



# Funding the next generation of excellent researchers

The Academy of Medical Sciences' research funding schemes  
for biomedical researchers



# Supporting the next generation

**If we are to generate advances in our understanding and treatment of disease, we must attract the brightest minds to careers in medical science. The Academy plays a direct role in nurturing the next generation of medical researchers through our grant schemes for early career scientists, and also through mentoring, skills development, networking and policy work on academic careers.**

**The Academy provides funding support through the following schemes:**

- **Starter Grants for Clinical Lecturers**
- **Clinician Scientist Fellowships**
- **Daniel Turnberg Travel Fellowships**
- **Newton Advanced Fellowships**
- **Newton International Fellowships**

This package of grant schemes is complemented by our one-to-one mentoring scheme and other career development opportunities. Visit [www.acmedsci.ac.uk/mentoring](http://www.acmedsci.ac.uk/mentoring).

This booklet showcases some of the Academy's grant holders across our three longest running schemes and displays the breadth of research areas funded by the Academy.

Our funding schemes target key points in the academic training pathway and encourage international collaboration and career development. They complement the support provided by larger research funders and we often work in partnership to allow us to reach across the breadth of the medical research community.

We are a niche funder and identify areas where new funding streams are needed, based on our policy work and the experience of our Fellows. We have always been at the forefront in supporting young researchers and influencing the development of structured career paths that will allow them to shape their training as they wish.

# Starter Grants for Clinical Lecturers

**Our Starter Grants for Clinical Lecturers enable aspiring clinical academics to establish their research portfolios and strengthen their bids for longer-term fellowships and funding.**

The Starter Grants for Clinical Lecturers scheme was launched in October 2008 as a partnership between the Academy and the Wellcome Trust to provide modest 'starter' funds to enable research-active Clinical Lecturers to pursue their research work. Clinical Lecturer posts provide a salary but often do not come with funding to support research costs; our Starter Grants help bridge this gap.

Soon after the scheme was established, a number of other funders joined to support this effort. The scheme is now generously funded by a consortium consisting of the Wellcome Trust, Medical Research Council, British Heart Foundation, Arthritis Research UK, Prostate Cancer UK and the Royal College of Physicians.

## **What is offered**

Our Starter Grants provide Clinical Lecturers with up to £30,000 towards their research costs for up to two years. Starter Grant holders can also benefit from mentoring by one of the Academy's Fellows through the Academy's one-to-one mentoring scheme. They are also invited to attend career development events including the Winter Science Meeting for Starter Grant Holders, an annual event organised exclusively for them.

## **Eligibility**

The scheme is open to research-active Clinical Lecturers holding a PhD or MD and undergoing higher specialty training. Applicants need to have secured protected research time throughout the proposed project.

## **Deadlines**

There are two funding rounds each year with closing dates in March (for a June panel) and September (for a December panel). The Selection Panel is chaired by Professor Marina Botto FMedSci, Imperial College London.

