

Gatsby Plant Science Summer School 2020

27th June – 1st July 2021

The Hawkhills, Easingwold, York*

"Brilliant speakers, amazing tutors, and a way to peek into the world of plant sciences!" 2020 participant

- **Hear from the UK's top scientists on global challenges and science's biggest questions**
- **Develop your skills for research, study & work**
- **Get inspiration and insight into future careers**

"It is an opportunity of a lifetime, such great fun, brilliant for your future career in biology", 2014 participant

"Life changing. If you're not sure about what you want to do this experience will be amazing for you, so enjoyable, it will shape the rest of my degree and academic career", 2019 participant

At the Gatsby Plant Science Summer School (GPSSS), each morning begins with a talk by a distinguished scientist, sharing how their research tackles the world's big questions and challenges. You'll discuss the lecture in small groups, led by an experienced academic tutor, before returning to question the speaker.

After lunch, you'll take part in science practicals designed to give you insights into new developments in the field. These include using confocal microscopes to see live cell development, seeing how pathologists are tackling the spread of disease, and how computer modelling shapes our understanding of developmental biology.

Over the week, you'll also learn how to put inspiration into action. You'll develop your careers skills, being coached by expert mentors on topics such as how to find work experience, how to get bursaries and studentships, how to make connections with scientists, and how to run a research project.

The social side definitely isn't forgotten - you'll meet fellow biosciences students from across the UK, making new friends in a lively but relaxed environment.

"I believe this will probably remain the single most important part of my academic life." 2017 participant

Grants and how to apply

This opportunity is entirely sponsored by the Gatsby Charitable Foundation, including all science teaching and equipment, all accommodation, and all food for the week - you only need to cover the cost of your travel. Accommodation is in single ensuite rooms. Grants towards travel costs are available for students on low incomes.

"Whether you love or hate plants, experience the GPSSS to have great fun, meet new people and broaden your horizons."
2020 participant

If you'd like to be considered for a place, contact the lecturer at your University known as your Gatsby Mentor, and let them know you're interested (see www.gatsbysummerschool.org.uk for the name of your Mentor). There are up to 80 student places, selected from 28 UK Universities and your mentor will nominate up to 8 end of first year (or second year for Scottish universities) undergraduate students from your University for a place on the 2021 course, of which 1 is guaranteed a place, all other places will be determined by the Gatsby Plant Science Education Programme (hosts of the GPSSS) from your applications. Don't be put off that it's competitive; it's worth telling your mentor if you're interested, as they may well think the GPSSS is suitable for you, they may also put other local opportunities your way too.

*Subject to change to an online alternative due to COVID 19 restrictions

The 2021 Programme

Lectures and tutorials

'Topological analysis of multicellular dynamics' Professor George Bassel, University of Warwick

'Ecological monitoring with citizen science' Dr Chantal Helm, University of Cambridge

'Three in the bed: coordinating early seed development' Dr Gwyneth Ingram, ENS de Lyon

3 more to be confirmed

See selected past years' lectures at <https://www.youtube.com/c/GatsbyPlantScienceEducationProgramme>

Practicals*

Cell Biology

Live-cell imaging using fluorescent reporter proteins is one of the central techniques in modern cell biology. In this workshop, you'll get your hands on a top-end research quality confocal microscope, followed by computer-based image analysis techniques. You'll meet young researchers working in this fast-moving area, and find out what excites them.

Development

Plants are mathematically beautiful! This workshop introduces you to the importance of computer modelling as a research tool for biologists. Designed for both total beginners and more experienced programmers, you'll relate patterns in living organisms to the underlying biological development processes.

Pathology

Find out how the UK protects the health of our forests, crops and environment by preventing the spread of pests and pathogens. You'll go out into the field to collect specimens of potentially invasive pests, before using high-tech kit for DNA testing. During the workshop, you'll speak to people working in the area about their experiences and what the work is really like.

Plant ID and Systematics

Whether you're a skilled ecologist or you can't tell a dandelion from a daffodil, the Plant ID practical will get you looking at plant families in new ways. Using a specially designed method, we'll do away with the traditional difficulties of using keys for taxonomy. By the end of the workshop, you'll be confident in using a key to identify families and you'll have tested your new skills in the field.

Careers

Throughout the GPSSS, you'll have the chance to meet people with a wide variety of careers in science – many of which you may never have heard of. You'll hear from people at all stages of their careers, hear their top tips for success and fulfilment, and get practical support with your next steps.

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