



College of Biomedical
and Life Sciences

Coleg y Gwyddorau
Biofeddygol a Bywyd

Boosting research at Cardiff University via the Wellcome Trust's

Institutional Strategic Support Fund



October 2016 Review



**Cardiff University
secured**

**£1.5m
for ISSF2**

run between **2014-2016**

with the College of Biomedical and Life Sciences providing

**£1.5m match funding
to the award.**

What is the Wellcome Trust Institutional Strategic Support Fund (ISSF)?

The Wellcome Trust Institutional Strategic Support Fund (ISSF) provides UK-based universities with funds for investment in research of strategic importance to the Institution. Awards are flexible in scope, allowing host institutions to use the funding for a range of diverse activities, from biomedical research to social and cultural studies, from applied R&D to public engagement. Funded universities are encouraged to invest in areas of unmet need, including early careers and interdisciplinary initiatives.

Cardiff has held two ISSF awards. The most recent secured £1.5m over two years (2014-2016), with the College of Biomedical and Life Sciences providing £1.5m match funding to the award.

Aims of ISSF2



To catalyze key priority areas aligned to the College research strategy

To encourage new cross-disciplinary collaborations across the College

To add value to existing Wellcome Trust investments at the Institution.

Strengthening Biomedical and Clinical Sciences Research at Cardiff

ISSF2 built on the success of ISSF1 by widening our approach to encompass our five priority Research Themes within the College of Biomedical and Life Sciences (BLS).



[Integrative Biosystems](#)



[Cancer](#)



[Immunology, Infection and Inflammation](#)



[Mind, Brain and Neuroscience](#)



[Population Health](#)

We also looked to boost collaboration with researchers in the physical sciences, humanities and social sciences, and consolidate ties with other Universities, including in the South West.

GW4



Broad Benefit:

In ISSF2, all Schools in BLS received ISSF funding for research or engagement activities. This reflects the goal of the College to invest in the very best science across BLS.

ISSF Management Board & Expert Review Advisors:

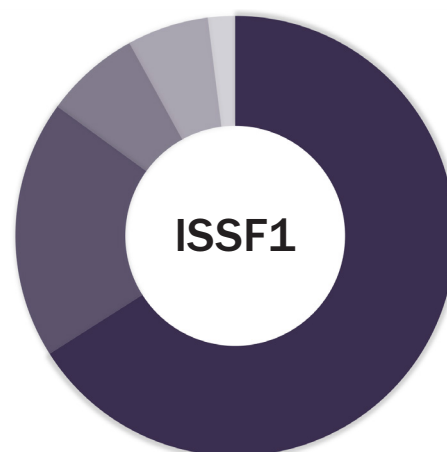
Delivery of the ISSF schemes was guided by the ISSF Management Board, chaired by the Pro Vice-Chancellor for the College (Professor Dylan Jones), and including ISSF Panel Leads and College Research Theme Leads. Review of applications was based on peer review involving individuals from all Schools in the College.

Future:

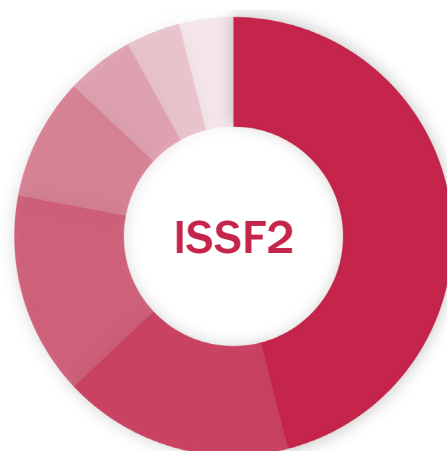
The College has just been awarded funding for ISSF3. This new award focuses on key areas of unmet need in the College, including enhancing opportunities for early career researchers, equality and diversity and providing the right form of support at different career stages. Further details about schemes will be provided shortly.