**[www.acmedsci.ac.uk/sgcl](http://www.acmedsci.ac.uk/sgcl)**

682  
applicants



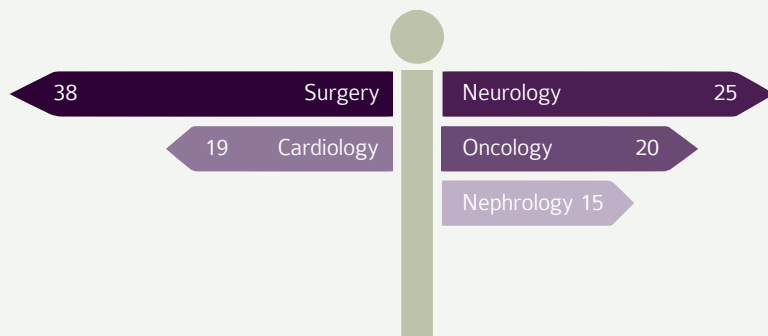
272  
awardees

£7,696,238  
awarded to date



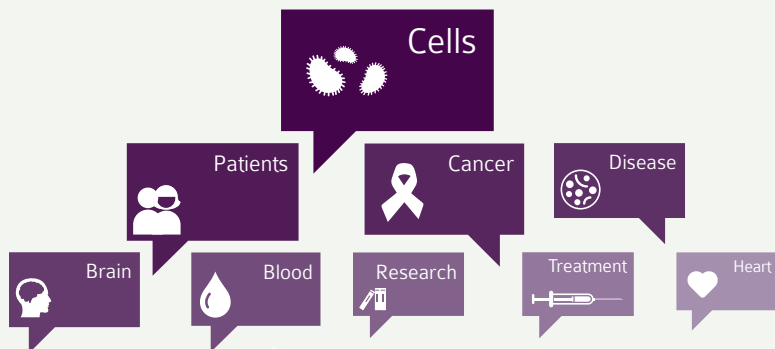
70% 30%

### Most common research areas funded\*

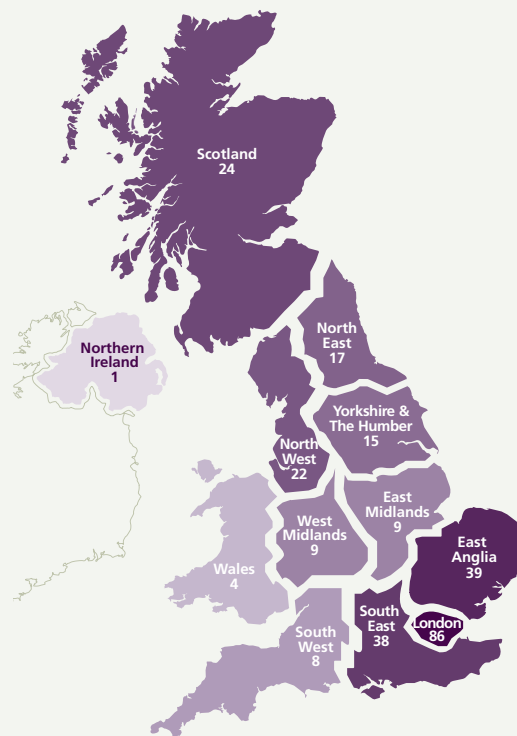


\* we accept applications from all research areas.

### Most common words in abstracts

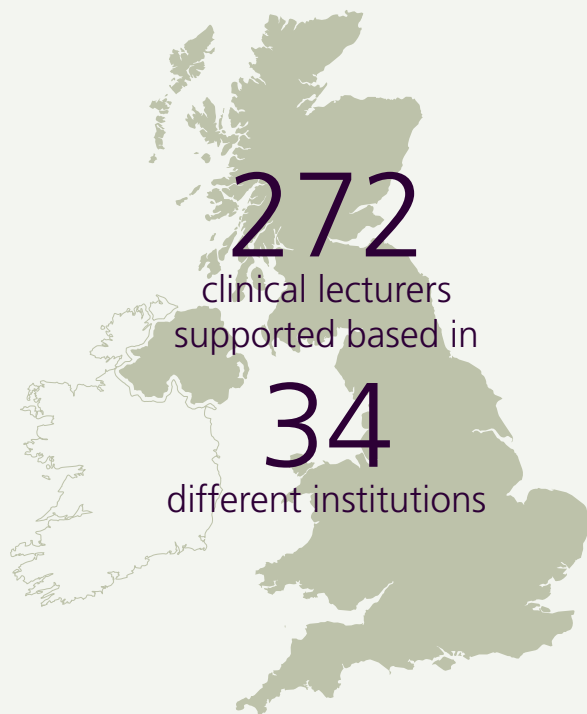


### Number of awards made





# Starter Grants for Clinical Lecturers



614  
publications

£54  
million

follow-on funding  
secured by awardees



Approximately

150

collaborations  
established by awardees



75

mentoring pairs established



# Helping the body fight cancer

## Dr Sophie Papa

Current position:

**MRC Clinician Scientist Fellow and Honorary Consultant Medical Oncologist,  
King's College London and Guy's and St Thomas' NHS Foundation Trust**

Award:

**Starter Grant for Clinical Lecturers**

### Career path

- Studied medicine at Oxford University and Imperial College London
- PRHO, Charing Cross Hospital
- SHO rotation, Guy's and St Thomas
- Medical Oncology Trainee, London Deanery
- Membership Royal College of Physicians
- PhD in cellular immunotherapy, King's College London
- Clinical Lecturer and Senior Lecturer, King's College London

