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Career profile
Anne

Name:
Dr Anne Bishop

Job title:
Janet Thornton Postdoctoral Research Fellow

What do I do:
I investigate gene expression and genome variation for bacteria that can give people diarrhoea.

My career highlights

- GCSEs: 8 subjects including double science
- A Levels: Biology, Chemistry, Maths
- University: M.Biochem (4 year degree)
- PhD: Human Cell Biology and Cancer Research
- Researcher working on bacteria, human cells and vaccines
- Career break, starting a family
- Teaching Associate for undergraduates in Biology
- Janet Thornton Postdoctoral Research Fellow

What do I enjoy most about my job?
When I find something new in my experiments and I know that, at that moment, I am the only person on the planet who has ever known that piece of information.

What does a typical day look like in my job?
No day is the same, it's wonderfully varied. I'm in-and-out of the lab setting things up and running experiments. At my computer designing new experiments, analysing data and making (hopefully informative and attractive) plots of the data, writing publications and meeting with colleagues.

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Career profile

Anne

Skills I use in my job :

Creativity
I communicate with children and families about science in a creative and inspiring atmosphere about my knowledge and career

Teamwork
Talking, listening and helping other researchers

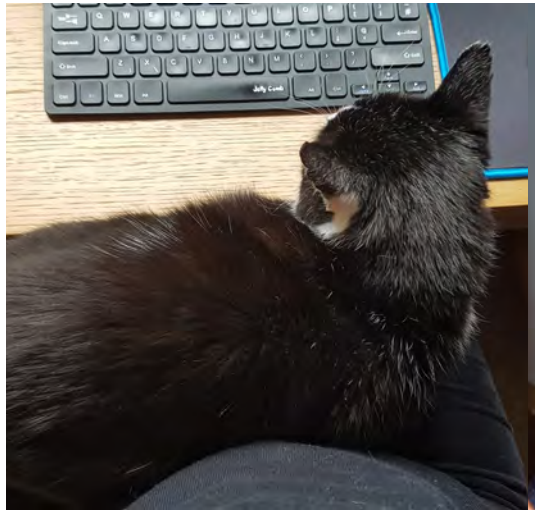
Communication
Presenting my work to the science community and writing publications

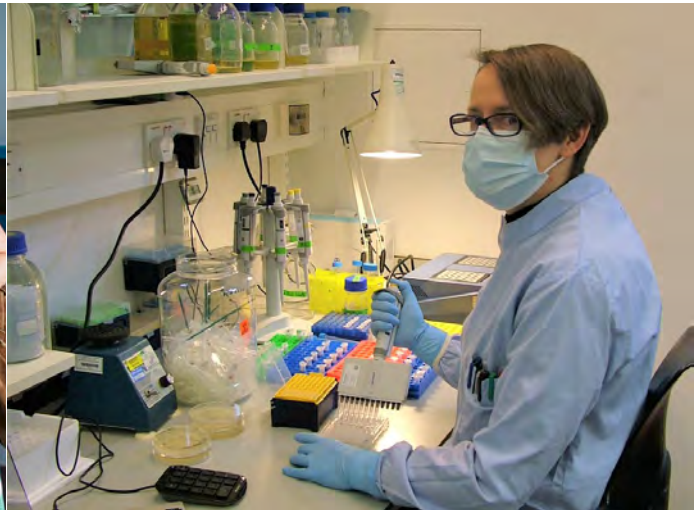
Coding
Using various software's to analyse and present large data sets

My top tips for students wanting a career in genomics:

- Curiosity is critical to being a good scientist.
- Keep asking questions. How do we know that? How does that work? What makes that happen? As a scientist you may be able to answer these questions

What hobbies do I have?
Singing in a choir, playing the clarinet with friends and attending classical, jazz and blues concerts. Reading and discussing literature with my book club. Chairperson of Nottingham Twins and Triplets Club (peer support charity for families with multiple birth children).





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Career profile

Bryony

Name:
Bryony Braschi

Job title:
Gene Nomenclature Advisor

What do I do:
I work as a scientific curator in a team that assigns names to genes.

