What did we want to do when we were at school? What do we do in a typical day? What would we like to say to our younger selves about starting out in a career?

Staff and students from the Institute of Metabolic Science in Cambridge share their thoughts...
Brian: Senior bioinformatician

When I was at school... I wanted to be a fireman, but that was when I was still in the kindergarten.

What I like best about my job is that... I can meet a lot of smart people, and I can play with many powerful computers. All for good science, of course!

Before I worked in the IMS... I was supposed to spend 3 years in Cambridge for my PhD and then head back to Hong Kong. But then I stayed on to take up a bioinformatics job at a microarray facility at the Cambridge Biomedical Research Centre in 2009, and joined the Yeo laboratory at the IMS in 2011.

The most important qualities I need to do my job are... to know how to communicate with people from different disciplines, as I have to explain complex mathematical/computational concepts to biologists and vice versa to computer scientists. I remember I had to spend 15 minutes explaining what a genome is and why it is important to study at a computer science conference.

In a typical day... I always have a pile of emails to clear every morning. Then I’ll get on to the supercomputer to see if I have any new data, and to “submit” computationally intensive jobs so they will get run during the day. After that I’ll be either doing more bioinformatics analyses on my local workstation, or supervising people in the lab.

What I’d like to say to my younger self... don’t bother too much about the initial pay but invest time (and even money) so that you could find something you really want to do, something that you’ll really enjoy, as a career.

The Wellcome Trust—MRC Institute of Metabolic Science is based at the Cambridge Biomedical Campus and is close to Addenbrooke’s hospital.

The Institute is a joint venture between the University of Cambridge, The Medical Research Council (MRC), Cambridge University NHS Hospitals Trust and Wellcome.
Amy: PhD student

When I was at school... I really didn’t know what I wanted to do! I was keen on the sciences and maths, but had no idea what I would do with these subjects or what I could do with these subjects.

What I like best about my job is that... the freedom you have to research topics that really interest you. That’s the best part about doing a PhD.

Before I worked in the IMS... I studied for a broad and interdisciplinary degree (Human Sciences) at university, mostly because I wanted to keep my options open. I then went on to do a Masters in Nutrition for Global Health. I was interested in people and how to make them healthier, but not through treatment - through a better environment and better lifestyle choices! I then worked for a science journal for a couple of years, where I expanded my knowledge of research and academia from the ‘other side’ before returning to Public Health by doing a PhD.

The most important qualities I need to do my job are... patience and flexibility. There will be many occasions when things don’t go to plan or there are unavoidable delays. Learning to work around these obstacles is crucial!

In a typical day... the first year of my PhD has involved a lot of reading and planning – familiarising myself with other people’s work, establishing connections with other researchers for collaboration, applying for funding, and of course, the ‘real’ work, which usually involves data analysis and epidemiology!

What I’d like to say to my younger self... be proactive in working out what you like and what you don’t like – try different things and be open to opportunities that come your way!

Esther: Research nurse

When I was at school... I was as confused as ever, just like some of you, though all my life I have been studying. I thought about being a doctor or a lawyer, but eventually decided to train to be a nurse, though I always wanted to be involved in research.

What I like best about my job is that... it involves seeing research study participants every day, doing clinical measurements and making sure they are safe throughout their time with us. Although I may seem to be doing the same thing every day, what interests me in the job is meeting different kinds of people and how they each behave.

Before I worked in the IMS... I started in a School of Nursing in Nigeria, then to School of Midwifery, before completing my BSc Nursing, and then gained a Masters and Ph.D. in Educational Evaluation from the University of Ibadan in Nigeria. I came to the UK to study for another Masters degree in Advanced Nursing Practice from the University of Nottingham. I then worked as a staff nurse but when I saw the advert for a research nurse in the IMS I was so excited, I decided to apply and I got the job.

The most important qualities I need to do my job are... Intelligence and knowledge, empathy, compassion, sympathy, hard work, honesty, patience, tolerance, caring and integrity.

What I’d like to say to my younger self... the world is at your feet; make sure you choose your career wisely. Do not be pushed into doing what you don’t like. Have a mentor who you know can guide you through your choice but don’t let him or her dictate for you, make up your own mind on what you want to be in future and you work hard towards achieving it.
**Nita: Medical Research Council**  
Programme Leader & Professor of population health & nutrition

When I was at school I wanted... to be a doctor – the first in my family.

What I like best about my job is that... I can work towards the prevention of serious medical conditions I like type 2 diabetes. I find my job exciting because I learn new things all the time – the more research you do, the more you realise how much we still do not know.

Before I worked in the IMS... I qualified as a doctor before realising I was interested in doing medical research. I was fortunate to be able to do a Masters and a PhD (doctorate) in clinical epidemiology at the London School of Hygiene & Tropical Medicine. I learned about studying populations, which is different to the work you do as a clinical doctor where you see individual patients. It was a natural progression to train in public health medicine, so I transferred to Cambridge and over the last 12 years I have worked my way up from being a postdoctoral researcher to a Programme Leader.

In a typical day...from hour to hour I can be doing different things. For instance, I manage research projects and collaborations that involve scientists from different countries, write scientific papers, raise funds for research, supervise PhD students and postdoctoral fellows, teach postgraduate students and supervise public health trainees, give talks at conferences, do media interviews, review scientific papers and think of new research ideas. And when not doing that, I also serve in advisory roles with different national or international committees such as Diabetes UK and International Diabetes Federation. There is never a dull moment!

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**Jane: Public Engagement Associate**

When I was at school... I had no idea what I wanted to do. At all!

