Mothers in Science

64 ways to have it all

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The aim of this book is to illustrate, graphically, that it is perfectly possible to combine a successful and fulfilling career in research science with motherhood, and that there are no rules about how to do this. On each page you will find a timeline showing on one side, the career path of a research group leader in academic science, and on the other side, important events in her family life. Each contributor has also provided a brief text about their research and about how they have combined their career and family commitments.

This project was funded by a Rosalind Franklin Award from the Royal Society

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Foreword

It is well known that women are under-represented in careers in science. In academia, considerable attention has been focused on the paucity of women at lecturer level, and the even more lamentable state of affairs at more senior levels. The academic career path has a long apprenticeship. Typically there is an undergraduate degree, followed by a PhD, then some post-doctoral research contracts and research fellowships, and then finally a more stable lectureship or permanent research leader position, with promotion on up the ladder to follow.

A major crunch point for women comes at the appointment to lectureships, which are scarce, but subsequent promotion also seems to be problematic, leading to the metaphor of the leaky pipeline with the under-representation of women increasing at every career stage. Official statistics for the academic year 2005/06 show 23% of lecturers, 13% of senior lecturers and readers and just 7% of professors in science subjects are women. The figures are gradually improving, but none the less, they are not good, and much hand wringing has ensued. It is easy to find analyses about why it is so hard for women to succeed in academic science. Many contributory factors have been convincingly identified. Frequent among them are the highly competitive atmosphere of research science and the difficulty in combining a demanding job with family commitments.

These analyses are important. They can help to define the issues more precisely and to suggest measures to improve the situation. However, they have another, less positive effect. If aspiring women scientists are always reading about how difficult it is to succeed, is it any wonder that they opt for alternative career paths? I have often spoken to young women scientists who accept as fact that it is almost impossible to combine a career in academic science with motherhood, and if it is to be attempted at all, there are strict rules about how to do it.

These rules are part of a much wider mythology among scientists of both genders at the PhD and post-doctoral stages in their careers. The myths bubble up from the combination of two aspects of the academic science environment. First, a quick look at the numbers immediately shows that there are far fewer lectureship positions than qualified candidates to fill them. Second, the mentors of early career researchers are academic scientists who have successfully made the transition to lectureships and beyond. These people are usually extremely enthusiastic about their work (see below) and can't imagine that anyone would want to do anything else. Indeed many of them assume that if you end up in any other career it must be because you failed to get a lectureship.

This attitude is ridiculous. There are many fulfilling and exciting careers for those with a research science training, both inside and outside academia, of which an academic lectureship/research group leader position is just one. This combination of strong competition for lectureships coupled with a prevailing attitude that they are the only job worth having has an extremely damaging effect. Superstitions about what you must do to succeed abound. In terms of motherhood, the usual idea is that if you have children before you get your lectureship you might as well forget it. This is patently untrue, however it is a widely held belief.

The myths discourage women, but I think the 'win-a-lectureship-or-fail' attitude is much more damaging than just that. Given the many career options available to research scientists, it creates deep and unnecessary anxiety, and men and women on average respond differently to this anxiety. Men tend to fight to avoid perceived failure, whilst women tend to sidestep to avoid the perceived need for aggressive competition. Put crudely, men are too scared to opt out, women are too scared to opt in. This leaves both genders in careers that may not be the best for them.

To solve this problem early career research scientists need to be freed to make the decisions right for them. There are clearly two parts to balancing this equation. On the one hand, all researchers must receive advice, support and encouragement to identify and work towards whatever career path they prefer. And on the other hand, the myths about the trials and tribulations of the academic career path must be dispelled. This book is a specific contribution to this latter effort.

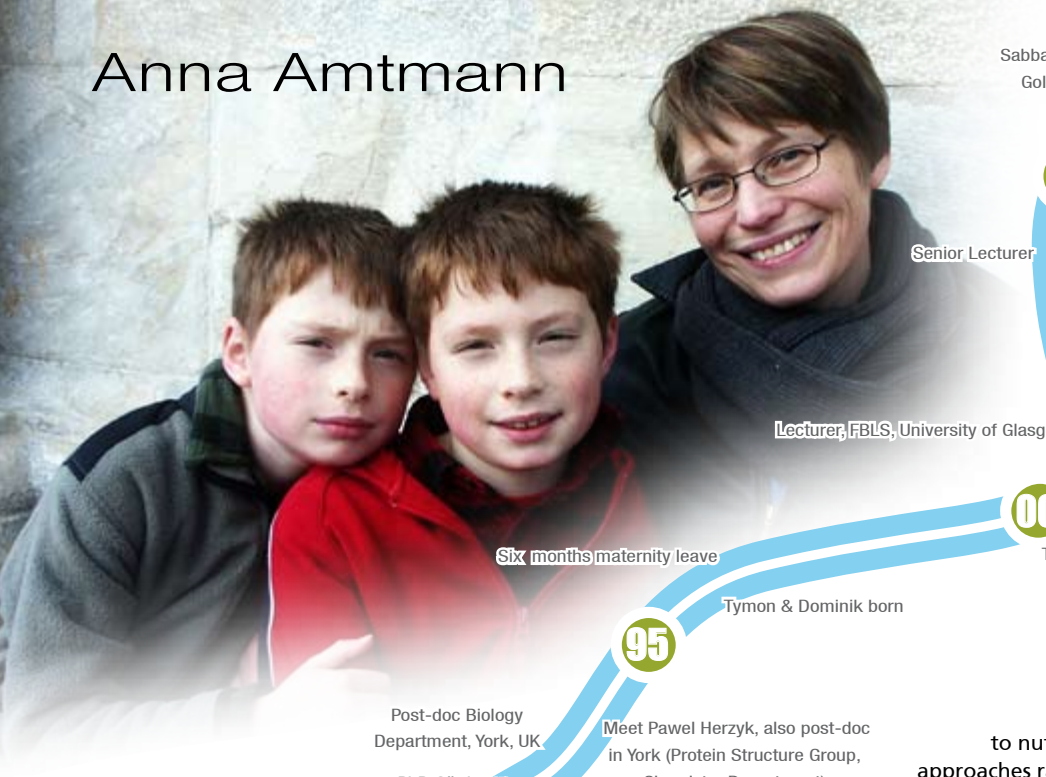
I am not claiming that academic science is not a competitive career. It has to be. We are spending taxpayers' and charity-givers' money on our research projects. There is less money available than there are research ideas, so a competitive process to try to ensure that the money is spent in the best possible way is essential. This rigorous peer review of research ideas is an important part of science and keeps standards high. The job is also most certainly demanding, but it is so exciting and rewarding that most scientist relish the challenges that research brings. Most of us are constantly deeply grateful for the opportunity to contribute to scientific endeavour, finding it exceptionally fulfilling. It is for this reason that it is frustrating to watch talented women scientists turning to other careers (albeit valuable and important ones) because they think they must if they want a reasonable work-life balance.

For many of us the concept of work-life balance is rather problematic. The phrase suggests that your work has nothing to do with the rest of your life. I consider my work to be an integral part of my life that complements the other things I do, including being a mother. This will certainly not be the case for everyone, but I don't want women to choose other options because they think it is impossible to combine a career in academic science with family life. The idea that women cannot thrive in the world of academic science, successfully combining a vocation for science with family life is simply untrue. It is not only perfectly possible, but also there are absolutely no rules about how to do it.

The aim of this book is to illustrate these points. On each page, the career path and family life of a woman research group leader in academic science are plotted on either side of a single timeline. Each woman has also provided a brief description of her research interests and of how she combined research and family life. It was not difficult to find participants for this book. Although the proportion of women in academic science is below 50%, the number of mothers enjoying these careers is substantial. The 64 women in this book are a somewhat random sample and they are presented in no particular order. If there was any method at all involved it was principally focussed on variety.

The 64 participants have taken many different routes to their current positions. Some did not start their research careers until after their children were older, some took an extensive career break while their children were young, some worked part time for substantial parts of their careers, many found excellent childcare support from their partners, their family, or professional childcare providers. Many comment that the autonomy and flexibility characteristic of academic science make it much easier to combine with motherhood than many other professions. Everyone agrees it is very hard work, very enjoyable and very fulfilling.

Anna Amtmann



Sabbatical at the MPI
Golm, Germany

Twins start secondary school
Family re-united
Anna & Dominik in Berlin,
Pawel & Tymon in Glasgow

05

Senior Lecturer

Pawel Lecturer and Head of Bioinformatics,
FBLS, University of Glasgow

Lecturer, FBLS, University of Glasgow

Move to Glasgow

00

Twins start primary school

Six months maternity leave

Tymon & Dominik born

95

Post-doc Biology
Department, York, UK

Meet Pawel Herzyk, also post-doc
in York (Protein Structure Group,
Chemistry Department)

PhD Göttingen

Erasmus student, Linguistics,
Barcelona, Spain

MSc Biology Göttingen, Germany

90

Research

My group investigates the molecular mechanisms that allow plants to adapt to nutrient deficiency and salt stress. Experimental approaches range from patch clamp and enzymatic assays to microarrays and metabolomics.

Career

My career is based on enthusiasm, determination, hard work and luck. Having twin boys was tough but minimised the number of maternity leaves and turned the lab into a heaven of peace... Pawel and I have always had an equal share in childcare and household. Being in the same job means we understand the stress and the satisfaction that comes with it, and the personal commitment that it requires.

Beth Jefferies

Research

My work explores how language and memory processes are organised in the brain. I study patients who have damage to particular brain regions. I also use a technique called transcranial magnetic stimulation to briefly disrupt the function of small areas of the cortex in healthy volunteers (see photo).

Career

When Meredith was a baby, my work as a research fellow was very flexible and I was able to stay at home with her at least one day a week. My husband also switched to part-time work: he found he really loved this role and is now her main carer.

95

BA, Experimental Psychology, University of Oxford

00

Married Paz

PhD, University of Bristol

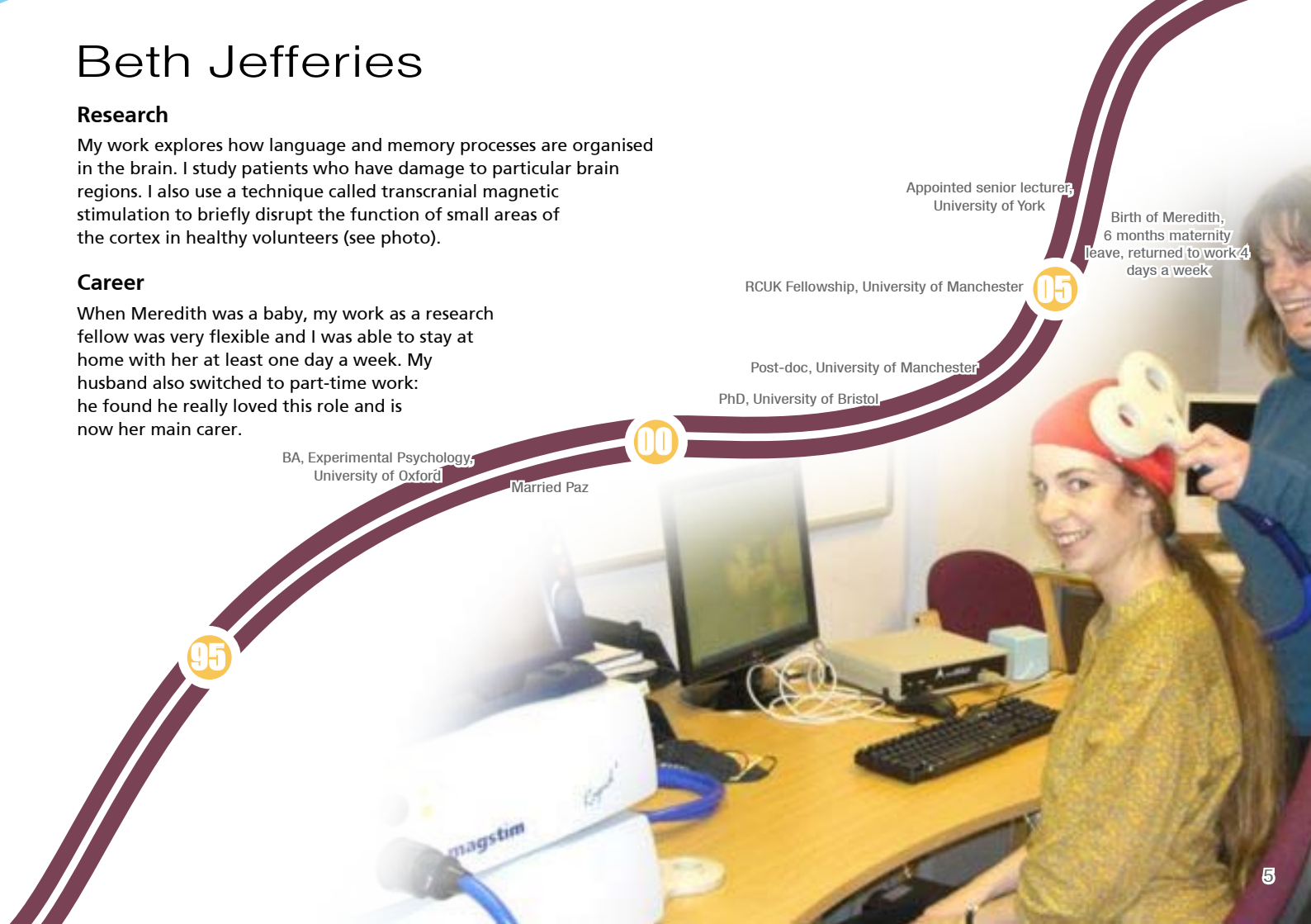
Post-doc, University of Manchester

05

RCUK Fellowship, University of Manchester

Birth of Meredith, 6 months maternity leave, returned to work 4 days a week

Appointed senior lecturer, University of York



Kate Bushby

Left Liverpool to study medicine in Dundee

80

Met Jimmy Steele (dental student and future husband)

Qualified in Medicine with commendation and began training jobs in Dundee, Edinburgh and Glasgow

85

Married Jimmy Steele

MSc awarded in Human Genetics with distinction, commenced MRC training fellowship

Awarded MRC Clinician Scientist Fellowship

MD thesis awarded

90

Jenny born

Moved to Newcastle to a lectureship for Jimmy, our son Tom was born

95

Appointed Senior Lecturer at the University of Newcastle

00

Personal Chair in Neuromuscular Genetics

Became Co-ordinator of TREAT-NMD EU Network of Excellence

Deputy Director of MRC Translational Research Centre in Neuromuscular Diseases.

05

Tom started Medical School in Liverpool

Research

The neuromuscular research group is a multidisciplinary team involving clinically based and laboratory researchers. We focus on the molecular genetics of limb-girdle muscular dystrophies and related disorders. Having contributed to the identification of some of the genes underlying these heterogeneous phenotypes, the emphasis is moving towards understanding the functions of these genes and developing treatments.

Career

I am a firm believer of 'anything being possible' for women in SET, but 2 things are important to combine this with a good family life. First and foremost, is a supportive and understanding partner- my husband is also a Professor so we understand the pressures we are both under. Second, is stable childcare- we have had the most fantastic nanny. I have chosen to work 80% time since Tom was born, and this has been my safety valve- I don't think I would have been as happy without this one day to meet the children from school and just have time to catch up. Most people would not know I work part time- the other key is efficiency, but part time work is a luxury that some can't afford.

Judith Armitage

Research

I have always been fascinated by the physiology of single celled organisms, particularly bacteria, and their apparent ability to make decisions. My research has concentrated on the environmental sensing mechanisms controlling their direction of movement, and more recently combining molecular genetics, biochemistry and in vivo light microscopy with structural biology, bioinformatics and mathematical modelling to develop predictive models of sensory networks at both single cell and population levels.

Career

I never really considered any career but scientific research. I met my husband while we were undergraduates and have lived with the "2 body problem" ever since. Since obtaining permanent positions we have not worked in the same city, and with the arrival of our daughters decided I would take on the primary day to day management of the family (with a day nanny when the girls were pre-school) and we would live in Oxford and John would commute. While academic life is flexible, commuting for 20 years has not been easy for John and when the girls were young going to conferences meant leaning on grandparents and friends to get them to and from school etc. On the positive side, we have exciting careers and have two resourceful and independent daughters.

75 Married John

BSc Hons, UCL in Microbiology, met future husband, John Jefferys- a neurophysiologist

80 PhD in Microbiology UCL. Awarded Quain studentship in Biology at UCL to continue research

Awarded Lister Institute Research Fellowship and started research on Rhodobacter motility

85 Appointed lecturer, Department of Biochemistry, University of Oxford and Fellow of St.Hilda's

Relocate to Oxford, John moves to St.Mary's Paddington as Wellcome SRF

90 Georgina born

Elizabeth born

95 Professor of Biochemistry

John becomes Chair of Neurophysiology and then Head of Division of Neuroscience, University of Birmingham

00 Fellow of Merton College.

Fellow of UCL

05 Director, Oxford Centre for Integrative Systems Biology

Georgina starts University

Sally Day

85 Met Julian, who was studying zoology at Oxford

DPhil in Physics at Oxford University

Research Engineer at Thorn EMI Central Research Laboratories

90 Seconded to RSRE Malvern to research applications of liquid crystals

Julian travelled to Holland and then Mali to research insect behaviour

Senior Scientific Officer in Liquid Crystals and Displays group at RSRE Malvern

Moved to London where Julian had settled to work with the Forensic Science Service

Royal Society University Research Fellowship, UCL

95 Married

Lecturer in Electronic and Electrical Engineering, UCL

Ben was born and took 9 month career break

00 Amy born, maternity leave, followed by 1 term sabbatical

Nanny took maternity leave, during the sabbatical

Senior Lecturer

05 Julian seconded to work in Birmingham for a year, but only temporarily, so we didn't move!

Ben started secondary school

Parents moved nearby

Awarded Cyril Hilsum Medal by the British Liquid Crystal Society

Research

My research is on the application of liquid crystals in displays and for other applications. Liquid crystals are organic liquids with interesting electro-optical effects and to develop their applications means that Engineers, Physicists and Chemists have to work together. I am interested particularly in the optical properties and how to improve liquid crystal displays, as well as making other devices work, such as tunable focal length lenses and optical filters and switches for telecommunications.

Career

Working in a University certainly offers a lot of flexibility as to when and where to work; it is standard practice for people in London to work at home some of the time. So this has worked well with children, although a full time nanny was essential with pre-school children; it meant that I could really work at home. Itís not easy, as any working mum will tell you, but I wouldnít enjoy being at home all of the time. I think the children like knowing that their mum is developing new technology, but I do make sure thereís time for other hobbies - like making costumes!

Marian Holness

Research

I apply concepts developed in the material sciences to rocks. I try to understand their history by examining thin rock slices under the microscope. My main interest at present is the process of solidification of molten rock under volcanoes.

Career

Both our children went to full-time nursery at the age of 4 months. I am responsible for dropping off the children at school and picking them up from the childminder at 5:30, so my working day is shorter than that of many of my colleagues. But I find the total escape from work into domestic duties provides an immensely creative environment from which my research has benefited. My first sabbatical year was spent in Cambridge due to the impossibility of re-locating the family, but we hope to spend the next one abroad when my husband is no longer Senior Tutor.

