

The background of the slide features a faded, sepia-toned illustration of a classical figure, possibly a personification of Victory or Liberty, holding a laurel wreath. Overlaid on this is a grid of thin, dark lines that form a globe-like pattern. In the top left corner, the letters 'WWI' are written in a large, stylized, white font with a black outline. The main title is centered in a large, bold, black font.

A 2º Grande Guerra vista do campo das Ciências

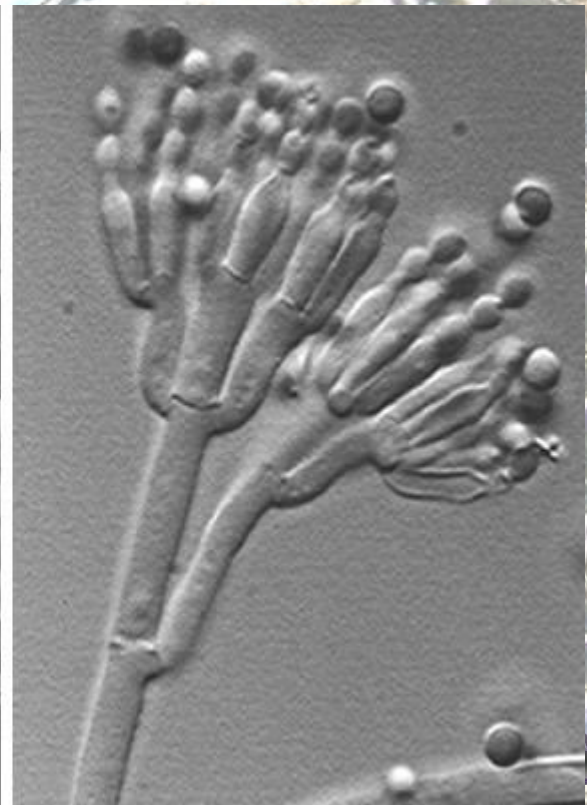
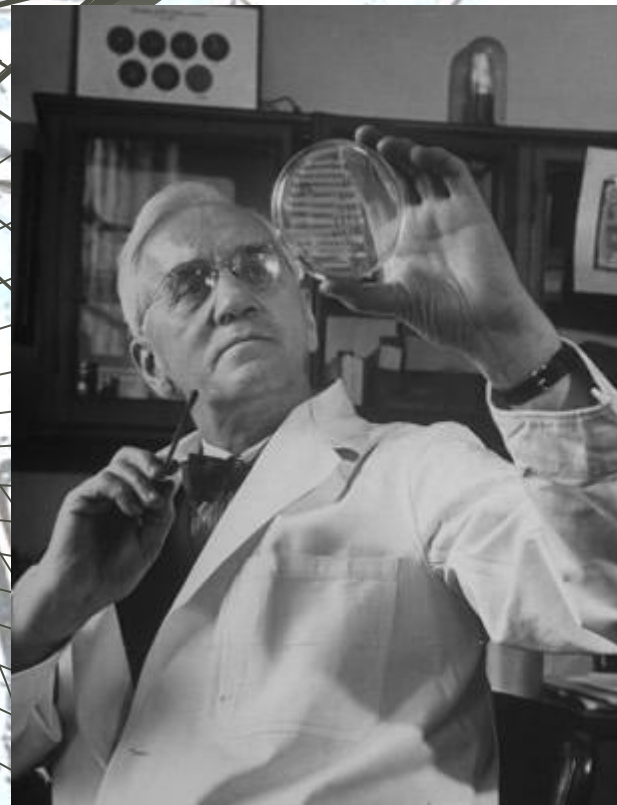
Descobertas científicas no campo da Biologia, Medicina e Ciências da Terra e sua influência na ciência posterior

