

**RACE  
AGAINST  
DEMENTIA**

**IIM**

**PPA**

**CT**

**REPORT  
2023**

**IN THE TIME IT TAKES TO COMPLETE  
A PIT STOP, ANOTHER PERSON IS  
DIAGNOSED WITH DEMENTIA**



# CONTENTS

1. **FUNDING AND GUIDING THE BRIGHTEST DEMENTIA RESEARCHERS**
2. **APPLYING THE PACE AND PRECISION OF FORMULA 1**
3. **ENABLING COLLABORATIONS**
4. **RAISING FUNDS TO BEAT DEMENTIA**
5. **SHARING THE IMPORTANCE OF DEMENTIA RESEARCH**
6. **PLANS FOR THE FUTURE**

**BY 2050, 152 MILLION PEOPLE AROUND THE WORLD ARE EXPECTED TO LIVE WITH DEMENTIA.**

**CARING FOR PEOPLE LIVING WITH DEMENTIA IS EXHAUSTING, FRUSTRATING AND OFTEN FINANCIALLY CRIPPLING. IT CURRENTLY COSTS THE UK £34 BILLION EVERY YEAR. BY 2040, THAT COST IS PREDICTED TO REACH £94 BILLION.**

**LIKE A RACE TEAM, WE ARE FOCUSED. WE EXIST TO FIND PREVENTIONS AND CURES FOR DEMENTIA.**



**DEMENTIA IS A CRUEL DISEASE. LOVED ONES SLIP AWAY SLOWLY. MEMORIES ARE BANISHED TO PHOTOGRAPHS. BUT DEMENTIA CAN AND WILL BE BEATEN.”**



My brother Paul and I have been ambassadors since 2016 when my father established the charity. We were spurred on by the frustration and agony we felt when my mother’s frontotemporal dementia diagnosis was revealed.

I have now become Chairperson of Race Against Dementia, and my father is now the charity’s President. His leadership and dedication to this vital cause is at the heart of the charity. With his guidance we will continue to drive Race Against Dementia forward, enabling it to make a meaningful impact.

Dementia is a cruel disease. Loved ones slip away slowly. Memories are banished to photographs. But dementia can and will be beaten. We are hopeful that Race Against Dementia’s work will lead to preventions and cures for dementia.

In 2023 we continued to fund and train dynamic early-career dementia researchers. Meeting these scientists and learning about their ideas and collaborations is an inspiration. Whether it’s applying advanced imaging technology to analyse brain samples, or developing ways to detect early signs of the disease in the blood, our talented researchers give me optimism, hope, and pride.

I would like to thank all our donors and supporters whose generosity makes our work possible. Thank you also to our outgoing CEO, Bridget Barker, for her exceptional leadership and dedication. I’m delighted that Bridget will now bring her expertise to our Board of Trustees.

This is an exciting time for our teams, with ongoing advances in our understanding of the disease. Let’s continue to work towards a world free from the heartbreak of dementia.

**MARK STEWART  
CHAIRPERSON OF TRUSTEES**



Having joined Race Against Dementia last year, I have already had the pleasure of getting to know some of our generous supporters, committed team and our incredible researchers.

As incoming Chief Executive Officer, I present our 2023 impact report showcasing research progress and how the generous contributions of our supporters, funders and advocates are making an impact.

In 2023, we appointed three new Race Against Dementia Fellows. We also launched the Ignition Fund, offering researchers funding for unexpected breakthroughs.

In March [Formula 1 announced its support for Race Against Dementia and named us as an official charity partner.](#) We also welcomed our newest ambassador, Hollywood actor Florence Pugh, who has fully embraced our urgent mission.

Our mission is simple. We equip dynamic and driven dementia researchers with funds and a Formula 1 mindset to accelerate preventions and cures for dementia.

