

Cambridge's 92 Nobel Prize winners part 4 - 1996 to 2015: from stem cell breakthrough to IVF

By [Cambridge News](#) | Posted: February 01, 2016



Some of Cambridge's most recent Nobel winners

Over the last four weeks the *News* has been rounding up all of Cambridge's 92 Nobel Laureates, which this week comes right up to the present day.

From the early giants of physics like JJ Thomson and Ernest Rutherford to the modern-day biochemists unlocking the secrets of our genome, we've covered the length and breadth of scientific discovery, as well as hugely influential figures in economics, literature and politics.

What has stood out is the importance of collaboration; while outstanding individuals have always shone, Cambridge has consistently achieved where experts have come together to bounce their ideas off each other. Key figures like Max Perutz, Alan Hodgkin and Fred Sanger have not only won their own Nobels, but are regularly cited by future winners as their inspiration, as their students went on to push at the boundaries they established.

In the final part of our feature we cover the last 20 years, when Cambridge has won an average of a Nobel Prize a year, and shows no sign of slowing down, with ground-breaking research still taking place in our midst today.



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1.1996 James Mirrlees, Trinity College: Prize in Economics, for studying behaviour in the absence of complete information



As a schoolboy in Galloway, Scotland, Mirrlees was in line for a Cambridge scholarship, but was forced

to change his plans when on the weekend of his interview he was rushed to hospital with peritonitis.

He instead went to the University of Edinburgh, but did make it to Cambridge for his PhD in 1964, where he was an active debater.

A visiting professor at MIT on three separate occasions, he has also taught at Oxford, the University of Melbourne, the Chinese University of Hong Kong and the University of Macau.

2. 1997 John Walker, Sidney Sussex College: Nobel Prize in Chemistry, for studying how a spinning enzyme creates the molecule that powers cells in muscles

A grammar schoolboy who studied chemistry at Oxford, Walker's life was changed when he was seated next to two-time Nobel Laureate Fred Sanger at a banquet at a research workshop in Cambridge.

At Sanger's invitation he relocated to Cambridge to join his research group, remaining at the university for more than 23 years.

At the Laboratory of Molecular Biology of the Medical Research Council he worked to analyse the sequences of proteins, and was appointed founding director of the MRC Mitochondrial Biology Unit (MBU) [formerly the MRC Dunn Human Nutrition Unit] in 1998, becoming its emeritus director in 2013.

3. 1998 Amartya Sen, Trinity College: Prize in Economics, for his contributions to welfare economics

Sen moved to Cambridge in 1953, after studying maths and economics in his native India.

Since 1972 he has taught in the US and UK, making contributions to welfare economics, social choice theory, economic and social justice theories.

In 1998 he became the first Asian to lead a Cambridge college when he became master of Trinity, and he is also an honorary fellow of Darwin College.

4. 1998 John Pople, Trinity College: Nobel Prize in Chemistry, for the development of computational methods in quantum chemistry

An undergraduate student at Trinity College, after his graduation Pople worked for a while at the Bristol Aeroplane Company, before returning to Cambridge for a PhD in mathematics.

In 1964 he moved to America, where he lived until his death in 2004.

5. 2000 Alan McDiarmid, Sidney Sussex College: Nobel Prize in Chemistry, for the discovery and development of conductive polymers

McDiarmid's obsession with colour began as a teenage 'lab boy' in a high school chemistry department in his native New Zealand, when he was asked to prepare bright orange crystals.

In 1960 he moved to Wisconsin for his PhD, where he obtained a graduate scholarship to study silicon

hydrides in Cambridge.

He married his wife Marian in the Sidney Sussex chapel, later dedicating the Nobel he won at the University of Pennsylvania, to her.

6. 2000 Paul Greengard: Nobel Prize in Medicine, for discoveries concerning signal transduction in the nervous system

While a student at Johns Hopkins University in Maryland Greengard attended a lecture by Nobel-winning biologist Alan Hodgkin, which he later said inspired his own work.

In 1954 he followed in the Trinity College fellow's footsteps by spending a brief stint in Cambridge during his postdoctoral studies.

