

A true friend of Japan

Sir Paul Nurse is a special adviser to the Hiroshima Research Center for Healthy Aging based at Hiroshima University. He has visited Japan many times since the 1970s through his studies into yeast and the fact that Japan and the UK are world leaders in this research field. Yeast's importance for Sake production means Sir Paul's strong connections and friendships in this country extend to industry as well as academia.

April 5th 2017



"From Hiroshima to the World"

Nobel Laureate Sir Paul Nurse at Satake Memorial Hall: Don't let failure hold you back

Sir Paul Nurse visited Higashi-Hiroshima Campus April 5 to take part in the "From Hiroshima University to the World" lecture series.

A packed Satake Memorial Hall witnessed the former president of Britain's Royal Society outline his life and research up to receiving the Nobel Prize for discovering the genetic control of cell division in 2001.

In an oration threaded throughout with humor and inspiration Sir Paul relayed a series of setbacks spanning five decades that only helped push him on to ever greater things.

These included a lack of language skills barring his access to university, unfortunate experiences collecting sea animals on cold British coasts, an unsuccessful Phd project,

and experiments that never seemed to produce the correct outcome!

With a young family to care for and a lack of job prospects, due to his research conflicting with contemporaneous scientific orthodoxy, he wondered if he should abandon it all together.

But the long hours spent observing yeast cells clearly payed off for the renowned geneticist who told his captivated audience: *"If you fail at things do not get depressed and disappointed, just keep carrying on because you can make a success of it. I failed often and it didn't hinder me."*

From working class monoglot to Britain's leading scientist

Sir Paul's talk at HU was peppered throughout with touching recollections from his life - but with enough biochemistry to keep even the most fervent geneticists in the audience happy.

He told of his humble beginnings in a working class family in London and how his interest in science was ignited when Sputnik 2 flew over his house as a child.

A fascination with nature and astrology saw him excel at school but this was tempered when his inability to master foreign languages initially prevented his access to university.

He instead got a job as a lab technician at the Guinness Brewery in Birmingham where his experimental work persuaded the University of Birmingham to give him the benefit of the doubt and admit him without a second language.

Sir Paul said his decision to study biological sciences was due to his perceiving the big problems involved in physics as too daunting.

However, not all biological fields were to his liking; the cold outdoor work involved in ecology drove him into the centrally heated lab work of cell biology. Even then Sir Paul described his PhD examining amino acids in fungi as, "just about the most boring PhD project you could imagine!".

What interested Sir Paul most was the process of reproduction, as the basis of all life, that occurs in the cell. He reminded the audience that they were all once a single cell and jested that if they were not interested in that then perhaps they should leave! >>

Journey to success

When he began his research Sir Paul was entering a pioneering field: “I wanted to investigate how it [the cell cycle] is controlled using a genetic approach—because nobody knew at all how cell reproduction was controlled”

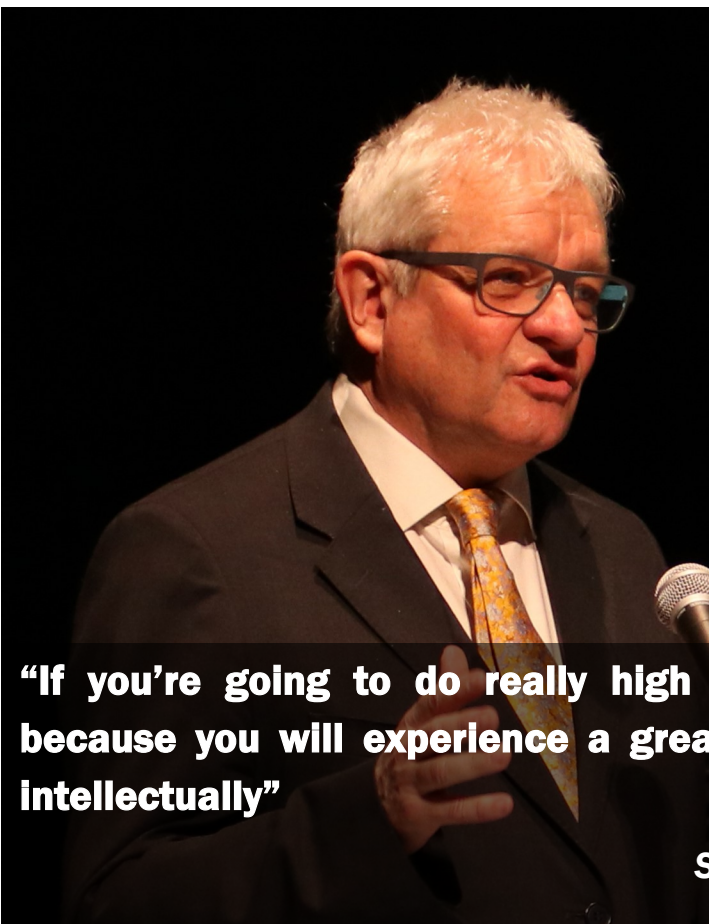
An independent streak has, as Paul pointed out, led to his success and kept him going when the rest of the world was up against him and his ideas.