85 BA in Natural Sciences, Cambridge University

90 PhD in Earth Sciences, Cambridge University

Post-doc in Edinburgh University

95 Royal Society University Research Fellowship, Edinburgh University

Met my future husband, Stephen Siklos (a mathematician), in Cambridge

Returned to Cambridge to take up an Assistant Lectureship

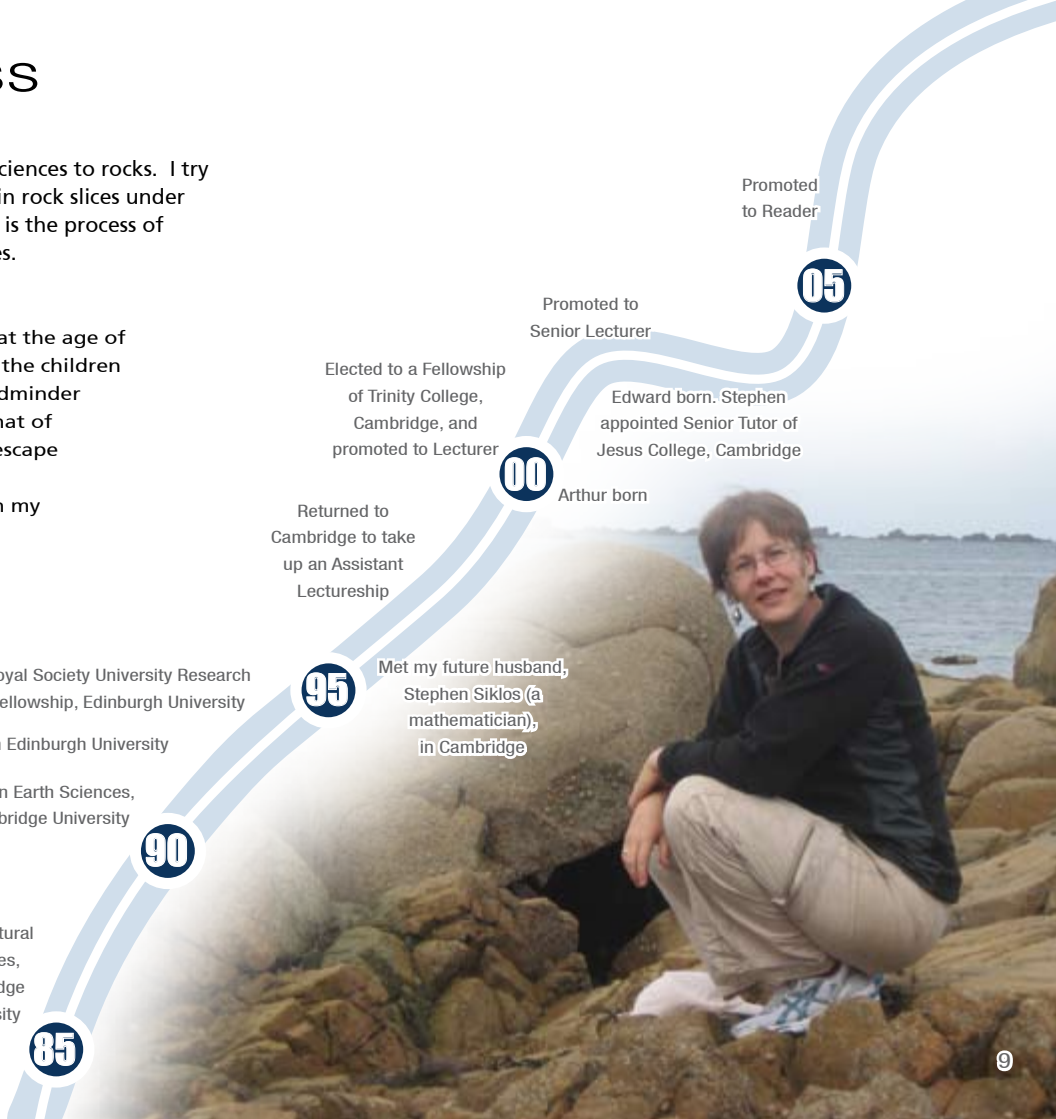
00 Elected to a Fellowship of Trinity College, Cambridge, and promoted to Lecturer

Arthur born

Edward born. Stephen appointed Senior Tutor of Jesus College, Cambridge

Promoted to Senior Lecturer

05 Promoted to Reader



Claire Carmalt

85

BSc Chemistry, Newcastle upon Tyne

90

PhD Newcastle upon Tyne

Postdoctoral Research, University of Texas at Austin USA

95

Met Stephen Wren, a medicinal chemist

Married Stephen

Royal Society Dorothy Hodgkin Fellowship, University College London (UCL)

Stephen appointed a Medicinal Chemist at Xenova, Slough

00

Lecturer, UCL

Senior Lecturer, UCL

Royal Society of Chemistry Meldola Medal

Victoria born, maternity leave

Stephen moves to Argenta Discovery, Harlow to take up Team Leader position

Victoria goes to nursery

05

Reader, UCL

Rosie Born, maternity leave

Victoria starts school

Rosie goes to nursery, maternity leave ends and Stephen starts new job as Principal Research Scientist at Summit plc – all on the same day!

Research

My research is aimed at developing new highly volatile precursors to deposit films of materials and to investigate in detail the properties of the resulting films. The films are deposited by chemical vapour deposition and typical properties tested include gas sensors and conductivity

Career

I waited until I had gained some funding, publications and a research group before having children. This worked well for me because I was initially spending long hours in the laboratory. Now I spend a lot of time managing my research group, writing proposals and publications and I am able to work from home sometimes. This flexibility has really helped as the commute to London, work and caring for a young family makes life very hectic!

Pat Monaghan

Research

My research centres on life history trade-offs, and how these are influenced by environmental factors. This involves studies of growth, reproduction and longevity, mainly in birds. I collaborate with molecular biologists and endocrinologists. I am also involved in conservation related research.

Career

I delayed having children until it felt right. Having children helped me prioritise my work, which then improved considerably! Field work became more difficult, but I also have interests in laboratory-based questions. Neil and I have Chairs in the same department, and share all aspects of family life. Having excellent, reliable childcare available in conveniently located nurseries made everything much easier.

Jean Beggs

C.B.E. for services to science

Royal Society Research Professorship

Biochemical Society Novartis Medal and Prize

Royal Society Gabor Medal

05

Paul goes to senior school

Professor of Molecular Biology, University of Edinburgh

00

Elected to Fellowship of the Royal Society

Simon leaves school; we buy the house next door and renovate it

Elected to Fellowship of the Royal Society of Edinburgh

95

University of Edinburgh Professorial Research Fellow

Paul starts nursery school & Simon starts senior school

Royal Society Senior Research Fellow, University of Edinburgh

Elected member of EMBO

Royal Society University Research Fellow, University of Edinburgh

90

Birth of Paul

Simon starts primary school

85

Ian gets job in Edinburgh/I resign lectureship & move to Edinburgh

Beit Memorial Fellowship for Medical Research

ARC Plant Breeding Institute, Cambridge

Lectureship, Imperial College, London

Postdoc University of Edinburgh

75

80

PhD University of Glasgow

We move to Cambridge

Simon born – we share a nanny with a neighbouring family

We move to London

BSc University of Glasgow

Married Ian the same day he graduated in Medicine

70

Research

After developing an efficient gene cloning system for yeast cells, I became interested in RNA splicing. The mechanism and regulation of splicing in yeast is still my main focus, along with recent forays into systems biology.

Career

I have been extremely fortunate to have received Royal Society Fellowships, especially, after resigning a lectureship to return to Edinburgh with my husband. He has been extremely supportive of my career, which was vital to me. We believe in having good domestic support, nannies when the boys were young, au pairs later. We still have an au pair who helps with our dogs.

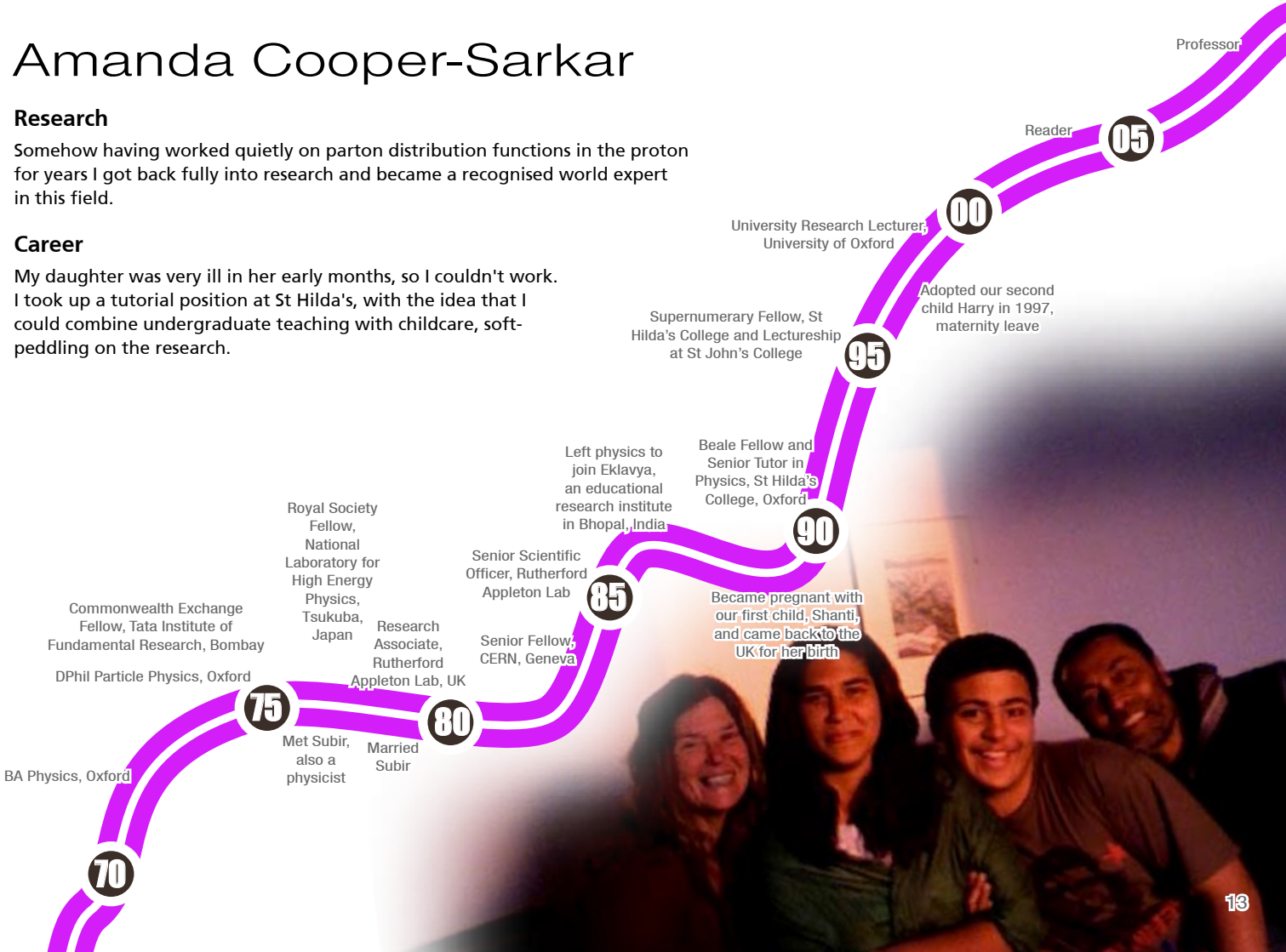
Amanda Cooper-Sarkar

Research

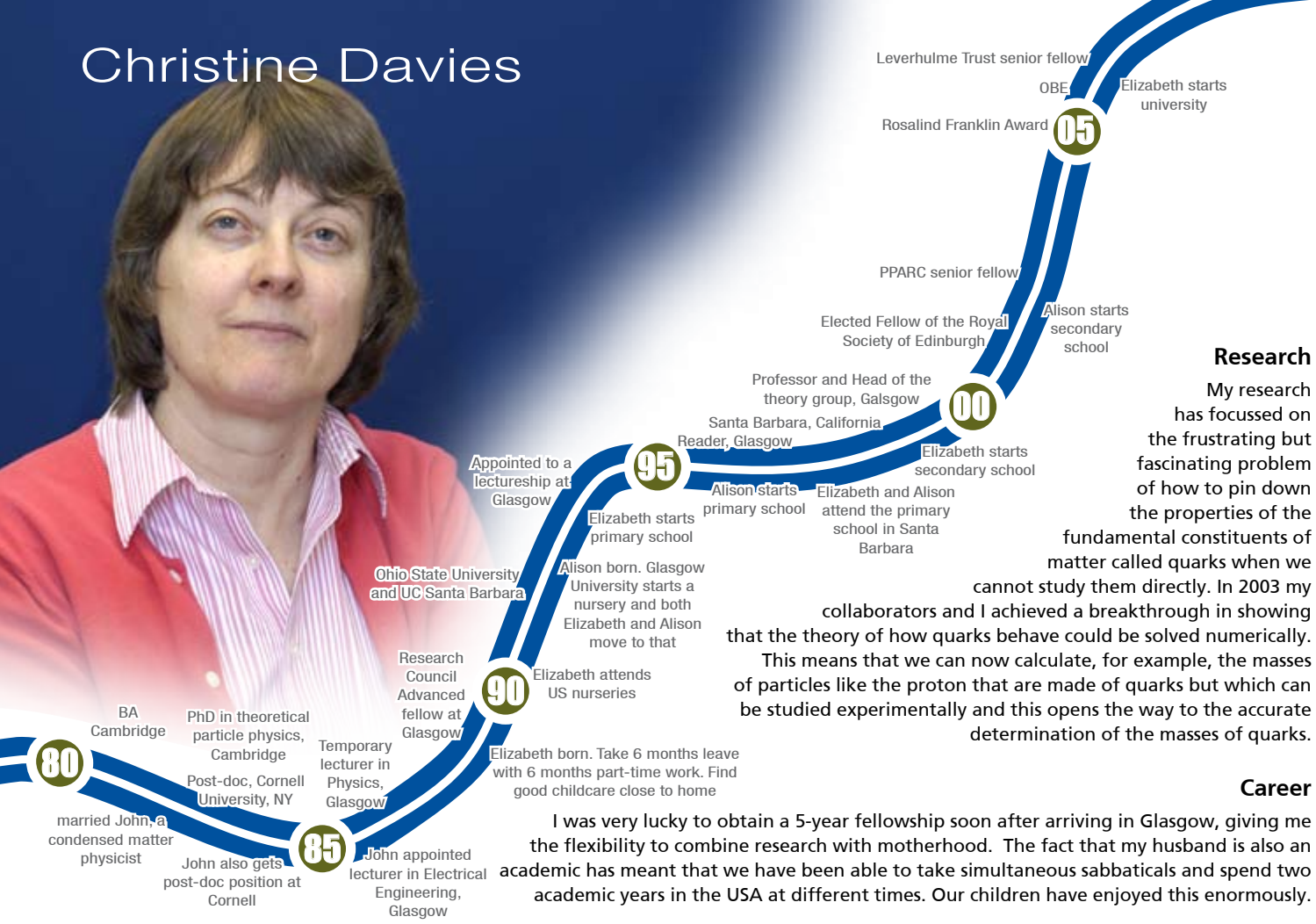
Somehow having worked quietly on parton distribution functions in the proton for years I got back fully into research and became a recognised world expert in this field.

Career

My daughter was very ill in her early months, so I couldn't work. I took up a tutorial position at St Hilda's, with the idea that I could combine undergraduate teaching with childcare, soft-peddling on the research.



Christine Davies



Research

My research has focussed on the frustrating but fascinating problem of how to pin down the properties of the fundamental constituents of matter called quarks when we cannot study them directly. In 2003 my collaborators and I achieved a breakthrough in showing that the theory of how quarks behave could be solved numerically. This means that we can now calculate, for example, the masses of particles like the proton that are made of quarks but which can be studied experimentally and this opens the way to the accurate determination of the masses of quarks.

Career

I was very lucky to obtain a 5-year fellowship soon after arriving in Glasgow, giving me the flexibility to combine research with motherhood. The fact that my husband is also an academic has meant that we have been able to take simultaneous sabbaticals and spend two academic years in the USA at different times. Our children have enjoyed this enormously.

Caroline Dean

Research

I became very interested in how prolonged cold triggers flowering (a process called vernalization) when I was a post-doc in California. Over the last 15 years my lab has used genetics and biochemistry to study the pathways that regulate vernalization requirement and response in Arabidopsis. These involve conserved epigenetic regulators (from plants to humans) and provide a great system to unpick mechanisms that link environmental changes with chromatin silencing.

Career

I waited until I had a research group before having children. Personally I found this a good option as experimental work is not as flexible as managing. Writing, planning etc can be done at all times of day and night. We also accepted the fact that we needed a lot of domestic/childcare help so home time meant fun with the kids and not chores. Recently, a major perk has been to take the whole family to meetings (and do a bit of exploring at the same time).

85

BA Hons Biology, York

Met Jonathan Jones whilst working at Advanced Genetic Sciences, CA, USA

90

PHD York

Jonathan and I both move to take up independent positions in Norwich, UK

Post-Doc Advanced Genetic Sciences Berkeley, CA, USA

95

William born - nanny moves in!

Project Leader John Innes Centre

Pippa born

00

William starts kindergarten

Date Associate Research Director John Innes Centre

Pippa starts kindergarten

05

EMBO fellow

Elected Fellow of Royal Society

Officer of the Order of the British Empire

Pippa starts secondary school

William starts secondary school - nanny replaced by au pair

au pair moves out!

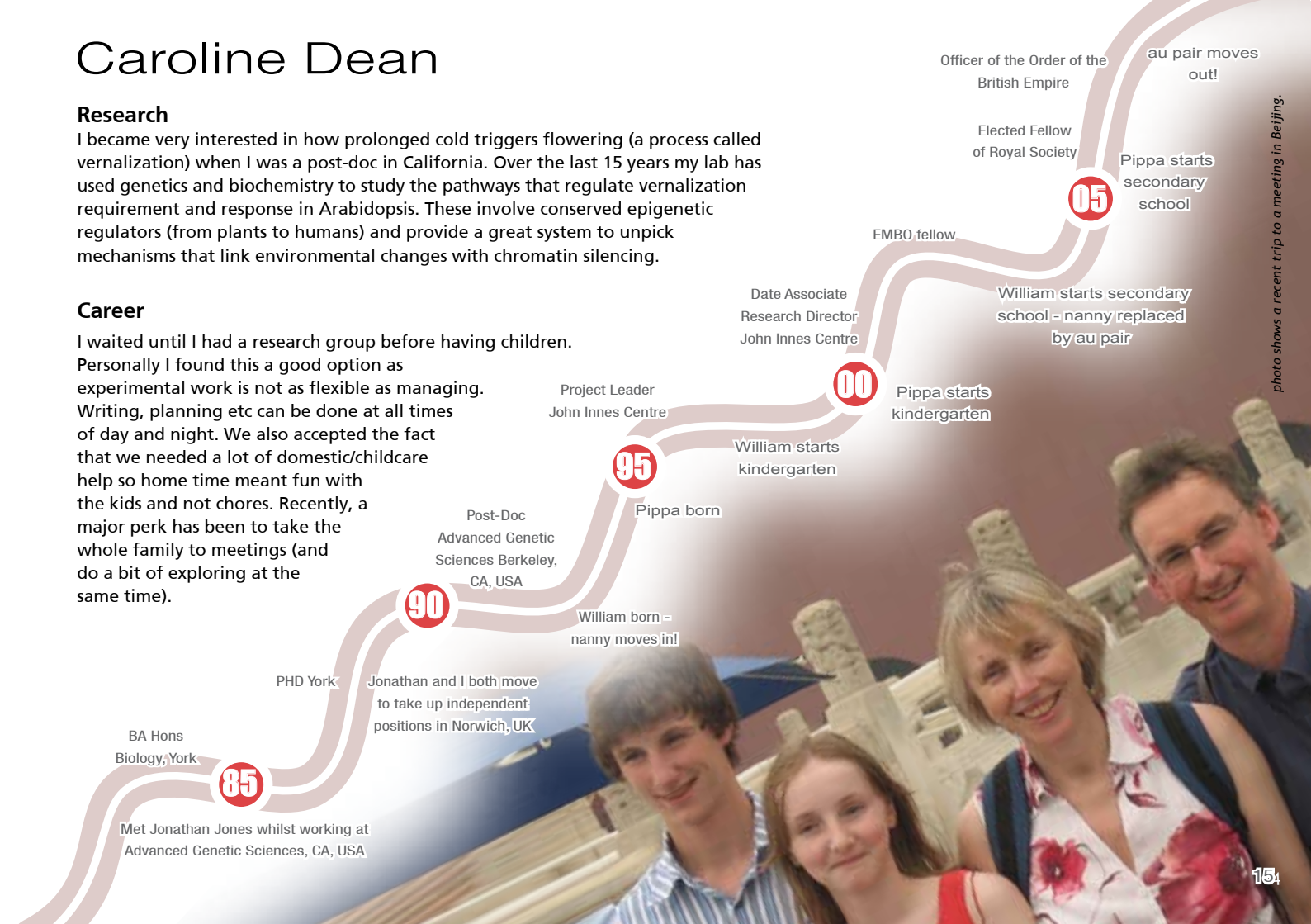


photo shows a recent trip to a meeting in Beijing.

Julia Yeomans

BA Physics, Oxford

PhD Condensed Matter Theoretical Physics, Oxford

Post-doc, Cornell

Lecturer, Southampton

Pauline Chan Fellow, St Hilda's College, Oxford

Kate born

Vicky born

Married Peter Hore, a Physical Chemist at Oxford

EPSRC Advanced Fellow

Rosie born

Reader, Oxford

Becky born

Professor of Physics, Oxford

Research

My research is in theoretical and computational soft condensed matter physics, using mathematics to understand physical systems. We are interested in liquid crystals, liquids moving on microstructured surfaces and biological problems such as DNA ejection from viral capsids and bacterial swimming.

Career

I am privileged to able to combine a large family and an exciting career. Lots of things have helped: an EPSRC Fellowship when the children were small, the flexibility of academic work, and Peter and I being appointed to permanent jobs at the same university.