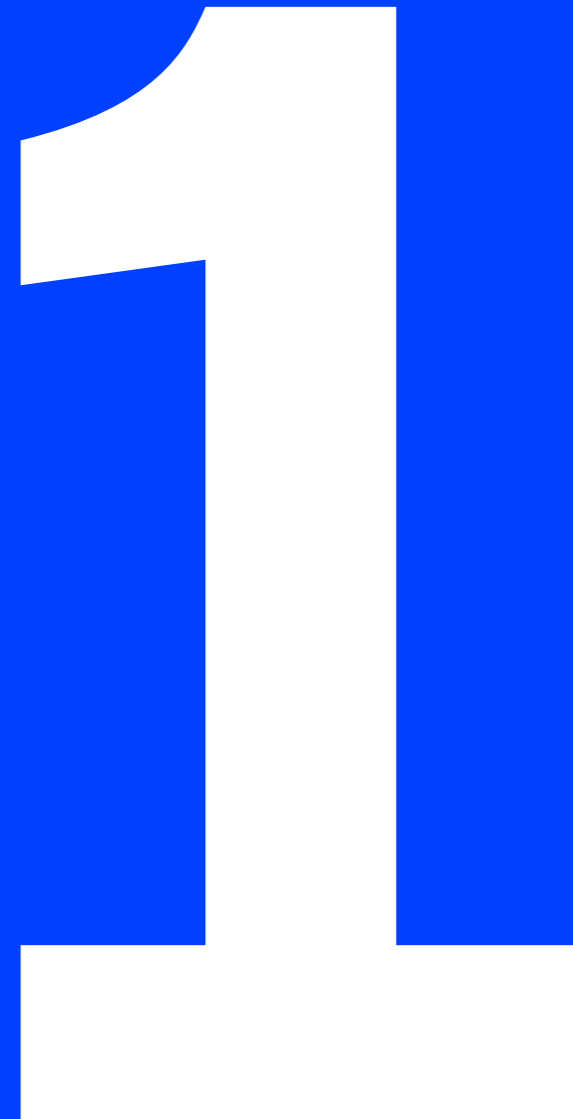
Internationally, 2023 produced promising drug developments that appear to decelerate the decline of memory and thinking in early-stage Alzheimer’s disease. In the United States, lecanemab was licensed for use in people in the early stages of Alzheimer’s and another drug, donanemab, was submitted for licensing.

These milestones can only be reached through research. They exhibit the exciting possibilities that research presents.

Dementia continues to take a heavy toll on individuals and families. So for all the families in the same lane as Mark and Sir Jackie, we must strive to beat dementia.

Thank you for your generous support.

**VERONICA BAMFORD-DEANE  
CHIEF EXECUTIVE OFFICER**



# FUNDING AND GUIDING THE BRIGHTEST DEMENTIA RESEARCHERS

## WHAT IS DEMENTIA?

Dementia is a debilitating decline in cognitive function. It is not a specific disease, but a group of symptoms caused by various conditions, including Alzheimer’s disease, frontotemporal dementia, Parkinson’s disease and Lewy body dementia. There are more than 200 types of dementia.

Dementia affects critical brain functions – memory, language, attention, problem-solving, orientation and judgment. It disrupts life – every day.

Caring for people living with dementia is exhausting, frustrating and often financially crippling. Symptoms are often progressive, irreversible and vary from person to person. It can affect people of any age – including children – from any background, anywhere in the world.

Unless something is done, one in three people born today will die with dementia.

## RACE AGAINST DEMENTIA

Race Against Dementia equips dynamic and driven dementia researchers with funds and Formula 1 mindset training and mentoring to accelerate preventions and cures for dementia.

We work to achieve better diagnosis, understand risks and develop possible new treatments.

We disrupt current practices – sharing technologies and forging new collaborations across disciplines, institutions and industries.

## FELLOWSHIPS: OUR FLAGSHIP PROGRAMME

We fund and guide the most promising early career scientists (Fellows) – ground breakers in the search for preventions and cures for dementia.

Race Against Dementia Fellowships are open to researchers within six years of completing a PhD. Scientists have been chosen from universities in the UK, Australia, South Africa, Europe and the USA. These research Fellows receive up to five years of support.

We partner with respected dementia research charities to launch open calls for applicants. Once chosen, These research Fellows join Race Against Dementia’s cohort of exceptional dementia researchers and receive mentoring and training in a Formula 1 mindset to fast-track their progress.