My career highlights

- GCSEs: Geography, History, French, Design Technology
- A Levels: Biology, Chemistry, General Studies, Geography, French
- University: BSc Biochemistry including one year industrial placement at Pfizer
- PhD in Molecular Evolution
- Web Developer at the British Trust for Ornithology (BTO)
- 5 year career break when started a family
- Gene Nomenclature advisor

What do I enjoy most about my job?
It is varied and interesting work and I am always learning something new. I am trusted to use my own initiative and get on with my work and manage my own work time.

What parts of my job are challenging?
It is challenging when researchers do not agree with our recommendations. If we could start naming genes from the beginning again, some things might be done in a different way to the past.

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Career profile

Bryony

Skills I use in my job :

Concentration

A lot of my job involves reading scientific papers and understanding the data in them to help us assign useful, unique and functionally informative names to genes

Teamwork

Work with specialist advisors from research community when naming genes, and we sometimes write papers with co-authors from research groups

Communication

My job involves writing emails to discuss gene names with researchers all over the world

Organisation

We use tools allowing us to set reminders and store all correspondence with researchers so it can be easily searched

My top tips for students wanting a career in genomics:

Find something interesting about everything you work on. There is always something new to learn!

What hobbies do I have?

I love making silver jewellery and also enjoy embroidery, painting and reading as well as spending time with my family. I am also the current chair a few charities in my local area.

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Career profile

George

Name:
George

Job title:
Research Governance Manager

What do I do:
I make sure that the research taking place at the Wellcome Sanger Institute is ethical

My career highlights

- GCSEs: including History, Business Studies and Philosophy and Ethics
- A Levels: History, Politics, Economics and ICT
- BA (Hons) History at Nottingham Trent University
- Research Ethics Committee Assistant, Health Research Authority
- Research Ethics Committee Manager, Health Research Authority
- Research Governance Officer at Wellcome Sanger Institute
- Research Governance Manager at Wellcome Sanger institute

What do I enjoy most about my job?
I enjoy how varied it is, with every day posing new challenges and opportunities, but most of all I enjoy being able to say I help make a difference.

What was my favourite subject at school?
Having to say no is one of the most challenging things parts of the role. There are times in my role where I have to tell researchers that samples they want to use cannot be used for what they have in mind. Its often best to provide a solution rather than a problem, a different way forward.

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Career profile

George

Skills I use in my job :

Problem Solving
Providing advice and support to researchers on how best to obtain the samples they need for their work

Teamwork
Sharing workload amongst the team to enable balance and provide the best support we can to researchers

Communication
Writing an application for ethical approval in a way that communicates exactly what researchers want to do in plain English

Analytical
Analysing changes in the law in order to assess how it could impact internal policy

My top tips for students wanting a career in genomics:

- Do what you enjoy and you will find you are better at it and will find the time you need to practice.
- With the above in mind, occasionally put yourself out of your comfort zone and don't be afraid to try new things.
- Don't feel to have to be sure about your future, things have a way of working themselves out.

What's next in my career?
Building up my team and having more time to focus on policy and the changing regulatory environment

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Career profile
Jay

Name:
Jay Miles

Job title:
Trainee Clinical Bioinformatician

What do I do:
Learning to create and run computer programmes which process individual's genomic information. This can help identify causes of inherited diseases or cancer.

My career highlights

- GCSEs: Art, Music, History, German
- A Levels: Biology, Physics, Maths, Further Maths, German
- University: BSc degree in Biomedical Science
- Lab Assistant in an NHS Blood Sciences Lab
- University: MSc degree in Molecular Neuroscience
- PhD in Molecular and Cellular Biology
- NHS Scientist Training Programme in Clinical Bioinformatics
- 6 week Bioinformatics Internship at Wellcome Connecting Science

What do I enjoy most about my job?
I'm really happy that I can use science to contribute to providing the best healthcare service we can. Science has so much potential to improve people's lives, and we're constantly developing new ways to improve genomic medicine.

What parts of my job are challenging?
Before my current role, I didn't actually know anything about bioinformatics! Changing into a new field and being a complete novice again was pretty hard, but I love my job, and learning so many new skills has been really rewarding.