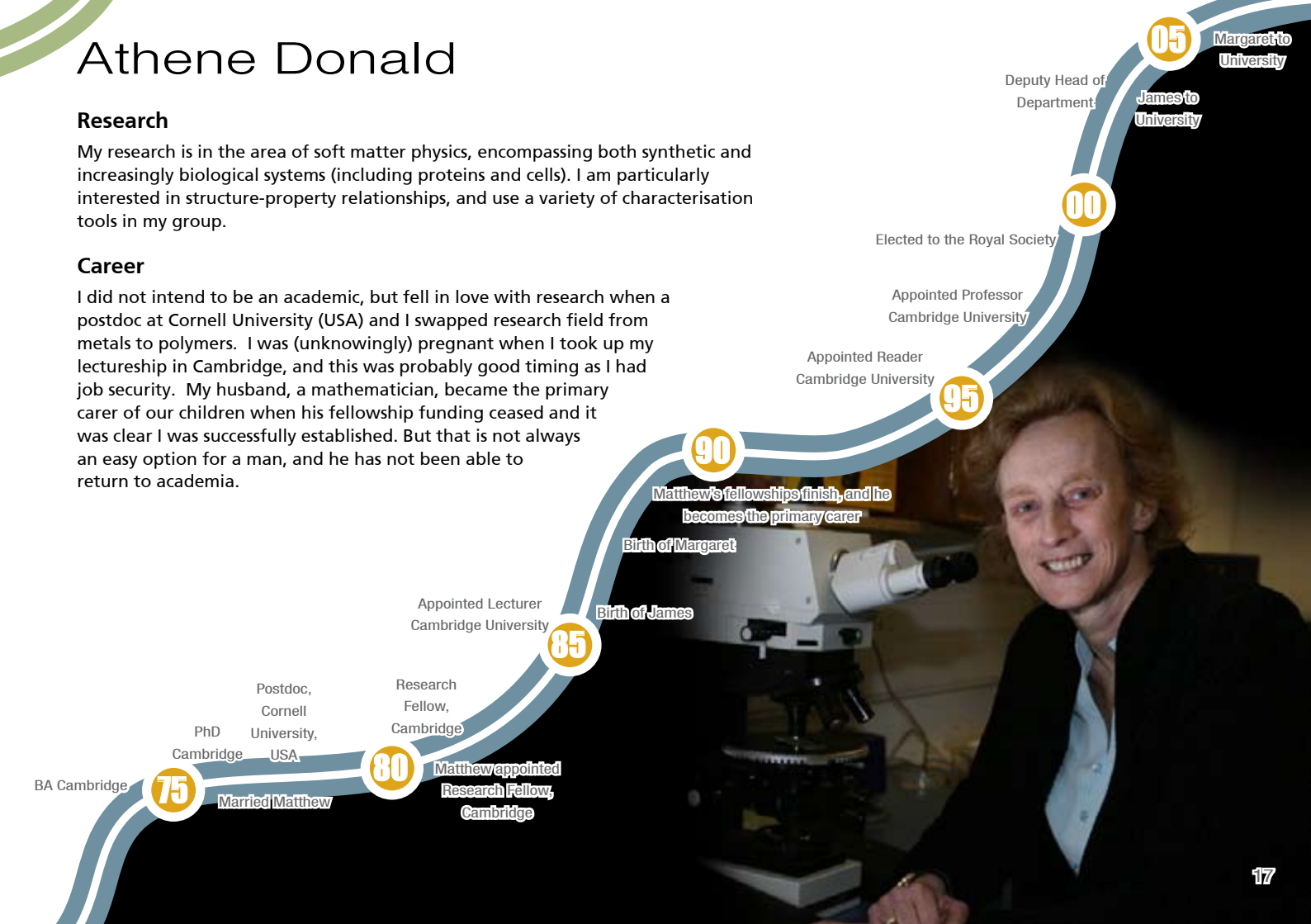
Athene Donald

Research

My research is in the area of soft matter physics, encompassing both synthetic and increasingly biological systems (including proteins and cells). I am particularly interested in structure-property relationships, and use a variety of characterisation tools in my group.

Career

I did not intend to be an academic, but fell in love with research when a postdoc at Cornell University (USA) and I swapped research field from metals to polymers. I was (unknowingly) pregnant when I took up my lectureship in Cambridge, and this was probably good timing as I had job security. My husband, a mathematician, became the primary carer of our children when his fellowship funding ceased and it was clear I was successfully established. But that is not always an easy option for a man, and he has not been able to return to academia.



Jelena Gavrilovic

75

BSc University College London

80

Research Technician
University College London

Research Assistant
Strangeways
Research Laboratory
Cambridge

85

PhD Strangeways Research
Laboratory Cambridge

Married Tony

Tony working in London

Tony becomes freelance
consultant, based in Cambridge

90

Post-doc Ecole Normale
Superieure, Paris

Post-doc University College
London (commuting from
Cambridge)

Sonia Born, 1 year
career break

95

Post-doc, 50% time,
Strangeways Research Laboratory

Junior Group Leader, 60% time,
Strangeways Research Laboratory

Anna born, 7 month
career break

Moved to Norwich

00

Lecturer, 75% time,
University of East Anglia, Norwich

05

Senior Lecturer
University of East Anglia

Research

We investigate how the interactions of cells with their surroundings are modulated through the action of cell surface and matrix-degrading proteinases, in a number of normal and disease situations, including wound healing and diabetes.

Career

I have had some great mentors who helped me to build my career alongside having children. My husband works from home, which has also been hugely beneficial, although he travelled a lot and rather unpredictably when our children were small. At times working part-time was challenging for developing my career but being able to work and spend time with our children when they were young was ideal for me.

Veronica van Heyningen

Research

Human genetics is the area that has excited me for more than three decades. From the earliest days of gene mapping my work has been aimed at understanding the ways in which mutations can disrupt function, and, at the same time, give us insight into normal biology by studying human disease and animal models.

Career

My children were born while I was still a relatively young postdoc. With a purely research post and good employer, it was possible to accommodate maternal duties and work. A domestically helpful husband, whose mother was a working scientist, has also been a useful asset. I am a fan of nursery care, allowing children to be socialised and yet not fixated on just one carer. My ambitions grew with increasing maturity, so that I could accommodate committee work, as well as research and travel, when the children were self-sufficient and I was not yet too ancient.

70
MS Biochemistry Northwestern, USA
BA Cambridge
DPhil Genetics, Oxford
Beit Fellowship MRC Mammalian Genome Unit, Edinburgh
Postdoctoral Fellow MRC Human Genetics Unit – 30 hours pw
Married Simon, go to Northwestern University, Illinois, S as postdoc

75
Return to UK, Simon Demonstrator, Oxford
Simon appointed lecturer in Biochemistry, Edinburgh
Paul born, nursery January 1976
Eleanor born, nursery January 1977

80
Paul to school
Eleanor to school

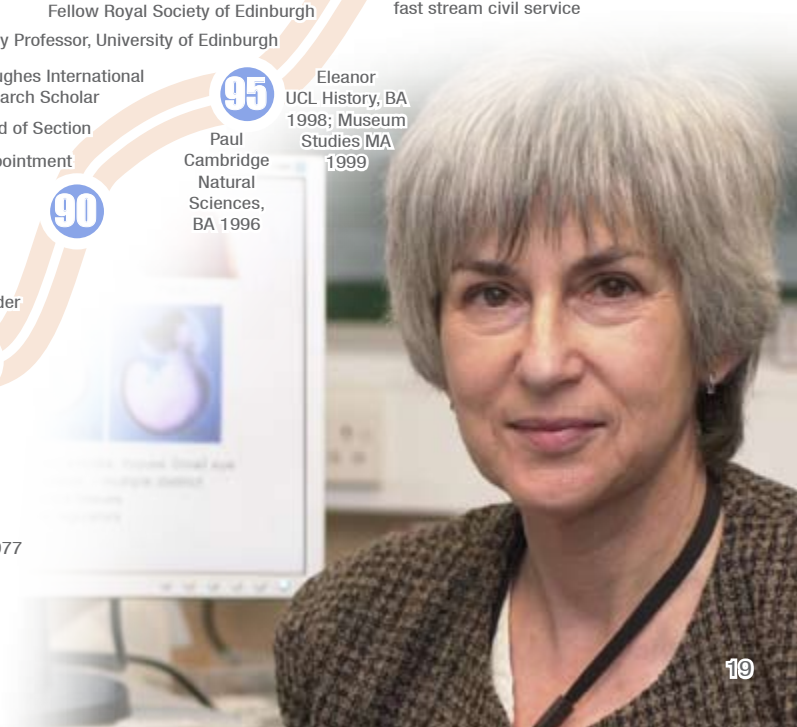
85
MRC Tenured - full time
MRC Senior Scientist – group leader

90
MRC Special Appointment
Head of Section
Howard Hughes International Research Scholar
Honorary Professor, University of Edinburgh
Fellow Royal Society of Edinburgh
Fellow Academy of Medical Sciences

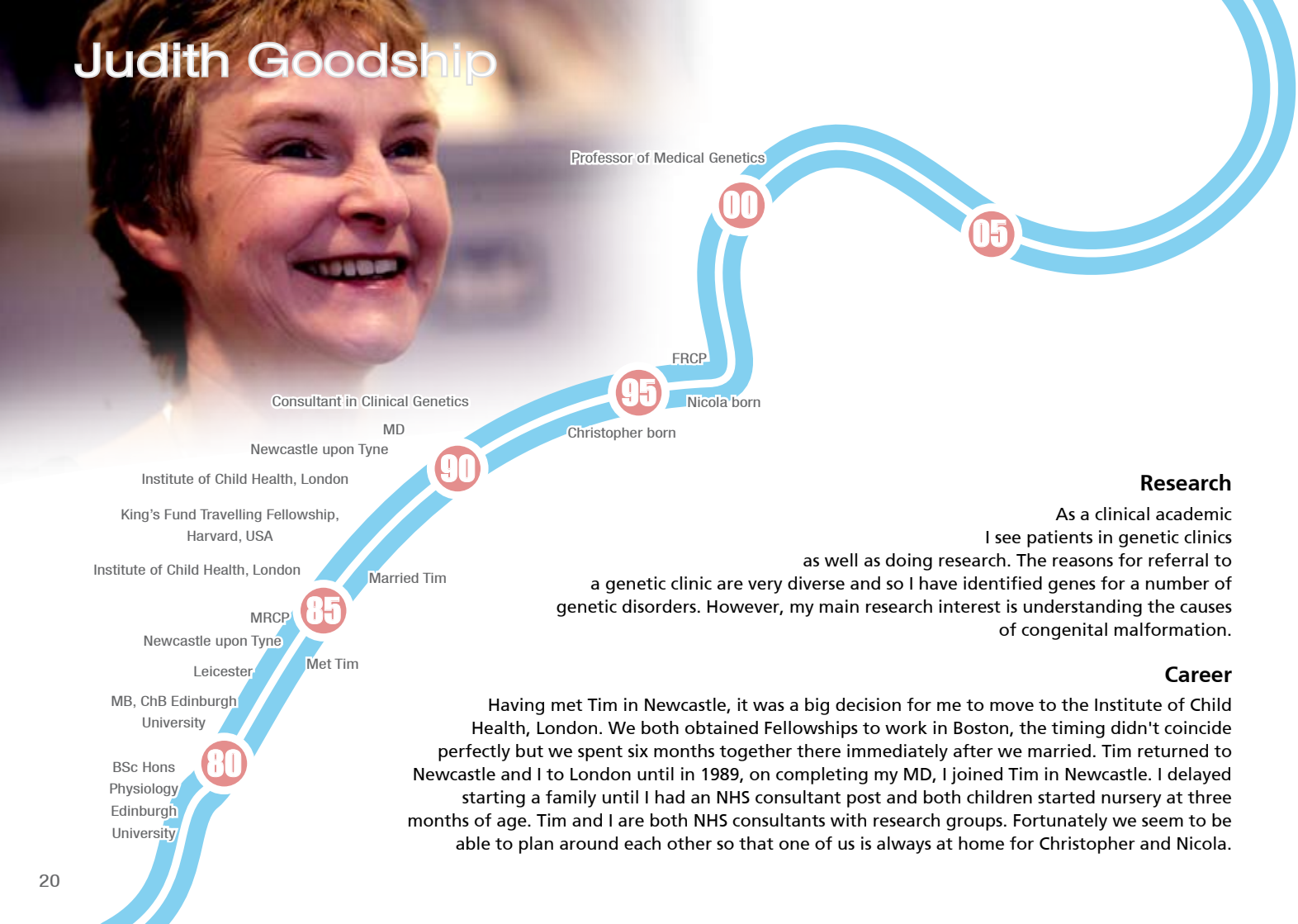
95
Paul Cambridge Natural Sciences, BA 1996
Eleanor UCL History, BA 1998; Museum Studies MA 1999
Paul PhD 1999, UCL; enters fast stream civil service

00
Member Human Genetics Commission
EMBO Member
Eleanor fast stream civil service

05
Simon Vice Principal Edinburgh; Personal Chair in Learning and Teaching
Fellow of the Royal Society
Eleanor marries Benet
First grandchild born
Paul marries Maddy



Judith Goodship



Research

As a clinical academic I see patients in genetic clinics as well as doing research. The reasons for referral to a genetic clinic are very diverse and so I have identified genes for a number of genetic disorders. However, my main research interest is understanding the causes of congenital malformation.

Career

Having met Tim in Newcastle, it was a big decision for me to move to the Institute of Child Health, London. We both obtained Fellowships to work in Boston, the timing didn't coincide perfectly but we spent six months together there immediately after we married. Tim returned to Newcastle and I to London until in 1989, on completing my MD, I joined Tim in Newcastle. I delayed starting a family until I had an NHS consultant post and both children started nursery at three months of age. Tim and I are both NHS consultants with research groups. Fortunately we seem to be able to plan around each other so that one of us is always at home for Christopher and Nicola.

Fiona Polack

Research

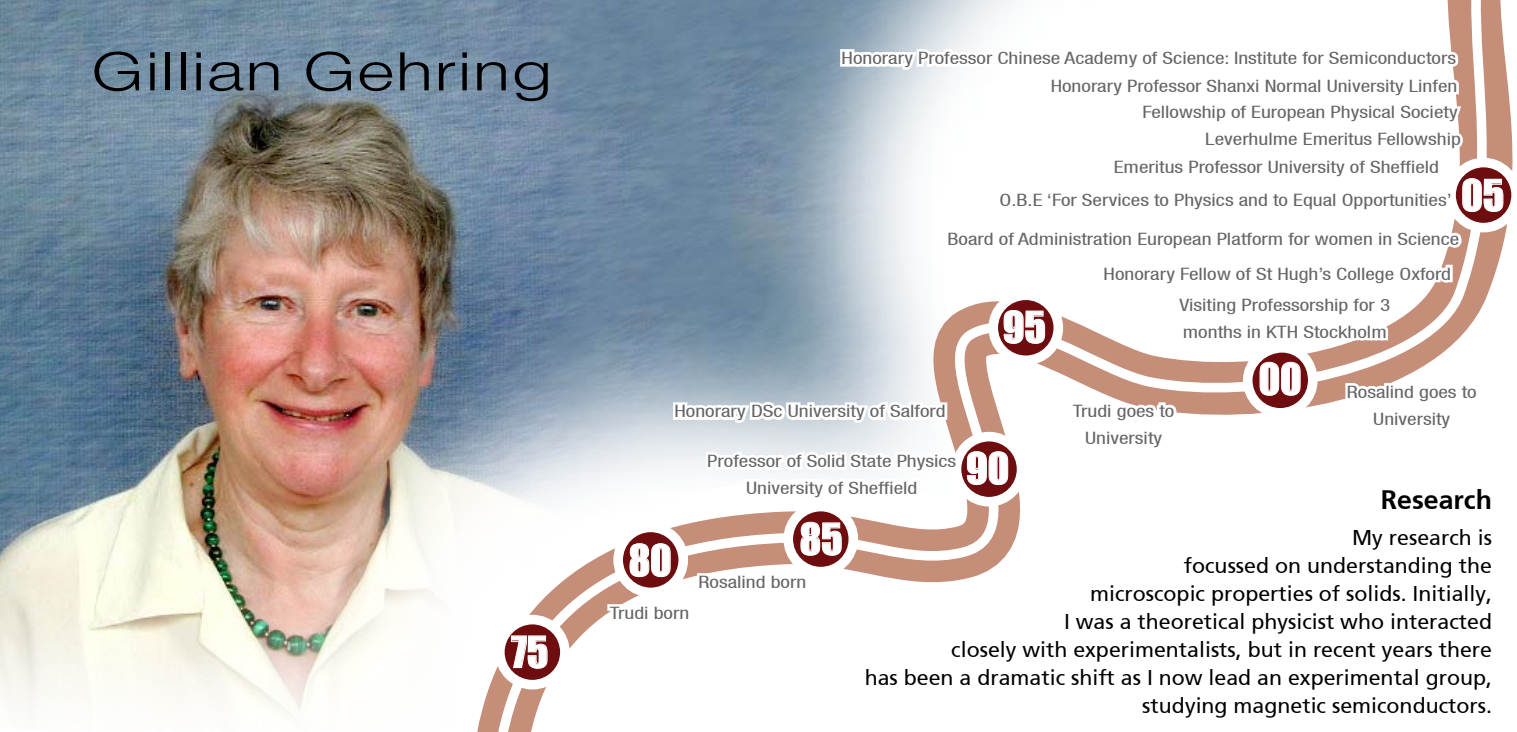
I always wanted to research something! I now research systems and software engineering, and particularly engineering complex systems. The work is increasingly interdisciplinary, and brings together state of the art computer science, engineering, biology, and other sciences.

Career

My career is built on luck: a PhD in the only 1980s history group using computers, running out of contracts just as an MSc opportunity arose, a workplace nursery opened, an unemployed friend with childcare experience, etc. Being settled in York helped childcare and schooling. A key player is my husband, who shares all the child care and housework. It takes working on, the work-life balance is ok, with two original and enthusiastic children as consolation.

75
BA, Geography, Cambridge
80
PhD, History, Cambridge
85
Married Chris
Post-doc, projects at Essex and York
Elizabeth born, September 1988
90
Elizabeth at nursery
One miserable year unemployed
MSc in Information processing, York
Research associate, rigorous software engineering, York
Alexander born, November 1993. 3 weeks' maternity leave writing courses whilst night-feeding
Appointed to lectureship
Alexander at nursery, Elizabeth at school
95
Rolling one-year contract lectureship
Permanent lectureship, York
00
Senior lecturer, York
05
Elizabeth starts University

Gillian Gehring



Honorary Professor Chinese Academy of Science: Institute for Semiconductors
Honorary Professor Shanxi Normal University Linfen
Fellowship of European Physical Society
Leverhulme Emeritus Fellowship
Emeritus Professor University of Sheffield
O.B.E 'For Services to Physics and to Equal Opportunities'
Board of Administration European Platform for women in Science
Honorary Fellow of St Hugh's College Oxford
Visiting Professorship for 3 months in KTH Stockholm
Rosalind goes to University
Trudi goes to University
Honorary DSc University of Salford
Professor of Solid State Physics University of Sheffield
Rosalind born
Trudi born
Visiting Fellowships Karlsruhe Techniche Hoschule Germany and Institute Laue Langevin Grenoble
a Lecturer in Theoretical Physics, Oxford
Married Karl Gehring
NATO Research Fellow University of California Berkely
Leverhulme Reseach Fellowship St Hugh's College Oxford
DPhil Oxford in theoretical Physics
BSc Physics University of Manchester

05 00 95 90 85 80 75 70 65 60

Research

My research is focussed on understanding the microscopic properties of solids. Initially, I was a theoretical physicist who interacted closely with experimentalists, but in recent years there has been a dramatic shift as I now lead an experimental group, studying magnetic semiconductors.

Career

We delayed having our children until we were both well established in our careers; Karl who, is also a physicist, was a Research Fellow in Oxford before moving to the GEC central research labs. When our children were young we had a succession of good nannies and then graduated to au pairs when they were both at school. About the time of our move to Sheffield Karl became ill and took early retirement so he took over a lot of the child care when our daughters were in their teens. In recent years, since our daughters have become independent, Karl has come with me on various foreign trips, which have been great for both of us.

Leslie Ann Goldberg

Research

My research lies at the intersection of mathematics and computation. The research area is called "computational complexity" and the goal is to understand the inherent difficulty of computational problems. I am particularly interested in understanding the mathematics underlying algorithms for counting and for randomly sampling.

Career

My husband and I work in the same department, which has made it relatively easy to organise childcare. Instead of having a nanny, we have used after-school clubs and holiday playschemes. The type of work that we do (proving theorems, writing papers), can easily be done anywhere, at any time, and this flexibility has been helpful.

Sunetra Gupta

10
"So Good in Black" published
Zoological Society of London Scientific Medal
Short sabbatical at Princeton
Daughters attending local school in US

05
Professor of Theoretical Epidemiology

00
Reader in Infectious Disease Epidemiology, Dept of Zoology, Oxford
"A Sin of Colour" published
Olivia born

95
"Moonlight into Marzipan" published
Isolde born
Awarded Wellcome Senior Fellowship in Biodiversity
Junior Research Fellowship, Merton College, and Department of Zoology, University of Oxford
'The Glassblower's Breath' published
Awarded Wellcome Trust Training Fellowship in Biomathematics
Married Adrian Hill, Wellcome Principal Research Fellow in the Dept of Medicine at Oxford
PhD, Imperial College, University of London
'Memories of Rain' published

90
AB Biology, Princeton University

Research

My main area of interest is the evolution of diversity in pathogens, with particular reference to the infectious disease agents that are responsible for malaria, influenza and bacterial meningitis. I use simple mathematical models to generate new hypotheses regarding the processes that determine the population structure of these pathogens. I work closely with laboratory and field scientists both to develop these hypotheses and to test them.

