Dear Readers,

Welcome to Issue 77 of the Genetics Society newsletter. This issue marks a special occasion, as it coincides with the 2017 Genetics Society Autumn Meeting. The meeting has been a valuable platform for researchers to present their work, network, and collaborate across different disciplines. This year, the meeting has seen a record attendance, with over 1,000 scientists in attendance, indicating the growing interest and importance of interdisciplinary research.

Meetings in themselves are a valuable place for different career stages to meet and network. Interdisciplinary meetings are even more so as they demonstrate the, perhaps previously unconsidered, links between our specialities. This allows researchers to combine their skill sets and engage with more sophisticated, nuanced questions. These opportunities for collaboration can then attack the problems of our world today using a more holistic approach.

I hope you enjoy this issue, and all of the reports on the various research and meetings which we have been delighted to fund.

Best wishes,
Lynsey Hall

A WORD FROM THE EDITOR

A word from the editor

Welcome to Issue 77

Dear Readers,

Welcome to the latest addition of the Genetics Society newsletter, and my first editorial exploit! Since the last newsletter, the Society has had a new experience in the form of a joint meeting between the Genetics Society, the British Society for Developmental Biology and the British Society for Cell Biology. For this, we created a new travel grant option for junior scientists, and in this issue have covered this event from their perspective with reports from grant recipients. The response to this meeting event was very favourable, so hopefully we will see it repeated in the future.

Our autumn meeting will also be a joint meeting, this time with the British Society of Genetic Medicine. Meetings in themselves are a valuable place for different career stages to meet and network. Interdisciplinary meetings are even more so as they demonstrate the, perhaps previously unconsidered, links between our specialities. This allows researchers to combine their skill sets and engage with more sophisticated, nuanced questions. These opportunities for collaboration can then attack the problems of our world today using a more holistic approach.

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Best wishes,
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The Human Genome in Healthcare

This meeting is a joint event between the Genetics Society and the British Society for Genetic Medicine.

Recent technological advances provide the ability to directly access variation within an individual’s genome, providing vast potential for personalising and improving healthcare. The ‘Human Genome in Healthcare’ meeting aims to explore the science that underpins current and potential future applications of the human genome to inform diagnostics, prognostics and personalisation of therapies.

We have an outstanding line up of speakers from around the world who will provide insight into the approaches through which an individual’s genome can be harnessed to improve healthcare.

Sessions will focus on advances in approaches to interpret an individual’s genome in the context of rare disease, common complex disease and cancer, alongside approaches aiming to provide more effective personalised therapies.

The meeting will explore how the impact of variation within an individual’s genome can be harnessed to improve healthcare.

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The meeting will explore how the impact of variation within an individual’s genome can be harnessed to improve healthcare.

Here is a list of some of the speakers:

- Kaitlin Samocha (Harvard Medical School/Broad Institute, USA)
- Don Conrad (Washington University School of Medicine, USA)
- Joe Marsh (University of Edinburgh, UK)
- Denis Lo (Chinese University of Hong Kong, Hong Kong)
- Serena Nik-Zainal (St George’s Hospital, UK)
- Magnus Ingelman-Sundberg (Karolinska Institute, Sweden)
- Jakub Tola (University of Minnesota, USA)
- Joe Pickrell (New York Genome Centre, USA)

Scientific Organisers:

- Michael Simpson (King’s College London and Genomics plc)
- Jim Huggett (LGC & University of Surrey)
- Emma Woodford (Central Manchester University Hospitals NHS Foundation Trust (British Society for Genetic Medicine)

More detailed information and links to event websites can be found at www.genetics.org.uk/Conferences/Externalmeetings.aspx

We will happily include any announcements for genetics-based meetings in this section. Please send any items to theteam@genetics.org.uk

Genome 10k and Genome Science Conference

Date: Tuesday 29 August - Friday 1 September 2017
Location: Norwich Research Park, Norwich.
Registration deadline: 31st July 2017
Website: www.earham.ac.uk/genome-10k-and-genome-science-conference

MRC Human Genetics Unit - Eye Development and Degeneration Scientific Meeting

Date: 4th - 5th September 2017
Location: MRC Institute of Genetics and Molecular Medicine, Edinburgh
Abstract submission deadline: 30th June 2017
Website: edin.ac/eye2017

Integrating Inherited Cancer Syndromes into Cancer Care 2017

Date: 6th - 9th September 2017
Location: The Royal Marsden Education and Conference Centre, London
Website: www.royalmarsden.nhs.uk/news-and-events/conference-centre/study-days-and-conferences/integrating-inherited-cancer-syndromes

The Genomics of Common Diseases

Date: 6th - 9th September 2017
Location: Wellcome Genome Campus, Hinxton, Cambridge
Registration deadline: 8th August 2017
Website: coursesandconferences.wellcomegenecampus.org/Conferences.wt

Exploring Human Host-Microbiome Interactions in Health and Disease

Date: 13th - 15th September 2017
Location: Wellcome Genome Campus, Hinxton, Cambridge
Registration deadline: 1st August 2017
Website: coursesandconferences.wellcomegenecampus.org/Conferences.wt
The Genetics Society helps support several sectional interest groups by providing meeting sponsorship. We currently have 15 groups who organise sectional interest meetings with the organizers and dates of any forthcoming meetings are listed below. If you are interested in any of these areas, please contact the relevant organizer. Groups who wish to be considered for sectional interest group status should contact the Scientific Meetings Secretary Dominique Kleyn (dominique.kleyn@btinternet.com) in the first instance.

### Arabidopsis
- **Organiser:** Geraint Parry  
  (geraint@garnetcommunity.org.uk)  
  **Website:** www.garnetcommunity.org.uk

### British Yeast Group
- **Organisers:** Daniela Delneri (d.delneri@manchester.ac.uk) and Graham Pavitt (graham.pavitt@manchester.ac.uk)

### C. elegans
- **Organiser:** Stephen Nurrish  
  (s.nurrish@ucl.ac.uk)

### E-ACTG (Edinburgh Alliance for Complex Trait Genetics)
- **Next meeting:** Autumn 2017 (details to be notified)  
  **Organisers:** Chris Haley (chris.haley@roslin.ed.ac.uk) and Josefine Pemberton (j.pemberton@ed.ac.uk)  
  **Website:** www.wiki.ed.ac.uk/display/eactg/Edinburgh+AAlliance+for+Complex+Trait+Genetics

### Ecological Genetics Group
- **Organiser:** Paul Ashton  
  (Genetics@BritishEcologicalSociety.org)

### Evolutionary Genetics and Genomics
- **Organiser:** Frank Jiggins (fmj1001@cam.ac.uk)  
  **Website:** evolutionarygenetics.heliconius.org/eggs/

### South-West Fly
- **Next meeting:** 3rd May 2016 (Bristol University)  
  **Organiser:** James Hodge  
  (james.hodge@bristol.ac.uk)  
  **Website:** http://www.bristol.ac.uk/phys-pharm-neuro/events/flies/meetings/

### Genetics Society Pombe Club
- **Next meeting:** 2018 (date to be confirmed)  
  **Organiser:** Jacky Hayles (j.hayles@canter.org.uk)

### London Fly meetings
- **Next meeting:** 3rd Wednesday of the month  
  **Organisers:** Nic Tapon (nic.tapon@crick.ac.uk) and Barry Thompson (barry.thompson@crick.ac.uk)

### Mammalian Genetics and Development
- **Organisers:** Nick Greene, Andrew Copp, Andrew Ward (ich.mgdwshop@ucl.ac.uk)

### Mammalian Genes, Development and Disease
- **Next meeting:** 7th July 2017  
  **Organisers:** Rosalind John (johnrm@Cardiff.ac.uk), David Tosh (d.tosh@bath.ac.uk) and David Allard (d.allard@exeter.ac.uk)

### Oogenesis group
- **Organiser:** Rachel Ashworth (r.ashworth@ucl.ac.uk), Caroline Brennan (C.H.Brennan@qmul.ac.uk) and Corinne Houart (corinne.houart@kcl.ac.uk)

### The Zebrafish Forum
- **Organiser:** Jon Bridle (jnm.bridle@bristol.ac.uk)

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### News announcements

**Congratulations**

Many congratulations to our President Wendy, who has just been elected as a Fellow of The Royal Society.

For those of you unfamiliar with Wendy’s work, she is fascinated by the three-dimensional structure and organization of the genome and her work has changed thinking about how the expression of genes is controlled. By combining imaging and molecular genetics she showed that different human chromosomes have preferred positions in the cell nucleus, and she has revealed that the packaging of individual genes in the nucleus changes during the differentiation of stem cells and in response to epigenetic mechanisms.

Current research in the Bickmore lab focuses on how spatial genome organisation influences the regulation of genes in development and in disease.

Wendy is currently the Director of the MRC Human Genetics Unit at the University of Edinburgh.

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**At the Fringe**

Our Honorary Secretary Jonathan Pettitt will be performing in August at this year’s Edinburgh Fringe as part of the Cabaret of Dangerous Ideas. In his own words:

> Like many researchers, I have ‘enjoyed’ the opportunity of trying to make my research funny and entertaining by performing as part of the academic stand-up comedy network, Bright Club. In some ways, it wasn’t as difficult as it sounds, since for most audiences, studying worms is an inherently ridiculous venture.

Last year, I performed an expanded version of this show as part of the Cabaret of Dangerous Ideas at the Edinburgh Fringe.

I’ve found writing and presenting science to the public through organisations like Bright Club and the Cabaret of Dangerous Ideas to be a challenging, but very rewarding alternative to conventional public engagement activities; it has significantly improved my general communication skills. I would encourage anyone interested in stepping out of their comfort zone to give it a try.