### Research

Immune rejection of tumours has been appreciated for years, and we know that the immune system is able to recognise malignancy and fight against it. Failure of this defence is a key step in the development of cancer. I work on techniques to enable a patient's immune system to see and kill cancer cells by inserting artificial genes into human immune cells. I am an investigator on a "first in man" trial of this therapy for head and neck cancer. The trial is the first of its kind and paves the way for future clinical translation of techniques for the direct benefit of patients. I am working to apply the same approach to prostate cancer.

### What set you on the path to becoming a scientist?

I really enjoyed my PhD research. It made me ambitious for a career that had both clinical and laboratory facets to it. Combining both is so much more interesting and challenging for me than either in isolation.

### What is a standard day like for you?

I start early and check both my work email accounts. We have lab or clinical meetings most mornings. Then it is into the lab or working on data, writing up studies or writing grant applications. Twice a week I do a clinical ward round. One day a week, I attend a multidisciplinary melanoma meeting and then see patients in clinic. I attend one clinical and one academic journal club per week.

### What are the challenges one might face as a clinical academic?

It is very easy to be pulled away from your academic work by clinical challenges. The other great challenge, and a deterrent for many, is the lack of job security. You have to keep seeking funding for yourself and the team you want to build. This is a very time- and energy-consuming process.

### What skills does a researcher of the future need?

A commercial eye. The ability to make real working collaborations. Endurance.

"I'm driven by the possibility that we will make a real difference for patients through the work we do, and the intellectual stimulation it offers."



# Developing effective therapies

## Dr Mandy Johnstone

Current position:

**Wellcome Trust Clinical Postdoctoral Research Fellow and Honorary Consultant Psychiatrist, University of Edinburgh**

Award:

**Starter Grant for Clinical Lecturers**

### Career path

I started my career with an undergraduate degree in biochemistry. A summer project introduced me to research, and inspired me to complete a PhD in developmental neurobiology at King's College London. I later qualified in Medicine at the University of Glasgow and went on to train as a psychiatrist at The Institute of Psychiatry, before moving to Edinburgh where I am now a Wellcome Trust Clinical Fellow and Honorary Consultant Psychiatrist.

### Research

My goal is to better understand the molecular pathophysiology of neuropsychiatric disorders so that we can develop more effective therapies in future. I am investigating the consequences of rare copy number variants associated with neurodevelopmental disorders, including schizophrenia, autism, intellectual disability and epilepsy using human induced pluripotent stem cells as *in vitro* models.

### What is a standard day like for you?

I really don't have a standard day, and no two days are ever really the same! Every day brings a different challenge and that is also what is so exciting about being a medical academic. I spend one day a week seeing patients and the rest of my time involves thinking about how the symptoms my patients experience have arisen and how best to try and solve them at the most fundamental biological level.

**"A career as a clinical academic brings lifelong stimulation and freedom to carve out one's own path through higher training and beyond."**



"Being awarded an AMS grant was instrumental in allowing me to become research-active again. It provided much needed support and resources to significantly strengthen my bid for longer-term funding."

Dr Mandy Johnstone,  
Starter Grant for Clinical  
Lecturers awardee



# Clinician Scientist Fellowships

**Our Clinician Scientist Fellowship scheme supports outstanding clinicians to build the foundations of a career in clinical academic medicine and help to improve the quality of care for patients.**

In 2000, the Academy published 'The Tenured Track Clinician Scientist: a new career pathway to promote recruitment into academic medicine', a report that led many funders to develop Clinician Scientist Fellowships. Our own programme was launched in 2001 in partnership with the Health Foundation; it has since supported a growing cohort of clinical academics to pursue and develop their research within a clinical setting through four funding calls.

## **What is offered**

The programme provides five years' funding to cover personal salary costs and an allowance for research expenses. Awardees have access to the Academy's one-to-one mentoring scheme, through which they can benefit from mentoring by one of the Academy's Fellows, and the Health Foundation's leadership development programme.