For any further information on ISSF, please contact Mrs Swapna Khandavalli, ISSF Administrator & Research Support Officer, BLS, at:

issfadmin@cardiff.ac.uk



Medicine	66%	Biosciences	6%
Psychology	19%	Pharmacy	2%
Optometry	7%		



Medicine	46%	Healthcare	5%
Psychology	17%	Optometry	4%
Biosciences	15%	Dentistry	4%
Pharmacy	9%		



What did we do with ISSF1 & ISSF2 funding?



Strategic recruitment of senior staff in neuroscience and immunology. These were Professors Jeremy Hall and Philip Taylor.



New core posts in informatics, generating an embedded group now supporting a wide range of data analysis and training requests across the College.



New research activities via small-scale grants for research and mobility, with a particular focus on interdisciplinary collaboration across BLS Research Themes, as well as linkage to the social sciences and medical humanities.



New equipment of benefit to researchers across the College:

- PhotonIMAGER Optima
- Fluidigm's microfluidic devices C1TM and BioMark HD system LEEC Crystallisation Incubator, Formulatrix Rock Imager
- Cell-IQ System; Mass-director preparative high performance liquid (pHPLC) chromatography system



Enabling a wide range of public engagement activities.



Case studies highlighting the value of ISSF to our researchers

Developing novel online cognitive tests of spatial perception and memory for use in UK population cohorts, starting with ALSPAC

"The ISSF Population Pilot helped us develop new web-based cognitive tasks sensitive to cognitive aging, and we are now piloting the use of this in a population study in collaboration with Bristol University. It helped us make the transition to cognitive epidemiological approaches, and build on research opportunities afforded by GW4." –

Kim Graham (PSYCH), Population Pilot Award.

Bioinformatics Hub

"With ISSF Funding we have built a data analysis resource available to all College researchers, contributing to two weekly, drop-in data clinics."

ISSF funding supports two core data analysis posts. This investment forms a service-hub supporting research grant applications, study design and data analysis across the College. A request for support can be made via two weekly drop-in Data Clinics, held within the University. For contact please email data-clinic@cardiff.ac.uk

– **Robert Andrews (CBLS), Core posts.**

Contextualising deprived women's risky health behaviours within pregnancy: a qualitative longitudinal study using visual methods to inform future intervention co-development

"Within the health and wellbeing in pregnancy project, funded by the ISSF Public Health Award, my team has used visual, participatory and creative methods to understand barriers and facilitators to healthy behaviours in pregnancy among women living in poverty. Creative and participatory techniques are not commonly used in the College of Biomedical and Life Sciences, and have proved very popular with participants, and allowed a greater understanding of the challenges of delivering public health interventions at this time, through creating a strong relationship with participants."

– **Aimee Grant (SEWTU, Centre for Trials Research), Public Health Award.**

New technology for higher resolution non-invasive longitudinal in vivo bioluminescence imaging

"We have used the award to develop our work in a sub-field of synthetic biology we call 'synthetic bioluminescence'. This application-driven work will feed directly into the enablement of biomedical research by providing advanced tools to study mammalian genetics, development, treatments or pathologies using dual colour near-infrared bioluminescence imaging (BLI). We are confident that our new enzymes (called iLucs) will lead to next generation high-resolution dual or multiparameter in vivo BLI technology."

– **Amit Jathoul (BIOSCI), Fellowship Award.**

Crystallisation facility for the determination of protein structures at atomic resolution

“Since installation this equipment has been used to successfully generate over 30 unique protein crystal structures. New structures are being generated at a rate of >4 per month. Structures generated by this equipment have featured on the cover of three journals including the Journal of Clinical Investigation. This article has been selected as a feature article.”

- Andy Sewell (MEDIC), Equipment Award.

Developing Clinical Academics

“This award provided a valuable insight into research and academic work, allowing me to make informed decisions about my future career. I now recognise the challenges and rewards academic work entails, such as fellowship proposals and presenting work. With this new appreciation of the work of a clinical academic, I fully intend to pursue an academic component to my future training. Following the Taster for Clinicians Award, I was awarded a MRC funded Clinical Academic Mentorship Scheme with Cardiff University.”

- Sarah Healy (MEDIC), Taster for Clinicians Award.