If you want to attend Jonathan’s performance, tickets and further information are available at: tickets.edfringe.com/whats-on/our-genes-tell-us-what-to-do
Honorary Secretary’s Notices

Jonathan Petitt  Honorary Secretary, University of Sheffield

Life Membership in the Genetics Society

Have you reached the age of retirement (65), but wish to continue with your involvement in the Society? If so, and you are an ordinary member who has discharged any arrears the might be due to the Society, then you might consider applying to become a Life Member of the Society.

Life members will continue to receive notices and remain eligible to vote in the Society AGM, but will not be required to pay further subscriptions. Recipients of the Genetics Society Medal will also be offered Life Membership. Should you require additional information about becoming a Life Member, please contact The Genetics Society Office (theteam@genetics.org.uk).

Amendments to Society Bylaws

The following bylaws have been amended.

A3. Life Membership

Individuals must be current members in order to qualify for Life Membership. The names of those accepted into Life Membership shall be published on the Society’s website.

A7. Professional misconduct

The society reserves the right to revoke the membership of any member who has been sanctioned for professional misconduct.

Committee changes and elections

As mentioned in the previous newsletter, on our Executive sub-committee, Lynsey Hall has replaced Manuela Marescotti as the Newsletter editor and Kay Boulton has taken up the newly created position as Website Editor. We are pleased to welcome Helena Wells to the sub-committee, who has replaced Lynsey Hall as the Postgraduate Representative.

We also welcome two new Ordinary Committee members: Sudhakaran Prabakaran (University of Cambridge) and Danny Thorogood (IBERS) who will represent Genomics (Area B) and Applied and Quantitative Genetics (Area D), respectively.

We also welcome new members of the Genetics Society. All members are encouraged to make an active contribution to the Society by attending the scientific meetings and promoting membership among colleagues. Members can apply to our various funding schemes, which include travel grants and summer studentships. Those who want to become more involved may consider acting as a Local Representative for the Society, helping to run a Sectional Interest Group, or volunteering to serve on the Committee. Details of funding schemes and upcoming committee vacancies are listed elsewhere in this Newsletter.

The committee is currently considering the nominees for the following positions: Scientific Meetings Secretary, Ordinary Committee Member for Corporate Genetics and Biotechnology (Area F) and Evolutionary, Ecological and Population Genetics (Area E). Successful nominees will take up their posts in May 2018. The names of post holders will be announced at the earliest opportunity.

Medal and Prize Lecture Announcements

2017 JBS Haldane Lecture - Professor Enrico Coen

This public lecture will be held on the evening of the 21st November 2017 in the Royal Institution Lecture Theatre. Further details will be posted on the Society’s website, and ticket booking will be available on the Royal Institution website (http://www.rigb.org/whats-on) nearer the date.

Genetics Society President

Laurence was elected Fellow of both the Royal Society and the Academy of Medical Science in 2015, with many other awards, prizes, fellowships, lectures, scientific publications, and board and committee memberships to his name. Public engagement activities also feature highly in Laurence’s outstanding career to date.

Laurence graduated with a degree in Natural Sciences (Zoology) from Churchill College, Cambridge, in 1987, followed only ten years later by a Chair in Evolutionary Genetics at the University of Bath.

He did his doctoral studies under the supervision of Bill Hamilton FRS and Alan Grafen FRS in Oxford. Laurence’s research interests have covered a broad span of evolution, genetics and genomics, and his lab now predominantly use computational techniques to understand the way genes and genomes evolve.

Presently, Laurence is especially interested in understanding whether selection might operate on what have commonly been assumed to be unimportant mutations (e.g. synonymous mutations, small genome re-arrangements) and if so why. This has relevance for the diagnosis of genetic diseases and for gene and genome manipulation. He is the founding director of the Genetics and Evolution Teaching Project, which is devoted to large scale studies that test methods for teaching genetics and evolution from Primary School onward.

Laurence will be steering the Genetics Society during its centenary year celebrations (2019) and is very much looking forward to his involvement.
The Local Representative acts as a key liaison between the membership and the Society’s Office and Committee by helping to recruit new members, publicising the Society’s scientific meetings and other activities, and in providing feedback from the membership on matters of professional concern. The Society normally appoints only one local representative per company, institution or department, but exceptions can be made when there are semi-autonomous sub-divisions containing a substantial number of members or potential members.

Currently, we have local representative vacancies in Ascot, Hinxton, Manchester and Plymouth. We seek to fill vacancies and to update our database of Local Representatives on a yearly basis. Should you wish to volunteer as a local representative or if existing representatives wish to update their contact details, please contact the Honorary Secretary, Jonathan Pettitt, by e-mail at j.pettitt@abdn.ac.uk.

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<th>Local representative</th>
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<td>Dr Declan McIlmena</td>
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<td>Dr Charlotte Ruitledge</td>
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<td>Dr Felicity Z Watts</td>
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<td>Dr Colin M Zanetza</td>
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<td>Professor Patricia Kozlowska</td>
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<td>Howard Baylis</td>
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The Genetics Society, British Society for Developmental Biology and British Society for Cell Biology Joint Spring Meeting 2017

A joint spring meeting between The Genetics Society, the British Society for Developmental Biology (BSDB) and the British Society for Cell Biology (BSCB) was held at the University of Warwick at the beginning of April. The three learned societies scheduled a fantastic multi-disciplinary 4 day programme which consisted of a range of talks, posters, medal lectures, social events and a careers workshop. Approximately 400 delegates attended this meeting, the first of its kind between these societies. To give our membership an overview of how delegates enjoyed the experience, the meeting is covered here through the words of some of the conference attendees who received the Junior Scientist Joint Meeting Grant.

The newly tractable session speakers showed how the continuous advances in genetics and genomics techniques allow us to identify the biological features of an increasing number of organisms. Of particular note were Richard Burgess (QMUL, UK), who showed how the translation of genomics and transcriptomic studies efficiently contribute to the management of ash dieback disease, and Reiner Schulz (RCL, UK), who reported preliminary advances in oak genomics that may elucidate adaptive mechanisms in response to past environmental conditions. Overall, I found the conference inspiring and a valuable academic and personal experience. I would like to sincerely thank the Genetics Society for their support, enabling me to attend the conference and to present my poster.

Katya McLaughlin, University of Edinburgh

This 4 day conference consisted of a range of talks, posters, medal lectures, social events and a careers workshop. Topics covered included epigenetics, evolution and development, gene expression and many others. The attendees incorporated every career stage, from top scientists in the field to early PhD students and included non-academics such as those involved in science communication. The careers session consisted of informal round table sessions with representatives from an excellent mix of career types including academic and industrial roles, and others such as portfolio management and patent law. These were very useful for PhD students and postdocs planning the next stages of their career.

A session which I found particularly engaging was ‘Newly Tractable Systems’, which included presentations discussing the use of model organisms not commonly studied, for example the talk by Dr Eamonn Mallon on the important role of DNA methylation and imprinting in social insects such as bumble bees. Another highlight was the Cheryll Tickle Medal Lecture, where Jenny Nichols discussed her career in the stem cell biology field, highlighting important findings regarding the requirement of specific factors at different stages throughout development. This conference also offered me the opportunity to present my research on dissecting the role of epigenetic machineries in chromatin compaction in ground state pluripotent cells. This opportunity was hugely valuable as I was able to have discussions with top researchers from a range of relevant fields, a feature unique to a broad meeting such as this one. I am very grateful to the Genetics Society for giving me this opportunity.

Lauren Molina-Garcia, University College London

This conference provides a unique forum to network and get knowledge on different topics related with genetics, as well as cell and developmental biology. I had the opportunity to attend a career workshop in which different professional scientists shared their own experiences and gave us advice on how to plan our scientific careers. Talking to Ben Steventon (Henry Dale Fellow) and Victoria Moreno (Group leader at King’s College London) was especially motivating, as I would like to stay in academia after my postdoc. The session about Neurons, networks and behaviour was of particular interest to me with highlights including Gregory Jefferis’ talk on how the manipulation of specific interneurons modulates the response to pheromones in Drosophila and Stephen Goodwin’s on how dopaminergic and GABAergic neurons regulate male copulation also in the fly.

In addition, I had the opportunity of presenting my recent work in a poster session, on the second day of the conference. I received positive feedback and interest from other researchers, and was greatly honoured to be awarded the post-doc poster prize from the Genetics Society - it made the memories of this conference unforgettable.

Lisa Parts, University of Oxford

I had a chance to give a short talk as part of the Newly Tractable Systems session. My PhD project focuses on the molecular mechanisms and evolution of pesticide resistance using C. elegans as a model organism. Whilst pesticide resistance is a rising problem, the understanding of the early stages of resistance remains poor. Therefore this was an excellent opportunity to share my findings, and an invaluable experience that I greatly benefited from. Poster sessions, encompassing about 180 projects, were also held, creating the possibility to meet other researchers in my own field of study. I am truly grateful to the Genetics Society for presenting me with the opportunity to attend this Joint Meeting, thus enabling me to present my research to the scientific community and meet fellow students from all over the country.

Louise Cleal, University of Edinburgh

As a final year PhD student, this meeting was highly beneficial to me in several ways. For a significant proportion of the time, there were three talks occurring simultaneously, based around different themes, meaning there was a lot of choice. I attended a multitude of engaging talks and a number of additional medal lectures. I also presented a poster outlining my PhD project, aimed at understanding the molecular mechanisms underpinning the development of Congenital Diaphragmatic Hernia in mice with conditional deletion of the gene: Wnt1. The opening plenary lecture, presented by Professor Bonnie Bassler, discussed bacterial quorum sensing; the process of cell-cell communication in bacteria. Considering the ever-increasing global problem of antibiotic resistance, understanding such a process, which is fundamental in microbiology, is essential. Following on from this, Professor Marisa Bartolomei presented the Genetics Society Medal lecture on the epigenetic regulation of genomic imprinting, which is important in development and in many disease settings. The sheer diversity of the meeting was evident after just the first two talks. The highlight for me was undoubtedly the presentation of the Waddington Medal to Professor Bill Harris, followed by his highly entertaining talk entitled “Fate choice in the retina, Stalin is not involved”. Other presentations which really stood out for me included a humorous talk by Dr Eamonn Mallon discussing...
epigenetics in social insects, as well as an intriguing talk by PhD student, Bryony Leek, describing her work on X chromosome inactivation in Opossums.