In 2023 we funded two new UK Race Against Dementia Fellows. Our partners, Alzheimer’s Research UK, managed the selection process and generously part funded the research programme.



Dr Amy Lloyd

Dr Jake Brooks

Dr Sam Nightingale

Dr Ziphozihle Ntwatwa

Dr Amy Lloyd from the University of Dundee is investigating the role of the brain’s immune cells in Alzheimer’s disease.

Dr Jake Brooks from the University of Warwick is studying the connection between air pollution and dementia, focusing on the effects of metal pollution particles.

We also began funding research in South Africa, with Dr Sam Nightingale and Dr Ziphozihle Ntwatwa starting Fellowships at the University of Cape Town. With Ziphozihle’s support, Sam is leading a team to investigate whether there is a higher prevalence of Alzheimer’s disease in a population of people with HIV, to study the effects of inflammation and infection on the brain.

## SINCE THE BEGINNING OF THE FELLOWSHIP PROGRAMME:

18

FELLOWS HAVE BEEN SUPPORTED BY RACE AGAINST DEMENTIA



50%

OF THE FELLOWS HAVE BEEN PROMOTED TO SENIOR POSITIONS DURING THEIR FELLOWSHIPS



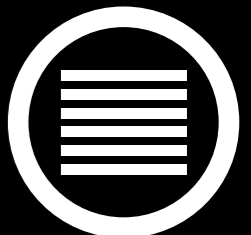
£10 MILLION+

HAS BEEN DONATED TO FUND THEIR RESEARCH



138

PAPERS HAVE BEEN PUBLISHED BY RACE AGAINST DEMENTIA FELLOWS



£13 MILLION

HAS BEEN SECURED BY FELLOWS TO FUND ADDITIONAL RESEARCH PROJECTS



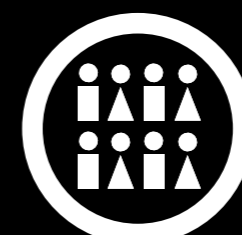
90K+

DEMENTIA RESEARCH HOURS HAVE BEEN FUNDED (AND COUNTING!)



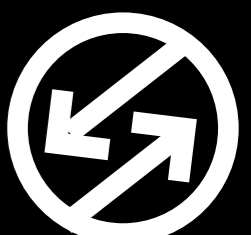
31

RESEARCH JOBS HAVE BEEN CREATED BY FUNDING AND CONTRIBUTED TO OVER 130 JOBS



30

CROSS-INSTITUTIONAL COLLABORATIONS HAVE BEEN INSTIGATED





## IGNITION FUND: FLEXIBLE SEED FUNDING FOR UNEXPECTED BREAKTHROUGHS

Research funding is often fixed to a set body of work. Much like the process of developing a winning racing car, scientific discovery rarely follows a linear path. There are new leads or unexpected breakthroughs.

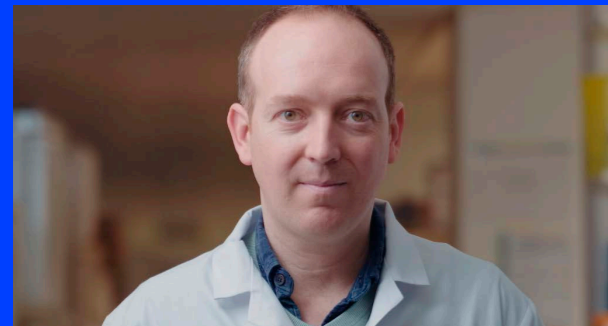
The Race Against Dementia Ignition Fund awards grants to exceptional scientists so they can quickly exploit an opportunity and avoid a high potential idea being shelved. Applications can be made for up to £100,000 and are assessed by Race Against Dementia's expert scientific panel. Funding can be used for equipment, headcount or research costs.

In 2023 grants were awarded to three researchers:



### DR AITANA SOGORB-ESTEVE

Dr Sogorb-Esteve investigates the effects of the brain's 'waste management system' when it goes wrong. Without this system, toxic waste will build up and damage brain cells. She will develop a process to detect when this system malfunctions to better understand how dementia progresses.