## **Eligibility**

The programme supports outstanding clinicians working in any medical discipline, whose research has a translational focus – that is, research that has a direct benefit to patients. The findings of their research can then be used to shape healthcare, by influencing policy or informing professional practice. Applicants are medically-qualified with a PhD or MD and are either approaching the end of their training or have been recently awarded consultant status.

## **Deadlines**

The Clinician Scientist Fellowship programme does not run an annual call for applications but future calls for applications will be advertised through our website. The previous Selection Panel was chaired by Professor Andrew Morris FRSE FMedSci, University of Edinburgh.

**[www.acmedsci.ac.uk/csf](http://www.acmedsci.ac.uk/csf)**



This scheme has been supported through the generous support of the Health Foundation.

219  
applicants

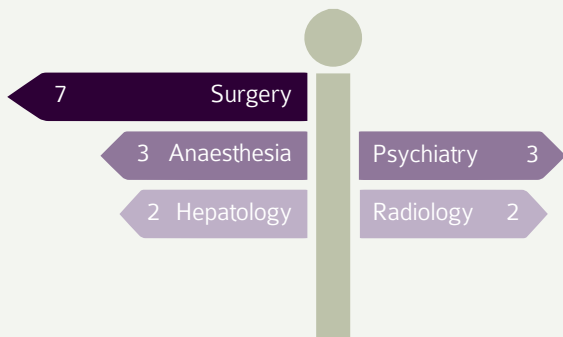


26  
awardees



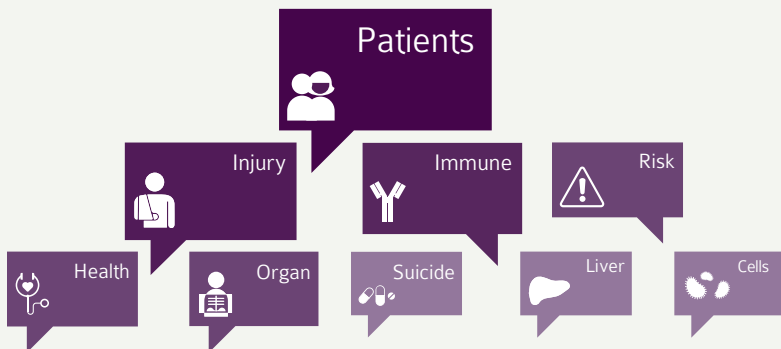
58% 42%

Most common research areas funded\*



\* we accept applications from all research areas.

Most common words in abstracts



Number of awards made





“My AMS grant provided a springboard for progress to a Senior Fellowship. It catalyzed major partnerships with the pharmaceutical and biotechnology sectors.”

Dr Jonathan Fallowfield, Clinician Scientist Fellowship awardee

# Targetting scar tissue

## Dr Jonathan Fallowfield

Current position:

**Senior Clinical Fellow and Honorary Consultant Hepatologist, University of Edinburgh**

Award:

**Clinician Scientist Fellowship**

### Career path

- Bachelor of Science/Bachelor of Medicine, University of Southampton
- PRHO in surgery and medicine, Southampton General Hospital
- SHO rotation, Hammersmith Hospital and Oxford University Hospitals Trust
- Membership Royal College of Physicians (London)
- SpR in Gastroenterology / G(I)M, Wessex Deanery
- MRC Clinical Research Training Fellow, University of Southampton
- PhD, University of Southampton
- Clinician Scientist Fellow, University of Edinburgh

### Research

Mortality from liver cirrhosis has tripled over the last three decades, and liver disease is the fifth most common cause of death in the UK. For advanced liver disease, liver transplantation is the only curative option, but there is a shortage of donor organs. My research is focused on using our insights into how liver scar tissue accumulates and breaks down to identify new 'targets' for treatment. In this way, we can design and test new medicines in the laboratory and then in patients with liver disease. Based on a strong rationale from experimental models of liver disease, we are now translating our new therapeutic approaches (in particular the use of the peptide hormone relaxin) and diagnostic techniques (e.g. specialized MRI scans) into patients.

### What do you find most satisfying about medical research?

The excitement of making new discoveries. Forming new and fruitful collaborations with academic and industrial partners. Being able to shape clinical practice.