Rachel Bonnington, University College London

As a developmental biologist, this meeting was the perfect opportunity to present my work investigating the cellular and genetic mechanisms that regulate a glia-to-neuron cell fate switch in C. elegans. I was able to gather valuable feedback on my work, and came away buzzing with ideas for new experiments I want to try, and new techniques that I want to apply to my own project.

The highlight of the conference for me was the Beddington Medal Lecture, awarded to Erik Clark for the best PhD thesis. In his thesis, Erik used a combination of modelling and experiments to better understand how the Drosophila pair-rule network generates the expression that lead to the patterning of segmental boundaries. This work reveals a previously unrecognised role for temporal information during spatial patterning, shedding new light upon the evolutionary relationship between the simultaneous, "long-germ" segmentation seen in Drosophila, and the sequential, "short-germ" mode of patterning seen in most other arthropods.

Highlights from the short talks included talks from Annick Sawala, Stephen Goodwin and Aranza Barrios on the development of sex-specific differences in the nervous system, as part of the Neurons, Networks and Behaviour session. I also enjoyed the fascinating Newly Tractable Systems session, in which the potential of using social insects as model systems to study epigenetics was discussed.

Out with the talks, my conversation with Aidan Maartens (manager of the Node) at the Roundtable Career Workshop really stoked my enthusiasm for science communication and public engagement. This is something that I now want to develop further during my career.

Rosalind Clifford, University of Leeds

This joint meeting provided an opportunity to step back from the intense focus of a PhD and be inspired by others’ stories. Indeed, one of the main things that struck me about the meeting was the friendly, community-like atmosphere. It really opened my eyes to some fascinating research from a diverse range of disciplines.

I gained some fascinating insight from the Epigenetics session, including a very absorbing talk about the impact of an imprinted foot-tally-expressed gene on maternal metabolism. In addition, at the Newly Tractable Systems session, I was introduced to epigenetic models I’d never considered, including oak tree growth rings, opossums, bumblebees, fire ants and Ciona.

For me, the highlight of the whole experience was the poster session near the end of the first day. It was thrilling to be able to discuss my own (very preliminary!) research in relation to their findings, and then return to my PhD supervisor with ideas of my own about how to direct my project next. It was a defining moment of my PhD and I must thank the Genetics Society for the assistance that led me to this. It was remarked upon at the plenary session that broad-spectrum conferences are becoming increasingly rare. This was sad to hear, because some of the most extraordinary research that I couldn’t wait to relay back to my colleagues was presented in talks I attended purely out of curiosity.

Yannie Chen, University of Leeds

I am a first-year PhD student, studying epigenetic chromatin modifications using Caenorhabditis elegans as a model system, for which I presented a poster. As such, I was mostly, but not exclusively, interested in the genetics topics in each session of the conference.

The talk by Rebecca Oakley (King’s College London) about intragenic CpG islands was interesting and relevant to my research, as R-loops require high GC skew, which are mainly found at CpG islands. She mentioned a method called epiCRISPR, to study epigenetic mechanisms which is mainly used for DNA methylation. This stuck in my head like an earworm, as methods to study epigenetics is limited and new tools can open gateways to uncharted areas. The Plenary session by Xiaowei Zhuang (Harvard University) about new super-resolution imaging also left a strong and long lasting impression. Her ultimate goal is to image single-cell transcriptomes using a method called MERRFISH (multiplex error robust FISH), which is able to identify the gene regulatory network and the spatial distribution of RNA in a single cell.

Overall, this conference, being my first conference, left a positive impression on me and reminded me how exciting the current science and future scientific progress is. I hope that by the end of my PhD I will be able to leave an impression to others through my research similar to the impression I received from this conference.

In addition to talks and lectures, there was also the opportunity to present research via the medium of poster presentation. All three societies awarded prizes, with the Genetics Society awarding a poster prize for the best overall poster, best student poster and best postdoc poster. The Genetics Society overall poster prize went to Alewo Idoko-Akoh of The Roslin Institute, University of Edinburgh. Mr Idoko-Akoh (pictured) was awarded The Genetics Society Junior Scientist Conference Grant (Scheme A) for his poster CXCR4 and c-Kit signalling are required for directed migration of chicken primordial germ cells through the chick embryonic vascular system. Mr. Alewo Idoko-Akoh is pictured with his PhD supervisor Dr. Mike McGrew and two members of The Genetics Society Committee - Dr. Douglas Verminnen and Dr. Kay Boulton.

The prize for best postdoc poster was awarded to Laura Molina-Garcia of University College London for her poster Sex learning in C. elegans. Both best student and best postdoc posters were awarded a cash prize of £100 (sponsored by BioMed Central).

Information on BSDB and BSCB prize winners can be found at: bsdb.org/2017/04/11/awards-spring17/.

The next Genetics Society meeting will be held on 23rd - 24th November 2017, at The Royal Society in London. The focus of this meeting will be The Human Genome in Healthcare. To register or submit an abstract, visit the Genetics Society website. The deadline for abstract submission is 25th September 2017. Junior scientists are eligible to apply for financial assistance from the Genetics Society to facilitate their attendance at the meeting. Further information on our grant schemes are provided on page 41 of the newsletter.
GENETICS SOCIETY SPONSORED EVENTS

27th Mammalian Genetics and Development Workshop

Professor Nicholas Greene, University College London

Over 70 delegates gathered for the one-day meeting consisting of 22 short talks, a higher number than in recent years. In keeping with tradition, the programme featured talks from PhD students and early career postdoctoral researchers, as well as technology talks.

Morning highlights included Sara Pozzi (UCL) presenting data on the function of Hex1 in the pre-implantation mammalian embryo, describing how it interacts with core factors to maintain pluripotency and self-renewal. Continuing with pluripotency, Harry Leitch (Imperial) described a model for induction of primordial germ cells and the role of Nanog in this process, through a very elegant series of in vivo genetic approaches.

This year we were treated to a very elegant series of in vivo approaches bringing primordial germ cells and the role of Nanog in this process, through a very elegant series of in vivo genetic approaches.

In the afternoon, Noreen Eder (Crick), who presented her data manipulating the expression of gene candidates that may be responsible for Branchio-Oto-Renal syndrome when mutated. As SIX1 mutations underlie this syndrome in some of the patients, genomic and in vivo approaches in chick where combined to identify targets of SIX1 and the group found that a large proportion of these mapped to deafness loci.

It was an incredible day of taking in pioneering and emerging data, which sparked exciting conversations. All participants had the opportunity to unwind, network and discuss further at the wine reception, during which the judges had a very tough time deciding the prizewinners.

The University of Cambridge’s Tessa Bertozzi (Cambridge), who presented the identification of gene candidates that may be responsible for Branchio-Oto-Renal syndrome when mutated. As SIX1 mutations underlie this syndrome in some of the patients, genomic and in vivo approaches in chick where combined to identify targets of SIX1 and the group found that a large proportion of these mapped to deafness loci.

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The UK Dictyostelium Meeting

Dr Jonathan Chubb, University College London

The UK Dictyostelium meeting returned to Central London for the first time in nearly 20 years with a very diverse programme, sampling the full range of biological interest that the organism, and its genetic and biochemical tractability, generates.

Much the heart and soul of Dictyostelium research over the past several decades has been the contribution of the organism to our understanding of cell motility and chemotaxis, where the organism is far easier to make progress with than the disease-relevant leukocytes that attempt to emulate it. The motility session did not disappoint, introducing mechanisms and models that may open the door to historically intractable problems, such as how neuronal growth cones can migrate in the correct direction during development. Linked to the experimental strength of the system in uncovering the mechanism underlying cell motility, is a rich vein of signal transduction research, where the signalling matmos is strongly reminiscent of more complex eukaryotes- contrasting yeast, where there is some molecular overlap, but major differences in regulatory connectivity. The current “hot” signalling molecule is inorganic polyphosphate or polyP, research into which began decades ago but has made little progress of any perturbation one makes, and c) the wholeness of the model from cell to development - one is understanding a complete functioning system, not an isolated cancer or stem cell in culture that has little hope of fulfilling the potential prescribed by evolution.

The array of high quality talks were exceptional, and the prizes for best presentations went to: a) its diversity- researchers of a single biological sphere of interest rarely get forced to consider so many diverse forms of biology beyond their favourite protein complex, b) its relative simplicity- which means it is far more likely one can interpret the effects of any perturbation one makes, and c) the wholeness of the model from cell to development - one is understanding a complete functioning system, not an isolated cancer or stem cell in culture that has little hope of fulfilling the potential prescribed by evolution.

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Whilst a number of experimental models may feel invigorated by recent advances in genome editing, for example, by finally allowing the analysis of targeted mutations in your favourite sick cancer cell line, the strength of Dictyostelium research continues to be: a) its diversity- researchers of a single biological sphere of interest rarely get forced to consider so many diverse forms of biology beyond their favourite protein complex, b) its relative simplicity- which means it is far more likely one can interpret the effects of any perturbation one makes, and c) the wholeness of the model from cell to development - one is understanding a complete functioning system, not an isolated cancer or stem cell in culture that has little hope of fulfilling the potential prescribed by evolution.

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British Meiosis Meeting
Dr Alexander Lorenz, University of Aberdeen

F or the 9th iteration of their annual meeting, 77 meiosis researchers from the United Kingdom and beyond descended on Dundee in the North-East of Scotland to present and discuss their most recent research. Delegates included British researchers, stakeholders from the crop breeding industry, and participants from France, Germany, and the Republic of Ireland.