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Career profile

Jay

Skills I use in my job :

Analytical
I use bioinformatics to process and analyse biological data to extract useful information

Teamwork
Science is a collaborative process! Our team share and discuss ideas, and review each other's work

Coding
I use Python and Bash to create and run computer programmes which analyse genomic data

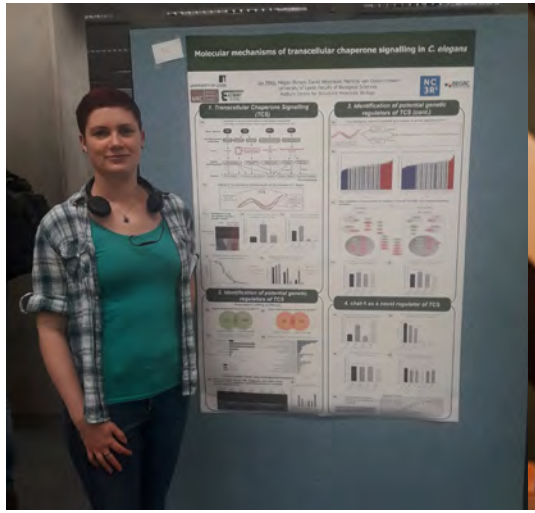
Problem Solving
I use knowledge of biology and computing to figure out how to get key information from complex data

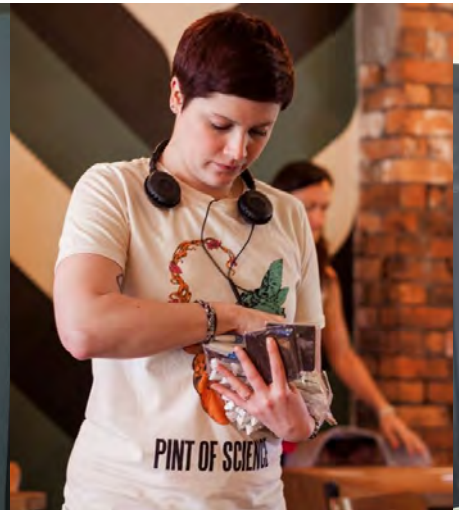
My top tips for students wanting a career in genomics:

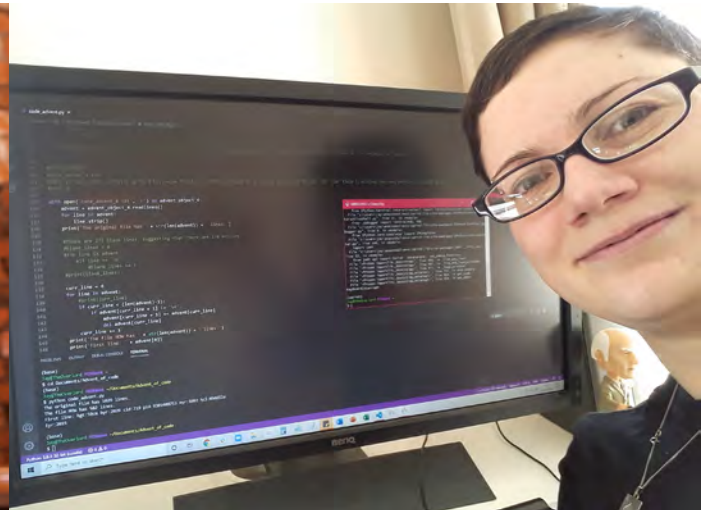
- Follow the things you enjoy doing!
- You don't have to do the same thing for your whole career, and having a broad range of experiences can give you new perspectives.
- Don't think you have to restrict yourself to focusing on one subject - the most exciting science often happens when people investigate how topics overlap.

What hobbies do I have?

I've always loved natural history, so I spend a lot of time out walking and looking for wildlife. I also like growing lots of plants (with mixed success), or playing around with various arts and crafts.







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Career profile

Lucy

Name:
Lucy Holland

Job title:
Laboratory Scientist Apprentice

What do I do:
I work in a laboratory on various cell lines and study towards a BSc degree in Applied Biosciences.