### What set you on the path to becoming a scientist?

I did an intercalated BSc as a medical undergraduate and enjoyed it hugely. I knew then that I wanted to do a PhD and follow an academic career path (even though there was no clear path at that stage).

### What is a standard day like for you?

Every day is different - two clinical days and three research days per week, interspersed with teaching. As a Senior Fellow more time is spent writing grants/papers/talks, examining and reviewing etc and less time hands-on in the lab.

### What are the challenges you face as a clinical academic?

Being expected to excel in both academic and clinical arenas. The responsibility for members of your research team that rely on you repeatedly pulling in grants. The pressure to publish and work life balance is an ongoing struggle.

### What skills does a researcher of the future need?

Resilience, energy, entrepreneurial skills, the ability to communicate and network effectively.



# Clinician Scientist Fellowships

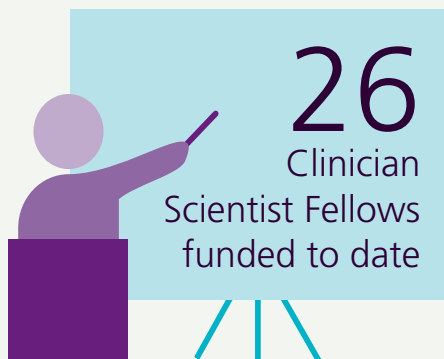


386  
publications

100%

secure follow-on  
funding, totalling

£55  
million



26

Clinician  
Scientist Fellows  
funded to date



prizes received



6

have become  
professors

# Navigating the path to research

## Dr Shiao Yng Chan

Current position:

**Associate Professor, Department of Obstetrics and Gynaecology, National University of Singapore**

Award:

**Clinician Scientist Fellowship**

As an undergrad I had to do a science project, which I had to work so hard on, I thought never again! At Cambridge University, my third year project was on vasopressin in the rat brain. I did a medical degree, but you also had to do an intercalated project year. There was a lot of work to get through in two terms, and after that, I decided I was done with research.

But when I was a junior doctor, I earned the nickname "Professor" because I was asking so many questions – they could obviously see my brain ticking! – and then, in the second year of my obstetrics and gynaecology SHO job, when I was having one of my tutoring educational supervisor meetings, the consultant asked me what I wanted to do, and I said I was interested in endocrinology. And he said, "I don't think you should do that! You should do research." He wasn't an academic, but he could see that was where I should be going.

Another consultant gave me similar advice – obviously people could see I was that way inclined, even if I couldn't see it in myself.

When I got to Birmingham Women's Hospital, one month into my job a Professor called me in and asked if I wanted to be his research Fellow. And that was how it started! I was awarded a MRC Clinical Fellowship so I did my PhD, and even then, I wasn't sure if I wanted to be an academic!

After that I went back into my clinical rotation. But in science and research there is always the next step, something more to find out, the next phase, somewhere else to go, so I applied for a Clinician Scientist Fellowship...and after that, I thought maybe yes, I am meant to be an academic.



# Transforming transplantation

## Miss Lorna Marson

Current position:

**Senior Lecturer and Honorary Consultant Transplant Surgeon, University of Edinburgh**

Award:

**Clinician Scientist Fellowship**

Kidney transplantation is the best treatment for many patients with kidney failure, improving their quality and length of life significantly compared with dialysis. The biggest challenge facing the transplant community is the shortage of organs for donation. My work combines the challenge of clinical kidney transplantation, particularly increasing the number of living donor kidney transplants we perform, and undertaking research which aims to optimize the function of each and every kidney that is transplanted.

Every year about 4% kidney transplants are lost through a slow process of decline, with the development of scar tissue and loss of cells within the kidney. Such patients must then return to dialysis and to the transplant waiting list. My research has focused on the part played by specific cells such as

macrophages and B cells in the deterioration of kidneys in the years following transplantation. I have developed a technically challenging experimental system for examining the role of these cells. We have demonstrated that treatment of recipients with a drug aimed at altering the way the macrophages work reduces injury in the early period following transplantation, and this is likely to have a long term impact. We have translated this work into a clinical trial, which is always very exciting to undertake as a clinician scientist. In this trial, we have demonstrated that we can safely treat our patients with the drug, and that it effectively alters the expression of protective protein in the macrophages of these patients. We now plan to undertake a multicentre clinical trial to determine whether this is effective at reducing cell injury and improving outcome.

