

Sydney Brenner
1927-2019

*"Restless
innovator
and eminence
grise"*

Research was his life

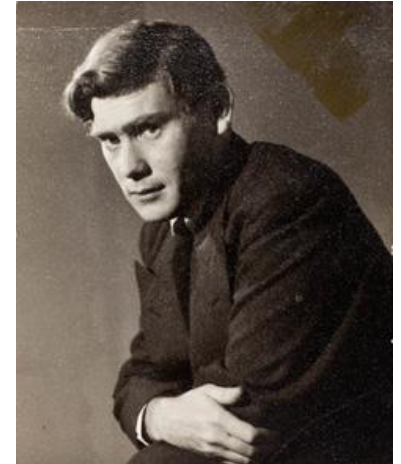


Why stay at home and be miserable, when you can go into lab and be miserable?
-- Sydney Brenner

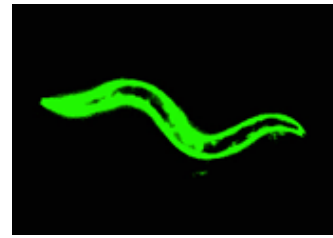
A Tribute to the Revolutionary Biologist And "Father of Worms"

Early life

- ❖ *Son of a cobbler, born and raised in South Africa*
- ❖ *At the age of 15, obtained a scholarship to study medicine at the University of Witwatersrand (WITS) in Johannesburg.*
- ❖ *Earned his DPhil at Oxford University, UK*
- ❖ In April 1953, Brenner visited Cambridge to see the famous double helix model first hand where he met both Francis Crick and James D. Watson.
- ❖ Impressed by Brenner's work on mutation in bacteria, Crick arranged a position for Brenner at the Cavendish Laboratory of Molecular Biology (LMB) at Cambridge which they co-shared for 20 long years.
- ❖ In 1957, Brenner, Crick and their colleagues demonstrated, through mutations in *E. coli*, that the genetic code was made up of 'codons'.



A Historical Journey of Innovation



*Established roundworm **C. elegans** as a model organism for investigation in development biology*

***Crick, Brenner et al. experiment:** Demonstrated that the **genetic code** is made up of a series of **3 base pair codons** that code for individual amino acids*

*Brenner's most famous experiment with French biologist **François Jacob** in **Matthew Meselson's** laboratory at the **California Institute of Technology**, discovered the **existence of messenger RNA**, which carries genetic information from nucleus to cytoplasm.*

Shared **Nobel Prize** in physiology or medicine 2002, with **H. Robert Horvitz and John E. Sulston** for their discoveries concerning "genetic regulation of organ development and programmed cell death."

AWARDS AND HONOURS

- Elected a Fellow of the Royal Society of London ,1965.
- Royal Medal from the Royal Society, 1974
- Novartis Medal and Prize of the Biochemical Society in 1980
- Kyoto Prize,1990

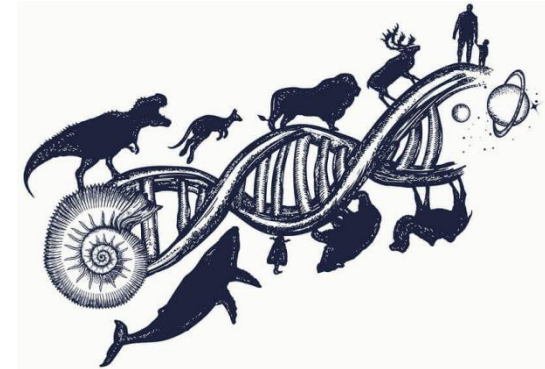
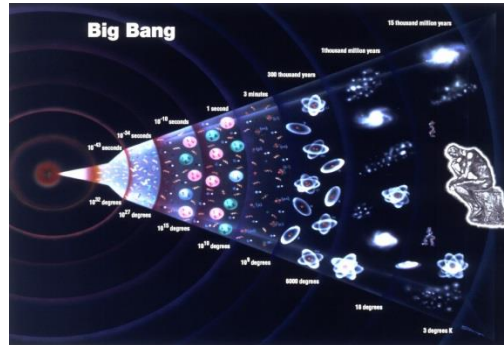