Career

The flexibility of a career in science has certainly allowed me to spend a lot of time with my children, particularly as I am able to do much of my work at home. Trying to maintain a career as a novelist at the same time has however been difficult, but writing is a passion that I cannot easily put aside. In both cases, it is not so much the work itself but all else that goes along with it (such as travelling to conferences) that becomes hard to accommodate.

Julia Goodfellow

Research

My research career has focused on the study of macromolecular structures using both experimental and molecular modelling methods. The biological structures I have studied include long chain sugars, the cornea, proteins and modified DNAs. Modifications of such structures alter the ability of the macromolecule to interact with other molecules and can be related to disease states.

Career

I have had a traditional academic career combining both research and teaching with administrative roles at Birkbeck, University of London. Subsequently I became Chief Executive of the Biotechnology and Biological Sciences Research Council, a non-departmental public body that provides funding for biosciences research in UK universities and in seven sponsored institutes. In 2007, I became vice-chancellor at the University of Kent. I married in 1972 after finishing my undergraduate studies. We have two children and have combined family life with both of us having careers in science. Our daughter is an undergraduate and our son is finishing his studies for a PhD.

70
BSC in Physics at Bristol
Married Peter
75
PHD at the Open University
80
Post Doctorate at Stanford CA
Research Fellow at Birkbeck
85
Lecturer at Birkbeck
Henry my first child was born
90
Ros my second child was born
95
Professor of Bio-molecular Sciences at Birkbeck
Head of the Crystallography Department at Birkbeck
00
Vice Master of Birkbeck
Henry starts University
05
Chief Executive of the BBSRC
Ros starts University
Vice - Chancellor of the University of Kent

Claire Grierson

BSc Microbiology and Microbial Technology, University of Warwick

85

PhD Plant Molecular Biology, Plant Breeding Institute, Cambridge

90

Post Doc John Innes Centre, Norwich

Royal Society Dorothy Hodgkin Research Fellowship

95

Met Mark through mutual friends in Bristol

Lecturer, University of Bristol

00

Bethan Born, I worked part time for seven months

Erin born, I worked part time for seven months

SEB President's Medal

6 month Bristol University Women Returners Fellowship to focus on research

Reader, University of Bristol

05

Mark retires

Life Science Coordinator, Bristol Centre for Complexity Sciences

Parent's helper starts

Research

I have studied development and differentiation throughout my career, enjoying the fantastic tools and resources available in the model plant Arabidopsis. I am increasingly interdisciplinary, most prominently as a member of the University of Bristol Centre for Complexity Sciences. This brings insights and fresh ways of thinking to our work on how cells specialise.

Career

I was already pregnant when I got my lectureship at Bristol, and started the job after maternity leave with Bethan. I worked part time for several months after each of our children was born. This, and an extra six months without teaching that the University gave me when I returned after Erin was born, gave me time to be a hands-on Mum and keep my research going. Being able to work at home, and at any time of day makes it much easier to cope with my caring responsibilities, both for the children, and for Mark who retired through ill health in 2007. We now have a parentís helper, who helps Mark with the children and the household chores after school. This way I can work full time and still have time to enjoy our family.

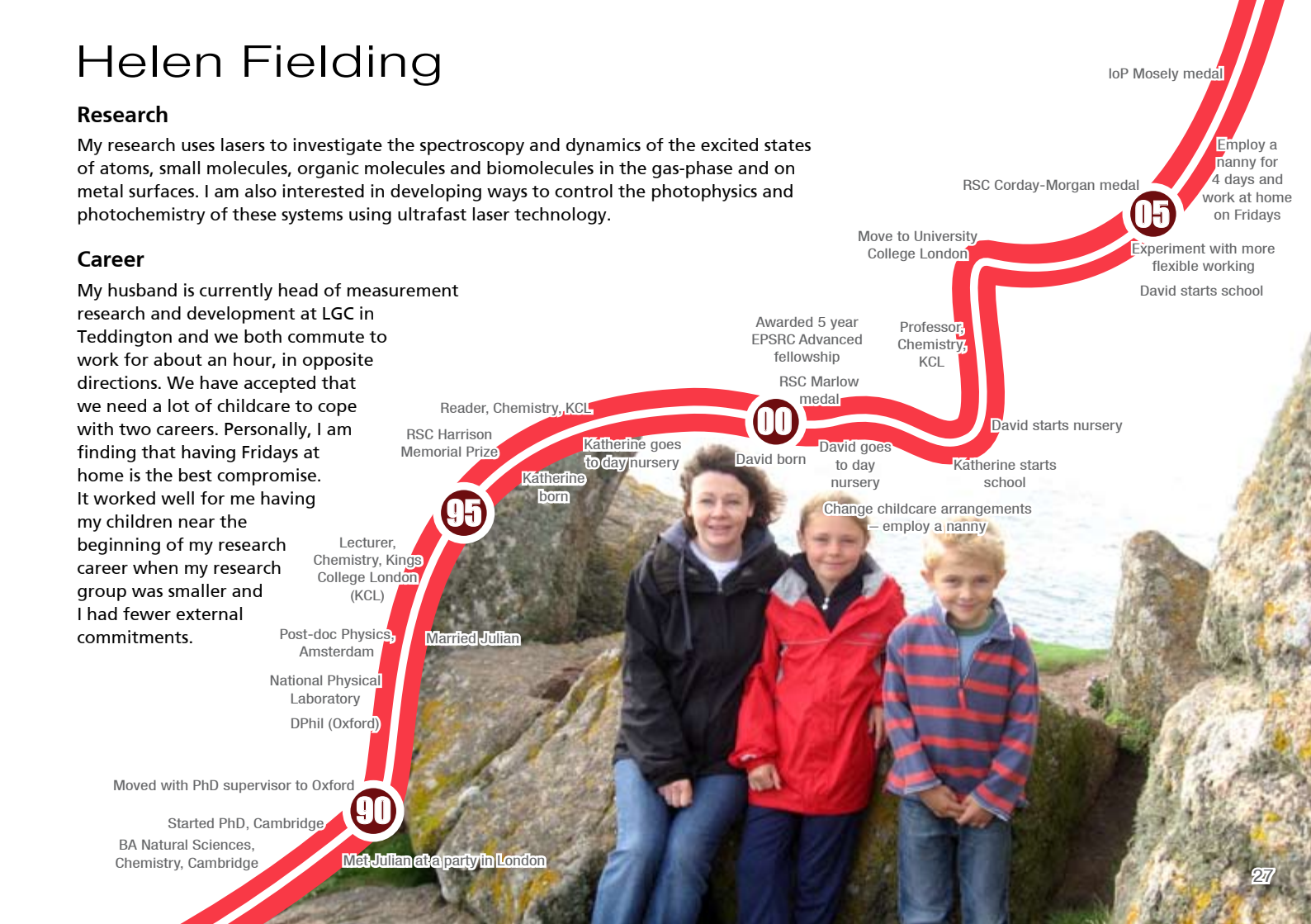
Helen Fielding

Research

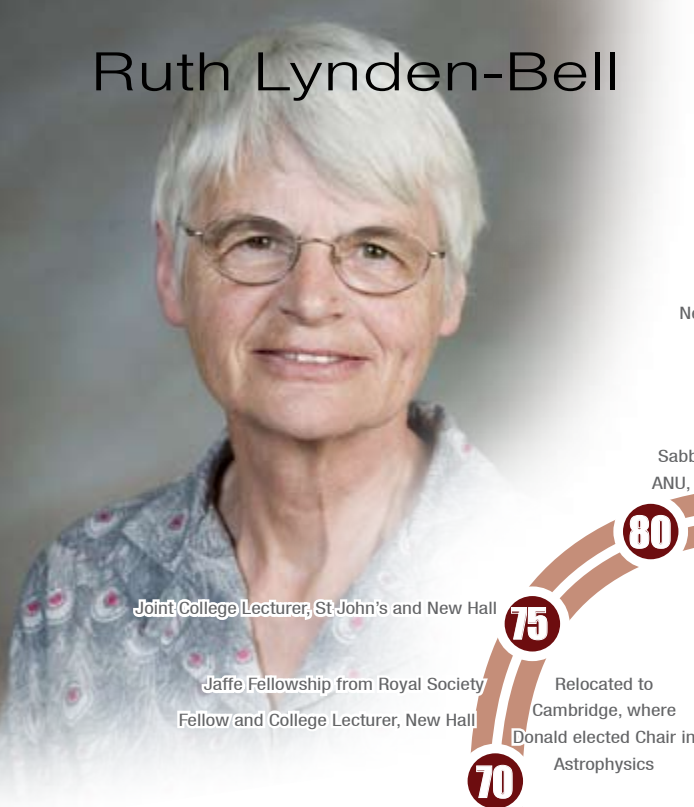
My research uses lasers to investigate the spectroscopy and dynamics of the excited states of atoms, small molecules, organic molecules and biomolecules in the gas-phase and on metal surfaces. I am also interested in developing ways to control the photophysics and photochemistry of these systems using ultrafast laser technology.

Career

My husband is currently head of measurement research and development at LGC in Teddington and we both commute to work for about an hour, in opposite directions. We have accepted that we need a lot of childcare to cope with two careers. Personally, I am finding that having Fridays at home is the best compromise. It worked well for me having my children near the beginning of my research career when my research group was smaller and I had fewer external commitments.



Ruth Lynden-Bell



60
BA, Chemistry, Cambridge
Started PhD, Cambridge
Married Donald
Daughter born
65
Finished PhD at CalTech, USA
Fellow, New Hall Cambridge
Half time lecturer, Sussex University
Sabbatical at CalTech
Son born
70
Jaffe Fellowship from Royal Society
Fellow and College Lecturer, New Hall
Relocated to Cambridge, where Donald elected Chair in Astrophysics
75
Joint College Lecturer, St John's and New Hall
80
Sabbatical at ANU, Canberra
85
Sabbatical at ANU, Canberra
90
Sabbatical at UCLA
Newton Trust Lecturer, Cambridge
95
Professor at Queen's University Belfast, Co-founder of the Atomistic Simulation Group
Editor, Molecular Physics
Sabbatical at Boston U
00
"Retired" to Cambridge, Leverhulme Emeritus Fellow
05
Elected Fellow of the Royal Society

Research

My current research involves trying to understand the properties of liquids and solutions using computational modelling. One project is to compare the properties of model liquid water with properties of liquids made from models which have been modified in well-defined ways. Another current interest is in the solvent properties of ionic liquids.

Career

Originally I was an NMR spectroscopist measuring chemical shifts and coupling constants of simple molecules, but I made the transition to a theorist and then a computational chemist partly as my interests changed and partly because it was easier to combine theory and computational work with family timetables. My most important asset has been a supportive husband who respects my abilities.

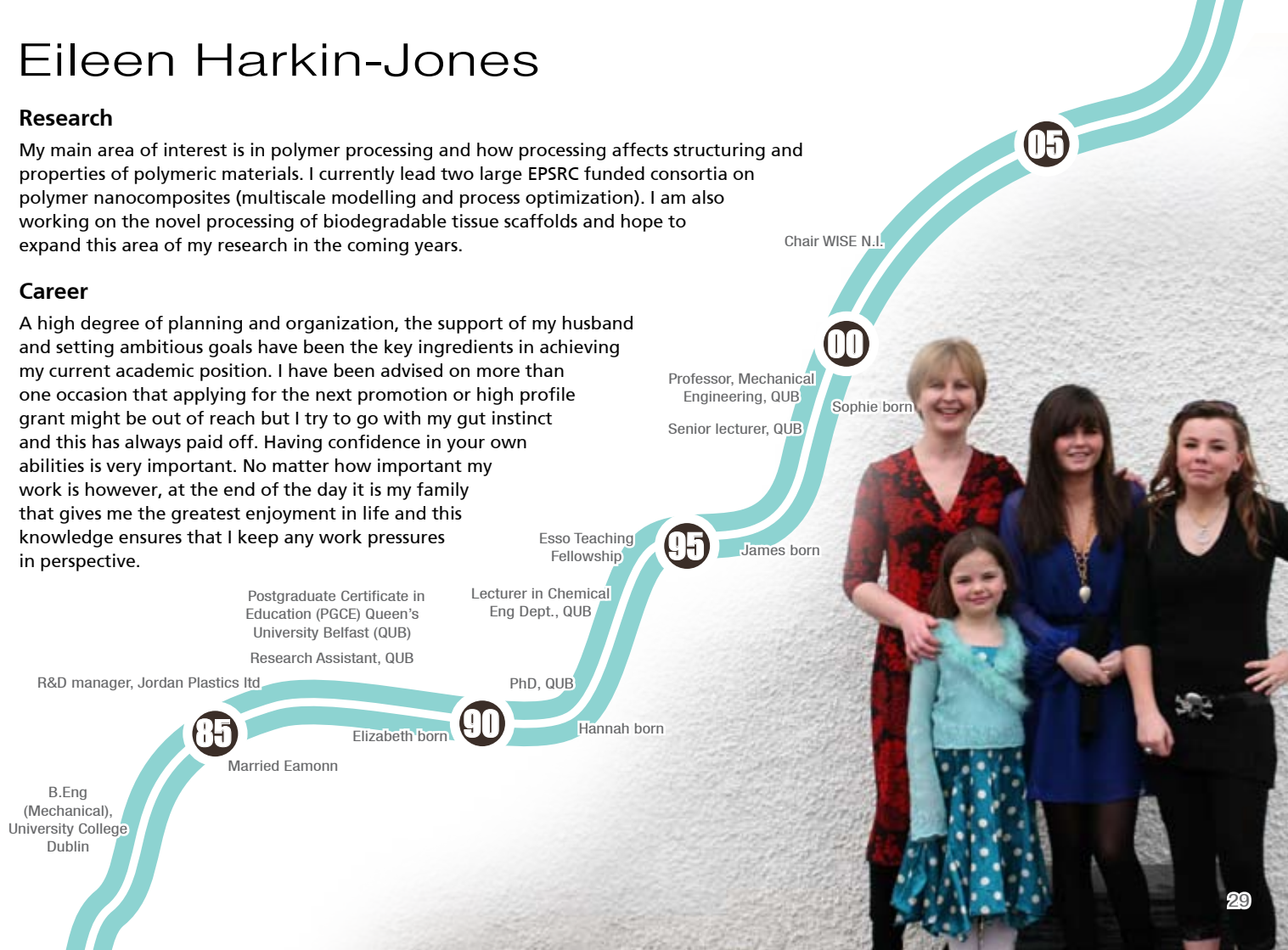
Eileen Harkin-Jones

Research

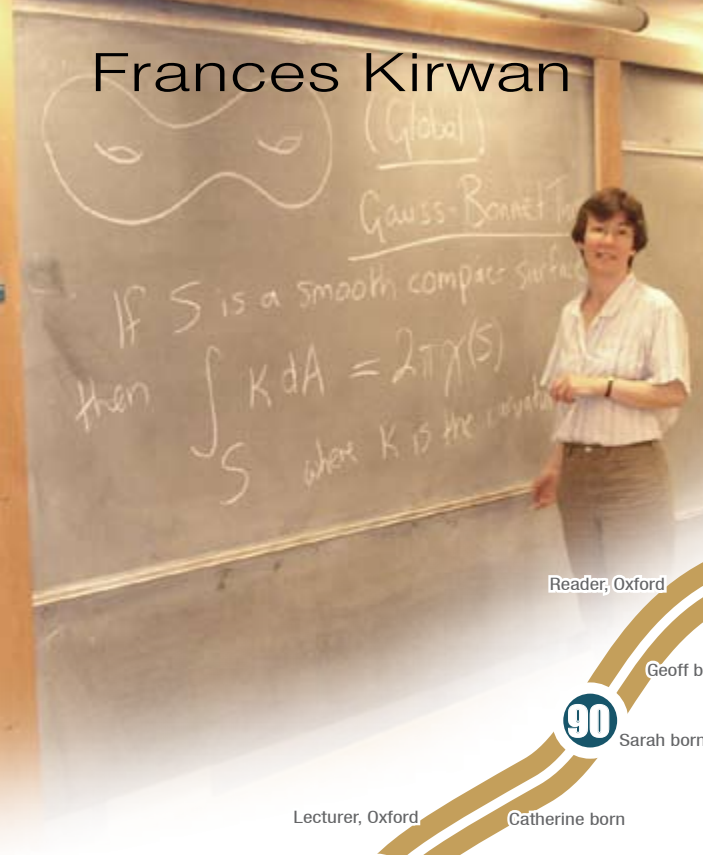
My main area of interest is in polymer processing and how processing affects structuring and properties of polymeric materials. I currently lead two large EPSRC funded consortia on polymer nanocomposites (multiscale modelling and process optimization). I am also working on the novel processing of biodegradable tissue scaffolds and hope to expand this area of my research in the coming years.

Career

A high degree of planning and organization, the support of my husband and setting ambitious goals have been the key ingredients in achieving my current academic position. I have been advised on more than one occasion that applying for the next promotion or high profile grant might be out of reach but I try to go with my gut instinct and this has always paid off. Having confidence in your own abilities is very important. No matter how important my work is however, at the end of the day it is my family that gives me the greatest enjoyment in life and this knowledge ensures that I keep any work pressures in perspective.



Frances Kirwan



BA in Maths, Cambridge

80

DPhil, Oxford

Post-doc Harvard

Post-doc Oxford

85

Married Michael

Lecturer, Oxford

Catherine born

90

Sarah born

Geoff born

Reader, Oxford

95

All children now at school

6 months sabbatical in Australia

9 months sabbatical in Australia

00

Elected fellow of Royal Society

President of the London Mathematical Society

05

Catherine starts university

Research

My research is in pure mathematics, though some of the motivation for the problems I work on comes from theoretical physics. I work in algebraic geometry, mainly on classification problems, studying geometric objects called moduli spaces.

Career

While combining an academic career with bringing up three children, I have been very lucky to have had extremely supportive colleagues (as well, of course, as husband, family and other childcare support). In addition, being a mathematician may well have helped: for my research I have no need of a lab, and relatively little need of a library. Thus in principle, at least, I could do research while feeding a baby or singing lullabies to a toddler (though I am not sure that much of that happened in practice)!

Marysia Placzek

Research

My research aims to understand the differentiation of cells in a particular region of the brain, the hypothalamus. The hypothalamus mediates homeostasis : the control of the body's internal environment. By understanding how it develops, we get clues as to how the hypothalamus functions normally, and how dysfunction in hypothalamic cells leads to wide-ranging problems, including age-related morbidities.

Career

The flexibility of academic work, and the support of colleagues have been hugely useful in allowing me to juggle my job and the demands of a fairly large family of four children. My husband and I run adjacent, but separate labs - and this gives us the chance to talk to each other, away from the chaos of home. The main reason that the juggling works for me is that I love both parts of what I do - getting huge enjoyment from the lab, and even more enjoyment from the family.

Rosalind John

90

BSc Biochemistry,
King's College London

PhD Biochemistry, Imperial

Post-doc on Huntington disease
at University of San Francisco
and Stanford, California

95

Post-doc on Genomic Imprinting
at University of Cambridge

00

Part time MRC Researcher
Career break

Daughter born,
maternity leave

05

Senior Lecturer, Cardiff
School of Biosicences

Research

I have a long-standing interest in mammalian epigenetics and disease. After a circuitous but entertaining career as a postdoctoral researcher (US and UK), I was appointed directly as a Senior Lecturer in Genetics at Cardiff University late in 2003. Maintaining a career and having a family has not been entirely straightforward but any obstacles that I have encountered have been over come by a healthy dose of stubborn determination and the generous support of my colleagues, in particular Professors Azim Surani, Mandy Fisher and the late Anne McLaren. It has also been crucial to embrace a somewhat nomadic lifestyle to pursue my research goals.

Career

Balancing my career and my family can be somewhat challenging. Relocating to Cardiff meant starting from scratch, both for myself and my young daughter. We had to build new friendships and the much needed support network for when things do not go according to plan. But things have worked out much better than I could have expected. Now we just have to learn some Welsh!

Effie Mutasa-Göttgens

Research

The goal of my research is to assist plant breeders in developing improved 'weather-resistant' crops. In recent years, my principle focus has been to improve our understanding of environmental and physiological control of bolting and flowering in sugar beet. In particular, we have created transgenic models to study the role of the plant hormone gibberellin during reproductive growth and bolting which, in sugar beet, marks the reproductive transition.

Career

My husband is also a career scientist - fortunatley in biomedical research which is generally better funded than plant science - this, for us, was critical in the early years when the equivalent of all my salary was spent on childcare. Without space for au pairs and local family networks, this was the only way I could keep working and not lose touch with my research. I just about managed to keep my head above water at home and work. It soon became impossible for both my husband and I to remain fully competitive - something had to give - I slowed down. Now, the children are older, my husband's career has taken off, mine is getting back on track and worth every sacrifice.
I love my children to bits!