The meeting comprised four sessions of talks covering meiotic recombination, chromosome organization, synaptonemal complex formation, chromosome segregation, checkpoint control, and cell division. Following the traditional ethos of the British Meiosis Meeting the talks, apart from the keynote lectures, were given by early career researchers. This year’s keynote speakers were Mathilde Grelon from the Institute Jean-Pierre Bourin in Versailles (France) and Bernard de Massy from the Institute of Human Genetics in Montpellier (France). Mathilde started the whole meeting presenting her recent story on a DNA topoisomerase VI-like complex which is important given the effects of Ebola, HIV and SARS and flies get viral infections in all the same ways as humans. Ben described the fundamental principles of how RNA viruses interact with their hosts is important given the effects of Ebola, HIV and SARS and flies get viral infections in all the same ways as humans.

Understanding the fundamental principles of how RNA viruses interact with their hosts is important given the effects of Ebola, HIV and SARS and flies get viral infections in all the same ways as humans.

The next talk was given by early career researchers. Luke Ramsay, James Hutton Institute, Dundee, started the meeting presenting research done in plants (Arabidopsis, Brassica). After a coffee break with an additional opportunity to discuss the posters, the final session, with 3 talks on ‘Synaptonemal Complex and Checkpoints’ (chaired by Mary Herbert, Newcastle University) included research on mouse spermatocytes and biophysical analysis of mammalian synaptonemal complex proteins. The meeting concluded with awards and prizes for the best talk which went to Kayleigh Wardell (Neale lab, University of Sussex; prize generously sponsored by Labtech) and the best poster to Rachael Barton (Marston Lab, University of Edinburgh).

Thanks to our amazing research community the 9th British Meiosis Meeting was extremely enjoyable, and indeed the Discovery Centre generously provided by the University of Dundee was the perfect venue for these two days of meiotic talks and poster sessions. We are extremely grateful to all the speakers from the James Hutton Institute, Dundee and the University of Dundee for their support before and during the meeting.

We would also like to thank all the students who gave talks, including those who were given the opportunity to present their work for the first time. The meeting was extremely enjoyable, attracting attendees from across the UK and indeed the Discovery Centre generously sponsored by Labtech provided a fantastic venue for these two days of meiotic meetings.

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British Neuroscience Festival
Silvia Paracchini, University of St Andrews

I am extremely grateful to the Genetics Society for sponsoring our symposium on language genetics during the BNA2017 conference. The aim of the symposium was to take the audience through the different levels of human genetics research: starting from the definition of the phenotype of interest until the dissection of the underlying biology. Our line-up included Prof Tim Bates (University of Edinburgh) who described the importance of careful planning and design for the success of genome-wide association studies in the context of complex phenotypes as in the case of language-related disorders. Dr Dianne Newbury (Oxford Brookes University) presented a fascinating account of how next generation sequencing approaches allowed resolving the genetics of a very specific backward speech disorder in one family. I described how genetic association studies are contributing to dissect the link between brain asymmetries and neurodevelopmental disorders and how follow-up studies in animal models can help to understand language biology. In particular, the newly established Bat1K Consortium will generate genomic data to study how language evolved. It was great to hear from the feedback that the audience appreciated particularly the logical flow of the presentations.

In addition to presenting our work and interacting with the audience, this meeting was an opportunity to reconnect and discuss in person with many colleagues and collaborators. The conference program itself was excellent. The public lectures and plenary sessions have been outstanding. For example, I was able for the first time to hear Mary Stocker speaking about her work that led to the award of the Nobel Prize. I felt privileged to be in the audience and could see for myself why she is The Queen of Neuroscience. I attended various symposia, both around specific topics as well as more generally science-related. Among the latter type we had our own BNA Brexit session with a discussion panel that included representatives of funding bodies and learned Societies. One message I took away from this session is that the scientific community has been relatively quiet in the pre-Brexit vote, but we can no longer afford to do that and it has become a necessity for us to engage more with the public. It was great to see that the BNA, in line with this, endorsed the March for Science held on 22nd April around the world.

The science presented at the ICLDR meeting will encompasses the full variety of themes and organisms which comprise of Developmental Biology, including evolution, genomics, genetics, the initiation of organogenesis, patterning, stem cell niches, regeneration, network modelling, mathematical biology.

30th European Congress for Arachnology

Date: 20-25 August 2017
Location: TBC

This meeting will cover topics in genetics, genomics, physiology, neuroscience, ecology, evolution, biodiversity, conservation and taxonomy.

15th International Conference on Pseudomonas

Date: 5-9 September 2017
Location: St George’s Hall, Liverpool

This meeting will cover topics in genetics, genomics, physiology, neuroscience, ecology, evolution, biodiversity, conservation and taxonomy.

Conservation of adaptive potential and functional diversity

Date: 7th - 8th September 2017
Location: University of Durham

This meeting will focus on the significant advances in the application of genomic methods to conservation issues, incorporating inference that provides a better understanding of evolutionary process and facilitates the conservation of adaptive genetic diversity.
Say it out loud: Communicating Your Science 2017

Jonathan Smith, University of Leicester

How can you give an engaging interview about your research on the radio? What makes a good story? How can you use comedy when talking about science to the public? These are just some of the questions discussed in this year’s Communicating Your Science workshop, which took place in April at Chicheley Hall.

Gathered at the beautiful grounds was a diverse group of researchers and industrial experts, including PhD students, postdocs, university engagement officers, podcasters, and authors. Our topics of research ranged from cancer, forensics and structural biology to the genetics of bat migration. What we all had in common, however, was a passion for communicating science to the public. Thus, academic and industrial experts provided us invaluable training on how to effectively share our research with the wider world outside of our lab.

What is your premise?

On the first day of the workshop, Professor Enrico Coen of the John Innes Centre told us how crucial storytelling is for effective communication. “Telling a lively, engaging story about your research is very effective for keeping people hooked,” he enthused. “Storytelling as a whole is wrongly overlooked and undervalued by the academic community.” This principle is relevant in both academic communications and public engagement, as humans in every walk of life all like to hear a good story.

For many researchers, distilling their entire project into a single, flowing story can be intimidating. However, Prof. Coen suggested a simple solution for this: “At every stage of the communication, ask yourselves: ‘What is the premise of my story?’”. To illustrate this point, we discussed the 1957 film Twelve Angry Men, which masterfully unravels a tense situation with a meaningful premise hidden within. In groups, we then performed a brief dramatic story. These activities all emphasised the importance of the premise, and of a natural logical flow in our presentations.

Always keen for laughs

On the second day of the workshop, the science comedian Helen Keen showed us the power of comedy in presenting science to the public. “Jokes in talks lighten up the mood and relax your audience,” she explained. “Humour reminds the audience that scientists are just normal people, with their own quirks and idiosyncrasies.” Applied with care, this form of storytelling can even work in academic presentations to other scientists; we all appreciate a good joke from time to time.

Our training in using comedy was extensive. Attendees were each given five minutes to make the others laugh, and everyone revealed their different styles of humour, ranging from song and dance to funny lab anecdotes. Furthermore, anyone interested in trying this out themselves can look at science comedy nights held by the Bright Club in locations across the UK.

Radio didn’t kill the science star

On the second day of the workshop, staff from the Naked Scientists podcast gave us vital training on interview skills for radio. They individually interviewed each of us about our research, teaching us tricks on how to control the flow of the interview. There were broadly two take home messages, as the podcasters explained: “First avoid any jargon; the interviewer will derail you by asking you to explain it”. And the second? “Right at the outset of the interview, say, in one sentence, what you are exploring in your research and letting us mix with others to consider podcasting in the future.

And so the story ends...

This workshop was an invaluable experience for everyone there, giving us vital training in presenting our research and letting us mix with others showing a similar passion for communicating your science. As we had been reminded time and again, this workshop did not just apply to public engagement, but also across the world of academia. I now go back to my lab bench thinking more about the premise of my work and how I can explain it most effectively to others. I’ve ordered a Tommy Cooper-esque fez too, ready for my next departmental presentation.
Sectional Interest Group Spotlight: 14th Annual UK Workshop on Archaea

Dr Tom Williams and Dr. Thorsten Allers

Since 2002, the archaeal community in the UK has held its annual workshop in January. It is convened at a different venue each year but has maintained the same format: an afternoon of talks by PhD students and young postdocs, a poster session and conference dinner, and a morning of talks. Since 2007, the UK Archaea workshop has been generously supported by the Genetics Society and is the annual meeting of the Archaeal Sectional Interest Group.

The 14th Annual UK Workshop on Archaea was held in January 2017 in the Life Sciences Building of the University of Bristol. The conference attracted a total of 41 attendees from UK and continental European laboratories. The programme of talks highlighted the research contributions of PhD and younger postdoctoral investigators in archaeal molecular biology, ecology and evolution. Compared to past years, the programme featured a slightly greater representation of archaeal ecology and evolution, perhaps due in part to the recent surge in interest in archaeal genomics, and of the discovery of the Lokiarchaeota and other evolutionarily important groups.

The meeting kicked off with a session focused on archaeal evolution, with talks on inferring a timescale for the deepest splits in the tree of life, comparative genomics of the “Asgard” Archaea (which includes Lokiarchaeum), and a report on the environmental diversity of marine Thaumarchaeota. After coffee, delegates heard two talks about the structural biology of the archaellum (the archaeal analogue of the bacterial flagellum), including the keynote lecture, which was delivered by Prof. Sonja-Verena Albers from the University of Freiburg.

The poster session was held on Thursday evening. Topics covered included genetic and biochemical analyses of cell surface structures, CRISPR/Cas, DNA replication and repair, transcription and non-coding RNAs. The archaeal halophiles and hyperthermophiles were well represented, in particular the workhorse models for archaeal molecular biology, Haloferax volcanii and Sulfolobus acidocaldarius.