What I like best about my job is that... my job is usually not the same 2 days running – that’s important to me. Also I get to meet a lot of different people all the time and I find that really interesting.

Before I worked in the IMS... I worked for a bank and found it too boring so I went to work as a lab assistant. This was much more fun and I felt inspired to study for a biology degree part-time, went on to do a full-time PhD and then continued for a bit working as a researcher. For me, research work could be lonely and the projects were very long-term so for the last 15 years I’ve been doing work that’s related to research but gives me the variety and people-contact that I enjoy.

The most important qualities I need to do my job are...to be organised, creative and resilient (because I’m always trying to get people to do things and they don’t always say yes!) Having a background in biology really helps.

In a typical day...there’s not really a typical day for me but when I wrote this I was recruiting volunteers for the Cambridge Big Biology Day, working on our Public Engagement strategy and planning a training session for researchers.

What I’d like to say to my younger self...Always choose what interests you not what you think you ought to go for. And be open to change along the way.
Steph: PhD student

When I was at school... I didn’t know what I wanted to do, but I knew I liked biology and chemistry so picked those subjects.

What I like best about my job is... finding out new things about how cells work. I like problem solving, so I enjoy planning experiments that will show me a small part of the picture and then getting the data together and trying to work out what is going on in cells.

Before I worked in the IMS... I knew I wanted to do a PhD because I love research, but I didn’t know exactly what I wanted to research. The MRL has a Wellcome-funded PhD programme which includes a year of rotations to try different labs, so I applied and now I am working in an area I hadn’t even heard of before coming here: unconventional protein secretion.

The most important qualities I need to do my job are... to be excited by research – sometimes experiments don’t work and you need the motivation of wanting to know the answer!

In a typical day... there is no real typical day, but most days involve some lab work and some writing up. Last week I prepared a new gene construct, so PCR, a transformation so I could grow the construct in bacteria, and then a DNA purification. Then next week I will be able to use the construct in my experiments.

What I’d like to say to my younger self about starting out in a career... I feel like I am still starting out in my career! Every time I have come to make a decision about what to do next, whether it was A levels, university courses or choosing the PhD, I have chosen the thing I have been most interested in. This seems to have worked well so far!

Yue: postdoctoral fellow

When I was at school... I wanted to be the president of China, LOL.

What I like best about my job is that... it’s about creating knowledge and discovering things that no one has an answer for yet.

Before I worked in the IMS... after high school in China, I had a chance to continue my undergraduate and master’s degree in Lyon, France in a top engineering university. In my 3rd year in France, I entered the bioinformatics department as I did not like all the other departments. At the end of the 5th year, every student was required to do an end-of-study internship when I decided to come to Cambridge to do some research. I did my intern in the MRC-Human Nutrition Research Unit and met my current boss in the IMS. I asked if I could do a PhD degree with him and he said ‘why not’. That’s how I ended up here today – I just finished my PhD degree and continued to work as a post-doc research associate.

The most important qualities I need to do my job are... to be organised, creative and hard-working.

In a typical day... I usually start by sitting in front of my desktop from 9.30 am and do my research which involves data processing, data analysis, mathematical modelling, computer programming, writing scientific papers, writing emails to colleagues and supervisors etc. I usually finish work at about 6 pm.

What I’d like to say to my younger self... do your best at everything so that you are prepared for all the potential opportunities that would come to you. If you are prepared, then you can choose the best and the best would also choose you.
Samantha: Research Associate

When I was at school I wanted to be... a veterinarian or a medic.

What I like best about my job is... how intellectually stimulating it is. There is always something new to learn and new to discover and there are plenty of opportunities to work with world-class researchers for the end goal of improving public health.

Before I worked in the IMS... after completing my undergraduate degree, I was deciding between a medical or a research career. A few key academic mentors inspired me to pursue research and as a result I went on to complete my masters and doctoral degrees in epidemiology. I joined the IMS after completing my doctoral training and doing some post-doctoral work. My research has given me the opportunity to work both in clinical settings as well as with research teams that focus on analysing large population-level datasets. For me, my job is a perfect mix between research and medicine.

The most important qualities I need to do my job are... being organised, attentive to detail, curious and determined. Having a strong background in statistics and computer programming is very helpful.

A typical day... would involve a mix of analysing data, writing original research articles, meeting with other researchers and/or key stakeholders, mentoring/teaching students, reading up on the latest research developments, and collaborating with other researchers on their on-going projects.

What I’d like to say to my younger self ...reaching your goal is much less about “smarts” and much more about persistence, determination, and hard work.

Greg: Senior Research Laboratory Technician

When I was at school I wanted to be... a pyro-technician (firework display and demolition using explosives).

What I like best about my job is... that it’s challenging and involves people and technology. The main thing is working with and purchasing the latest scientific technologies, then playing with them.

Before I worked in the IMS... after Sixth Form College I worked as a technician at the Sanger Institute on the Human Genome. I moved to another Gemone project at the HGMP-MRC. After which I move to a Genetrap project located back at the Sanger Institute, all roles being at technical level. I travelled the world for 18 months then found my current role, not knowing where it would take me.

The most important qualities I need to do my job are... to be able to meet people’s needs and expectations, while managing your own. Taking time to discuss an issue/topic in person can enlighten most situations; email isn’t always the best medium for communication, pick the correct one i.e. Communication skills.

In a typical day I... train researchers to use various microscopes for imaging tissues and cells. Training them to use analysis software as well. Negotiate pricing on new equipment purchases.

What I’d like to say to my younger self about starting out in a career... work harder, forget about partying all the time and hone your knowledge and skills.