85
BSc Hons. Applied Biology, Hatfield Polytechnic

PhD Mycology. Biotechnology Centre, Cranfield Inst. of Technology

90
Post Doc, QMW, University of London

Post Doc. Rothamsted Research, Broom's Barn

95
Head of Plant Biotechnology Group, Broom's Barn

Sofia born

00
Jessica born

05
Both children now at school, husband given tenure and promoted to reader

Aline Miller

Senior Lecturer, Manchester University

Lewis was born

05

Laurenzo was born

Lecturer, Manchester University

Post-doc, Cavendish Laboratory Cambridge

Alberto appointed to Lectureship at Manchester

00

Met Alberto (he was a lecturer in France at the time)

PhD Durham University

BSc in Chemistry Strathclyde University

95

90

Research

My research spans a wide area with particular emphasis on applying physical principles within the life-science field. The unifying theme is to relate the physics of self-assembly to functional, microstructural and mechanical properties to gain both process and product control. Of particular current interest is the development of responsive tissue engineering scaffolds.

Career

My husband works as an academic in a similar field, and this has helped enormously. He understands the nature of this job and has helped with the running of my reserach group while I have been on maternity leave. Between us we are managing to juggle both work and home life by working flexibly and sharing commitments equally.

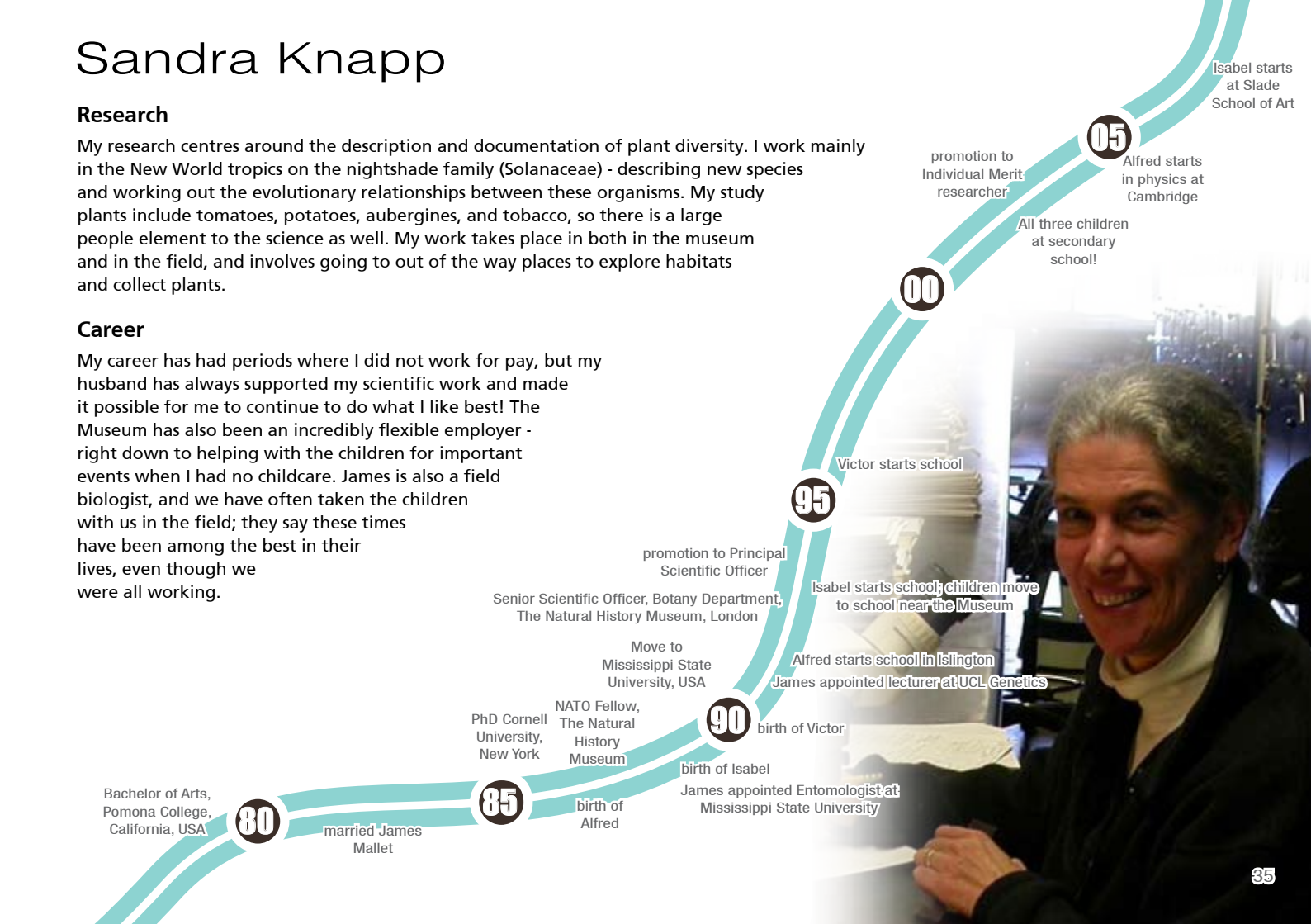
Sandra Knapp

Research

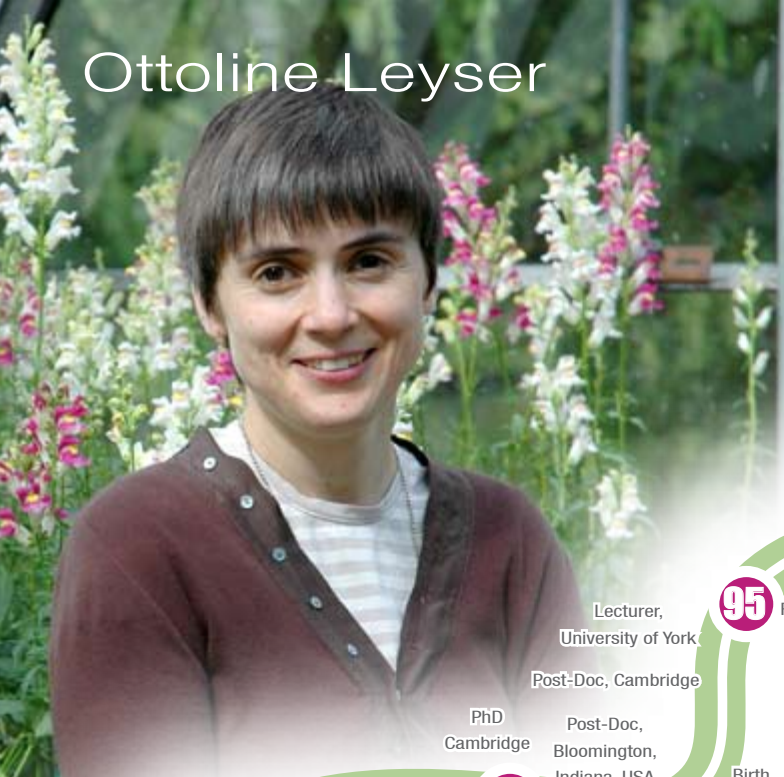
My research centres around the description and documentation of plant diversity. I work mainly in the New World tropics on the nightshade family (Solanaceae) - describing new species and working out the evolutionary relationships between these organisms. My study plants include tomatoes, potatoes, aubergines, and tobacco, so there is a large people element to the science as well. My work takes place in both in the museum and in the field, and involves going to out of the way places to explore habitats and collect plants.

Career

My career has had periods where I did not work for pay, but my husband has always supported my scientific work and made it possible for me to continue to do what I like best! The Museum has also been an incredibly flexible employer - right down to helping with the children for important events when I had no childcare. James is also a field biologist, and we have often taken the children with us in the field; they say these times have been among the best in their lives, even though we were all working.



Ottoline Leyser



85
Married Stephen

Stephen becomes freelance writer

90
Birth of Francesca

PhD Cambridge

Post-Doc, Bloomington, Indiana, USA

Post-Doc, Cambridge

Lecturer, University of York

95
Francesca starts school

Birth of Joshua

Joshua starts school

Reader, University of York

00
Francesca starts secondary school

Professor, University of York

Joshua starts secondary school

05
Elected Fellow of Royal Society

Research

My research is aimed at understanding the complex network of long-range hormonal signals that regulate shoot branching in plants. I am particulary interested in integrating gene regulatory networks with hormone transport and whole plant level effects.

Career

My career has been helped greatly by the fact that my husband is a freelance writer. Because he works from home in a very flexible way, we have been able to move easily and he has been the main carer for our children. It also worked well for me having the children during my post-doctoral years when my work was more flexible.

Susan Lanham-New

Research

I have worked in the area of nutrition and bone health across the life-cycle since 1989. Over the last decade, I have focused my research programme to address three specific areas: (i) what is the interaction between diet and sunlight exposure on vitamin D status in Caucasian and Asian populations; (ii) how might basic dietary manipulation assist the skeleton in its role of acid:base maintenance? (iii) at what level do physical activity & nutrition work synergistically within an individualís genetic potential to optimise bone health?

Career

Several key events have significantly impacted on my career. In 1988, I moved from the South Coast of England to the North-East of Scotland, to undertake an MSc in Human Nutrition and Metabolism at the University of Aberdeen, with the tremendous help of an MRC Scholarship. This degree opened so many doors and I haven't looked back since. I am hugely privileged to hold an academic position at a top Biosciences University. Women can successfully combine having a family and a career but you must be prepared to i) be adaptable; (ii) cope with little sleep and (iii) juggle an infinite number of balls all at the same time. But it is great, great fun and enormously rewarding.

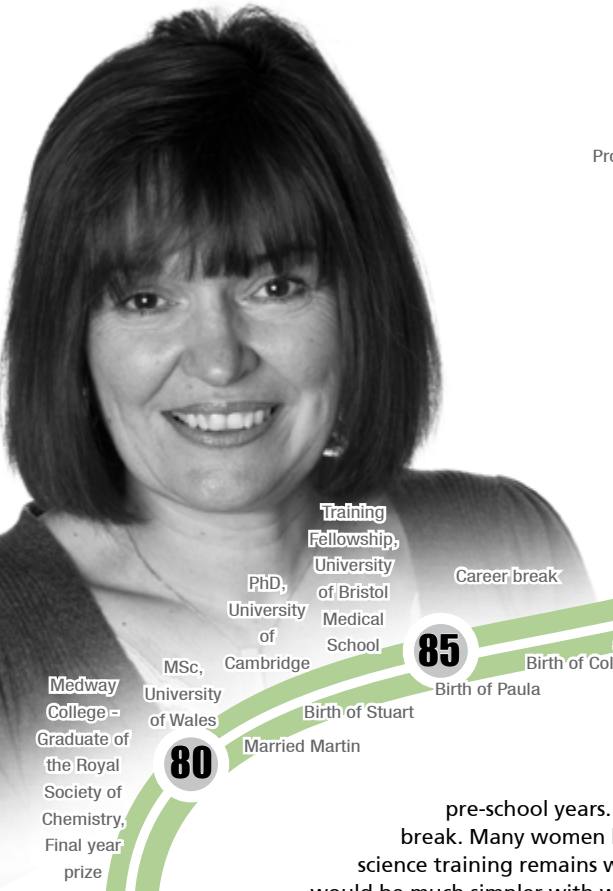
90
- MSc in Human Nutrition and Metabloism, Aberdeen
- BSc in sports Science

95
- PhD funded by Nutritional Consultative Panel
- Appointed Lecturer, University of Surrey
- Young Investigators Award at World Congress of Osteoporosis

00
- Nutritional Society Medal
- Young Investigators Award at European Osteoporosis Conference
- Young Investigators Award at UK Osteoporosis Conference
- Arrival of Christian Stephen

05
- Formation of D3TEX Ltd
- Promotion to Reader
- Arrival of Kristabel Pamela

Carol Robinson



Royal Society Research Professorship

Fellow of Royal Society

Rosalind Franklin Award

Biemann Medal From the American Society for Mass Spectrometry

Royal Society of Chemistry Silver Medal for Mass Spectrometry

Professor of Mass Spectrometry in the Department of Chemistry, Cambridge

05

00

Royal Society University Research Fellow, Oxford University

95

Research Assistant, University of Oxford

90

Colin started school

Paula started school

Stuart starts school

Birth of Colin

Birth of Paula

85

Training Fellowship, University of Bristol Medical School

Career break

PhD, University of Cambridge

MSc, University of Wales

Birth of Stuart

Married Martin

80

Medway College – Graduate of the Royal Society of Chemistry, Final year prize

Research

My research interests are in the areas of mass spectrometry, protein folding and assembly. The introduction of electrospray mass spectrometry, enabled the analysis of individual protein molecules. Using this approach, my initial research interest has been to develop procedures through which it is possible to obtain information about the development of secondary structure during protein folding.

Career

I decided to take an 8 year career break to be at home with my children during their pre-school years. I thoroughly enjoyed this time and did not have a problem re-entering science after this break. Many women have asked me about the problems of staying out of the field for so long. However basic science training remains with you and the latest developments can soon be picked up. Nowadays, staying in touch would be much simpler with web access to journals, webcast scientific meetings etc. The most important thing is to do what feels right at the time and to make it work for you.

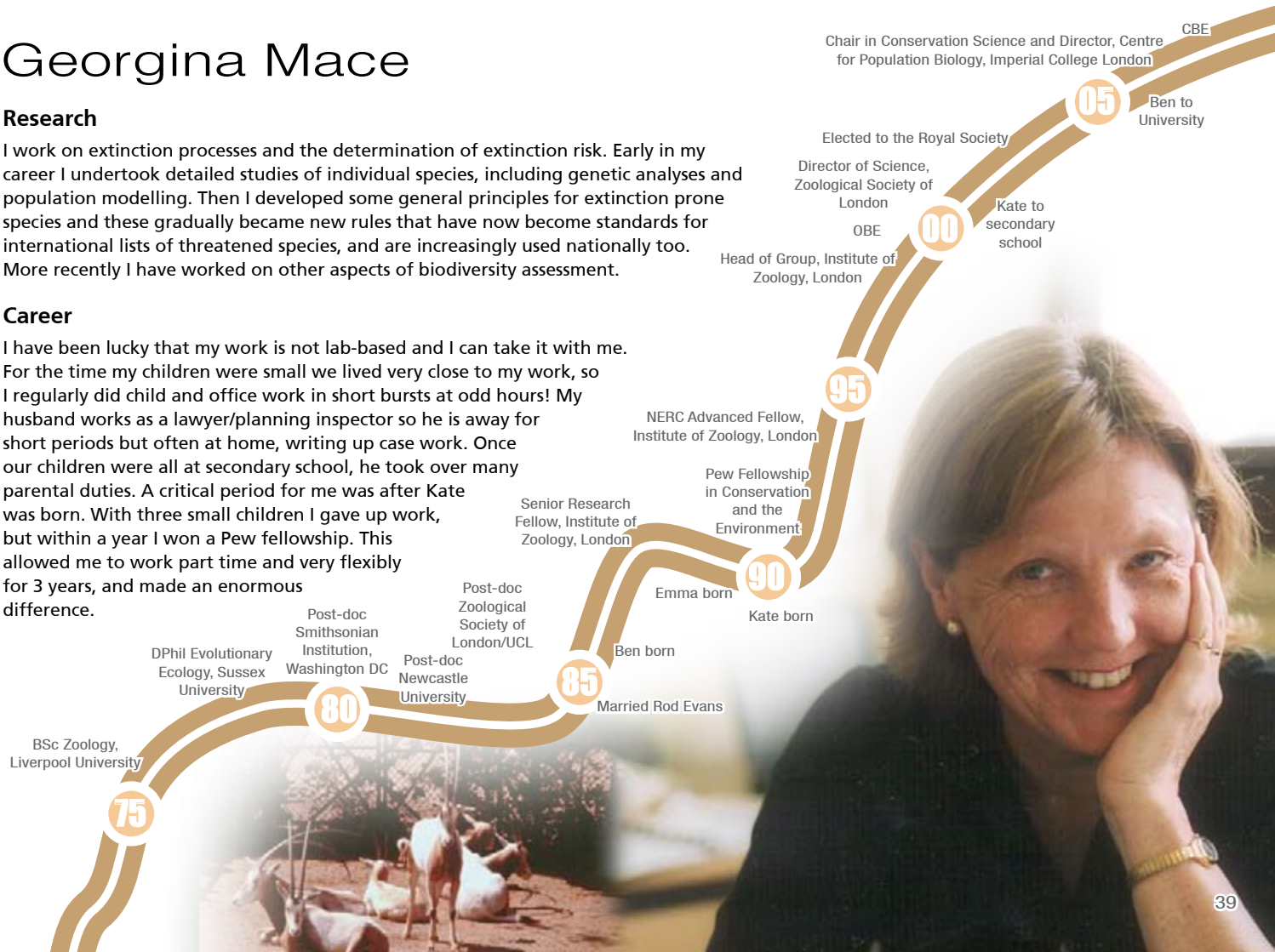
Georgina Mace

Research

I work on extinction processes and the determination of extinction risk. Early in my career I undertook detailed studies of individual species, including genetic analyses and population modelling. Then I developed some general principles for extinction prone species and these gradually became new rules that have now become standards for international lists of threatened species, and are increasingly used nationally too. More recently I have worked on other aspects of biodiversity assessment.

Career

I have been lucky that my work is not lab-based and I can take it with me. For the time my children were small we lived very close to my work, so I regularly did child and office work in short bursts at odd hours! My husband works as a lawyer/planning inspector so he is away for short periods but often at home, writing up case work. Once our children were all at secondary school, he took over many parental duties. A critical period for me was after Kate was born. With three small children I gave up work, but within a year I won a Pew fellowship. This allowed me to work part time and very flexibly for 3 years, and made an enormous difference.



Alison Rodger

Professor, Warwick 05

DSc, Sydney

Founding director of the EPSRC-funded MOAC Doctoral Training Centre

Reader, Warwick

Senior Lecturer, Warwick 00

Rowena born

Elisabeth born

Lecturer in Medicinal and Organic Chemistry, Warwick 95

Glasstone Fellow and Inorganic Chemistry Fellow of St. Hilda's College, Oxford

Unilever Physical Chemistry Fellow, St Catherine's College, Oxford 90

Overseas Scholar of the Royal Commission for the Exhibition of 1851 and Research Fellow, Newnham College, Cambridge

PhD, Sydney 85

BSc, Sydney

Married Mark

Research

My research involves development and application of polarized spectroscopy techniques to study the structure and interactions of biomacromolecules. Most of this work involves cross discipline collaborations. It has evolved from being almost completely theoretical to largely experimental.

Career

My career, with hindsight, looks a really logical progression to gain the skills that let me do the multidisciplinary research and doctoral training that I currently do. At the time, however, it was driven by a mix of working on things that fascinated me and the need for both my husband Mark and me to get jobs. We decided that our priority was to live in the same house and pretty much took it in turns to choose where to move. We did have 5 years with a Coventry-Reading commute during which time Elisabeth was born; thankfully soon after Rowena was born Mark moved to Warwick University.

Lesley Smart

Research

My research interests have always been in the solid state - single crystal Raman, crystallography of small molecules, and latterly the solid state chemistry of ceramic pigments, new materials and catalysts for industrial processes and fuel cells.

Career

I've always felt it vital for a woman to have her own career, but juggling work with young children I found very difficult, particularly with Craig commuting to London. We shared child- and house-care as much as possible, and bought in what help we could - the crèche on campus was a godsend, as was the flexibility of an academic career. My post has had a large teaching commitment which I love, and it has been a great thrill to publish books. I was older when I had my children and it wasn't until they grew up a little that I have had more time for research again.