"CURRENT IDEAS OF THE USES OF MODEL ORGANISMS SPRING FROM THE EXEMPLARS OF THE PAST AND CHOOSING THE RIGHT ORGANISM FOR ONE'S RESEARCH IS AS IMPORTANT AS FINDING THE RIGHT PROBLEM TO WORK ON." - SYDNEY BRENNER

"UNCLE SYD"- THE SYDNEY BEYOND BIOLOGY



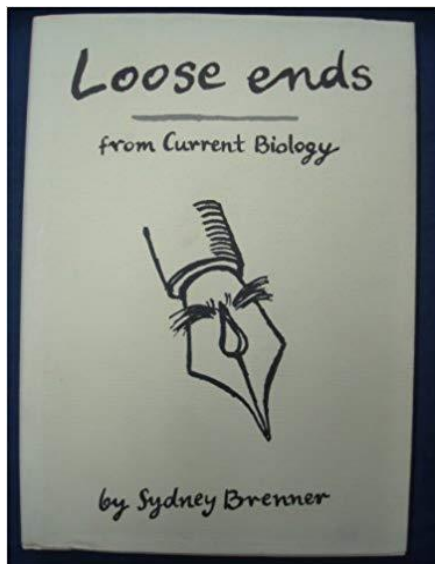
Created first **computer matrix analysis of nucleic acids using TRAC.**



Delivered lectures describing,

- ❖ Ten logarithmic scales of time from the Big Bang to the present
- ❖ Spanning the appearance of multicellular life forms
- ❖ The evolution of humans
- ❖ The emergence of language, culture and technology.

Adapted into a book titled "*Sydney Brenner's 10-on-10: The Chronicles of Evolution*".



Famous as "**one of biology's mischievous children; the witty trickster who delights in stirring things up.**"

His popular columns in *Current Biology* (titled 'Loose Ends' and, later, 'False Starts') in the mid-1990s led some seminar hosts to introduce him as *Uncle Syd*, a pen name he ultimately adopted.

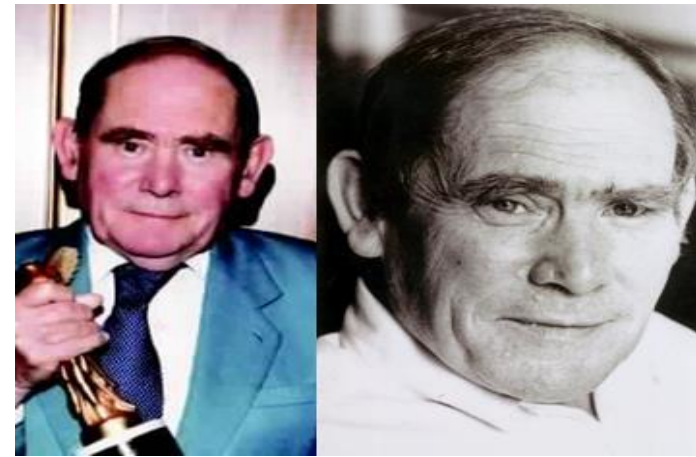
The Legacy Lives On....

- Founded the Molecular Sciences Institute (MSI), in Berkeley, California, 1996.
- **Founding Member of EMBO, 1964.**
- Started Singapore's first major research institute, the Institute of Molecular and Cell Biology (IMCB), 1985.



Institute of
Molecular and
Cell Biology

CREATING AN INNOVATION ECONOMY



Will be fondly remembered for legendary discoveries in molecular and developmental biology, for establishing research institutes around the world and being a huge source of inspiration for young scientists.

His endless passion for knowledge and discovery was expressed in a series of books...