Friday morning saw sessions on DNA replication in halophiles and on the evolution and mechanisms of prokaryotic immunity. The DNA replication talks included new insights into how Haloferax DNA replication can proceed in the absence of replication origins and the molecular biology of the halophilic replicative helicase.

The meeting concluded with two fascinating talks about the CRISPR/Cas system that approached the topic from differing perspectives: experimental evolution to study host-virus co-evolutionary dynamics, and molecular biology to unravel the detailed mechanisms of CRISPR/Cas adaptive immunity in S. solfataricus.

As in previous years, the conference provoked scientific debate and stimulated new collaborations. We are very grateful to the Genetics Society for their considerable support as well as to our industrial sponsors New England Biolabs and Electrolab.

The next UK Workshop on Archaea will be held in January 2018, when it will be hosted by Nick Robinson.

Join the online debate

Further to the website and newsletter, the Genetics Society has been engaging with its membership via the social media platforms LinkedIn, Twitter and Facebook. In order to ensure that all content on the groups are meaningful to you, both LinkedIn and Facebook groups are moderated. This means that when you join the group this needs to be formally approved, but as long as we can see you are active in a genetics related area this is not a problem. This prevents a lot of indiscriminate postings from online recruiters that have affected some of the Genetics related groups. As a member of the LinkedIn and Facebook groups you will be updated on our activities but you can also comment and add your own events.

linkedin.com/groups/Genetics-Society-UK-4574262
furthertheritter.com/pages/The-Genetics-Society/144832825530721
twitter.com/GenSocUK
TRAVEL GRANTS FOR JUNIOR SCIENTISTS

These reports are from Junior Scientists, who the Genetic Society has funded (up to £750) to attend non-Society genetics meetings. Further information on how to apply for these grants can be found in the Grant Schemes section of the newsletter or on the Genetics Society website.

The BNA Festival of Neuroscience 2017

Tulsi Patel . University of Nottingham

The British Neuroscience Association (BNA) held the biennial Festival of Neuroscience at the Birmingham ICC this April. With over 40 symposia across 12 scientific themes, just about every neuroscience topic or interest was covered so there was something for everyone. I had the opportunity to attend the meeting and present my poster entitled, ‘Investigating genetic variation in Alzheimer’s disease using whole-exome sequencing.’ The work is a series of living sculptures, each with an audio line and headphones attached to them. The audience were invited to listen in to the thoughts of family members affected by dementia.

Attending the conference was an amazing experience as there was so much variety in terms of research. I enjoyed hearing about work on other disorders and even found myself attending some talks on different strands of neuroscience altogether.

Programming and re-programming the brain

Ayman Alzu’bi . Newcastle University

Programming and re-programming the brain Conference (April 2017 Munich, Germany) was a meeting which aimed to facilitate scientific discussion between researchers scientists within the field of brain development, reprogramming and modeling. A large number of participants from all over the world attended this meeting.

The meeting provided an appropriate environment for researchers to meet and network with colleagues in the field. During these events many topics were discussed and covered (such as are modeling human brain development from pluripotent stem cells, programming and maintenance of cell identity in the CNS, development-inspired reprogramming of the brain, and deciphering CNS complexity with single-cell resolution). In addition to the very interesting talks presented from group leaders, the conference programs also included poster sessions in the field of in vivo and in vitro programming cell identity in the CNS.

My PhD research project is focussed on the differentiation pathways of human cortical GABAergic interneurons. At the meeting, I presented a poster with my recent findings titled COUP-TFI and COUP-TFII have distinct roles in arealisation of human cortical GABAergic interneurons. I greatly enjoyed the opportunity to receive feedback on my current research and to generate ideas for future works. I would like to thank the Genetic Society for giving me the chance to attend this meeting, and I would also like to thank the organizer for such interesting meeting which was quiet worthy and valuable for me.

TRAVEL GRANTS FOR JUNIOR SCIENTISTS

Gordon Research Seminar and Conference

Surangi Perera . University of Cambridge

In February 2017, I attended the Gordon Research Seminar and Gordon Research Conference on Neural Crest & Cranial Placodes in Ventura, CA, USA. For my PhD, I am studying the development of olfactory ensheathing cells which are derived from the neural crest and as such this seminar and conference was highly relevant to my research project. It provided me a fantastic opportunity to share and discuss my research, learn about some of the most recent advances in the field and network with peers and pioneers in the field. I was invited to give a talk at the Gordon Research Seminar (which is held specifically for students and postdocs) and presented a poster as well. The seminar provided a unique platform to share and discuss my research with peers and learn about my peers’ research. I greatly enjoyed these discussions with a diverse group of people studying different aspects of neural crest cells, and feel it helped broaden my perspectives. I also got invaluable feedback to further develop my research project in the final year of my PhD studies. Furthermore, the Career Developmental panel at the seminar where well-established scientists at diverse institutions talked about their career paths and provided advice for developing a career in the sciences was an extremely insightful session.

The Gordon Research Seminar was followed by the Gordon Research Conference which is known for promoting rich discussions and fostering a sense of community within specific fields. The conference encouraged the presentation of primarily new data that had not yet been published, so it provided a wonderful opportunity to learn about exciting new discoveries in the field. Attending the Gordon Research Seminar and Conference has greatly impacted my current (and possibly future) research work, and I am extremely grateful to the Genetics Society for awarding me a Junior Scientist Travel Grant to fund my travel expenses.

TRAVEL GRANTS FOR JUNIOR SCIENTISTS

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Association for Research in Otolaryngology (ARO) Midwinter meeting

Elisa Martelletti . King’s College London

My research project was selected as oral presentation and I had the amazing opportunity to present it in the Genetics session. I received positive comments from international scientists and I could discuss my research even after my talk because different researchers came to ask some extra questions.

From 11th-15th February I attended the 40th Association for Research in Otolaryngology (ARO) Midwinter meeting in Baltimore (Maryland, US). This is the major conference in the field, with over 1000 presentations and 2000 researchers presenting the state-of-the-art of hearing research.

I had the great opportunity to hear outstanding talks from scientists all around the world and discuss other people’s work during the poster sessions. I was extremely fascinated by the new available technologies for analysis on single cell, such as RNA-seq, Ribotag sequencing and even mass spectrometry. A really successful in vivo study for Usher syndrome was presented by Dr. Geleoc from Harvard University. Her group and her collaborators evaluated different way of delivery of exosomes oligonucleotides, targeting the known Type 1 Usher syndrome mutation, and they could rescue the phenotype in mice.

My research project was selected as oral presentation and I had the amazing opportunity to present it in the Genetics session. I received positive comments from international scientists and I could discuss my research even after my talk because different researchers came to ask some extra questions.

My research was selected as oral presentation and I had the amazing opportunity to present it in the Genetics session. I received positive comments from international scientists and I could discuss my research even after my talk because different researchers came to ask some extra questions.

At the end of April I travelled to Las Vegas to attend the Osteoarthritis Research Society International (OARSI) World Congress. This global forum for those involved in osteoarthritis research and treatment included featured speakers from a wide array of disciplines ranging from basic scientist and clinical investigators to bioengineers and orthopaedic surgeons.

The congress spanned 4 days and covered a variety of topics within the field, including Cartilage Biology, Biomechanics, Cartilage repair, Genetics and Epigenetics, Inflammation, Matrix and OA treatments, and this year due to popular demand a hands-on OA plenary session was also added. I was particularly fortunate that my abstract was selected for an oral presentation in the Matrix session, which enabled me to share my work and gain valuable feedback from a wide variety of people in the field.

The keynote address was given by Lindsay Hall from the University of East Anglia, on the Microbiome and its effects on disease, an increasingly hot topic in the osteoarthritis field. The talk away message was that the microbiota can be harnessed for therapeutic and biomarker development to improve human health in general, but that this can also be applied to osteoarthritis.

Of particular interest to me was a talk given by Katja Heinemeier of The Institute of Sports Medicine, Copenhagen, and was entitled, “Type II collagen; designed to last a lifetime?” Katja’s research involved using the 14C bomb-pulse method to evaluate collagen and GAG turnover rates. The 14C bomb-pulse method takes advantage of the high atmospheric levels of radiocarbon (14C) caused by the numerous nuclear bomb tests above ground in the 50’s and 60’s.

The levels have subsequently fallen, and the changing atmospheric levels of radiocarbon (14C), is reflected in all living organisms. Tissues that are constantly renewed will contain amounts of 14C close to the current atmospheric level of 14C, while tissues with very slow turnover will retain 14C from the years close to the formation of the tissue.

They were able to conclude that due to the high 14C levels, the collagen matrix of human cartilage is an essentially permanent structure with no significant replacement in adult life either in healthy or OA cartilage.

I would like to thank the Genetics Society for awarding me a junior scientist travel grant, giving me the opportunity to attend this meeting and present my work to such a diverse group of experts.

Selected as oral presentation and I had the amazing opportunity to present it in the Genetics session. I received positive comments from international scientists and I could discuss my research even after my talk because different researchers came to ask some extra questions.

Overall, attending the ARO meeting was an excellent opportunity to present my work to such a diverse group of experts. I was ready to crack on, feeling inspired, doing it. You leave the conference with a new spring in your step.

DGRC is a renowned international conference – the cream of the crop for Drosophila research. It is organised by the Genetics Society of America, and is host to over 150 platform presentations in a diverse range of Drosophila research, including the regulation of gene expression, chromatin and epigenetics and the evolution of developmental pathways. There are over a dozen plenary sessions, including keynote speaker Sean B. Carroll, training workshops, outreach and networking events.

I managed to get a talk slot by cancellation. I also opted to bring my poster along as well, since it was ready to go and they still had a poster slot booked for me.

I was lucky enough to attend the plenary talks of Virginia and Nitin during the conference, and to receive interest and feedback from leaders in the field was brilliant. This is something that struck me a lot whilst at DGRC, is that despite being a second year PhD student, I could talk to people who are by far my superior, and be treated as equals.