### DR CHARLIE ARBER

When studying a rare type of dementia, Dr Arber discovered that the amyloid protein, believed to trigger disease that causes dementia, comes from the brain's immune cells. He will use his grant to investigate further into these immune cells to improve our understanding of how to delay the onset of dementia.



### DR CARA CROFT

Dr Croft and her team made an exciting discovery when they revealed, contrary to longstanding beliefs, tau (a protein causing dementia) can clear by itself. Her research will investigate whether encouraging this self-clearing process will harm brain cells. This will develop potential treatment avenues for dementia.

## RACE AGAINST DEMENTIA TEAMS

Formula 1 teams have a relentless drive to succeed, working together to achieve a common goal. We believe this mindset can be applied to a team of dementia researchers to speed up progress.

Race Against Dementia Teams is a new research programme launched in 2023, to fund and train entire teams of researchers. Awards of up to £750,000 will be made to support a small team of top researchers over five years. Alongside funding the successful Teams will also benefit from the F1 inspired training and mentoring programme.

The Teams will investigate risk factors, new treatments for dementia and diagnosis that will identify dementia at the earliest stages, allowing patients to be treated by new and emerging drugs.

Team selection is spearheaded by Rosetrees Trust, a UK private medical charity which has funded over 2,000 research projects and has a successful venture philanthropy approach.

In 2023, 70 applications for this funding were received. They were reviewed by an expert triage panel. 18 projects have been shortlisted and the successful Race Against Dementia Teams will be announced in Summer 2024.





# 2

## APPLYING THE PACE AND PRECISION OF FORMULA 1

### THE FORMULA 1 MINDSET IN ACTION:

Researchers, funded by Race Against Dementia, receive training inspired by the pace and precision of Formula 1. They are encouraged to apply the mindset traits, found across teams in Formula 1, to their dementia research.

#### TEAMWORK

Dr Claire Durrant collects brain samples from patients in brain surgery to use in her research. She compares her brain sample collections to a Formula 1 pitstop, where everyone knows their role for maximum efficiency. This involves the co-ordination of surgeons, collecting the tissue from theatre, rapidly transporting it to the lab, and quickly deciding how it will be used in experiments.

#### INNOVATION

Dr Karissa Barthelson uses machine learning, a form of artificial intelligence where computers mimic the way humans learn from experience, in her research to explore the cause of childhood dementia. In a recent grant application she was commended for this 'highly innovative approach', as this technique has never been used in childhood dementia research.

#### RESILIENCE

Dr Ellen Dicks aims to predict cognitive decline using brain scans, creating a model by comparing thousands of healthy and Alzheimer's brain scan images. Ellen must include the right images to do this accurately - which requires quality checking every image.

After quality checking 1,000 images - taking 50 hours she realised that she needed more healthy brain images, so she had to repeat this lengthy quality-check process. Ellen used her built-up resilience to persevere through this challenging process.

#### ATTENTION TO DETAIL

Every race weekend Formula 1 teams build their garages to the same specifications so the whole team know where everything is located without thinking.

Dr Maura Malpetti ensures that her whole team know where data is stored and how they can access it so no time is wasted searching for data.

### HINTSA

Hintsata is a world leading, evidence-based coaching company, helping top athletes, including from Formula 1, achieve sustainable success.

In 2023, three researchers took part in the programme. They identified multiple benefits including:

- Managing pressure adeptly to perform in key moments.
- Developing resilience.
- Understanding the importance of physical fitness, nutrition choices and sleep patterns.

### VIRTUAL TRAINING SESSIONS

Every two months, Race Against Dementia hosts virtual online training sessions to bring together the international cohort of researchers and offer inspiring talks and training opportunities.

A highlight during 2023 was the session given by Dr Mike Morrison who guided the researchers on how to design effective and engaging scientific posters for presentations – a key skill to enable them to successfully communicate complex scientific information to non-scientists.

### LEADERSHIP TRAINING

Based on the Myers-Briggs Type indicator framework, four researchers took part in leadership skills training in 2023. Researchers identified their personal working style and how to work effectively with other personality types in their own teams.