“I enjoy the challenge of being a clinical academic. It is tough trying to balance a clinical and research career, particularly with a family. There are very few women in clinical academia and I see part of my role as encouraging women to stay despite the pressures.”



# Daniel Turnberg UK/Middle East Travel Fellowships

**The Daniel Turnberg UK/Middle East Travel Fellowships help build research links and develop scientific collaborations between the UK and the Middle East.**

The Daniel Turnberg UK/Middle East Travel Fellowships were established by the Academy in partnership with Lord and Lady Turnberg of Cheadle in memory of their late son, Daniel Turnberg, a doctor and researcher with a keen interest in fostering links between the UK and the Middle East. The scheme encourages scientific interchange and international understanding by giving early- to mid-career biomedical researchers from the Middle East the chance to undertake a short-term visit to a UK institution, or vice-versa. Such visits allow awardees to further their research experience, build collaborations and learn new techniques. The scheme is funded by the Daniel Turnberg Memorial Fund with the ongoing support of the Royal College of Physicians, the Wellcome Trust, the Wolfson Family Charitable Trust, Imperial College London and the Rosetrees Trust. The Daniel Turnberg Memorial Fund is grateful for the generous contributions received from many other charitable institutions and individuals.

## **What is offered**

The Daniel Turnberg UK/Middle East Travel Fellowships offer up to £3,500 towards both travel and a subsistence allowance for a period of one month. Recently, a small number of three month fellowships was introduced and these offer up to £9,000.

## **Eligibility**

The scheme is open to clinical and non-clinical researchers based in the UK, Israel, Egypt, Jordan, Lebanon or the Palestinian Territories whose research is relevant to human health.

## **Deadlines**

There is one funding round per year with applications closing in January. The Selection Panel is chaired by Lord Leslie Turnberg of Cheadle FMedSci.

**[www.acmedsci.ac.uk/turnberg](http://www.acmedsci.ac.uk/turnberg)**



Royal College  
of Physicians

wellcome trust

THE WOLFSON FAMILY  
CHARITABLE TRUST



Rosetrees Trust  
Supporting the best in medical research

Imperial College  
London

The Daniel Turnberg Memorial Fund receives contributions from many other charitable institutions and individuals, including the Isaac and Julia Haskel Trust and the Robert Gavron Charitable Trust.