In the poster session after giving my talk, I was overwhelmed with the amount of people who made the effort to come and chat to me and ask more questions of what I had presented. Living in your PhD bubble, it can be easy to lose site of what you are doing and why you are doing it. You leave the conference ready to crack on, feeling inspired, with a new spring in your scientific step.
Keynote Symposiums on Genomic Instability and DNA repair

Dalia Tarantino . King’s College London

Our discussions have provided me with new insights into the future directions of my project, and into how our two laboratories could collaborate in the future.

The Keystone Symposia on Genomic Instability and DNA repair gathered worldwide experts to discuss fundamental and cutting-edge DNA replication and repair biology, at an unparalleled level of depth. With regards to my project, I have greatly benefited from the talks involving the roles of Fanconi Anemia proteins (i.e. FANC-D2) in conjunction with Translesion Synthesis polymerases (i.e. Pol eta, POLH) in DNA replication and replication stress.

I am currently investigating the DNA repair pathways causing synthetic sensitivity upon HORMAD1 expression, therefore high levels of synthetic sensitivity are present in breast cancer cells upon HORMAD1 expression, a gene recently shown to be a key regulator of genomic stability.

I am grateful for the opportunity to present a poster at the 50th popgroup meeting held at Churchill College, Cambridge University. This was my first time presenting my research outside of Australia, which was particularly important for me because the subject of my research is an endemic Australian bird. There is a paucity of evolutionary research on southern hemisphere birds, which may be affected by different evolutionary processes compared to northern hemisphere birds, so it was great to be able to introduce the Thick-billed Grasswren and talk about patterns affecting gene flow between two subspecies.

My talk was entitled Barriers to avian gene flow can create genetic diversification in parapatric subspecies. This study investigates patterns related to the maintenance of a hybrid zone between two arid zone subspecies. Historically, animal hybrid zones were not recognized as significant entities involved in speciation. Nowadays, cases that document animal hybrid zones are becoming more common and could be of particular importance in harsh environments where high genetic diversity may increase species persistence. My results show that the parapatric subspecies, which we predicted would interbreed, only had a small amount of gene flow between them. Barriers and patterns of gene flow were related to both ecological differences across the landscape (e.g. vegetation type) and behavioural differences (e.g. competitiveness) between subspecies.

Talks and posters included both empirical and theoretical research with a diverse range of topics such as the evolution of heterogametic sexes, evidence of inbreeding depression, the evolution of the gut microbiome related to changes in diet, genes related to sociality, and the peopling of the Americas.

There were a few stand out talks that were closely related to my own work. Adam Eyre-Walker showed there was little evidence for 1) mito-nuclear co-adaptation and 2) mito-nuclear discordance causing deleterious effects in hybrids. Hannes Svardal talked about a method for calculating reticulation scores, which are helpful for estimating time since hybridization following secondary contact:

There were many different perspectives of evolution and ecology represented at this popgroup meeting. Exposure to this research was a great opportunity for me to develop new ideas and expand my own research. Thank you to the Genetics Society for providing the opportunity to attend the 50th Population Genetics Group.
The evolution of host resistance mechanisms in North American house finches to mycoplasmal conjunctivitis

Daisy Gates, University of Exeter

Host populations can differ geographically and temporally in their ability respond to infection by a novel pathogen. The aim of our research is to explore the innate and adaptive immune changes that occur following infection by an emerging infectious disease, as it moves from epizootic outbreak to an endemic state within a well characterised avian study system.

Our study species is the wild passerine, the North American house finch (Haemorhous mexicanus). House finches suffer from a conjunctivitis and respiratory tract infection that is caused by the bacterial pathogen Mycoplasma gallisepticum (MG). MG jumped from domestic poultry to H. mexicanus in the mid-1990s. Following its emergence in the novel finch population, MG caused massive declines in house finch abundance, largely through blindness-associated predation or starvation. As a result, host resistance spread rapidly from standing genetic variation within only 12 years post exposure, but the precise immune mechanisms by which this was achieved are yet to be fully elucidated.

Some populations of house finches have remained unexposed to the infection in the Western United States (Arizona). This provides an opportunity for researching the reciprocal genetic changes that have occurred in MG and house finches as a result of exposure. We are utilising blood samples from birds originating from both disease-naïve and disease exposed host populations to investigate the evolutionary changes in hosts over twenty years post-outbreak. We take advantage of the fact that there remain disease-unexposed populations of house finches to test the immune processes that have mediated the spread of resistance.

In conjunction with comparative experimental infection, we intend to use enzyme linked immunosorbent assays (ELISA) to examine the relationship between antibody concentration, disease severity and immune gene expression. By combining measures of immune gene expression and antibody production, we will obtain a unique picture of the evolution of innate and adaptive responses to the novel pathogen. The data collected will also contribute to the production of a mathematical model that will be used to investigate co-evolutionary changes in host resistance and pathogen virulence over time.

This project has been facilitated by funding from the Genetics Society, as it has given me the opportunity to undertake essential training in the US working alongside Dr Molly Staley, who is an expert in the field and was instrumental in collecting the field samples to be used for this work. Whilst it was not possible to conduct additional sampling this year, the grant enabled me to travel to Chicago and gain an understanding of the field methods used to sample house finches and allowed me to work with Dr. Staley to optimize and run total bird IgY and MG-specific ELISAs at the endocrinology department of Brookfield zoo.

During my stay I enjoyed an unforgettable experience in learning techniques essential to my research. In order to practice with ELISA and learn about the breadth of its application, I observed Dr Staley collecting fecal samples from bottlenose dolphins (Tursiops truncatus) as part of a project at the zoo measuring their Immunoglobulin A (IgA) levels as an indicator of stress. I was taught how to optimize ELISAs for a range of sample types and target molecules. I ran IgA assays on sheep and chimpanzee fecal samples in order to familiarize myself with the process before discussing in depth the steps necessary to optimize assays for passerine species. Additionally, Dr Staley also taught me the best practice for maintaining feeders in order to trap birds for study and how best to standardize the way we diagnose the severity of mycoplasmal conjunctivitis with morphometric scaling to avoid the subjectivity caused by previously used methods of eye scoring.

With help from the Genetics Society, I am now able to return to the University of Exeter fully trained in ELISA techniques as well as a thorough knowledge of the fieldwork involved for this experiment and techniques applicable to other wild avian systems. Moreover, it enabled me to experience working in a zoo setting and the caveats of designing assays for different vertebrate species.

I would like to thank the Genetics Society for making this field and lab work possible, Dr Molly Staley for the training in my lab skills, my supervisors Dr Camille Bonneaud and Dr Mario Recker for their support and to all the staff at Brookfield zoo for being so accommodating.
Methodologies in statistical and quantitative genetics applied to psychiatry

Lauren Chessum, MRC Harwell Institute

I am a post-doctoral training fellow studying the auditory system & the genetic basis of hearing loss using mouse models. In February 2017, I undertook a short training placement in Dr Ronna Hertzano’s laboratory at the University of Maryland School of Medicine (USA). Dr Hertzano is leading clinician-scientist in the auditory field, with an established & successful research group based in the university’s BioPark facility.

During my visit, I was trained in carrying out posterior canal injections for viral-mediated gene delivery into the mouse inner ear. This consisted of initial demonstrations of the technique, followed by a comprehensive programme of supervised & independent practice. Currently, only a small number of labs in the auditory field have experience in this pioneering gene delivery protocol, so this was an extremely valuable opportunity. Importantly, the results gained from these experiments in the Hertzano lab will be incorporated into my first-author manuscript, which are hoping to submit for publication within the next few months.

In the future, I hope to share this specialist inner ear gene delivery technique with my colleagues at the MRC Harwell Institute. This will enable us to further study genes of interest & enhance our knowledge of the pathways & mechanisms underlying hearing loss.

In addition to working closely with members of the Hertzano lab, I also interacted with two other internationally-renowned auditory groups on-site at the Maryland BioPark, participating in group lab meetings & presenting my own research to the larger team. This not only enabled me to discuss ideas & receive feedback on my work, but it also helped me to build my research network & further strengthen our collaborative relationships with the teams at the University of Maryland.

Overall, this training placement was a wonderful opportunity that will ultimately enable me to enhance my research into the genes & mechanisms involved in hearing loss. I am very grateful to the Genetics Society for awarding me a Training Grant to support my visit.

In addition to working closely with members of the Hertzano lab, I also interacted with two other internationally-renowned auditory groups on-site at the Maryland BioPark, participating in group lab meetings & presenting my own research to the larger team.

Clinical genomics and next generation sequencing

Dr. Harsh Sheth, Newcastle University

The clinical genomics and next generation sequencing course is one of the most popular courses organised by the European Society of Human Genetics. This is the 30th year of the course, which delivers a combination of lectures, workshops and interactive sessions in the field of genomics and transcriptomics. The course is aimed at senior PhD students, postdocs, clinical laboratory scientists, medics and clinical geneticians.

The main focus of the course was to introduce and acclimatise us to these latest developments and gain insight into analysing large data. Topics for the morning lectures ranged from principles and concepts of Mendelian genetics, application of sequencing in Mendelian disorder diagnosis, therapy and prenatal diagnosis in the NGS era, complex mechanisms of disease, novel applications of NGS and large scale NGS projects.

Some of the highlights included talks from Prof. Han Brunner and Prof. Andrew Read on the combinations of genotype-phenotype correlations and methods of classical gene identification. Dr. Alexander Hoischen, Prof. Evan Eichler and Dr. John Tyson’s talk on novel applications of NGS and future NGS technologies. Prof. Sir John Burn’s talk on cancer diagnosis and results of his latest CAPP2 trial on chemoprevention of colorectal cancer using aspirin.

