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"Science and everyday life cannot and should not be separated."

Discover the Scientific Vinegar by Rosalind Franklin

The Inheritance of Franklin is a testimony of the unholy spirit of scientific research , let 's combine it consciousness with the unceasing determination of revelation of mysteries her of life .

General Information:

Rosalind Franklin , brilliant and pioneering scientist , became important contributions in

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contributions to the understanding of molecular structures, particularly through her work with X-ray crystallography. Born in 1920, Franklin showed an early interest in science and pursued a career in physical chemistry. Her methodical research methods and incisive thinking led her to capture X-ray diffraction images that provided crucial evidence for the helical structure of DNA. Despite her pivotal role in this groundbreaking discovery, Franklin's contributions were initially overlooked, highlighting the difficulties faced by women in science at the time. Her legacy, however, remains as a symbol of perseverance, scientific rigor, and the pursuit of knowledge, inspiring future generations and securing her place as a pioneer in the field of molecular biology.

Scenario of the digital story: Beginning my scientific journey at the University of Cambridge, in the shadow of the Second World War, I immersed myself in the world of physical chemistry. This critical period strengthened my dedication to research, laying the foundations for the pioneering exploration of the microstructure of carbon, culminating in my PhD from Cambridge in 1945.

My expertise in the art of X-ray diffraction analysis led me to France and later to King's College London in 1950. There, I immersed myself in the enigmatic world of DNA, capturing definitive X-ray diffraction images that revealed its helical structure. Unfortunately, the significance of my contributions was initially ignored, but subsequent

research has recognized the profound conclusions that emerged from my meticulous work.

In addition to my DNA research, I carefully analyzed viruses, particularly the tobacco mosaic virus (TMV), revealing their intricate structures. Unfortunately, ovarian cancer cut short my journey in 1958. However, my legacy lives on through a wealth of scientific publications and groundbreaking discoveries, leaving an indelible mark on the scientific community.

I could say that my scientific odyssey was defined by unwavering dedication, an empathetic approach, and an unwavering pursuit of truth. Although my role in uncovering the structure of DNA was initially downplayed, the essence of scientific exploration, guided by empathy and integrity, remains a beacon for aspiring scientists.

Keywords : Resilient, Determined, Brilliant Scientist, Pioneering Research, Unrecognized Contribution, Empathetic Listener

Indicative Publications:

- During her 16-year career, Franklin consistently published: 19 articles on coal and carbons, 5 on DNA, and 21 on viruses.

1. Franklin, RE (1950), "Influence of the bonding electrons on the scattering of X-rays by carbon", *Nature* , 165 (4185): 71–72. Article in Nature

2. Franklin, R., Gosling, R. (1953), "Molecular Configuration in Sodium Thymonucleate ", *Nature* , 171: 740–741. Article in Nature
3. Franklin, Rosalind, Klug, A., Finch, JT, Holmes, KC (1958), "On the Structure of Some Ribonucleoprotein Particles", *Discussions of the Faraday Society* , 25: 197–198.

Sources :

- Profiles - National Library of Medicine
- Article from Nature

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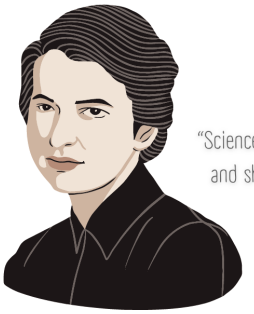

Multiple Choice Questions about Rosalind Franklin :

1. What was Rosalind Franklin's key contribution to the understanding of DNA?

a) The discovery of the double helix
of DNA through X-ray diffraction

b) The development of the first model depicting DNA replication

c) The proposal of the concept of genetic mutation within DNA chains

d) The investigation of the role of DNA in protein synthesis through laboratory experiments

2. What prevented the immediate recognition of Rosalind Franklin's important contributions to DNA research?

a) Lack of access to advanced laboratory equipment

b) Her premature death in 1958

c) Initial negligence by her research team

d) Gender bias and professional challenges faced by female scientists at the time

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3. In addition to her work with DNA, what other field of study did Rosalind Franklin contribute to?

a) Quantum physics and particle mechanics

b) Structures of viruses, specifically tobacco mosaic virus (TMV)

c) Microbiology and antibiotic resistance

d) Mechanisms of cell division and mitosis

4. What scientific method did Rosalind Franklin use to analyze molecular structures?

a) Electron microscopy

b) Spectroscopic techniques

c) Chromatographic methods

d) X-ray crystallography

5. How would you best characterize Rosalind Franklin's approach to scientific exploration?

a) Collaborative and social

b) Empathetic and emotionally driven

c) Methodical and attentive to detail

d) Visionary and theoretical

6. How did Rosalind Franklin's legacy endure after her untimely death?

a) Through a series of autobiographical publications

b) Through the establishment of a laboratory dedicated to DNA research

c) Through her numerous scientific publications and groundbreaking discoveries

d) Through the mentoring and education of the next generation of scientists

Answers :

1. a) The discovery of the DNA double helix through X-ray diffraction
2. d) Gender bias and professional challenges faced by female scientists at the time
3. b) Structures of viruses, specifically tobacco mosaic virus (TMV)
4. d) X-ray crystallography
5. c) Methodical and attentive to detail
6. c) Through her numerous scientific publications and groundbreaking discoveries