70
BSc Chemistry with Mathematics, University of Southampton

PhD Raman Spectroscopy, Southampton

75
Lecturer, Royal University of Malta

SRC Fellow, University of Bristol

Lecturer, The Open University

80
Visiting Professor, University of Victoria, B.C., Canada

85
Met my partner Craig, a physics lecturer

Sam born

Craig starts working in London

Sam starts school

Laura born

90
Craig moves to London Metropolitan University

Laura starts school

95
Sam starts secondary school

Laura starts secondary school

00
Senior Lecturer

Craig and I get married

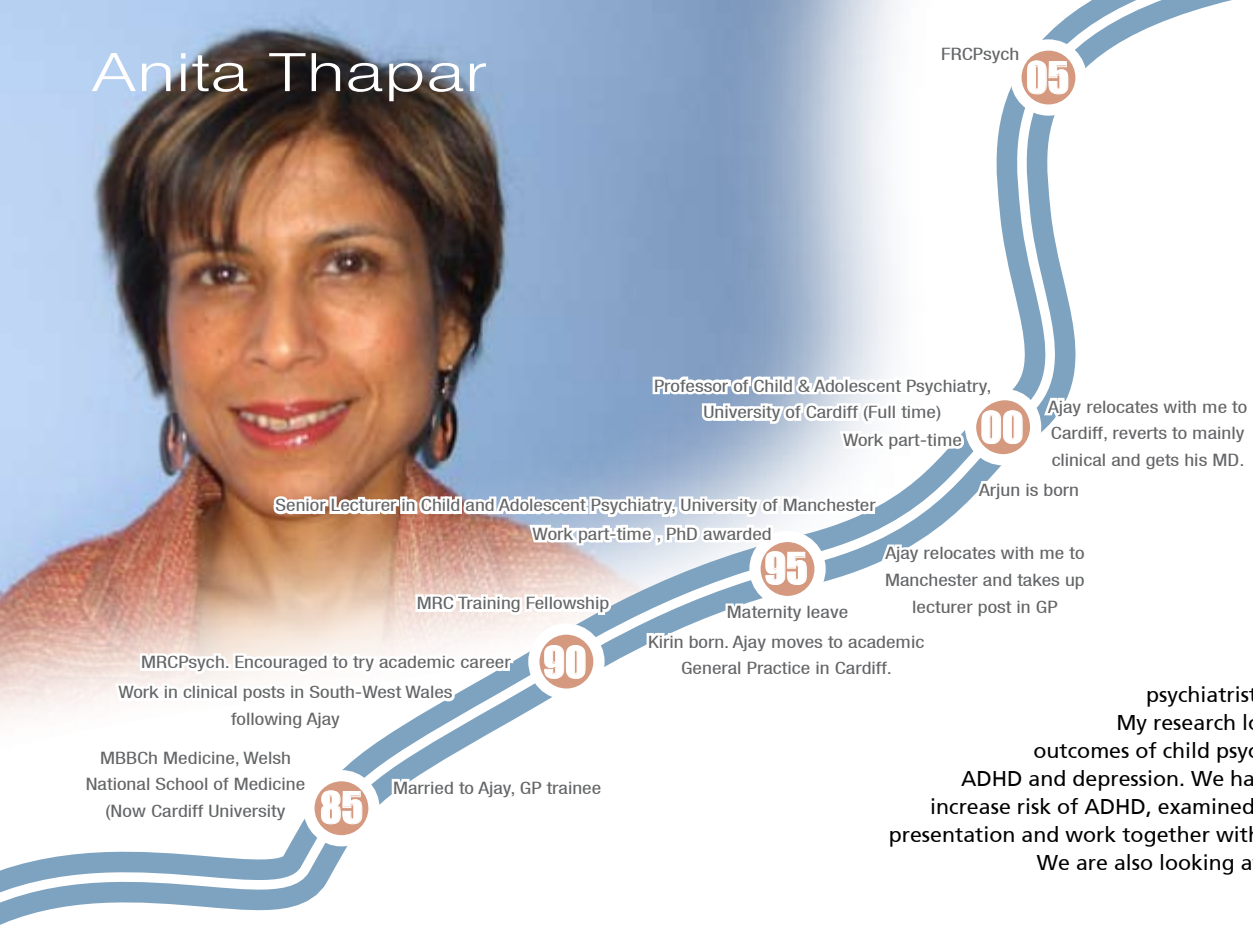
Sam to University

Member of Council, Royal Society of Chemistry

05
Molecular Science Awards Director, Open University

Laura to University

Anita Thapar



FRCPsych

05

Professor of Child & Adolescent Psychiatry, University of Cardiff (Full time)

Work part-time

00

Ajay relocates with me to Cardiff, reverts to mainly clinical and gets his MD.

Arjun is born

Senior Lecturer in Child and Adolescent Psychiatry, University of Manchester

Work part-time , PhD awarded

95

Ajay relocates with me to Manchester and takes up lecturer post in GP

MRC Training Fellowship

Maternity leave

MRCPsych. Encouraged to try academic career

Work in clinical posts in South-West Wales following Ajay

90

Kirin born. Ajay moves to academic General Practice in Cardiff.

MBBCh Medicine, Welsh National School of Medicine (Now Cardiff University

85

Married to Ajay, GP trainee

Research

I am a clinical child psychiatrist as well as an academic. My research looks into the causes and outcomes of child psychiatric disorders such as ADHD and depression. We have examined genes that increase risk of ADHD, examined how they affect clinical presentation and work together with environmental factors. We are also looking at adolescent depression.

Career

I am married to an academic GP and have two children. In my career I have had a lot of support from my husband. I have also been lucky in having helpful mentors. I have worked part-time when the children were younger.

Karen Halliday

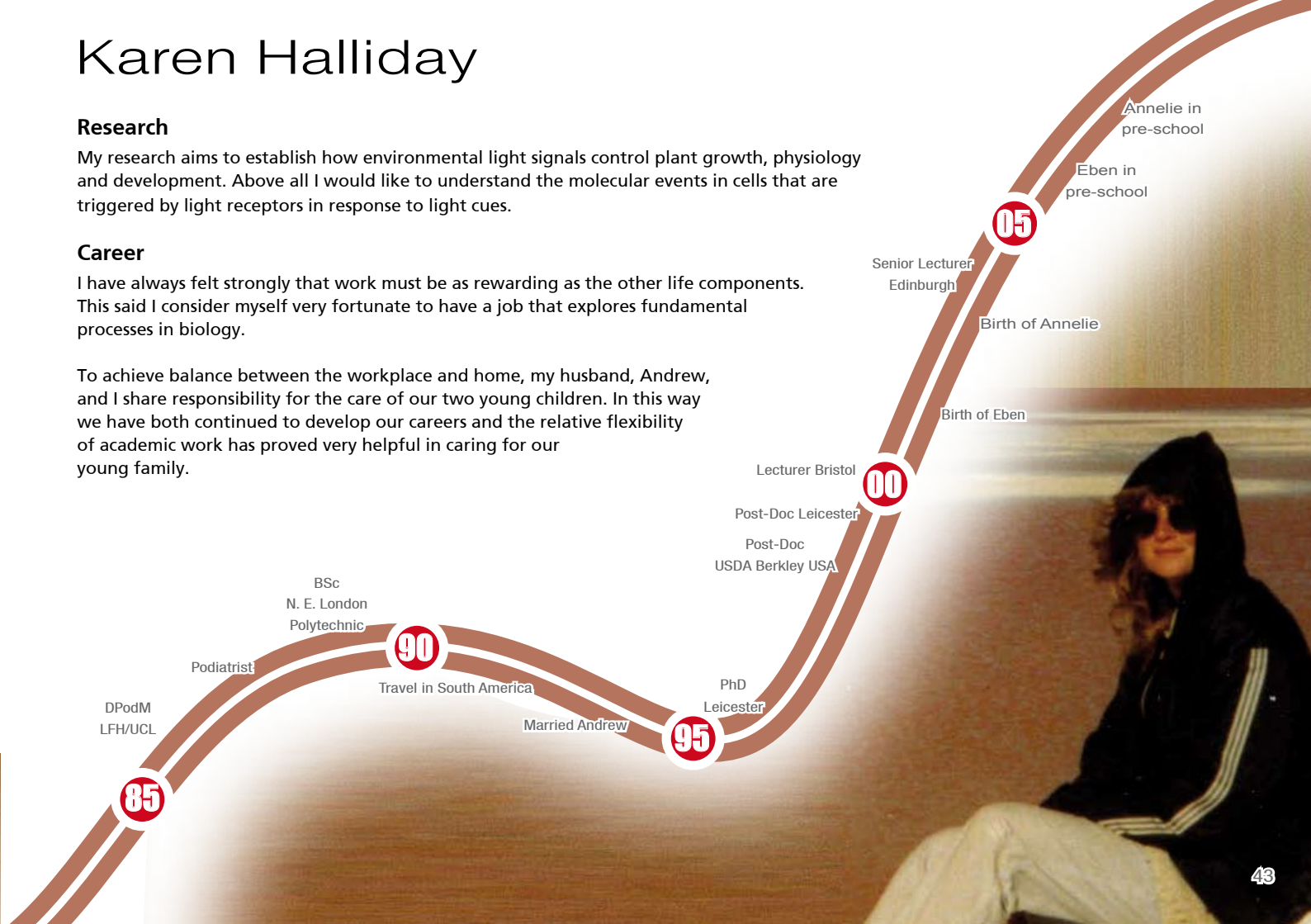
Research

My research aims to establish how environmental light signals control plant growth, physiology and development. Above all I would like to understand the molecular events in cells that are triggered by light receptors in response to light cues.

Career

I have always felt strongly that work must be as rewarding as the other life components. This said I consider myself very fortunate to have a job that explores fundamental processes in biology.

To achieve balance between the workplace and home, my husband, Andrew, and I share responsibility for the care of our two young children. In this way we have both continued to develop our careers and the relative flexibility of academic work has proved very helpful in caring for our young family.



Neva Haites

Research

My area of research has been in elucidating the role of genes in both inherited as well as sporadic disease. Diseases from the peripheral neuropathy - Charcot Marie Tooth disease to the inherited predisposition to breast and ovarian cancer. More recently I have been interested in how services for genetics can be provided including the extension of roles to nurses and genetic counsellors.

Career

My career has been facilitated by the willingness of my husband both to change the companies for which he worked, and then to set up his own businesses in the oil industry and hence having stability in Aberdeen.

Ulrike Tillmann

Research

I study geometric objects through their topological invariants. In particular I have worked on the moduli space of surfaces. Though my main work has been motivated by questions arising from quantum field theory and string theory, the mathematics involved is very interesting and exciting in its own right.

Career

As long as I can think back, I always imagined building an (academic) career and having a large family. Mathematics not being lab-based probably made this much easier. It also worked out really well that when the children were young, I was on a fellowship which meant that I had fairly light and flexible teaching duties. Our children went to nursery and later we have had several au pairs to help with the after-school care (and to reinforce the German spoken at home).

80
Abitur in Vreden, Germany

85
BA Brandeis, USA
Visiting student in Oxford
Met Jonathan

90
PhD Stanford, USA
Start of Post-Doc in Cambridge
Take up five-year Lectureship at Oxford

95
Awarded 6 year EPSRC Advanced Fellowship
Hannah is born
Ruth is born

00
Lectureship made permanent
Titular Professor
Hannah starts school
Miriam is born

05
Elected to the Royal Society
Miriam starts school
Ruth starts school

Li Zhang

Puyuan born

05

Weiqing born

Lecturer in Communications, School of Electronics and Electrical Engineering, University of Leeds

Research engineer, ECIT, Queen's university, Belfast

Research Associate, Electronics Department, University of York

PhD in Communications, Electronics Department, University of York

Research Scientist in Agilent Technology Ltd China Software Design Centre

00

Married Xiaocheng

MEng Electronics, Beijing University of Aeronautics and Astronautics, China

BSc Electronics, Beijing University of Aeronautics and Astronautics, China

95

90

Research

My research interests are in the area of wireless broadband communications, with emphasis on developing novel signal processing techniques to improve both the bandwidth and power efficiency of the overall system.

Career

I started my career as a lecturer in August 2004. After four years, I have set up my own research group with two RAs and three PhD students. At the same time, I have also set up my family. I have a three-year-old girl and a one-year-old boy. Both of them enjoy their time at nursery from Monday to Friday and this allows me to concentrate on my work. The right balance between work and family life is achieved with the help of the flexibility of academic work and of course the help from my husband, who is also working in academia.

Janet Thornton

Research

My research has focussed on understanding biological processes through analysing protein structure, function and evolution using computational approaches. Although I enjoyed experimental work, I gained most pleasure from analysing and integrating data to characterise, rationalise and ultimately try to predict structure and function, using knowledge-based approaches. Recently at EBI, I have enjoyed the challenges presented by high throughput biology in handling the deluge of data and attempting to plan for the future. It has been a privilege to participate in the genomic revolution which has radically changed and increased our understanding of basic biology.

Career

Throughout my career, my greatest pleasure has been in working with students, post-docs and colleagues, seeing them develop and enjoying the excellent science they generate. My priorities (work-life balance) tend to be driven by necessity, with home or work taking precedence according to demands! Moving labs (from London to Oxford to London to Cambridge) has always been difficult, but ultimately rewarding and in retrospect, the right way for me.

70 Married fellow student Alan Thornton

BSc Physics, Nottingham University

Alan starts work in commercial software development. We settled in Hemel Hempstead, where we have lived ever since.

PhD Biophysics, NIMR

Post-doc, Oxford

75 Birth of Alexander

Birth of Hazel

Went part-time (2 days per week)

80 Day nanny starts, who continued to look after the children (& me) until they went to University!

BBSRC fellowship, part time, Birkbeck

85 Half-time lectureship at Birkbeck

90 Returned to full time work

Both children left home almost immediately after university. Our son became a pilot and our daughter a metrologist.

Chair, UCL

95 Bernal Chair UCL/Birkbeck

00 Director, EBI, Cambridge

05 Alexander got married and we now have a beautiful grand-daughter

Ruth Gregory

BA in Mathematics, Trinity College, Cambridge

85

PhD in Theoretical Physics, DAMTP and Trinity College, Cambridge

Postdoctoral Research, NASA/Fermilab Astrophysics Center, IL, USA

Married

90

Robert R. MacCormick Fellow, Enrico Fermi Institute, University of Chicago

Relocated to UK for personal reasons

Son, John born (5 kilos!!)

PPARC Advanced Fellowship at DAMTP, University of Cambridge

Royal Society URF, Durham Centre for Particle Theory

95

Moved to Durham

00

Divorced

Reader at Centre for Particle Theory, Durham

Professor

05

John writes first short symphony, performed informally by Durham Sinfonietta

Awarded IOP Maxwell Medal for contributions to Theoretical Physics

Research

My research is aimed at trying to understand the interplay between spacetime, the construct and what we see. Although simplistically we have this already in the form of theories or equations, in reality, the route between this formalism and what we see is more subtle. I explore the impact of extra dimensions on our four dimensional world, and also the possible ways in which gravity and particle physics interact in the early universe. I am particularly interested in ways of modifying gravity to get unexpected large scale phenomena.

Career

I have been very fortunate in having several options to choose from, and have always prioritized my home life in these choices. Unfortunately, my experience has been that family and career can only mix for a woman if their partner is extremely supportive. I think it is incredibly difficult to operate at your natural level as a woman and Mother, as you are hampered by having significantly less time and more demands on it than your male peers, but that only makes it all the more satisfying!

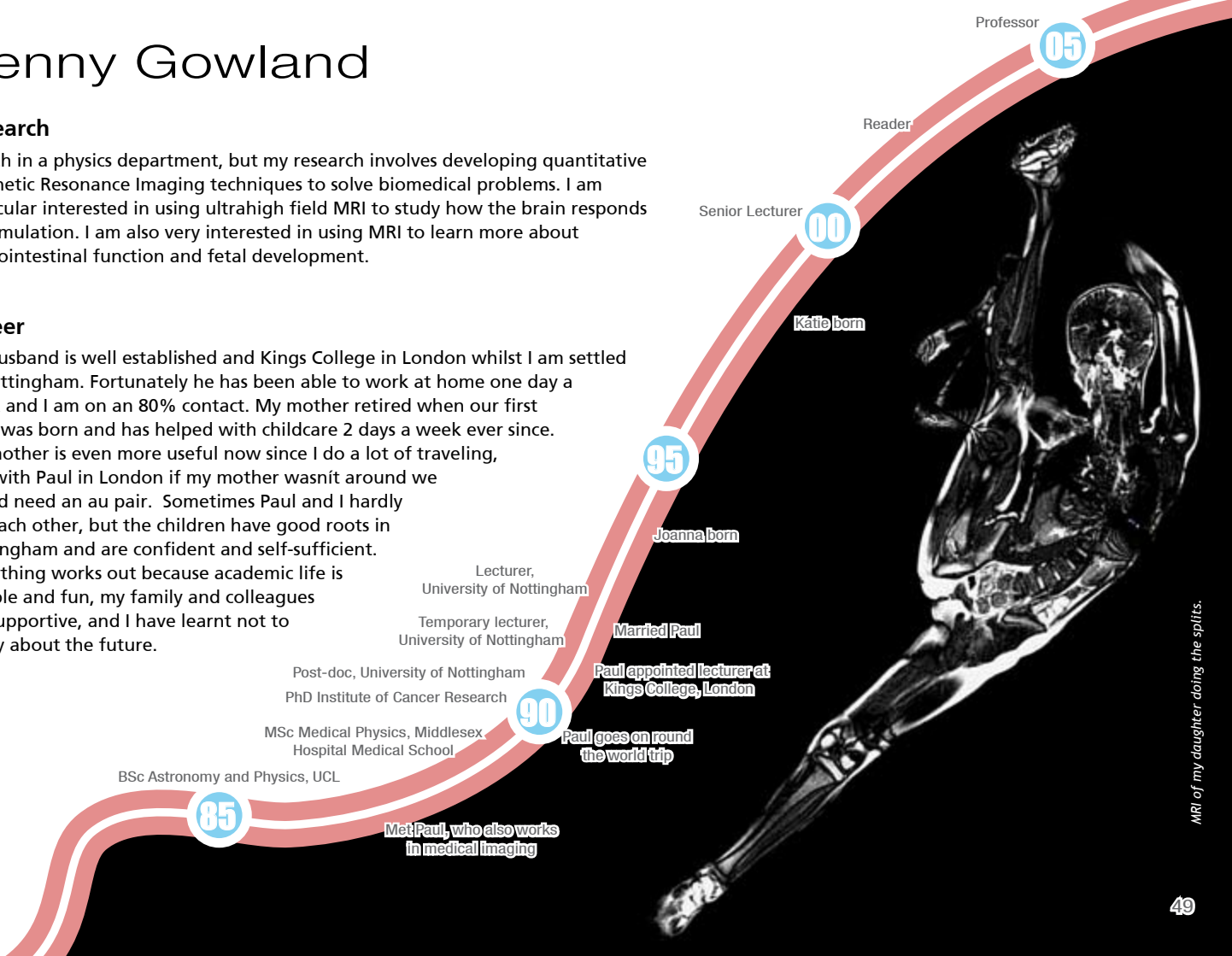
Penny Gowland

Research

I teach in a physics department, but my research involves developing quantitative Magnetic Resonance Imaging techniques to solve biomedical problems. I am particular interested in using ultrahigh field MRI to study how the brain responds to stimulation. I am also very interested in using MRI to learn more about gastrointestinal function and fetal development.

Career

My husband is well established and Kings College in London whilst I am settled in Nottingham. Fortunately he has been able to work at home one day a week and I am on an 80% contact. My mother retired when our first child was born and has helped with childcare 2 days a week ever since. My mother is even more useful now since I do a lot of traveling, and with Paul in London if my mother wasnít around we would need an au pair. Sometimes Paul and I hardly see each other, but the children have good roots in Nottingham and are confident and self-sufficient. Everything works out because academic life is flexible and fun, my family and colleagues are supportive, and I have learnt not to worry about the future.



MRI of my daughter doing the splits.

Helen Hailes

Met my husband to be Stephen Hailes, Computer Scientist

85

BA Chemistry, Cambridge Graduated and started a Ph.D in Biological Chemistry

Married Steve

Completed Ph.D in Biological Chemistry, Cambridge

Post-doctoral research, Cambridge

Started post doctoral research at Imperial College London

90

Lecturer in Chemistry at UCL

95

Birth of Rebekah and maternity leave

Steve started a Post-Doctoral position at University College London

Steve appointed Lecturer in Computer Science at UCL

Birth of Samuel and maternity leave

00

Senior Lecturer in Chemistry at UCL

05

Reader in Chemical Biology at UCL

Research

My research is focused on the use of synthetic organic chemistry to probe and solve biological problems. Several projects involve the development of new synthetic strategies, including the use of biocatalysts, to construct molecules with improved biological properties.

Career

I have managed my career by being organised, having a supportive husband, good childcare and understanding children! I had my first child Rebekah, while doing postdoctoral research and before establishing an independent research career, and then Samuel in the early years of my lectureship. We both juggled full time lecturing, research, and bringing up the children and despite the hard work and long hours the relative flexibility of academic life has helped.

Parveen Yaqoob

Research

My research investigates the influence of omega-3 fatty acids on maternal and infant immunity, and probiotics on gut health and immunity.

Career

Having waited until I had an established research group before starting a family, I had to have IVF to have Aden at 38. Philip is at the peak of his career and is away a lot, so childcare is mainly my responsibility. I often have to turn down invitations to speak at conferences, but because we work in the same field, there are occasions when we are both invited to the same meeting and take Aden along with us.

85
BA Physiological Sciences, University of Oxford

90
DPhil Biochemistry, University of Oxford
Meet my partner, Philip, a visiting Research Fellow in the same lab

95
Post-Doc, University of Oxford
Philip takes up a lectureship at the University of Southampton

00
Post-Doc, University of Southampton
Lecturer, University of Reading
Reader, University of Reading
Philip becomes Professor of Nutritional Immunology at Southampton

05
Aden born 28th December
Return to work in August at 80%; Aden starts nursery

85

R & D Engineer, China

BSc Sichuan University, China

90

95

Post-doc University of York

PhD, Exeter

00

Married Yongbing (Lecturer then, now a Professor in Electronics)

Birth of Yilin

Lecturer in Physics, York

05

Birth of Yiyang

Yilin went to primary school

Jing Wu

Research

My research is to understand the ultimate limit in the reversal speed of a magnetic element by stroboscopic investigation of spin motion in femtosecond time domain. The method I use is femtosecond/picosecond laser microscopy and the application is to determine the maximum working frequency of magnetic storage system.