Prof. Nicholas Katsanis’s talk on oligogenic diseases and functional analysis of novel disease variants using zebrafish models. The afternoon workshops comprised of lively debates on the ethics of non-invasive prenatal testing: hands on experience at carrying out bioinformatics analysis of whole genome and exome sequence data from patients with autosomal dominant, autosomal recessive and cancer and; interactive discussions on the topics ranging from how to set up a sequencing lab to the sequencing technologies of the future. On the penultimate day, students were asked to present a poster on the topic they are currently working on.

My poster titled “Identification of mismatch repair deficient tumours using molecular inversion probe based sequencing assay of short mononucleotide repeats” was awarded first prize for the best poster and platform presentation. Overall, the course was a perfect blend of hands-on workshops with high quality lectures providing plenty of opportunities for gaining in-depth knowledge on the latest developments and applications of NGS technology.

Lastly, I would like to thank the Genetics Society for awarding me the training grant and I would like to thank the organisers for putting together this wonderful course.

In addition to working closely with members of the Hertzano lab, I also interacted with two other internationally-renowned auditory groups on-site at the Maryland BioPark, participating in group lab meetings & presenting my own research to the larger team.
Improving mouse models of Alzheimer’s disease: Characterisation of Amyloid precursor protein knock-in (APPKI) mice

Lisa Yu

Background

850,000 people in the UK today suffer from dementia of which Alzheimer’s disease (AD) is the most common form. This disease manifests by the progressive loss of cognitive functions initially presenting with memory deficits, and towards later stages also affecting motor functions. Pathologically, AD is characterised by two cardinal lesions: amyloid plaques extracellularly and neurofibrillary tangles formed of Tau (MAPT) within neurons which leads to neuronal death. There are currently no mouse models that recapitulate both of these disease features, which has caused a devastating block in these disease models, which has caused a devastating block in research. Generally, these models overexpress APP (Amyloid Precursor Protein) and PSEN1 (Psenenl-1) genes with mutations that are associated with early-onset disease. A microarray database was set up by the research group with which I was working, where the gene expression of around 15,000 genes of 5 different transgenic mouse lines was compared with age-matched wild-type mice. This database is available freely at www.mouseac.org.

However, very recently a new APP “knock-in” (APPKI) mouse was created by Takaomi Saido (RIKEN Institute, Japan), containing the Swedish, Iberian and the Arctic mutations found in families with early-onset AD. These mutations for this new model were inserted in the original mouse APP locus under the control of the endogenous promoter, which bypasses the artificial overexpression of APP, and allows expression of humanized APP in the correct cells and at the correct time.

AD Mouse model comparison

The project goal was to characterise the novel APPKI mouse model at genetic, protein and tissue levels, and evaluate against the traditional APP/PSEN1 transgenic mice characterised previously. Quantitative RT-PCR (qRT-PCR) was used to analyse gene expression in the cortex of APPKI mice at different stages of pathology. Genes were selected using the Mouseac database with criteria of gene expression decreased or increased by more than 20% and P<0.01 in both homogenous and heterogenous APP/PSEN1 mice. Expression of genes in different cell types within the brain were assessed using the Barres Brain RNA-seq project, by focussing on genes expressed predominantly in neurons and microglia.

Genes identified were Hes1, Thy1, Atoh1 and Lgtn. Genes previously studied in APP/PSEN1 mice Bdnf, Gfap, Cort, Faim2, Trem2 and Rab8b expression levels were also explored in the APPKI model. I designed new primers for some of the genes not previously tested in my lab using Primer3-Blast to identify specific primer sequences against the entire mouse genome. In parallel, to determine the protein level variations, I carried out western blots for GFAP and the PU.1 transcription factor. Immunohistochemistry on brain slices from mice using GFAP, IBA-1 and Ifg1-1 antibodies was also performed to visualise number and morphology of different cell types.

Result

Brain-derived neurotrophic factor (BDNF) has been previously found to have neuroprotective properties. Bdnf showed decreased expression in the 2-month old homozygous APP/PSEN1 mice in cortex and hippocampus at earliest stages. However, qRT-PCR results from the 2-month old APPKI cortex showed no significant variation of this gene. Thy1 cell surface antigen appears to be mostly expressed within neurons with increased levels in 2- and 4-month old APP/PSEN1 mice. My experiments with APPKI 2-month old cortex samples indicate a significant decrease in expression returning to normal expression at 4 months.

Recent evidence suggests that the triggering receptor expressed on myeloid cells 2 (TREM2) is associated with the immune system, particularly microglial cells, and inflammation that could be triggered by the build-up of plaques and tangles. In both mice models Trem2 expression in the cortex is reduced, particularly at advanced stages.

Protein levels of the glial fibrillary acidic protein (GFAP) in the APPKI model is increased, consistent with that of the APP/PSEN1 mice. In addition, the PU.1 transcription factor expressed by microglia was also shown to be elevated in both APPKI and APP/PSEN1 mice. Morphological alterations in astrocytes were also observed.

Conclusion

Early gene expression changes in neurons appear to be different between the APPKI and APP/PSEN1 mice suggesting that overexpression and transgenic insertion of APP and PSEN1 likely produce artefacts, and that the disease initiates differently in the APPKI mouse model. However, gene expression changes associated with microglia and astrocytes at later stages of disease appear to be similar for both the APPKI and APP/PSEN1 mice. Further studies will be conducted to characterise the APPKI model using microarrays to identify the drivers of pathology. The long-term goal is to work towards improved mouse models of AD that better mimic the human pathology.

I like to thank Dr Frances Edwards for giving me the opportunity to work in her lab. Dr Davis Shih’s help and support throughout my placement. I am also very grateful to the Genetics Society who funded my project.
Examining the localisation of asymmetric cell to cell interactions

Sophie Ng

Development is a complicated process. There are a number of different factors that can cause misregulation of normal development to cause a variety of different diseases, such as neural tube closure and heart defects. Recently, planar cell polarity has been identified as an important feature of normal development. Planar cell polarity refers to the polarity within the apical side of the epithelial plane. Planar cell polarity is a key factor required for correct cell migration. The polarisation allows the cells to know their orientation, in order for the cells to travel in the correct direction for convergent extension during gastrulation.

My project focused on one of the two different pathways for planar cell polarity, which is called the core protein complex pathway. This core protein complex consists of six proteins: strabismus, frizzled, flamingo, diego, dishevelled and prickled, which forms a complex on the apical side of the cell. Flamingo, strabismus and frizzled are transmembrane proteins, while dishevelled, prickled and diego are cytoplasmic proteins. The transmembrane proteins provide the majority of the stability within the complex. Past studies have demonstrated that flamingo and frizzled are more stable than flamingo and strabismus, and the removal of flamingo loses the entire stability of the complex. It is understood that the specific position of the proteins within the complex help cells determine their orientation by understanding which side will be proximal, distal, anterior and posterior. In addition, the components signal to each other to help organise the protein complex. However, it is not fully understood how this protein signalling occurs.

During my project clone boundaries were created on the wings of drosophila melanogaster, a common model organism for studying planar cell polarity. Clone boundaries are regions whereby the core protein complex was forced into a certain orientation. In addition, I conducted chromosomal crossover to remove components of the core complex. The objective of this project was to see the relationship between the removal of frizzled in the core protein complex and its affect on the stability of strabismus. Clone boundaries were created on the wings of drosophila melanogaster, a common model organism for studying planar cell polarity. Clone boundaries were created on the wings of drosophila melanogaster, a common model organism for studying planar cell polarity.

The objective of this project was to see the relationship between the removal of frizzled in the core protein complex and its affect on the stability of strabismus, along with the effect on the planar polarity of the wing. The effect of strabismus as an inner core protein has not been studied in detail, unlike other members of the core protein complex. However, it is not fully understood how this protein signalling occurs. During my project clone boundaries were created on the wings of drosophila melanogaster, a common model organism for studying planar cell polarity. Clone boundaries are regions whereby the core protein complex was forced into a certain orientation. In addition, I conducted chromosomal crossover to remove components of the core complex. The objective of this project was to see the relationship between the removal of frizzled in the core protein complex and its affect on the stability of strabismus.

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One-off Meeting Sponsorship

Purpose

Sponsorship of genetic research meetings not organised by the Genetics Society.

The Genetics Society receives several requests from members each year to sponsor meetings in the field of genetics. These meetings are usually one-off meetings with an ad hoc organising committee and may be partly sponsored by another Society. The guidelines below indicate a review process for applications and the conditions that must be met for the award of Genetics Society sponsorship.

Review of applications

1) Members may make applications at any time visiting the following website: http://gensoc.fluidreview.com/
2) The application will be circulated to the full committee for review. The review will cover suitability of the meeting for Genetics Society sponsorship and level of support requested.
3) The committee will be asked to respond within two weeks and the Society aims to respond to requests within four weeks.

Conditions of sponsorship

4) Several levels of sponsorship are possible: (a) single lecture: £200 (b) session: £500-1000 (c) major sponsor: £1500-2000.
5) Genetics Society sponsorship must be mentioned in all pre-meeting publicity (e.g. posters, flyers, website) and in the meeting programme. If the Genetics Society is the major sponsor the meeting should be advertised as a “Genetics Society-sponsored meeting”.
6) Details of the programme of the meeting and registration forms should be sent as far in advance as possible to theteam@genetics.org.uk for inclusion in the Society’s newsletter and on the website.
7) A short report on a meeting that receives sponsorship of £1000 or more, for possible publication in the newsletter and on the website, should be sent to theteam@genetics.org.uk within one month of the conference taking place.
8) Genetics Society sponsorship may be used at the organiser’s discretion, but budget travel and accommodation options should normally be insisted upon. Any unused grant should be returned to the Genetics Society. The Society will not be responsible for any losses incurred by the meeting organisers.
9) An invoice for the grant awarded should be submitted to theteam@genetics.org.uk. The grant may be claimed in advance of the meeting and no longer than one month after the meeting.
10) The meeting organisers agree to make details of how to apply for Genetics Society membership available to non-members attending the sponsored meeting. Meetings that receive maximum sponsorship will be expected to offer a discounted registration fee to Genetics Society members to encourage non-members to join the Society at the same time. New members may then attend at the discounted rate, once confirmation of their application for membership of the Genetics Society has been received from the Society’s Office.