7. 2001 Joseph Stiglitz, Caius College: Prize in Economics, for analyses of markets with asymmetric information

Now a leading professor at Columbia University, Stiglitz arrived at Fitzwilliam College in 1965 as a Fulbright Scholar, before winning a Tapp Junior Research Fellowship to Gonville and Caius, making him the third economics laureate to be affiliated to the college.

8. 2001 Tim Hunt, Clare College: Nobel Prize in Medicine, for discoveries of key regulators of the cell cycle



A natural sciences student in the 1960s, Hunt returned to Cambridge after his PhD, where he taught the introductory course in cell biology, and supervised third year biochemistry projects.

He shared his Nobel while working at the Imperial Cancer Research Fund, now Cancer Research UK, was knighted in 2006, and now lives in Okinawa, Japan, with his wife Mary Collins, a fellow scientist and Cambridge graduate.

9. 2002 John Sulston, Pembroke College: Nobel Prize in Medicine, for discoveries concerning genetic regulation of organ development and programmed cell death



10. 2002 Sydney Brenner, King's College: Nobel Prize in Medicine, for discoveries concerning genetic regulation of organ development and programmed cell death

Cambridge-born, Sulston received a scholarship to read natural sciences at Pembroke, and like many of the university's previous Nobel winners, worked at the MRC. He is now chair of the Institute for Science, Ethics and Innovation at the University of Manchester.

Brenner was born in South Africa and spent 20 years working at the MRC, where he shared an office with Francis Crick. He now lives in Ely.

The pair shared their Nobel with American researcher Robert Horvitz.

11. 2005 Richard Schrock: Nobel Prize in Chemistry, for the development of the metathesis method in organic synthesis

As a postdoctoral researcher in Cambridge Schrock learned more than just organic chemistry. According to his Nobel biography, he has fond memories of taking brass rubbings at St Mary and St Michael's Church in Trumpington, joking: "I discovered a great deal about the relative heat capacity of my body versus a stone floor."

He now lives in Winchester, Massachusetts.

12. 2007 Eric Maskin, Jesus College: Prize in Economic Sciences, for having laid the foundations of mechanism design theory



After a year's postdoctoral study in Cambridge, Maskin went on to work at MIT, Harvard and Princeton. He shared his prize with fellow American economists Leonid Hurwicz and Roger Myerson.

13. 2007 Martin Evans, Christ's College: Nobel Prize in Medicine, for discoveries of principles for introducing specific gene modifications in mice by the use of embryonic stem cells



The 'father of stem cell research', Sir Martin reportedly learnt of his Nobel win sitting in a layby outside Cambridge, as he visited his pregnant daughter.

In 1981 he became the first to culture embryonic mice stem cells and cultivate them in a laboratory, paving the way for the creation of Dolly the sheep.

In 1999 he became director of Cardiff University's School of Biosciences, later serving as its president and then chancellor.

14. 2008 Roger Tsien, Churchill and Caius Colleges: Nobel Prize in Chemistry, for the discovery and development of the green fluorescent protein, GFP



Tsien came to Churchill after completing his bachelor's degree at Harvard in 1977, moving to Caius to complete his PhD.

He won his Nobel for isolating the vivid green protein found in jellyfish, and other luminous sea creatures.

15. 2009 Elizabeth Blackburn, Darwin College, PhD 1975: Nobel Prize in Physiology or Medicine, for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase

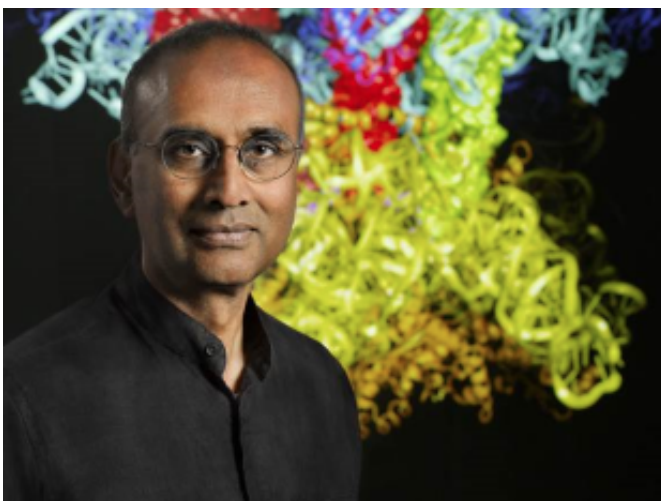


Born in Tasmania to a long line of scientists, Blackburn was immersed in nature from an early age, collecting jellyfish and tadpoles, and keeping a small menagerie of rabbits, guinea pigs, cats and dogs.