Career

Choosing between careers and families has never come to my mind. In reality, the fact that Yongbing is also an academia in York is very helpful in my career development. We always take turns in childcare for our two children, though I share a slightly higher weight. The relative flexibility of academic jobs has indeed proved very helpful in caring for my children. We are also very grateful to our parents on both sides, who came to the UK a couple of times and looked after the two grandchildren in turn over the last 5 years.

Jane Hill

Research

I examine how species (mainly butterflies) are affected by climate warming and habitat destruction. I work in Britain and the tropics. I am particularly interested in understanding how species respond to environmental changes, and the consequences of these biodiversity changes.

Career

I had Matthew once both my husband (also an ecologist) and I had permanent jobs close to one another. Until then, I had various post-doc contracts, most of which involved extensive periods of fieldwork and lots of commuting. Keith and I are both academics and so we are quite flexible in terms of childcare, and we both continue to work full-time. Fieldwork has been curtailed but I suspect this would have happened anyway as I spend more time managing my research group, and Matthew comes with us on trips to Borneo.

Sue Gibson

Lecturer, University of Warwick

Post-doc, ETH Zürich

DPhil Oxford

BA Cambridge

85

Lecturer, Imperial College London

90

Married Vernon, Chemistry Professor, University of Durham

Reader, Imperial College London

95

Vernon moves to Imperial College London

Birth of Anna, full time nanny employed

Professor, King's College London

00

Birth of Alex

Anna starts school with excellent after-school club and holiday scheme

Professor, Imperial College London

05

Alex starts school, nanny leaves

Elderly mum needs more help

Research

I became fascinated by the way metals alter the reactivity of organic molecules when I was an undergraduate. A passion to learn more has taken me on an exciting journey, highlights of which include the discovery of new chemical reactions, the creation of a wide range of new chemical compounds, and explorations of the inner workings of key catalytic processes.

Career

I have enjoyed wonderful support from Vernon, who fully understands the rewards and demands associated with academic life. From a practical point of view, we have chosen to 'invest' in top-quality childcare and domestic help, and we have ensured that our home, our work-places and our children's school are all within a short walk of each other.

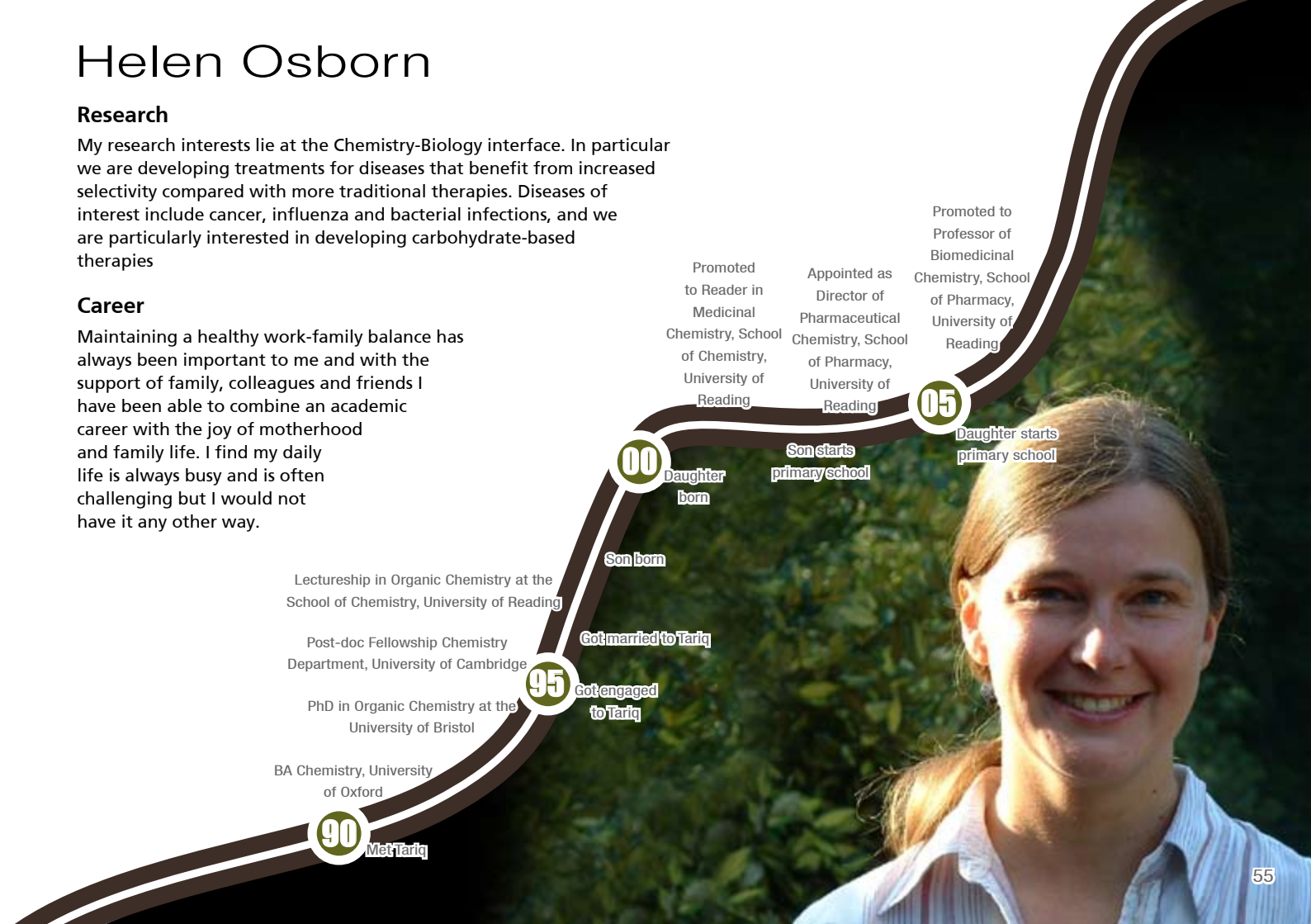
Helen Osborn

Research

My research interests lie at the Chemistry-Biology interface. In particular we are developing treatments for diseases that benefit from increased selectivity compared with more traditional therapies. Diseases of interest include cancer, influenza and bacterial infections, and we are particularly interested in developing carbohydrate-based therapies

Career

Maintaining a healthy work-family balance has always been important to me and with the support of family, colleagues and friends I have been able to combine an academic career with the joy of motherhood and family life. I find my daily life is always busy and is often challenging but I would not have it any other way.



Polina Bayvel

Royal Society Wolfson Research Merit Award

Elected, Fellow, Optical Society of America

Samuel starts nursery

Birth of Peter (Chaim-Pinhas)

05

Birth of Samuel (Shmuel-Daniel)

Elected Fellow of the Royal Academy of Engineering

Awarded IoP Paterson Medal

Promoted to Professor, Dept of Electronic & Electrical Engineering, UCL

Met Anatoly Zayats

00

Royal Society University Research Fellowship awarded (UCL), held 1993-2003

Principal Systems Engineer, Nortel Networks (formerly STC/STL)

95

Post-doctoral fellowship, General Physics Institute, USSR Academy of Sciences, Moscow

PhD in Electronic & Electrical Engineering, UCL

90

85

Research

My research is in optical communications and networks - to understand the limits to information transmission in optical fibres and build systems and networks to approach these limits. This includes the study of networks, optical pulse propagation as limited by fibre nonlinearities and dispersion, and new optical materials and devices.

Career

I have benefited hugely by having inspiring and supportive mentors, and superb students and colleagues, and this helped me build a critical mass in my research. The arrival of children has been professionally disruptive, especially as Anatoly is a busy physics professor at Queen's University, Belfast and is frequently away. Having parents nearby, an excellent nanny, little sleep and home help have all proved key to being able to maintain the success of my lab. My boys are a great source of inspiration, joy and fulfillment.

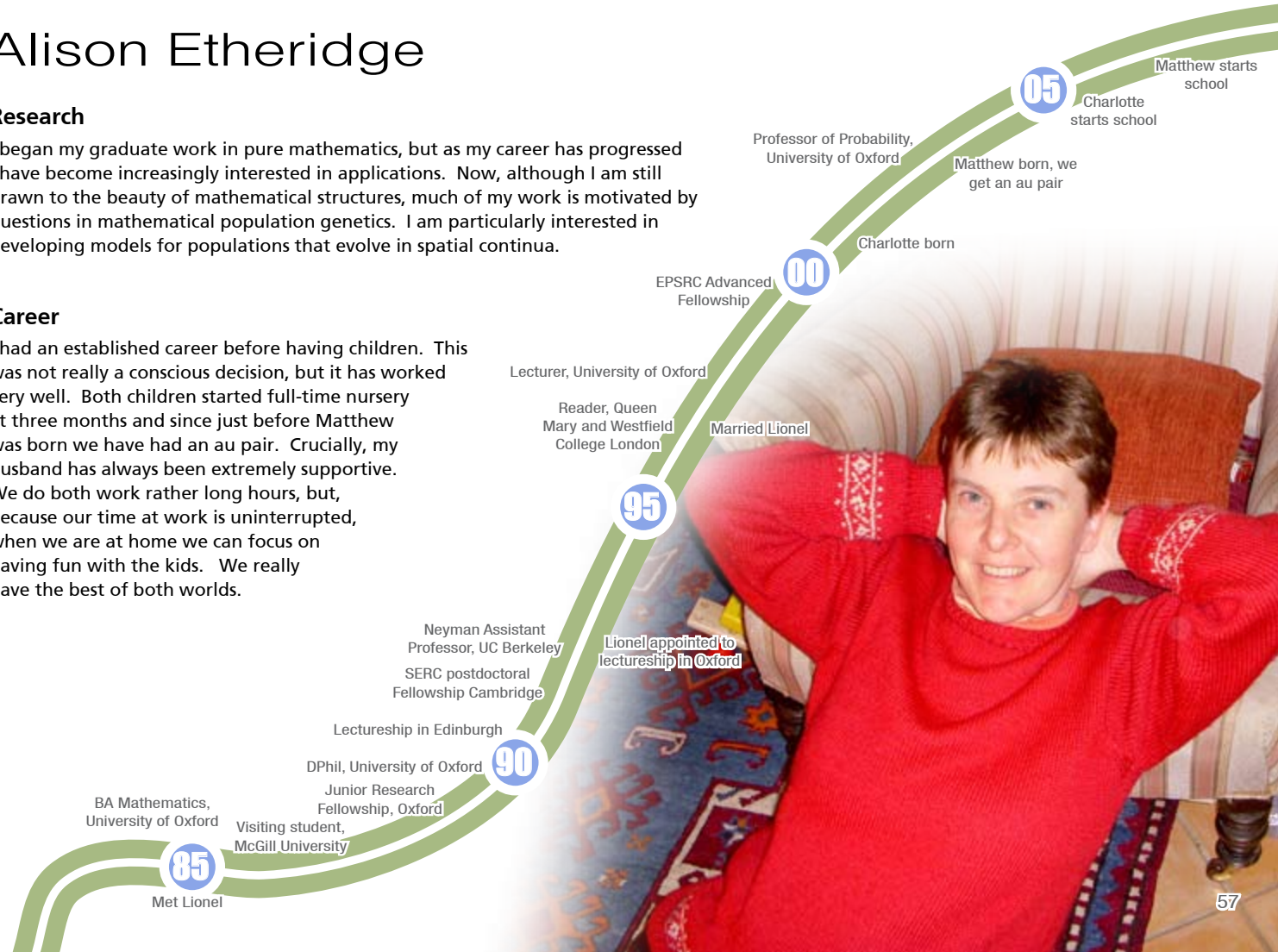
Alison Etheridge

Research

I began my graduate work in pure mathematics, but as my career has progressed I have become increasingly interested in applications. Now, although I am still drawn to the beauty of mathematical structures, much of my work is motivated by questions in mathematical population genetics. I am particularly interested in developing models for populations that evolve in spatial continua.

Career

I had an established career before having children. This was not really a conscious decision, but it has worked very well. Both children started full-time nursery at three months and since just before Matthew was born we have had an au pair. Crucially, my husband has always been extremely supportive. We do both work rather long hours, but, because our time at work is uninterrupted, when we are at home we can focus on having fun with the kids. We really have the best of both worlds.



Alicia Hidalgo

BSC, Universidad Complutense de Madrid, Spain

85

Meet Philip Davies, mechanical engineer, at Oxford

Marry Philip

PhD, University of Oxford

Post-doc, Universidad Autónoma de Madrid, Spain

90

Philip does post-doc at the Instituto de Energía Solar, Madrid

Post-doc, Wellcome CR-UK Institute (now Gurdon Institute), Cambridge, UK

Wellcome Trust Career Development Fellow, Department of Genetics, University of Cambridge

Natalia is born

I play major child-care role as Philip commutes daily to London

95

Philip moves to Melles Griot in Cambridge

Daniel is born

Natalia learns to ski, Daniel learns to walk while in the Alps

00

Philip joins Scientific Generics in Cambridge

EMBO Young Investigator Award

Philip takes major child-care role while I move my lab to Birmingham

Senior Lecturer, University of Birmingham

Philip moves to Warwick University with a Royal Society Industrial Fellowship

05

Philip moves to Aston University in Birmingham

Natalia and Daniel ski down black runs

Daniel gets a snake

Research

How is a brain made? I wonder how it is that while a brain grows during development, the number of cells is controlled so as to achieve characteristic shape, volume and regional cell densities, while at the same time all the innumerable and complex axonal circuits are established. I would like to understand how structure and function of the brain come together during development and evolution.

Career

A sense of enjoyment about life, willingness to work very hard in the lab and at home, a passionate love of science and not needing much sleep, has driven me. I thought if having a family and science happen to occur at the same time in life, I would go for both. Philip and I tried as much as possible to make career choices that would help us both. We have always shared childcare and domestic duties, and have lots of fun with the kids, playing lots and doing together sports, art and holidays that everyone enjoys.

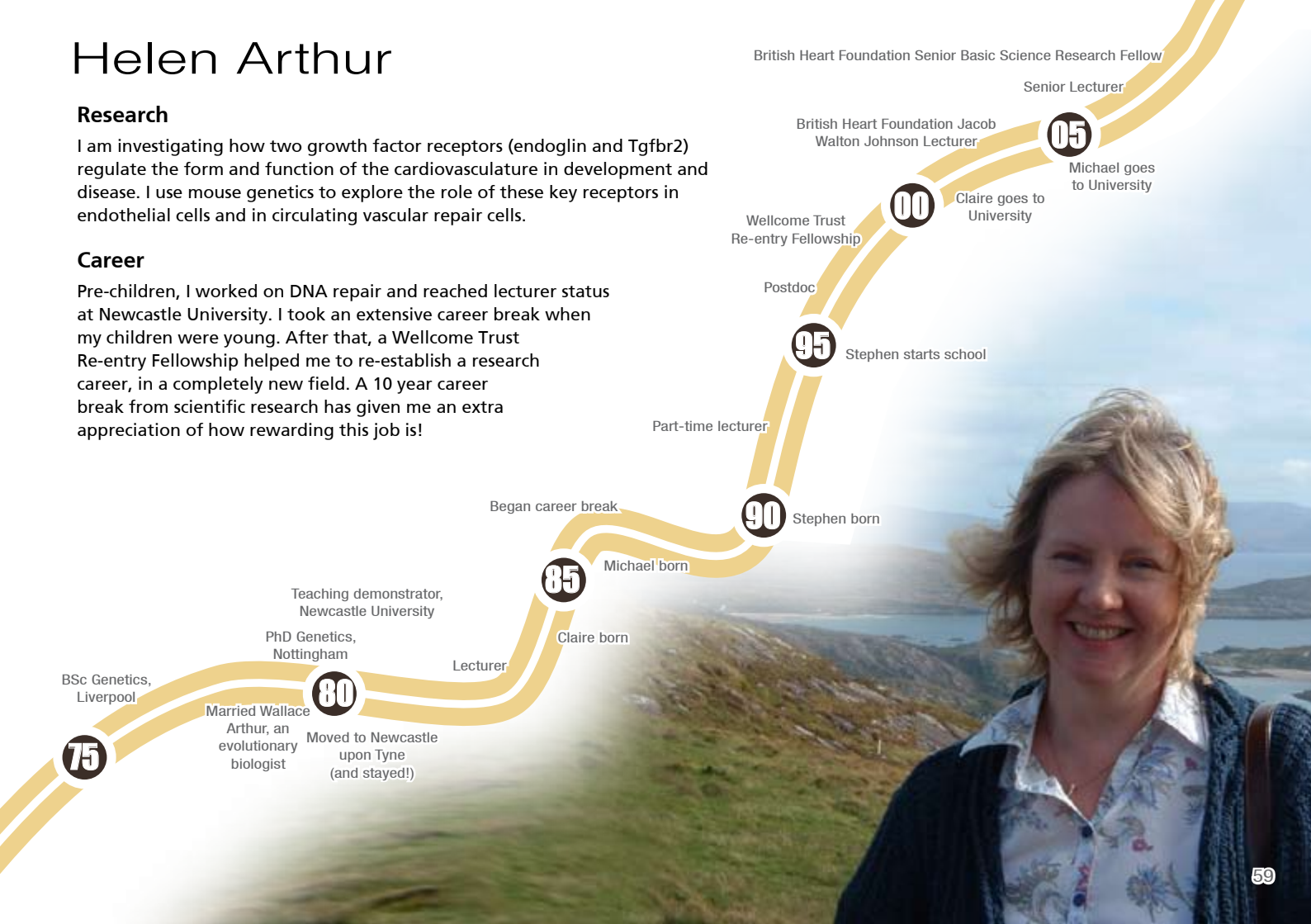
Helen Arthur

Research

I am investigating how two growth factor receptors (endoglin and Tgfbr2) regulate the form and function of the cardiovasculature in development and disease. I use mouse genetics to explore the role of these key receptors in endothelial cells and in circulating vascular repair cells.

Career

Pre-children, I worked on DNA repair and reached lecturer status at Newcastle University. I took an extensive career break when my children were young. After that, a Wellcome Trust Re-entry Fellowship helped me to re-establish a research career, in a completely new field. A 10 year career break from scientific research has given me an extra appreciation of how rewarding this job is!



Kate Storey

Met my partner, Jonathan Gordon, Marine Biologist

85

BSc Neurobiology, University of Sussex

PHD Kings College, University of Cambridge

Harkness Fellowship, Postdoctoral Research, University of California

90

Jonathan appointed to run research vessel Song of the Whale for International Fund for Animal Welfare

Alexander born - career break to 1989

Maternity leave Emma born

Postdoctoral Researcher (part-time), University of Oxford

95

Departmental Lecturer (full- time), University of Oxford

University Lecturer, Fellow of ChristChurch, University of Oxford

00

MRC Senior Non-clinical Research Fellow, University of Dundee

Relocated to Scotland, Jonathan working at the Sea Mammal Research Unit, St Andrews University and as a self-employed ecological consultant

Senior Lecturer, University of Dundee

Reader, University of Dundee

05

Alexander to University

Professor, University of Dundee

Research

I am researching the regulation of neural differentiation in embryos and embryonic stem cells. I aim to integrate different levels of analysis, from signalling pathways to cell cycle control and epigenetic modification to understand better the differentiated cell state.

Career

My partner is at sea for 3 months/year and childcare in the early years was largely my responsibility. I found post-doctoral research quite flexible and have taken a career break and worked part-time during this period. My first independent posts had high teaching demands and our move to Scotland, which was good for both our careers, allowed me to focus on research.

Katharine Reid

Research

I study the interaction of light with isolated molecules in order to determine the mechanisms by which energy can redistribute prior to fragmentation, rearrangement, or chemical reaction. I use laser light which has useful controllable properties such as intensity, frequency, pulse duration and polarization in order to study the extent to which these affect the interaction. My research is very fundamental in nature, but carries with it the tools with which chemical reactions might be steered to a controlled outcome in future.

Career

I found it very important to establish myself as a successful independent scientist before involving either a permanent partner or children in my life. This meant that when my daughter was born (when I was nearly 37) I had no qualms about making her my number 1 priority while being assured that my career, by then established, would continue. My partner and I share childcare and other domestic duties 50/50 which I think is vital. We are very lucky in that we work in the same place so don't have to deal with any commuting nightmares.

Professor

05

Madeleine starts school

Reader

Madeleine starts nursery full time

Madeleine born and maternity leave

00

Bought a house with my partner Jeremy (also an academic at Nottingham)

Lectureship, University of Nottingham

95

SERC Advanced Fellowship, University of Nottingham

SERC/NATO fellowship, Stanford University, California

90

DPhil University of Sussex

BSc University of Sussex

85

Naomi Chayen

Visiting Professorship, Harvard University

Elected President of the International International Organisation for Biological Crystallization

Professor Imperial College London

05

Permanent position Imperial College London

00

Principal Research Fellow

Started working full-time

Ariella started school, I started working full-time

95

Research Fellow Imperial College (4 days a week)

90

Nanny moves in

Birth of Ariella, 6 months maternity leave

Raphael starts school

Birth of Raphael, 6 months maternity leave

85

Post Doc Imperial College London (half-time)

PhD Brunel University UK

MSc HU Jerusalem

BPharm Hebrew University Jerusalem

80

Married Jeremy (Lawyer)

Research

I specialize in crystallization of proteins, developing a fundamental understanding of the crystallization process and harnessing this to design methodology of producing crystals for rational drug design. The research also involves crystallization on the International Space Station. Several of my research outputs have been patented and commercialized.