To apply for any of our grant schemes, instructions and downloadable funding application forms are available from the drop down Funding tab on the Genetics Society website - www.genetics.org.uk
New Sectional Interest Groups

Purpose
Regular sponsorship of genetic research meetings on particular themes. Regular (e.g. annual) funding is available for genetics research communities who wish to run regular series of meetings. Current examples include Arabidopsis, the Population Genetics Group and the Zebrafish Forum.

Members may make applications for new Sectional Interest Groups at any time. Applications should be submitted on the GS Funding Application Form and emailed to theteam@genetics.org.uk using message subject ‘New Sectional Interest Group’ and your surname. The award of Genetics Society support will be subject to review of applications by the committee and subject to the following conditions.

1) The sponsorship of the Genetics Society must be mentioned in all pre-meeting publicity (e.g. posters, flyers, websites). It should also be acknowledged in the meeting programme booklet. It is understood that wherever possible, the meeting should be advertised as ‘A Genetics Society Meeting’, however, where the Society’s financial contribution support is only partial, and where this formula of words would conflict with the interests of other sponsors, it is acceptable for the meeting to be advertised as a ‘Genetics Society-Sponsored Meeting’.

2) Details of the programme of the meeting should be made available to all Genetics Society members via the Society’s newsletter, and an electronic copy should be sent as far in advance as possible to the newsletter editor, at the latest by the advertised copy date for the newsletter preceding the close of registrations for the meeting. The same details will appear on the Genetics Society website. This information should include the programme of speakers, the topics to be covered, plus details of how to register for the meeting.

3) A report on the meeting, once it has taken place, should be submitted for publication in the newsletter, which is the official record of the Society’s activities. This should be sent as soon as possible after the meeting to theteam@genetics.org.uk, and should include brief factual information about it (where and when it took place, how many people attended and so on), together with a summary of the main scientific issues covered.

4) Genetics Society funds may be used to support speaker travel, accommodation, publicity or any other direct meeting costs, at the organizers’ discretion. It is understood that budget travel and accommodation options will normally be insisted upon. Any unused funds should be returned to the Society. The Society will not be liable for any financial losses incurred by the meeting organizers. Any profits should be retained solely for the support of meeting costs, at the organizers’ discretion. It is understood that budget travel and accommodation options will normally be insisted upon. Any unused funds should be returned to the Society. The Society will not be liable for any financial losses incurred by the meeting organizers. Any profits should be retained solely for the support of meeting costs.

5) A written invoice for the agreed amount of Genetics Society sponsorship should be forwarded to theteam@genetics.org.uk, no later than one month after the meeting date. Funds may be claimed in advance of the meeting, as soon as the amount of support has been notified in writing.

6) Meeting organizers may levy a registration charge for attendance at the meeting as they see fit. However, it is understood that Genetics Society members will be offered a substantial discount, so as to encourage non-members wishing to attend to join the Society at the same time. The meeting organizers agree to make available to non-member registrants full details of how to apply for Genetics Society membership, such as appear on the website and in the newsletter, and may charge such persons the same registration fee as charged to members, upon confirmation from the Society’s Office that their application and remittance or direct debit mandate for membership fees has been received.

7) The meeting organizers are free to apply to other organizations for sponsorship of the meeting, as they see fit. However, organizations whose policies or practices conflict with those of the Genetics Society should not be approached. In cases of doubt, the officers of the Genetics Society should be consulted for advice.

How to apply:
- 1st day of February, May, August and November. The application must be accompanied by a supporting statement from the applicant’s supervisor or head of department, which must be uploaded via the online application form before the registration deadline of the meeting.
- Please visit the website https://gensoc.myreviewroom.com in time for one of the quarterly deadlines (1st day of February, May, August and November). The application must be accompanied by a supporting statement from the applicant’s supervisor or head of department, which must be uploaded via the online application form before the deadline.
- Other conditions: Recipients of these grants will be asked to write a short report that may be included in the newsletter. A maximum of one grant per individual per two years will be awarded.
Training Grants

**Purpose**
To support attendance at short training courses.

Grants of up to £1,000 are available to enable members to go on short training courses in the area of Genetics research. Eligible expenses include travel, accommodation, subsistence and tuition fees.

**How to apply:** Applications should be made online via the Genetics Society Grants application site. Deadlines are bi-monthly (1 February, 1 April, 1 June, 1 August, 1 October and 1 December). To apply please visit the website https://gensoc.myreviewroom.com.

**Closing date:** awards will be announced within two months of the closing date. A maximum of one Training Grant per individual per three years will be awarded.

Heredity Fieldwork Grants

**Purpose**
To support field-based genetic research and training.

Grants of up to £1,500 are available to cover the travel and accommodation costs associated with pursuing a field-based genetic research project or to visit another laboratory for training. The research field should be one from which results would typically be suitable for publication in the Society’s journal *Heredity*. The scheme is not intended to cover the costs of salaries for those engaged in fieldwork or training, or to fund attendance at conferences.

**How to apply:** Applications should be made online via the Genetics Society Grants application site. Deadlines are bi-monthly (1 February, 1 April, 1 June, 1 August, 1 October and 1 December). To apply please visit the website https://gensoc.myreviewroom.com.

A panel of members of the Genetics Society committee will review applications including both information on the student and the proposed project. Feedback on unsuccessful applications will not be provided. Awards will be announced within two months of the closing date.

**Other conditions:** Only one application from any research group will be admissible in any one year. Recipients of these grants will be asked to write a short report within two months of completion of the project that may be included in the newsletter. A maximum of one grant per individual per three years will be awarded.

Genes and Development Summer Studentships

**Purpose**
To support vacation research by undergraduate geneticists.

Grants of up to £2,350 are available to provide financial support for undergraduate students interested in gaining research experience in any area of genetics by carrying out a research project over the long vacation, usually prior to their final year.

Applications must be made by Principal Investigators at Universities or Research Institutes. The application must be for a named student. Studentships will only be awarded to students who have yet to complete their first degree i.e. those who will still be undergraduates during the long vacation when the studentship is undertaken. There are no restrictions concerning the nationality, and the student does not have to attend a UK university.

**How to apply:** there is one closing date of 31st March each year. The student’s tutor or equivalent must also send a reference. Undergraduate students who wish to do vacation research projects are encouraged to seek a PI to sponsor them and to develop a project application with the sponsor. Both the PI and the student involved must be members of the Genetics Society.

The studentship will consist of an award of £300 per week for up to 8 weeks to the student plus a grant of up to £750 to cover expenses incurred by the host laboratory. Both elements of cost must be justified. The award will be made to the host institution.

A panel of members of the Genetics Society committee will review applications including both information on the student and the proposed project. Feedback on unsuccessful applications will not be provided.

**Other conditions:** Recipients of these grants will be asked to write a short report within two months of completion of the project that may be included in the newsletter.
The Genetics Society

The Genetics Society was founded in 1919 and is one of the world’s first societies devoted to the study of the mechanisms of inheritance.

Aims
The Genetics Society was founded in 1919 and is one of the world’s first societies devoted to the study of the mechanisms of inheritance. Famous founder members included William Bateson, JBS Haldane and AW Sutton. Membership is open to anyone with an interest in genetical research or teaching, or in the practical breeding of plants and animals.

Meetings
The main annual event of the Society is the Spring Meeting. This has at least one major symposium theme with invited speakers, and a number of contributed papers and/or poster sessions.

One day mini-symposia are held during the year in different regions so that members from different catchment areas and specialist groups within the society can be informed about subjects of topical, local and specialist interest. Like the spring symposia these include papers both from local members and from invited speakers. One of these meetings always takes place in London in November.

Medals and Lectures
The Mendel Medal, named in honour of the founder of modern genetics, is usually given on alternative years at a Genetics Society Meeting by an internationally distinguished geneticist. The Society also awards the Genetics Society Medal, the Mary Lyon Medal, Balfour Lecture and JBS Haldane lecture on an annual basis. Winners of the Genetics Society Medal and Balfour lectures present their lecture at a Genetics Society Meeting.

International links
The Society has many overseas members and maintains links with genetics societies in other countries through the International Genetics Federation, the Federation of European Genetics Societies and through the International Union of Microbiological Societies.

Publications
The Society publishes two major international scientific journals: Heredity, concerned with cytogenetics, with ecological, evolutionary and bio-metrical genetics and also with plant and animal breeding; and Genes and Development, which is jointly owned with Cold Spring Harbor Laboratories and which is concerned with molecular and developmental aspects of genetics. A newsletter is sent out twice a year to inform members about meetings, symposia and other items of interest.

Specialist interests
Six specialist interest areas are covered by elected Committee Members: Gene Structure, Function and Regulation; Genomics; Cell & Developmental Genetics; Applied and Quantitative Genetics; Evolutionary, Ecological and Population Genetics; Corporate Genetics and Biotechnology. The Committee Members are responsible for ensuring that the various local and national meetings cover all organisms within the broad spectrum of our members’ interests.

Contacting the Genetics Society

Members and potential members can contact the Genetics Society membership team in the following ways:

By phone:
0203 793 7850

By email:
TheTeam@genetics.org.uk

By post:
The Genetics Society, c/o The Royal Society of Biology, Charles Darwin House, 12 Roger Street, London, WC1N 2JU

The Genetics Society offers a wide range of benefits to its members including:

• Access to generous grants
• Discounted rates for attendance at prestigious Genetics Society meetings
• A biannual newsletter via post
• Free online access to the Society’s journal Heredity

Thank you for your support!
Heredity has a new look: a new front cover every month!

We are accepting figures/pictures/photos from authors that have their articles accepted in the journal. Please contact the editorial office to receive the details!