Brain Games for Adults

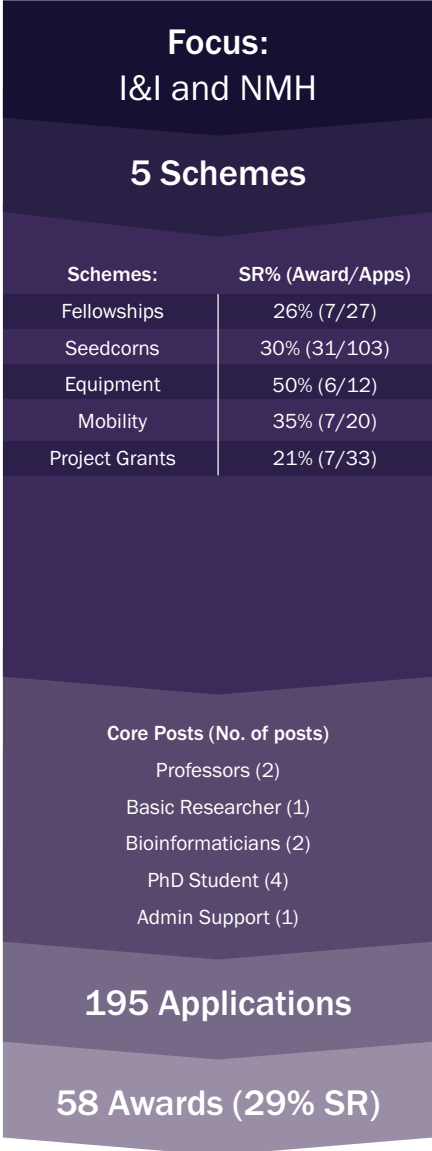
“‘Brain Night’, was an evening event in which we took the pre-existing Brain Games concept that has been used for engagement with children and adapted it for an adult audience. Approximately 200 visitors attended, with 94% saying they were likely or very likely to recommend the event to a friend or colleague.”

- Gavin Perry (PSYCH), Public Engagement Award.

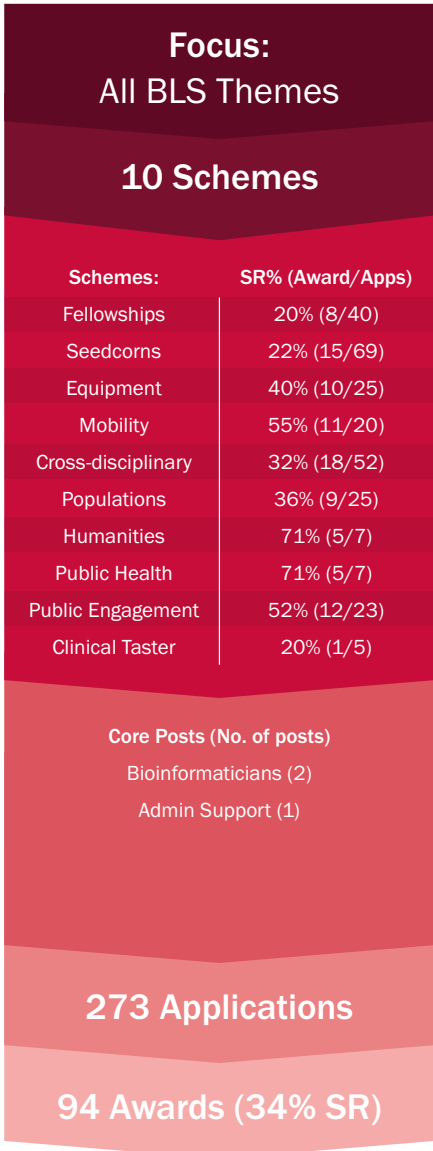
ISSF 1 and 2 schemes and success rates

The table compares our ISSF1 and 2 schemes, and includes information about the number of applications and success rates (SR%), the latter mostly between 20%-55%.

ISSF1 (3 years) - £4.5M



ISSF2 (2 years) - £3M





Public Engagement (PE)

Enhancing researcher engagement in PE is of particular importance to the Wellcome Trust. ISSF2 supported proof-of-concept public engagement including:



The implementation of a new [lay faculty](#) linked to our Systems Immunity University Research Institute.