Career

A combination of several factors has enabled me to combine my career with raising children. Caring for the children is shared with my husband, a live in nanny makes travel possible and the ability to work part time and gradually build up to full time have made it possible for me.

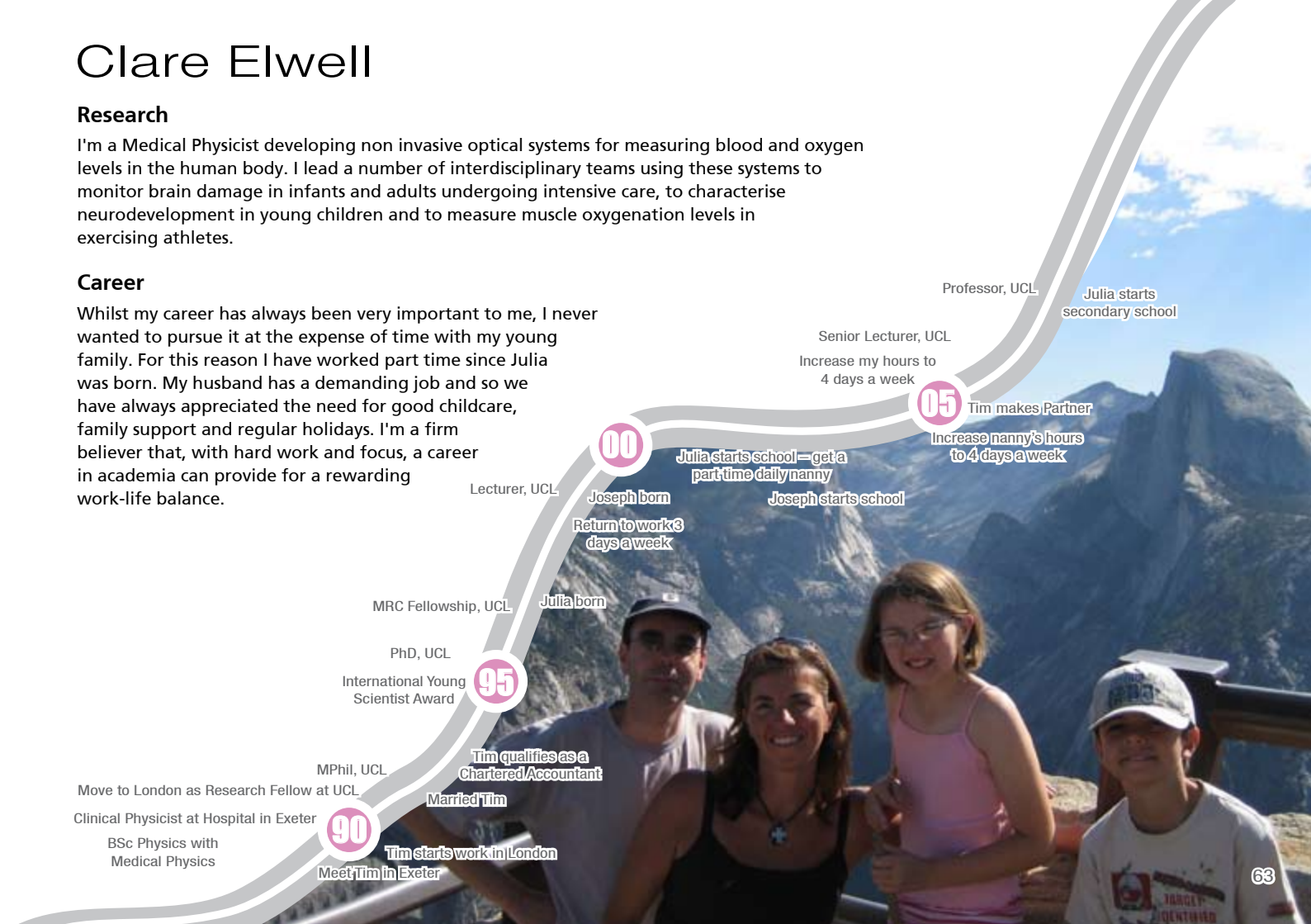
Clare Elwell

Research

I'm a Medical Physicist developing non invasive optical systems for measuring blood and oxygen levels in the human body. I lead a number of interdisciplinary teams using these systems to monitor brain damage in infants and adults undergoing intensive care, to characterise neurodevelopment in young children and to measure muscle oxygenation levels in exercising athletes.

Career

Whilst my career has always been very important to me, I never wanted to pursue it at the expense of time with my young family. For this reason I have worked part time since Julia was born. My husband has a demanding job and so we have always appreciated the need for good childcare, family support and regular holidays. I'm a firm believer that, with hard work and focus, a career in academia can provide for a rewarding work-life balance.



Andrea Brand

Herchel Smith Professor of Molecular Biology, Gurdon Institute and Department of Physiology, Development and Neuroscience, University of Cambridge

Royal Society Rosalind Franklin Award

Senior Group Leader, Gurdon Institute, University of Cambridge

05

William Bate Hardy Prize

Hannah starts school

Elected Fellow of the Academy of Medical Sciences

BSCB Hooke Medal

Elected Member of EMBO

00

Hannah is born

Hannah starts at nursery

95

Wellcome Trust Senior Fellow , Gurdon Institute, University of Cambridge

My partner, Jim Haseloff, and I move to Cambridge, UK, to take up independent positions

90

Post-Doctoral Fellow, Harvard, USA

PHD, MRC LMB, University of Cambridge

85

BA Oxford

Research

One of the goals of research in neurobiology is to repair or regenerate neurons after damage to the brain or spinal cord. Neurons are produced by multipotent neural stem cells that can both self-renew and simultaneously generate different types of neurons. My research aims to identify the genes that specify the characteristic behaviours of these neural cells. It may then become possible to induce stem cells to become neurons at will, or induce neurons to regenerate.

Career

Jim and I did not consider having children until we had established our own research groups and my Fellowship had been renewed. We have no childcare help at home and our families live in the US and Australia. It has not been easy juggling two careers and family life, but with a supportive lab and very little sleep, it has been possible.

Jane Clarke

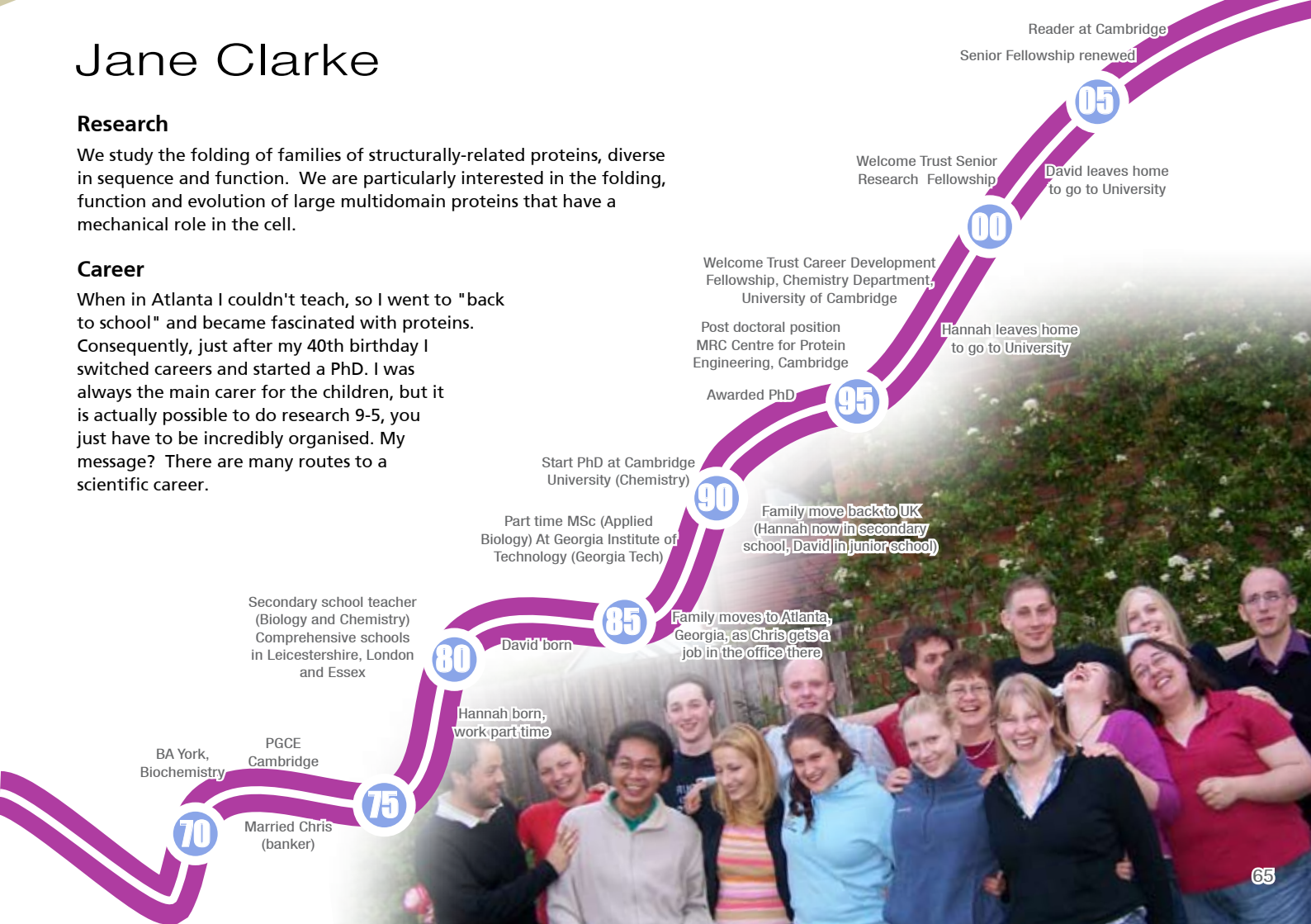
Research

We study the folding of families of structurally-related proteins, diverse in sequence and function. We are particularly interested in the folding, function and evolution of large multidomain proteins that have a mechanical role in the cell.

Career

When in Atlanta I couldn't teach, so I went to "back to school" and became fascinated with proteins. Consequently, just after my 40th birthday I switched careers and started a PhD. I was always the main carer for the children, but it is actually possible to do research 9-5, you just have to be incredibly organised. My message? There are many routes to a scientific career.

70
BA York, Biochemistry
PGCE Cambridge
Married Chris (banker)
75
Secondary school teacher (Biology and Chemistry) Comprehensive schools in Leicestershire, London and Essex
80
David born
Hannah born, work part time
85
Part time MSc (Applied Biology) At Georgia Institute of Technology (Georgia Tech)
Family moves to Atlanta, Georgia, as Chris gets a job in the office there
90
Start PhD at Cambridge University (Chemistry)
Family move back to UK (Hannah now in secondary school, David in junior school)
95
Post doctoral position MRC Centre for Protein Engineering, Cambridge
Awarded PhD
Hannah leaves home to go to University
00
Welcome Trust Career Development Fellowship, Chemistry Department, University of Cambridge
David leaves home to go to University
05
Welcome Trust Senior Research Fellowship
Senior Fellowship renewed
Reader at Cambridge



Dian Donnai

MB.BS University of London, St Mary's Hospital Medical School

Married Paul Donnai

70

Paul appointed as Registrar in O&G in Sheffield

Member of the Royal Colleges of Physicians (MRCP)

Paul appointed as Senior Registrar in Manchester

Melissa born December

75

Tom born April

Paul appointed Consultant Obstetrician and Gynaecologist

80

Consultant Clinical Geneticist, Manchester

FRCP

85

Honorary Professor, University of Manchester

90

Melissa and Tom to University

President of the Clinical Genetics Society

95

Carter Lecturer and Medallist, CGS

Professor of Medical Genetics, University of Manchester

FMedSci

00

Melissa an NHS Manager, Tom a History Teacher

CBE

05

Paul retired, and Melissa married Dan

Research

My research is into syndromes associated with physical and developmental disabilities. My group has elucidated the genetic mechanisms underlying several disorders. We have a particular interest in mosaicism and in genotype-phenotype correlation in Williams syndrome. Close integration of my clinical and academic work is important since we aim to rapidly translate research findings into clinical practice.

Career

We have somehow managed a 2-career, 2-children partnership, not by careful planning but by taking opportunities when they arose. In earlier years our moves were decided by my husband's career but after our children were at school the whole family have been supportive of the increasing demands of my career.

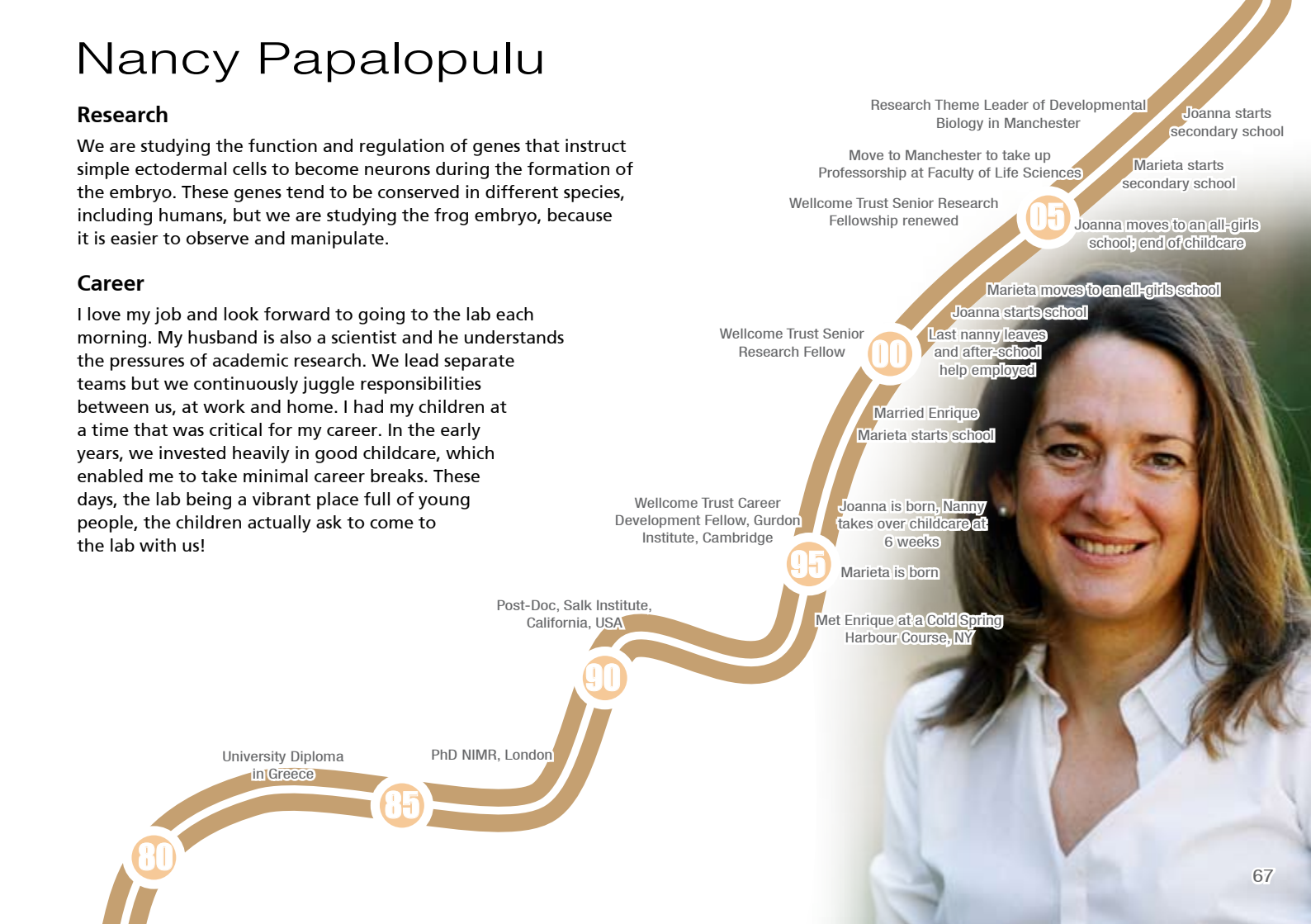
Nancy Papalopulu

Research

We are studying the function and regulation of genes that instruct simple ectodermal cells to become neurons during the formation of the embryo. These genes tend to be conserved in different species, including humans, but we are studying the frog embryo, because it is easier to observe and manipulate.

Career

I love my job and look forward to going to the lab each morning. My husband is also a scientist and he understands the pressures of academic research. We lead separate teams but we continuously juggle responsibilities between us, at work and home. I had my children at a time that was critical for my career. In the early years, we invested heavily in good childcare, which enabled me to take minimal career breaks. These days, the lab being a vibrant place full of young people, the children actually ask to come to the lab with us!



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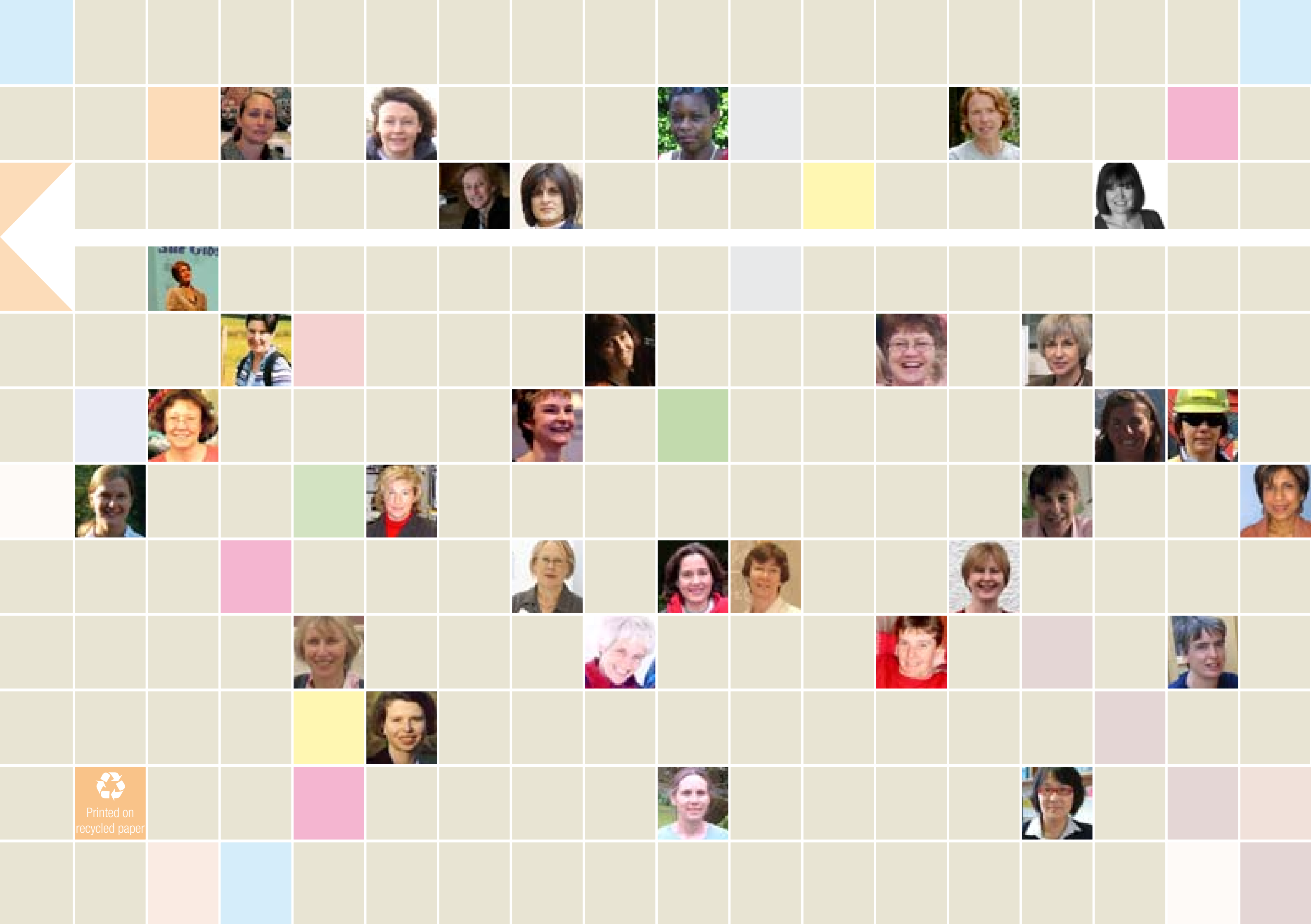
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