My career highlights

- Born in London
- GCSEs: Double Science, History, French, Economics
- A Levels: History, Sociology, Business, Extended Project
- University: BA (Hons) History
- Part-time Open University Certificate of Higher Education in Natural Sciences
- Laboratory Scientist apprentice and studying for a degree in Applied Biosciences

What does a typical day/week look like in my role?
In a typical week, I spend 4 days in the lab looking after cells, generating cell lines from patient tumour samples, and performing experiments with our special imaging microscope that can image cells growing in real-time. I spend 1 day studying online for my Applied Bioscience degree.

What's next in my career?
My next career milestone is completing my undergraduate degree. Gaining my degree will qualify me as a professional scientist, allowing me to apply for roles in cell biology research.

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Career profile

Lucy

Skills I use in my job :

Creativity
I design experiments to explore ideas and improve laboratory processes

Teamwork
I collaborate with colleagues to plan and perform experiments

Communication
I produce written experimental reports and present results to my team

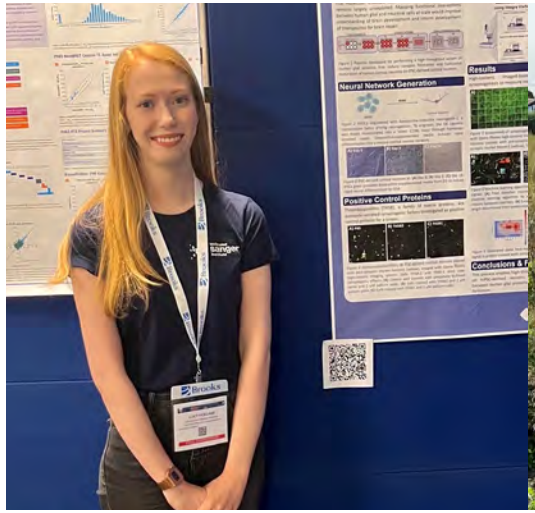
Organisation
Planning my week to ensure I can fit in all the laboratory work, university study, and team meetings

My top tips for students wanting a career in genomics:

- Maintain your curiosity
- Read beyond your curriculum, check out online courses, or even attend a hackathon
- Don't limit yourself to the jobs that exist now. Science is ever-changing, with entire new fields and industries emerging out of recent technological developments.

What hobbies do I have?

I love going on long walks in nature, particularly in the autumn when its mushroom foraging season. I also enjoy reading and baking.



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Career profile
Menna

Name:
Menna Ghouraba

Job title:
Advanced Research Assistant

What do I do:
I analyse human samples to try to understand what genetic variants, genes, and cells are responsible for human disease, inflammatory disease in particular.

My career highlights

- High school: science focused secondary diploma, Egypt
- University: Bachelor's degree in Pharmacy, Cairo
- Research and Development in a pharmaceutical company
- Clinical research assistant
- Teaching and research assistant
- Masters: Biotechnology, Cairo
- Advanced Research Assistant working on Human Genetics

What do I enjoy most about my job?
Seeing the outcome of my work translating into meaningful science that can actually change people's lives.

What does a typical day/week look like in my role?
I have a coffee, check my emails and attend meetings in the morning. Run experiments while socialising with colleagues. I read scientific papers to stay up to date with my field of work and be able to develop my project accordingly.

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Career profile

Menna

Skills I use in my job :

Observation
Observing all the details to perform a successful experiment and notice their results

Teamwork
Working among a huge multidisciplinary team to understand the scientific questions, design a solution and interpret the results

Problem solving
Troubleshooting and finding solution for unsuccessful experiments

Analytical
Understanding and dissecting the results of our experiments

My top tips for students wanting a career in genomics:

- Read a lot, do internships during your undergraduate years, and talk to many people.

What's next in my career?
Pursuing a PhD in cell and gene therapy.

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Career profile
Nneka

Name:
Nneka Anyanwu

Job title:
Head of Gene Editing

What do I do:
I lead a core facility that support the Sanger's world leading research by providing the expertise and resources required to deliver advanced genome engineering projects.