### CAREER MASTERCLASS

Race Against Dementia’s scientific advisors Professor Siddharthan Chandran and Professor Phillip Scheltens held a Masterclass at the University of Edinburgh, to support researchers with their careers. Advice was given on topics such as grant writing and intellectual property.



## THE 2023 SUMMER SCHOOL

Held at Silverstone racetrack, Britain’s motorsport epicentre, this week-long training event brought together 15 researchers, as well as our partners, inspirational guests and supporters.

At the 2023 Race Against Dementia Summer School we:

- Articulated the ‘Formula 1 Mindset’ to our researchers so they could embody it in their research. Professor Martin Elliott, explained how he had used the Formula 1 approach to improve paediatric patient care.
- Demonstrated the impact of dementia on patients and their families. We shared powerful insight into familial dementia from a patient’s perspective.
- Instigated collaboration and learning amongst researchers. We fostered discussion and collaboration during a quick-fire poster presentation and exhibition.
- Strengthened leadership skills in our Fellows to enable them to lead competitive and successful teams. Through inspiring talks and an interactive workshop delivered by a women’s health and leadership consultant and an Officer of the British Army.







## MENTORING

Race Against Dementia researchers are paired with a mentor from Formula 1 or industry - to help our researchers to navigate challenges and provide alternative perspectives.

### DR MAURA MALPETTI AND JONATHAN NEALE

Jonathan, ex-CEO of McLaren Racing, has connected Maura with different data science experts across Formula 1. This has enabled Maura to fast-track solutions to her data-analysis problems and build her resilience.



**THE APPROACH INCLUDES COPING WITH PAPER AND GRANT REJECTIONS, AND TURNING THEM INTO BETTER FUTURE APPLICATIONS. JONATHAN HAS HELPED ME LEARN THAT EACH REJECTION IS AN OPPORTUNITY FOR BETTER AND STRONGER FUTURE SCIENCE."**

- Dr Maura Malpetti





# 3

## ENABLING COLLABORATIONS

### THE EDINBURGH/AMSTERDAM RESEARCH PROJECT

A collaboration between the University of Edinburgh and the Amsterdam University Medical Centre, this project will accelerate the process of finding drugs for dementia and human trial design. By testing the effectiveness of drugs that already have approval for uses in other conditions, drugs can be put through clinical trials quicker. In 2023, this project identified multiple drugs that will be put through further testing.

### BIO-HERMES DATA CHALLENGE PROJECT GLASGOW UNIVERSITY AND ST ANDREWS UNIVERSITY

Race Against Dementia's support was the catalyst to kick-starting this project - an extensive bank of data comprised of 80,000 dementia biomarkers including blood, genetics and brain imaging. Access to this resource will be granted to researchers who submit an exciting project idea that they want to explore with this data.

With a particular focus on early career researchers, all projects will be given support from data scientists, project managers and research leaders in dementia. This support will allow researchers to focus on the science and make progress - faster.



# 4

**RAISING FUNDS TO  
BEAT DEMENTIA**

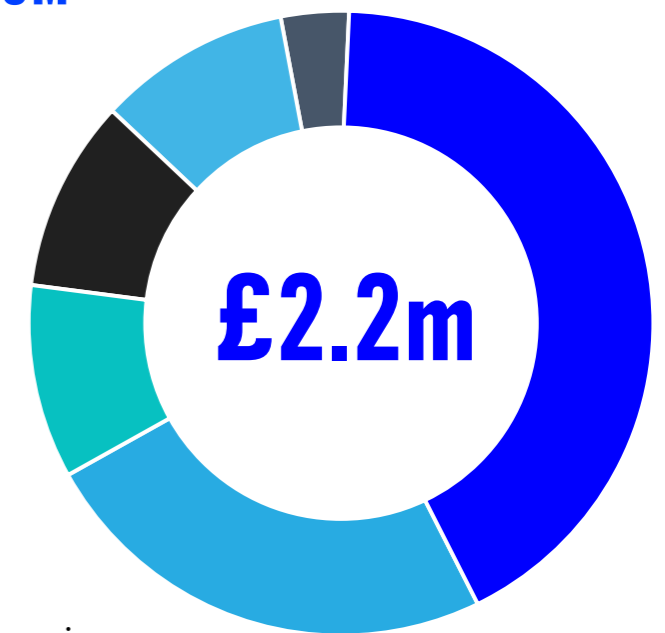
**£2.2m** was raised by our incredible supporters in 2023.