Slowly over many years, he built up a picture of the control of cell division. It was painstaking work involving long hours in the lab, and with many ups and downs which Sir Paul relayed to an intrigued audience.

One anecdote involved his returning to the lab one rainy night having been overcome with guilt after tossing a petri dish he was investigating into the bin – that petri dish turned out to be the source of one of his most important finds!

Another time his results were so far off the prevailing thinking he contemplated not publishing them. However a dream reminded him that science was the pursuit of truth and that he should release the results – even if it harmed his career.

This decision paid off and Sir Paul discovered the genetic control of cell reproduction in yeast and later humans—receiving the Nobel Prize Physiology or Medicine in 2001, and inspiring students and researchers around the world ever since.



“If you’re going to do really high quality science get used to failure because you will experience a great deal of it — it makes you tougher intellectually”

Sir Paul Nurse Q&A at Satake Memorial Hall

Question and answer session with Sir Paul Nurse



Q&A Session – Infect others with your enthusiasm!

Paul Nurse answered questions from a captivated audience after his well received talk at HU.

Responding to a local high school student having difficulties getting members of his group research project to play their part Sir Paul joked that bribery might be the solution! He proceeded to offer the following useful advice for all those involved in team work:

“You should show by your own passion, by your own enthusiasm that you have real curiosity about how everything works, maybe then they too will have curiosity – the only thing you can do is to lead by example by being interested.

“You don’t want to be too pompous, because then you will irritate them more – be enthusiastic about what you are doing and hope that it infects them!”

One Hiroshima University Student asked Sir Paul for advice on how to deal with repeated experimental failure. His answer:

“Science is driven by failure. The truth is there were many failures in the progress of this [Nobel winning] project. It is a mistake to think you do experiments just to prove you are right. If you have an idea about how something works you do experiments to try and destroy that idea...it then becomes more secure knowledge.

“If you’re going to do really high quality science get used to failure because you will experience a great deal of it — it makes you tougher intellectually”

A big HU welcome for leading British scientist



Sir Paul Nurse meets with HU luminaries



Sir Paul Nurse awarded honorary professorship



After-talk panel discussion

Please check out an interview with Sir Paul Nurse carried out by our Science Communication Fellow: [huscf.hiroshima-u.ac.jp/2017/05/02/414/](https://www.youtube.com/watch?v=INmmY0jw8vw)

If you would like to watch the talk given by Sir Paul Nurse at Hiroshima University you can find it here: <https://www.youtube.com/watch?v=INmmY0jw8vw>



"From Hiroshima to the World"

A packed schedule full of pomp and circumstance greeted Sir Paul Nurse when he visited Hiroshima University's Higashi-Hiroshima campus on April 5.

The day began with Sir Paul, director of the pioneering Francis Crick Institute in London, meeting HU president Mitsuo Ochi and a host of university luminaries, all eager to greet one of the most influential men in science.

Later at the Faculty Club Sir Paul was wine and dined in true HU style in the presence of the great and the good of HU's Science Faculty, as well as representatives from Japan's National Institute of Brewing.

Sir Paul of course is no stranger to Japan, having visited the country many times since the 1970's – his research interest in yeast being mirrored by many local researchers, not least due to its importance in Sake production!

It was perhaps appropriate then that the Nobel Laureate would give his "From Hiroshima to the World" keynote speech at Satake Memorial Hall - named after one of the main Sake breweries in nearby Saijo, "Japan's Sake Capital".

However, before he did, HU's onsite Science Communication Fellow was given a rare chance to interview the former president of Britain's Royal Society back stage. Sir Paul bestowed much advice garnered from his life in science including his belief that scientists should get involved in politics and the humanities, and should have hobbies that get them out of the lab in order to recharge their brains!

Sir Paul was introduced on stage by Dr. Takashi Toda, from Hiroshima Research Center for Healthy Aging, who has worked and known the eminent researcher for many years - even being present when he received his Noble Prize for Physiology or Medicine in 2001. Dr. Toda recollected how as a first year student in London in 1976 the very first research paper he read was by our guest, and how that paper influenced his research path.

The audience in the 1000 seater auditorium, where barely a spare seat could be found, were then carried on a whirlwind journey by Sir Paul detailing his life from a child of humble beginnings, all the way to his discovery of the genetic control of cell reproduction. This worked well metaphorically—as he pointed out, we all began life as a single cell.

Questions and answers from the audience preceded the bestowing of gifts including an honorary professorship from Hiroshima University, flowers, and suitably, a handmade Sake cup produced by one of our more creative faculty members - Dr. Yutaka Idogawa, an award winning ceramicist.

Ending proceedings, a panel discussion covered a wide range of topics including the importance of good science teachers, and ways to promote collaboration between different specialists.

It was then time for Sir Paul to hit the road for his next Japanese appointment, but not before he was waved off by grateful faculty members and staff. We look forward to welcoming him back soon!