My career highlights

- GCSEs: Art, Drama, French, Geography, History
- A Levels: Psychology, Biology, Maths, Chemistry
- University: BSc Degree in Biochemistry
- University: Master's degree in Forensic Science
- PhD researching genes related to depression and bipolar disorder
- Break to Portugal and trained in circus skills
- Postdoc in understanding the genetic basis of down syndrome
- Head of Gene Editing

What do I enjoy most about my job?
Relationships. Having a great network around me makes work so much more fun. It helps when it comes to generating ideas and when you are having a stressful day you always have someone to turn to.

What hobbies do I have?
I like crafty and arty things, like sewing, jewellery making and painting. I also like being active, so practice yoga and do circus skills.

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Career profile

Nneka

Skills I use in my job :

Creativity

Designing experiments and troubleshooting problems. Also, to improve the ways we run the facility and department

Teamwork

I don't do any lab work anymore, so I rely on my team completely to deliver the science. Collaboration is also crucial in the development of new ideas and improving our department

Communication

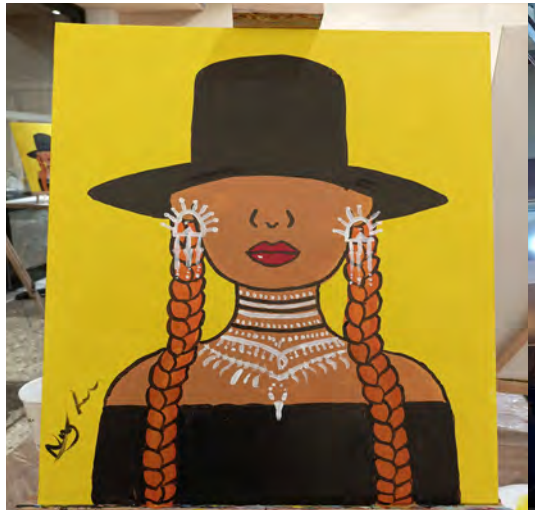
I regularly running meetings to share information amongst my team, colleagues and researchers

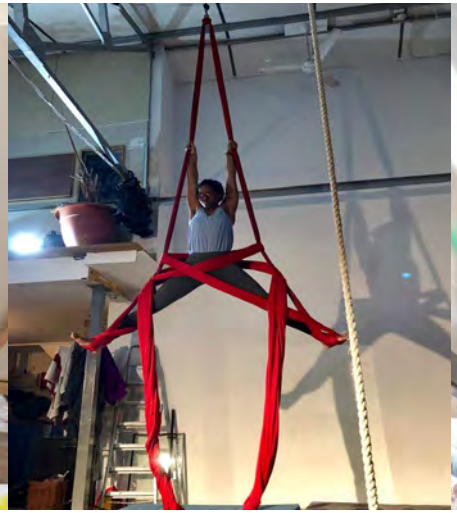
My top tips for students wanting a career in genomics:

There are lots of ways to get into genomics, explore your options and choose a path that works for you

What does a typical day/week look like in my role?

My current role is more strategic, I'll have meetings with researchers and my team about projects – designing experiments, giving updates and troubleshooting. Meetings with leadership to discuss how we are doing as a department and Institute. Attend many seminars and talks, to keep updated and out of genuine interest. The rest of the time I'll be on my computer trying to implement various ideas.





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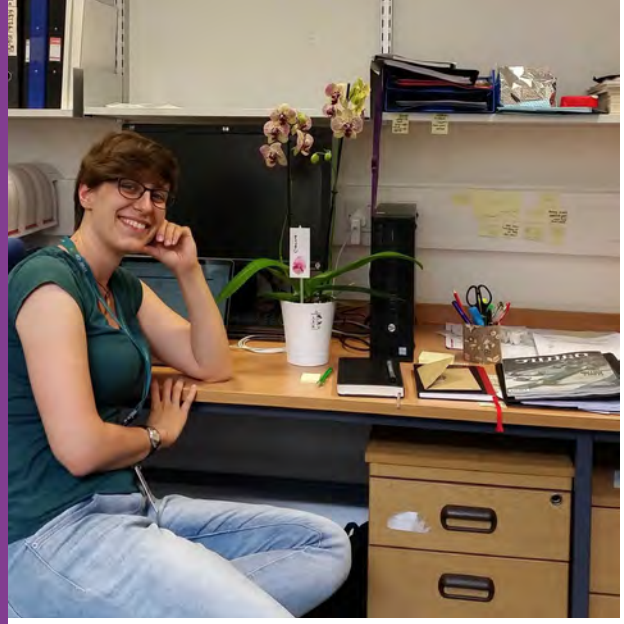
Career profile
Petra