**£2.3m** of additional funds were secured through Race Against Dementia partnerships and events and sent directly to our researchers and their universities.

Our funds came from a range of supporters from event challenge participants to individual, corporate, trust and foundation funders. Our partnerships grew in 2023. Race Against Dementia was named as one of five charity partners supported by Formula 1. A sincere thank you to everyone who contributed to the fundraising success of 2023.

## WHERE OUR MONEY CAME FROM

- INDIVIDUAL GIVING
- PARTNERSHIPS
- COMMUNITY
- TRUSTS & FOUNDATIONS
- OUR EVENTS
- GIFT AID



## WHAT WE SPENT IT ON

**£1.5m** was spent on training, research and advancing our charitable objectives in 2023.

**£300,000** was spent on raising funds.

## PARTNERSHIPS WITH RACE AGAINST DEMENTIA





# 50

SHARING THE IMPORTANCE OF DEMENTIA RESEARCH

Our network which includes our community mailing list, social media followers and the awareness attained as a Formula 1 partner extends the reach of our mission globally.

Race Against Dementia appeared in 522 editorial mentions, with a potential reach of over three billion readers.

## FORMULA 1

2023 was the 50th anniversary of Sir Jackie's last Formula 1 World Championship win, and announcing Formula 1 support for Race Against Dementia in 2023 was a fitting tribute to Sir Jackie's legacy.

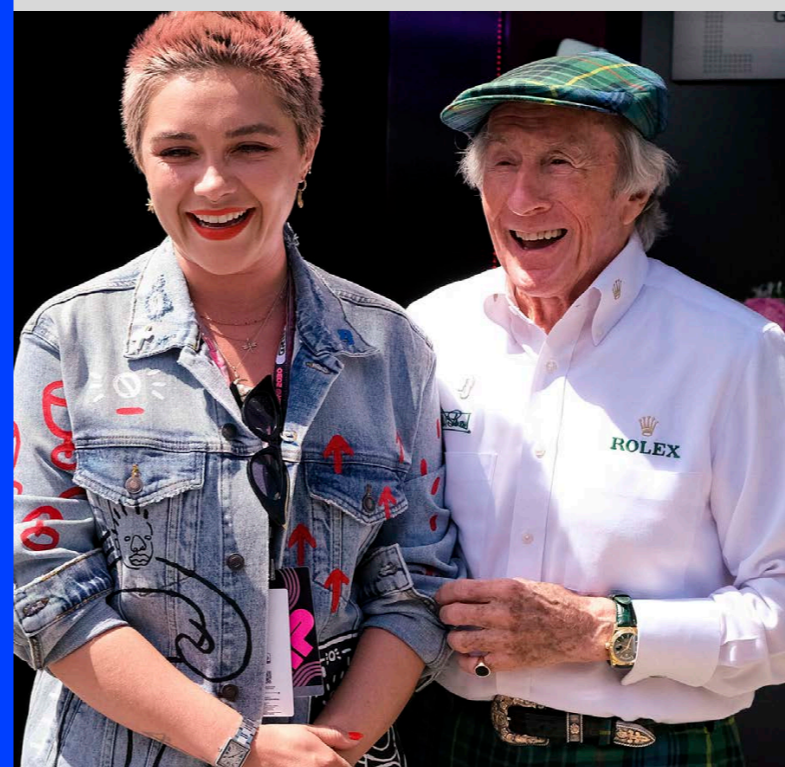
Stefano Domenicali, President and CEO, Formula 1 said:

**“FORMULA 1 IS PROUD TO BE SUPPORTING RACE AGAINST DEMENTIA IN THEIR TIRELESS WORK TO FIND A CURE FOR A TERRIBLE DISEASE THAT DESTROYS LIVES AND RIPS FAMILIES APART.”**

Over £500,000 was raised for Race Against Dementia through partnerships, events and campaigns surrounding the F1 partnership.