Developing a love of science after reading a biography of Marie Curie, she chose to study biochemistry, coming to Cambridge for her PhD in 1974, where she worked under Fred Sanger.

She won the Nobel while working in California, and advised President George W Bush on bioethics.

16. 2009 Venki Ramakrishnan, Trinity College: Nobel Prize in Chemistry, for studies of the structure and function of the ribosome



As current president of the Royal Society, Sir Venki, as he is widely known, is one of the UK's most prominent working scientists.

Born in India, he served as director of Cambridge's Medical Research Council Laboratory of Molecular

Biology, and shared his Nobel with Israeli Ada Yonath and American Thomas Steitz.

As well as a fellowship of Trinity College and a knighthood, he has been named among the 25 greatest living Indians, and received the nation's second-highest civilian honour, the Padma Vibhushan.

He once said when informed of his Nobel win he had insisted it was a hoax.

17. 2010 Robert Edwards, Churchill College: Emeritus Professor of Human Reproduction: Nobel Prize in Medicine, for the development of in vitro fertilization



Millions of infertile couples have been able to have children thanks to Edwards, who together with surgeon Patrick Steptoe developed their IVF breakthrough at Bourn Hall Clinic.

Louise Brown, the first so-called 'test tube baby' was born in 1978, and remained close to Edwards right up to his death in 2013.

Last year she told the *News*: "Bob was just like my grandad.

"He was the loveliest bloke and you could tell he really loved children; he had about five daughters of his own and he saw all the IVF children as part of one big family."

Steptoe died in 1988 so was not eligible for the Nobel, but a plaque commemorating both their achievements was unveiled in Bourn in 2013.



18. 2012 John Gurdon, Churchill and Magdalene Colleges: Emeritus Professor in Cell Biology: Nobel Prize in Medicine, for the discovery that mature cells can be reprogrammed to become pluripotent



In 1989, the Wellcome Trust and Cancer Research UK Institute, part of Cambridge's School of Biological Sciences , was founded to promote research into cancer biology.

It is now known as the Gurdon Institute, in recognition of its founder member, who continues to conduct his research there.

Born in Surrey in 1933, he has spent most of his career in Cambridge, serving as master of Magdalene College from 1995 to 2002.

While he continued his research during his mastership his wife Jean threw herself into college life, choosing to entertain every undergraduate at a sit-down Sunday lunch she prepared and cooked herself.

Defining himself as the "ultimate non-intellectual", Sir John was a keen skier and squash player in his youth, and is an experienced mountaineer.

19. 2013 Michael Levitt, Gonville and Caius / Peterhouse Colleges, Nobel Prize in Chemistry, for the development of multiscale models for complex chemical systems



Another of Cambridge's Nobel Laureates to have worked at the MRC lab, Levitt read maths in his native Pretoria before coming to Cambridge.

He spent four years at the MRC, where he developed a computer program for studying the behaviours of the molecules that underpinned much of his later work.

20. 2015 Angus Deaton, Fitzwilliam College, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel for his analysis of consumption, poverty, and welfare

Cambridge's most recent Nobel Laureate won the economics prize last October for his analysis of

consumption, poverty, and welfare.

He gained his BA, MA and PhD at Fitzwilliam College, before taking up professorships in Bristol and then Princeton.

In 2010 he returned to Fitzwilliam to deliver its foundation lecture, which can still be listened to on its website.

When he was announced as the 2015 winner he described himself as "someone who's concerned with the poor of the world and how people behave, and what gives them a good life".

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- 1