281  
applicants



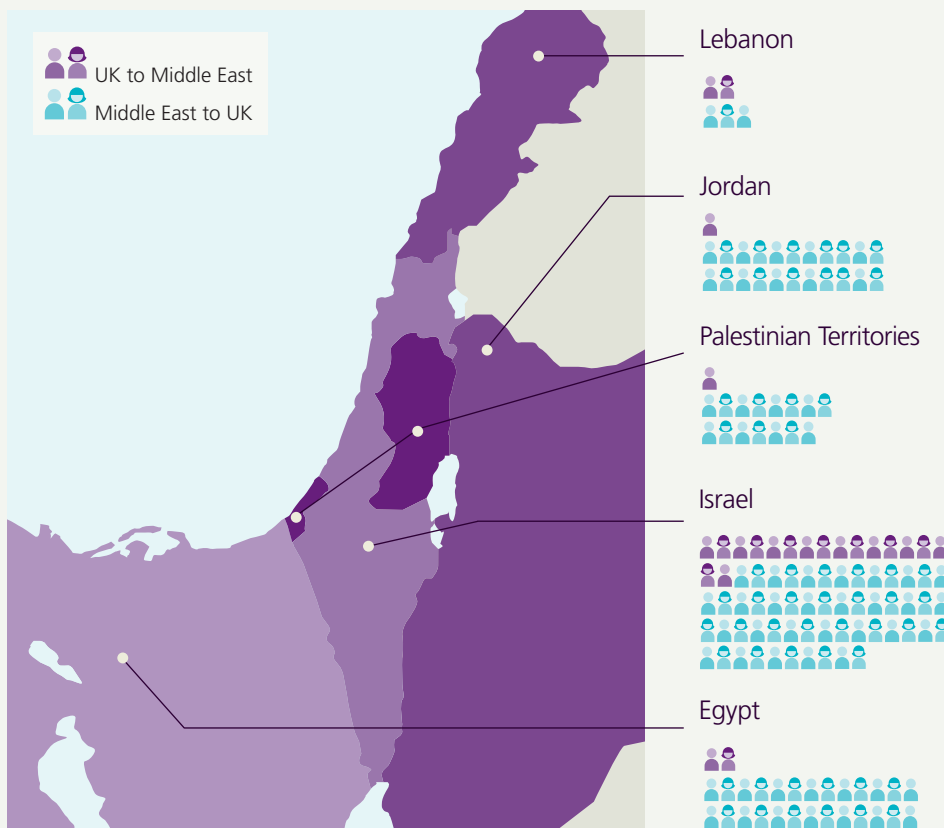
142  
awardees

£379,067  
awarded to date

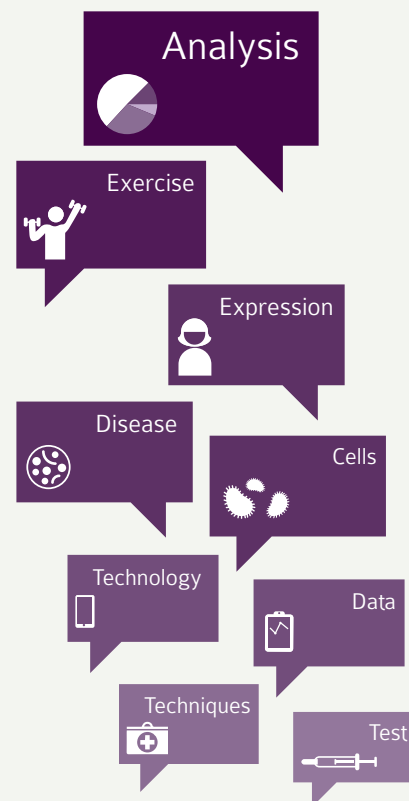


55% 45%

### Number of exchanges



### Most common words in abstracts





# Improving quality of life

**Dr Sharon Anavi-Goffer**

Current position:  
**Senior Lecturer, Ariel University, Israel**

Award:  
**Daniel Turnberg UK/Middle East Travel Fellowship**

## Career path

- BSc Agricultural Food Sciences, Hebrew University of Jerusalem, Israel
- MSc Biotechnology, Tel Aviv University, Israel
- PhD Physiology, University of Aberdeen, UK
- Research Fellow, California Pacific Medical Center, USA
- Research Associate, Ben-Gurion University of the Negev, Israel
- Research Fellow, University of Aberdeen, UK
- Senior Lecturer, Ariel University, Israel

## Research spotlight

Schizophrenia is one of the most important forms of psychiatric illnesses affecting young people in their twenties and thirties. I am trying to understand what the role of the cannabinoid system is in these psychiatric disorders. We have found that the cannabinoid receptor, when stimulated, is effective in reversing schizophrenia-like behaviour, and for this reason we are testing specific drugs that can stimulate this receptor. We plan to extend our pre-clinical studies to test the effect on cognitive function and social behaviour, with the ultimate goal of improving the quality of life for patients with schizophrenia. Current drug treatment cannot reverse the disease, but alleviate symptoms only. I hope that as diagnosis tools improve, our studies will help provide early treatment that may help to reverse the disease.

## How animals are used in this research

We undertake tests on mice that have been treated to show behaviors that mimic adult schizophrenia. The tests evaluate the effect of drugs that can reverse the schizophrenic behaviors in mice and hopefully one day be used in humans. One of the tests used is the Elevated Plus-Maze test. This involves the use of a structure that has a cross shape. Two arms of this cross are closed and the other two open. The mice are placed in the centre of the cross. When mice are anxious or schizophrenic, they tend to move less than the healthy mice and also hide at the corners of the closed arms. The administration of specific drugs reduced this behavior, indicating that the drug had an anti-schizophrenic effect that can potentially be therapeutic.

## What set you on the path to becoming a scientist?

I knew I wanted to be a scientist since I was a child. I have always been attracted to learning about how the brain functions and how drugs are developed.