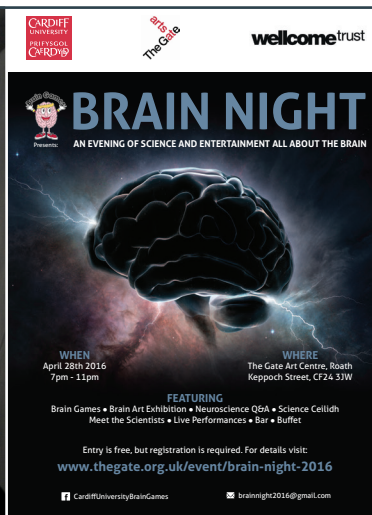
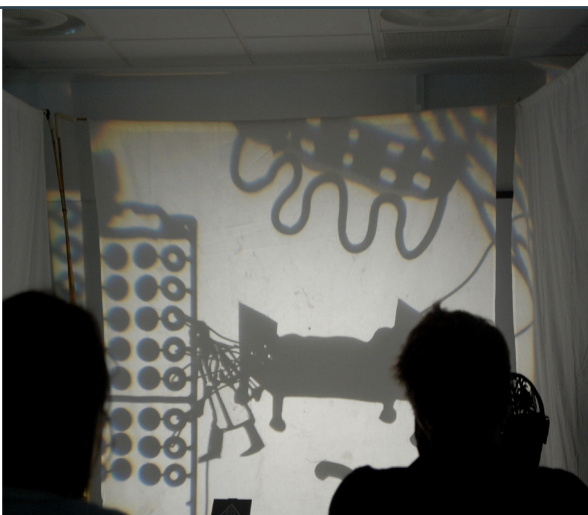


A programme of public lectures.



Extension of, and new, PE activities:

- Brain Night
- STEM work around bee-friendly cities
- Activities at the Science Pavilion at the National Eisteddfod
- A lecture on 'Consciousness and Coma', a Shadow puppet performance and a visual art exhibition
- Lab tours and talks to Cyfarthfa High School children on 'The body's battle against Cancer'



Members of the Wellcome Trust Board and our research community contributed to strategic decision-making and grant reviewing. Without this, we could not make ISSF such a success for researchers at the University.

visit: www.cardiff.ac.uk/bls/issf

Who's who – Meet the ISSF Team



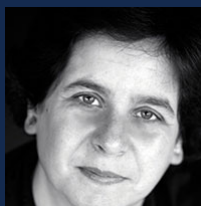
Mrs Swapna Khandavalli
Email: issfadmin@cardiff.ac.uk
Tel: 02920 888697

Swapna is the ISSF Administrator and Research Support Officer in the College of Biomedical and Life Sciences. Swapna manages the day-to-day running of the ISSF scheme, including collation of applications, panel meetings and general enquiries relating to the scheme.



Professor Dylan Jones
Email: JonesDM@cardiff.ac.uk
Tel: 02920 870468

Dylan is the Chair of the Wellcome Trust Management Board, as well as Pro Vice-Chancellor in the College of Biomedical and Life Sciences. His role with the Wellcome Trust ISSF is overall responsibility and governance of the scheme.



Professor Kim Graham
Email: GrahamK@cardiff.ac.uk
Tel: 02920 870468

Kim is the ISSF Principal Investigator and the Dean of Research in the College of Biomedical and Life Sciences. Kim is responsible for the strategic and operational delivery of the ISSF schemes, and regular reporting of outcomes to the Wellcome Trust.



Dr Amanda Roberts-Jones
Email: JonesAL6@cardiff.ac.uk
Tel: 02920 872796

Amanda is the Acting Head of Research Development, Research & Innovation Services. She was the programme manager responsible for our previous ISSF awards, but now manages the professional team (based within Research and Innovation Services and the College) responsible for delivery of the ISSF awards.



Dr Andrew Staphnill
Email: StaphnillA@cardiff.ac.uk
Tel: 02920 688957

Andrew is a Research Development Officer based at the University's Research and Innovation Services. He is responsible for managing appropriate use of the ISSF grant in alignment with the College match funding, and providing support in identifying opportunities for grant funding.