OBE (BSc Mathematical Sciences 2018), who took gold at Tokyo 2020. “It’s something I’ve always dreamed of, but you never know what it’s going to be like until you actually get there.”

Since then, Joe has also taken the top spot at the UIPM 2022 Pentathlon World Championships – feats made possible by your support. He’s now training for the 2023 season, which is his first opportunity to qualify for the Paris 2024 Olympics. During his time at Bath, Joe was supported by an Ivor Powell Sports Scholarship, which was established in 2010 in memory of the Bath honorary graduate and football coach. The scholarship is supported by several alumni through crowdfunding.

“Looking back, training and improvements take patience,” he explains. “Without the building blocks of my first few years training at the University of Bath, I would never have been able to continue up the ladder. In those founding years, the scholarship was crucial in keeping me on the path to my Olympic gold.”

Sports scholarships offer a vote of confidence in a young athlete at the beginning of their career. Fellow modern pentathlete Olivia Green (BSc Sport & Exercise Science 2022), whose sports scholarship was supported by alumni, also performed brilliantly in her first solo World Championships in 2022 – taking home team gold and placing fifth in the solo competition.

“I would like to thank my donors for the support I received while being a student-athlete,” she says. “Modern pentathlon requires lots of expensive equipment. The scholarship released financial pressures, enabling me to better manage competing for my country alongside being a student. As I have now graduated, I look forward to diving into life as a full-time athlete!”

For all you do to keep athletes like Joe and Olivia on top of the podium in sports and studies, thank you.



Olivia Green (far right) at the Pentathlon World Championships 2022

The most rewarding society you can join

Become a part of our 1966 Society by pledging a legacy in your Will.

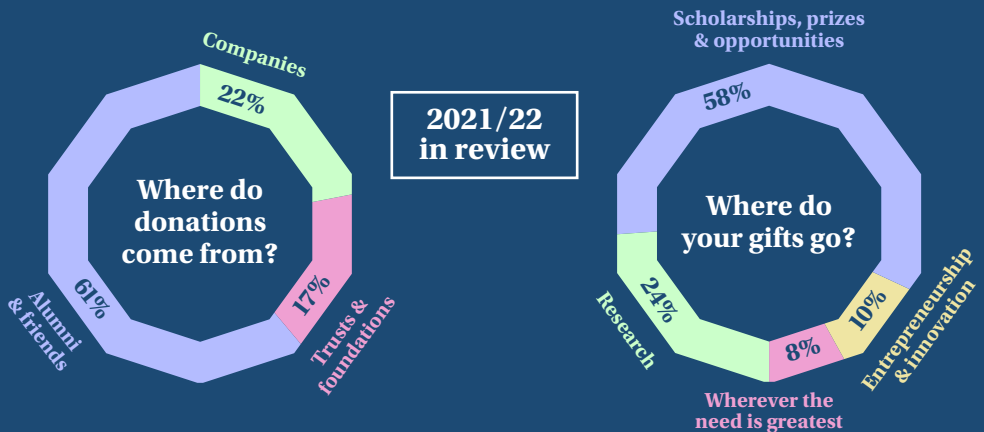
By leaving a gift of any size to the University of Bath in your Will, you know that you'll be having a positive impact on generations to come. What would you like to achieve?

Dr Aki Salo has pledged a legacy to further research in our Department for Health:
"It's always good to plan for the future. Anyone could leave a small or larger gift to benefit future students."

Barbara Nunn has pledged a legacy to support undergraduate scholarships:
"I'd like my legacy to help support students towards success and personal development during their time at university and beyond."

Professor Richard Mawditt OBE has pledged a legacy to the School of Management:
"It has been a privilege and pleasure to have been associated with the School of Management over the years in so many roles, and good fortune to all who sail in her for many successful years to come."

To find out more about making a gift to Bath in your Will and joining the 1966 Society, please email alumni@bath.ac.uk



The University of Bath is an exempt charity under the terms of the Charities Act 2011.

P-MC-0407-0123

Department of Development & Alumni Relations
Claverton Down
Bath BA2 7AY

+44 (0)1225 386824
alumni@bath.ac.uk
www.bath.ac.uk/alumni

facebook.com/bath.alumni.community

[@uniobathalumni](https://twitter.com/uniobathalumni)