Name:
Petra Korlević

Job title:
Staff Scientist

What do I do:
I work on getting DNA out of old museum insects, like disease transmitting mosquitoes. I also help people in the team with their own projects using my experience of sequencing DNA from really difficult samples.

My career highlights

- Born in Croatia
- Undergraduate and Master's Degree in Molecular Biology, Croatia
- PhD working on DNA from fossil bones and teeth, Germany
- Postdoc on malaria transmitting mosquitoes from museums, United Kingdom
- Staff Scientists helping with sequencing flying insects, United Kingdom

What do I enjoy most about my job?
Discovering new things that for a brief moment in time no one else in the world besides me knows (before I talk about them with people in my team).
Talking about science and research to people of all walks of life and backgrounds.

What parts of my job are challenging?
Sometimes there is just too many urgent things to finish at the same time, the multitasking can be mad!
Also writing down my research into manuscripts and publishing them as papers.

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Career profile

Petra

Skills I use in my job :

Creativity
Creating new protocols and tools, showcasing our scientific work with art

Teamwork
Making sure we are all on the same page regarding ongoing projects

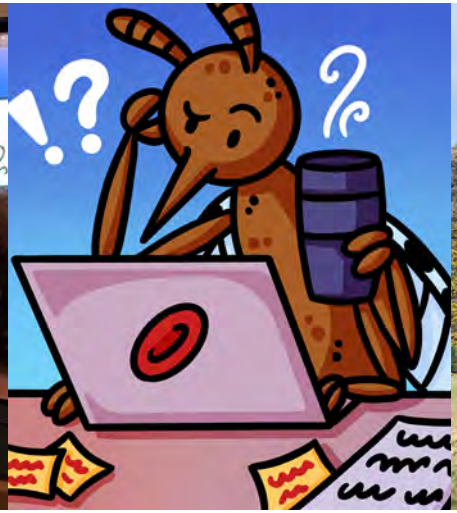
Problem solving
Making the protocols more efficient requires a lot of optimisation and tweaking

Organisation
Keeping track of everyone's projects and large scale projects in the group

My top tips for students wanting a career in genomics:

- Forget what you learned in school, DNA will often behave in very odd ways, just look at all the hybridizing species!
- Keep an eye out on all the odd places you can find DNA (like bones from 1 million year old mammoth teeth!)

What hobbies do I have?
Drawing, video games, and lately started getting more into gardening and embroidery.



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Career profile

Sasha

Name:
Sasha

Job title:
Genetic Counsellor

What do I do:
I work with patients who are affected by genetic conditions. I support them through the diagnosis of the condition and the chance of the condition reoccurring in their family.

My career highlights

- GCSEs: Double Award Science, French, Geography, Craft Design and Technology, Music
- A Levels: English Literature, Chemistry, Biology, AS Statistics
- University: BSc Degree in Biological sciences
- University: Masters degree in Science Communication
- Medical Information Officer
- University: Masters degree in Genetic Counselling
- Genetic Counsellor
- PhD in genomic research practice

What does a typical day/week look like in my role?
As a genetic counsellor I would spend a couple days a week in the clinic talking to patients. Many hours writing patient letters and attending meetings with other health care professionals.

What was my favourite subject at school?
Science and English, because I liked learning new things and being able to communicate them in creative ways.