## What skills does a researcher of the future need?

Above all, a researcher needs the desire to become a researcher. The work is very hard and very often takes its toll on family and private time. You need the passion to continue the research and not give up at hard times.

**“The grant has greatly affected my career, without it I would never have learnt the techniques that enabled me to set up my pre clinical study.”**

# Daniel Turnberg UK/Middle East Travel Fellowships

80%

report significant  
progress in their research  
as a result of their visit

54%

clinical

46%

non-clinical  
projects funded



65%

continue  
collaborating with  
their host institution

## Outcomes



Collaborative publications



Follow-on grants



International  
exchange programmes



"Our body is an incredible and sophisticated machine, we still know so little about it and each discovery is fascinating."

Dr Sharon Anavi-Goffer, Daniel Turnberg  
UK/Middle East Travel Fellowship awardee

# Newton Fellowships

The Newton Fund is a new initiative that aims to develop the long-term sustainable economic growth and welfare of partner countries through building research and innovation capacity. The Newton Fund forms part of the UK's Official Development Assistance commitment.

The Academy runs two fellowship schemes under the Newton Fund:

- **Newton Advanced Fellowships**
- **Newton International Fellowships**

Both of these schemes are run in partnership with the Royal Society and the British Academy.

These schemes are open to international researchers from partner countries with which we have a matched funding agreement, currently Brazil, China, Mexico and South Africa. We are working to include additional countries in future calls, please see our website for the latest list.





# Newton International Fellowships

**Newton International Fellowships support talented international, early-career postdoctoral researchers from partner countries to undertake research in clinical or patient-oriented research at a host university or research institution in the UK for two consecutive years. The Fellowships enable overseas researchers to benefit from an extended period within a first class research environment in some of the UK's best universities.**

The scheme was originally established in 2008 by the Royal Society and British Academy to enable the best early stage postdoctoral researchers in the physical and natural sciences, social sciences and humanities to work in UK institutions for two years.

In 2015 the Academy joined the partnership with the Royal Society and British Academy to extend the Newton International Fellowships supported through the Newton Fund to researchers undertaking clinical and patient-oriented research in Newton Fund partner countries.

## **What is offered**

£24,000 tax exempt subsistence funding, up to £8,000 research expenses, and up to £2,000 relocation expenses, as well as a contribution to the UK host organisation towards access to university facilities.

## **Eligibility**

Fellowships are available to independent researchers from Newton Fund partner countries with which we have an agreement (currently China, Brazil, South Africa and Mexico). Further countries may be added for future rounds. Applicants must hold a PhD, or expect to obtain their PhD by the time funding starts, and should have no more than 7 years of active full time postdoctoral experience at the time of application.

## **Deadlines**

Regular rounds will be open at the beginning and middle of the year.

**[www.acmedsci.ac.uk/newton-international](http://www.acmedsci.ac.uk/newton-international)**



# Newton Advanced Fellowships

**Newton Advanced Fellowships** are available to early- to mid-career international researchers from partner countries working in clinical or patient-oriented research. Applicants must have already established, or be well advanced in the process of establishing, a research group or network. The scheme provides an opportunity to develop the research strengths and capabilities of the awardees research group through training, collaboration and reciprocal visits with a partner in the UK.

## **What is offered**

The Newton Advanced Fellowship offers up to £37,000 each year for up to three years, which can cover a salary top up, research support costs, travel and subsistence and training costs for career development of the applicant and their research group.

## **Eligibility**

The fellowship is open to independent researchers from Newton Fund partner countries with which we have an agreement (currently Brazil, China, Mexico and South Africa). Applicants must have a PhD and no more than 15 years postdoctoral experience, and have agreed a proposal with a UK based collaborator.

## **Deadlines**

Regular rounds will be open at the beginning and middle of the year.

**[www.acmedsci.ac.uk/newton-advanced](http://www.acmedsci.ac.uk/newton-advanced)**





"It's nice that other people saw the potential in me, and were guiding me in that direction, even though they weren't always academics themselves."

Dr Shiao Yng Chan, Clinician Scientist Fellowship awardee








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[www.acmedsci.ac.uk/grants](http://www.acmedsci.ac.uk/grants)

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