## FLORENCE PUGH AT SILVERSTONE

Florence Pugh, launched her role as a Race Against Dementia ambassador at the British GP, and was interviewed on the grid by Sky Sports.



**“I'M HONOURED TO BE AN AMBASSADOR FOR RACE AGAINST DEMENTIA AND ALIGNED AS THEIR PARTNER TO RAISE MUCH-NEEDED FUNDS THAT WILL GO ENTIRELY TOWARDS GROUNDBREAKING RESEARCH TO FIND A CURE.”**

- Florence Pugh



*Sir Jackie Stewart and Mark Stewart at The Telegraph Christmas Charity Appeal phone-in day.*

## TELEGRAPH CHRISTMAS CHARITY APPEAL

Race Against Dementia was a chosen charity of the Telegraph Christmas Charity Appeal. Between November 2023 and January 2024, 20 articles were written, featuring interviews from multiple generous contributors within our community.

The appeal raised £150,000 for Race Against Dementia. All articles can be read online here: <https://www.telegraph.co.uk/race-against-dementia/>

## DEMENTIA RESEARCHER

Race Against Dementia has committed to fund Dementia Researcher for five years. As a supportive network for early career researchers, this platform helps dementia researchers to find funding, jobs and events.

## ADVOCATING RESEARCH

Dr Wiola Zelek led and won the competition to host the European Meeting on complement in Human Disease in Cardiff (complement is a component of the immune system in the blood). A Race Against Dementia Fellow leading the bid to host a meeting that unites experts in their field showcases the excellent leadership in our researchers.

Dr Maura Malpetti shared her work on blood biomarkers and innovative brain scans in several countries. Blood-based biomarkers can give signals to detect dementia or to choose the best treatment. Her conversations in Canada, Sweden, Germany and the Netherlands have sparked collaborations which will accelerate progress in biomarkers.

Dr Christy Hung published a paper highlighting that a genetic mutation linked with frontotemporal dementia can cause a build-up of a protein that appears to disrupt how a nerve cell cleans up waste. This gives clues about how treatments can clear this waste and stop nerve cells dying to slow progression.





# 6

## PLANS FOR THE FUTURE

In 2024, we will continue to inspire the next generation of dementia researchers. We will be focusing on fostering and delivering our Formula 1 mentality to inspire speed and collaboration throughout dementia research. More specifically we will:

- 1. SELECT UP TO FIVE INNOVATIVE AND MOTIVATED RACE AGAINST DEMENTIA TEAMS OF DEMENTIA RESEARCHERS IN SUMMER 2024.**
- 2. APPOINT NEW EARLY CAREER RESEARCHERS IN THE US, UK AND AUSTRALIA.**
- 3. DELIVER OUR UNIQUELY CURATED AND DYNAMIC RACE AGAINST DEMENTIA RESEARCHER TRAINING PROGRAMME INFLUENCED BY THE FORMULA 1 MENTALITY.**
- 4. OPEN THE 2024 CALL FOR APPLICATIONS FOR THE IGNITION FUND IN THE UK TO CONTINUE TO FUND NEW LEADS AND UNEXPECTED BREAKTHROUGHS.**
- 5. EXPAND OUR MENTOR NETWORK ACROSS TECHNOLOGY, BIOTECH AND MOTORSPORT TO GUIDE OUR RESEARCHERS AND SHARE THEIR UNIQUE PERSPECTIVES AND KNOWLEDGE.**
- 6. SUPPORT THE RESEARCHERS WHO WILL BE COMING TO THE END OF THEIR FELLOWSHIPS IN 2024 AND INTRODUCE A RACE AGAINST DEMENTIA ALUMNI PROGRAMME.**

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**With thanks to:** Nick Freeman, James Duncan Davidson, Douglas Robertson and Chris Watt

# RACE AGAINST DEMENTIA

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Race Against Dementia is a registered charity in England and Wales (1165559) and in Scotland (SC052594) and registered as a company limited by guarantee in England and Wales (09973676).