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Career profile

Sasha

Skills I use in my job :

Problem solving:
Being diagnosed with a genetic condition in often requires deciding between various tests or treatments, my role helps me to assist patients make decisions

Teamwork
As a genetic counsellor you work alongside lots of different health professionals to provide the best care

Communication
I communicate complex genetic information to a wide range of people with various backgrounds

Listening
Patients I see can be effected in various ways by a genetic condition and are often faced with grief, loss, fear and confusion. It's important to listen to their needs to make the best decisions for their future

My top tips for students wanting a career in genomics:

- Find out which part of genetics makes you the most excited
- Be prepared to always learn new things
- Be open to change

What's next in my career?
Who knows! Finish PhD and figure it out then.

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Career profile
Sunil

Name:
Sunil (Sunny)

Job title:
Postdoctoral Scientist

What do I do:
I work on understanding malaria transmission in endemic areas using single cell transcriptomics. I travel to malaria prevalent regions to take samples and analyse in the lab.

My career highlights

- Born in India
- Junior College: Maths, Physics, Chemistry
- B.Tech in Biotechnology, India
- Master's Degree in Molecular Medicine, Switzerland
- Visiting Scientist working on super resolution microscopy, Germany
- PhD on a parasite called Toxoplasma gondii, Switzerland
- Postdoctoral Scientist, United Kingdom

What do I enjoy most about my job?
I work with data that seemingly doesn't make sense, but when it is processed with the right genomics tools and coding magic, it generates beautiful results and plots that gives you feeling of pieces of a puzzle coming together smoothly.

What parts of my job are challenging?
Sometimes you tend to crouch in one position for too long, scratching your head, trying to figure out why your piece of code is not doing what you want it to do.

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Career profile

Sunil

Skills I use in my job :

Creativity
I face many challenges daily when working in a lab or tackling data. Being creative helps me overcome these problems

Teamwork
Science progresses with teamwork. I feel lucky to work with talented scientists in my lab, who come from all around the world

Communication
Presenting my work to my team and collaborators. Engaging with students to increase working knowledge of sciences

Coding
I mostly use a programming language called R, and sometimes need to use python and bash scripting

My top tips for students wanting a career in genomics:

- Be curious. Look at things around you as data – analyse it
- Talk with people who have similar interests
- Being organized saves a lot of time and keeps you sane
- Persistence is key when working on seemingly tedious work

What's next in my career?
A career in public health, more focused on policy making




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Career profile

Tobi

Name:
Tobi Alegbe

Job title:
PhD student

What do I do:
I'm a student researcher using computer science and statistics to understand the genetic causes of inflammatory bowel diseases such as Crohn's and ulcerative colitis.

My career highlights

- Born in Northwest London
- GCSEs: Triple Science, History, Humanities, Food Technology, Drama
- A Levels: Philosophy, Biology, Chemistry, Physics
- University: Undergraduate integrated MSci Biological Sciences, UCL
- University: Postgraduate MSc Bioinformatics
- PhD Computational Genetics

What do I enjoy most about my job?
I love working on interesting problems, coming up with solutions and knowing the work I do can have a real impact on people's lives.

What was my favourite subject at school?
I really enjoyed biology because understanding life has always intrigued me. But I also loved philosophy because it really opened my eyes to thought-provoking problems.

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Career profile

Tobi

Skills I use in my job :

Coding
I am a ‘dry lab’ scientist so all my science is done via code

Teamwork
I work in a team of 20 scientists and collaboration is key to getting things done

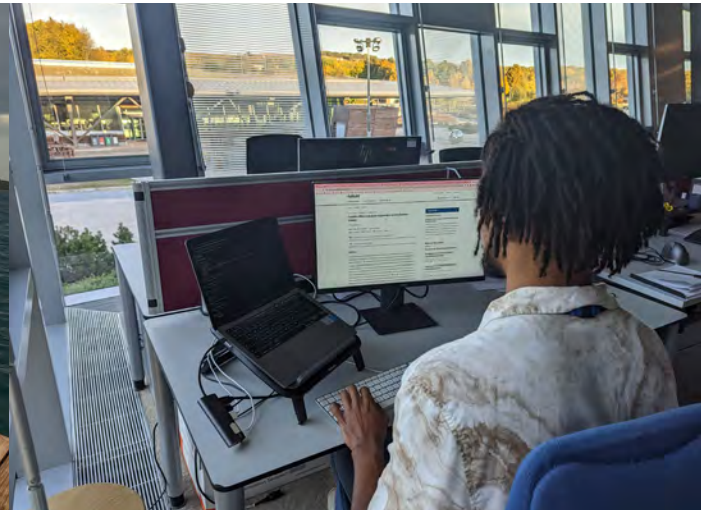
Problem solving
I am often confronted with challenging data problems