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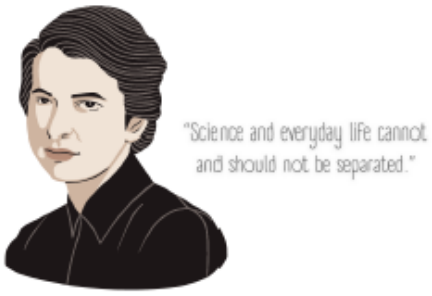

Discussion Questions about Rosalind Franklin :

1. Consider the challenges Rosalind Franklin faced as a pioneering female scientist in the mid-20th century. How did social norms and gender biases influence her scientific career?
2. Discuss the importance of Rosalind Franklin's contributions to understanding the structure of DNA. How did the X-ray diffraction images she obtained pave the way for the discovery of the DNA double helix?
3. Consider the ethical issues surrounding recognizing scientists for their contributions. Should Rosalind Franklin have been more recognized for her role in discovering the structure of DNA? How might this recognition have affected the scientific community?
4. How did Rosalind Franklin's dedication, method, and scientific rigor influence her pioneering research in molecular biology, particularly in the study of DNA and viruses?

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Unveiling Rosalind Franklin's Scientific Journey

Franklin's legacy is a testament to the indomitable spirit of scientific inquiry, combining empathy with relentless determination to uncover the mysteries of life.

Read Rosalind Franklin's story and complete her empathy map.

Can you find similarities or differences with your own empathy map?

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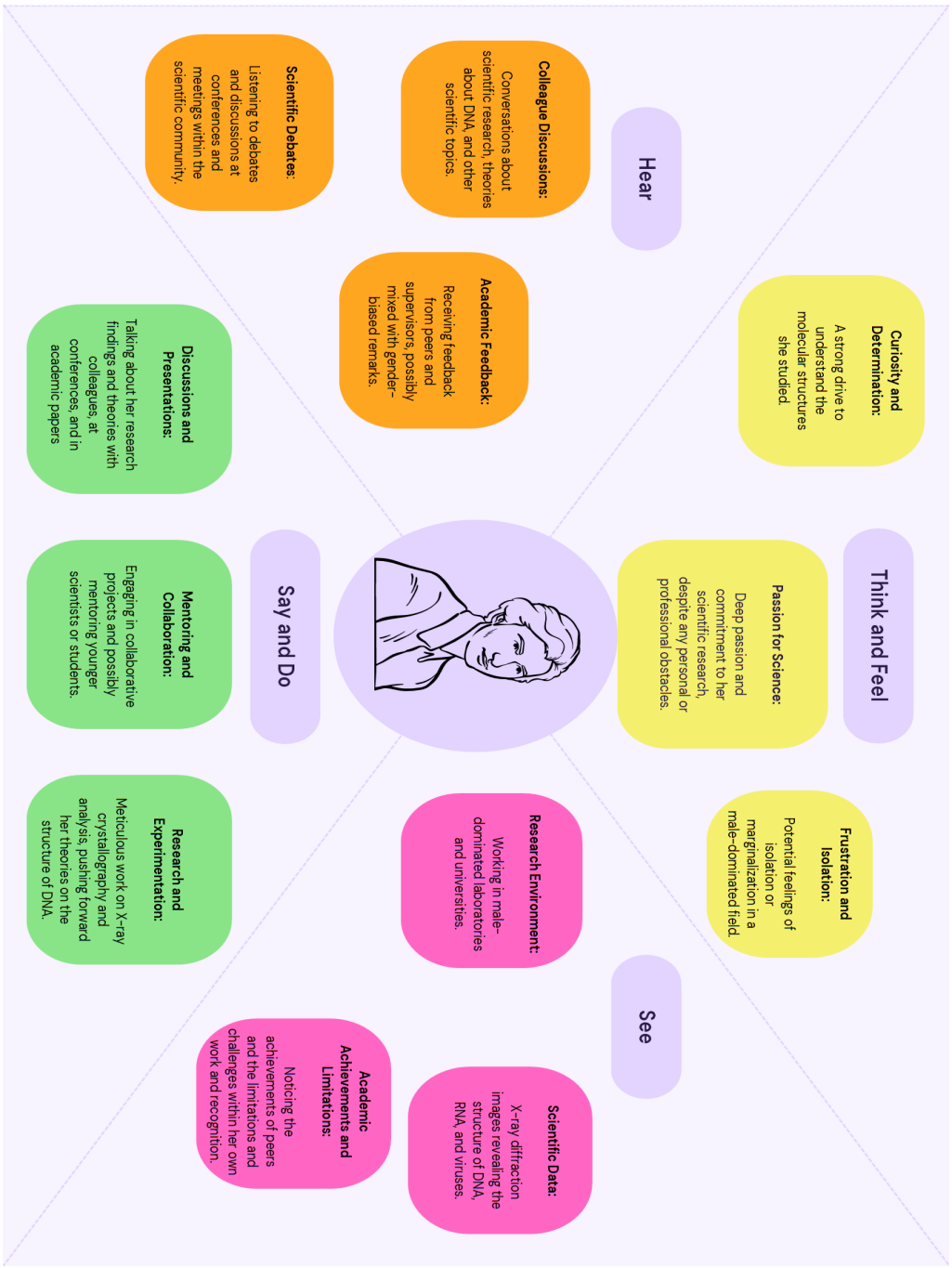
Rosalind Franklin



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