Observation
Visualising data and spotting patterns is key to what I do

My top tips for students wanting a career in genomics:

- Make sure you enjoy it – if you’re passionate the rest comes easier
- Being smart isn’t enough, you have to work hard too
- Never stop learning.

What hobbies do I have?
I like to swim, listen to audiobooks, play videogames and watch sports. I also love an adventure, whether that’s in the UK or abroad – going off the beaten track is always fun.



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Career profile

Tom

Name:
Tom Pemberton

Job title:
In-Country Training Assistant

What do I do:
I frequently travel to West Africa and South-East Asia to work with partner institutes to train and implement genomic surveillance lab protocols for malaria drug resistance.

My career highlights

- GCSEs: 8 subjects including double science
- A Levels: Biology, Chemistry, Physics, Math
- University: BSc Degree in Medical Microbiology with a year abroad
- Study a year abroad in USA during BSc degree: Human Cadaver Dissection, Virology, Statistics
- Volunteer work in Kenya
- University: MSc Degree in Epidemiology of Infectious Disease and Anti-microbial Resistance
- Genetic Technologist working on COVID-19
- In-Country Training Assistant working on Malaria

What parts of my job are challenging?
My job challenges me to adapt to new cultures and overcome unexpected issues faced in LMIC (Low-Middle Income Country) based labs. However, these are also the factors that keep it interesting.

What does a typical day look like in my job?
No week is ever really the same. Sometimes I will be in labs in other countries, sometimes I will be doing office work, such as data analysis, and sometimes I will be working in the lab at Wellcome Sanger Institute.

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Career profile

Tom

Skills I use in my job :

Problem Solving

Thinking on the spot to overcome issues in LMIC (Low-Middle Income Country) labs when things don't go to plan, such as power cuts

Teamwork

I work in a team dedicated to assisting our partners any way we can, in person or remote. Additionally, I work very closely with other scientists around the world.

Communication

Meeting new people from all over the world and adapting to new cultures

Analytical

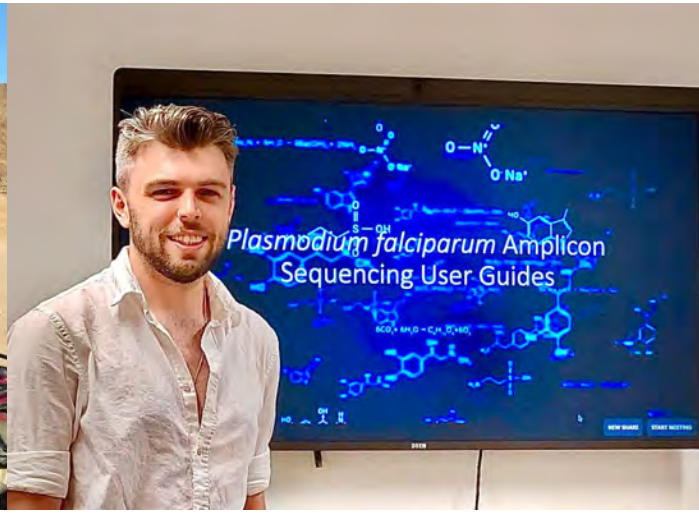
Analysis of data from our partners abroad

My top tips for students wanting a career in genomics:

- Don't settle for a career path and keep following your interests
- Science isn't always a linear career path, you never know where you will end up
- Take every opportunity you are offered, you never know where it may lead

What hobbies do I have?

I have always been adventurous and loved traveling the world, hence why I pursued a job which allows me to travel and work with malaria. However, day to day my hobbies include hiking, swimming, and gaming.



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