Ciências

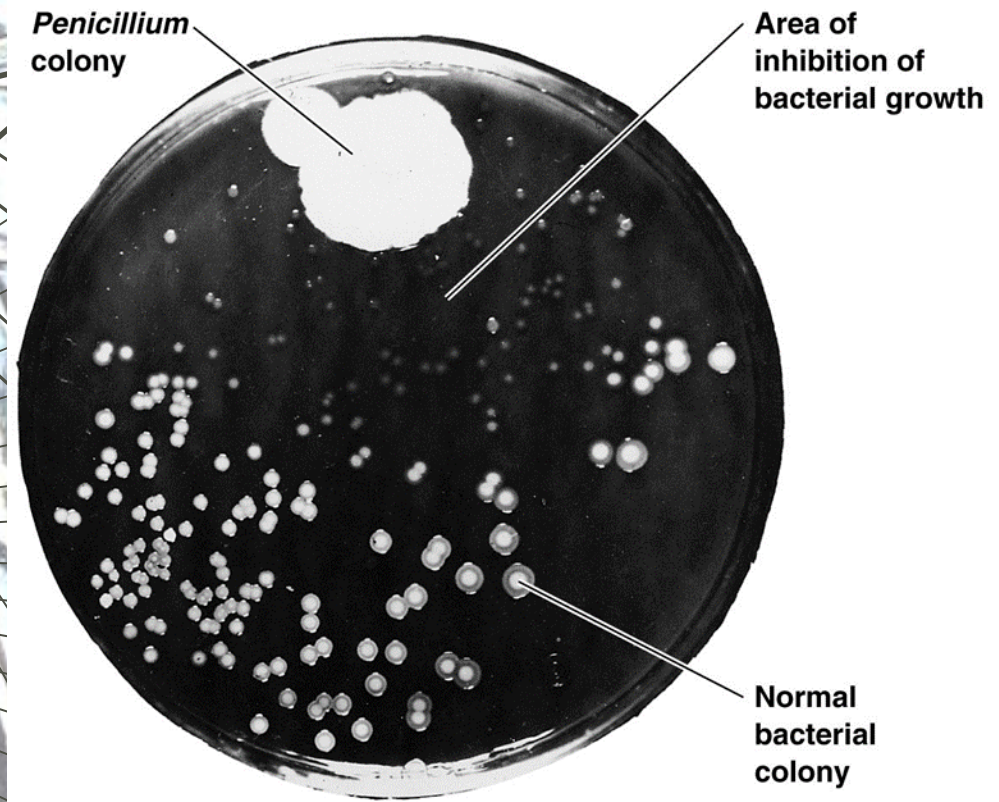
Descoberta da Penicilina (1928)

ALEXANDER FLEMING (1881-1955)

A descoberta da penicilina por Alexander Fleming, em 1928, é uma das descobertas científicas mais marcantes da história da ciência, da medicina e da farmácia do século XX.



Prémio Nobel (1945)



Ciências

Thanks to PENICILLIN ...He Will Come Home!



FROM ORDINARY MOLD— the Greatest Healing Agent of this War!

the the deadly, greenish-yellow mold above, called *Penicillium notatum* in the laboratory, gave the inspiration. Substances first discovered by Professor Alexander Fleming in 1928, named penicillin by its discoverer, it is the most powerful weapon ever developed against many of the deadliest infections. Thanks to penicillin research, an enemy was finally a part of the enemy's own life. Scientists everywhere were well able to meet the problem of large-scale production of penicillin, when the great need for it arose.

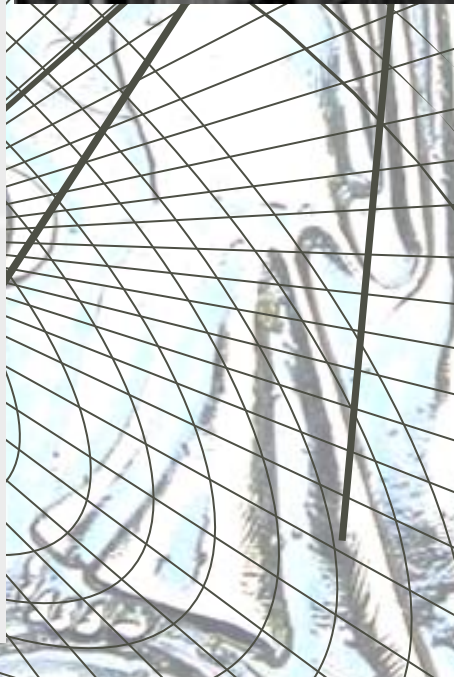
When the headlines of this war have told us in pages of silent pain in a lonely field, the greatest news of World War II may well be the discovery and development of one of our most powerful weapons that destroy — but of a weapon that saves lives. That weapon, of course, is penicillin.

Every day, penicillin is performing some unbelievable act of healing on men for battlefield wounds. Thousands of men will return home who otherwise would not have had a chance. Better still, more and more of this precious drug is now available for civilian use... to save the lives of patients of every age.

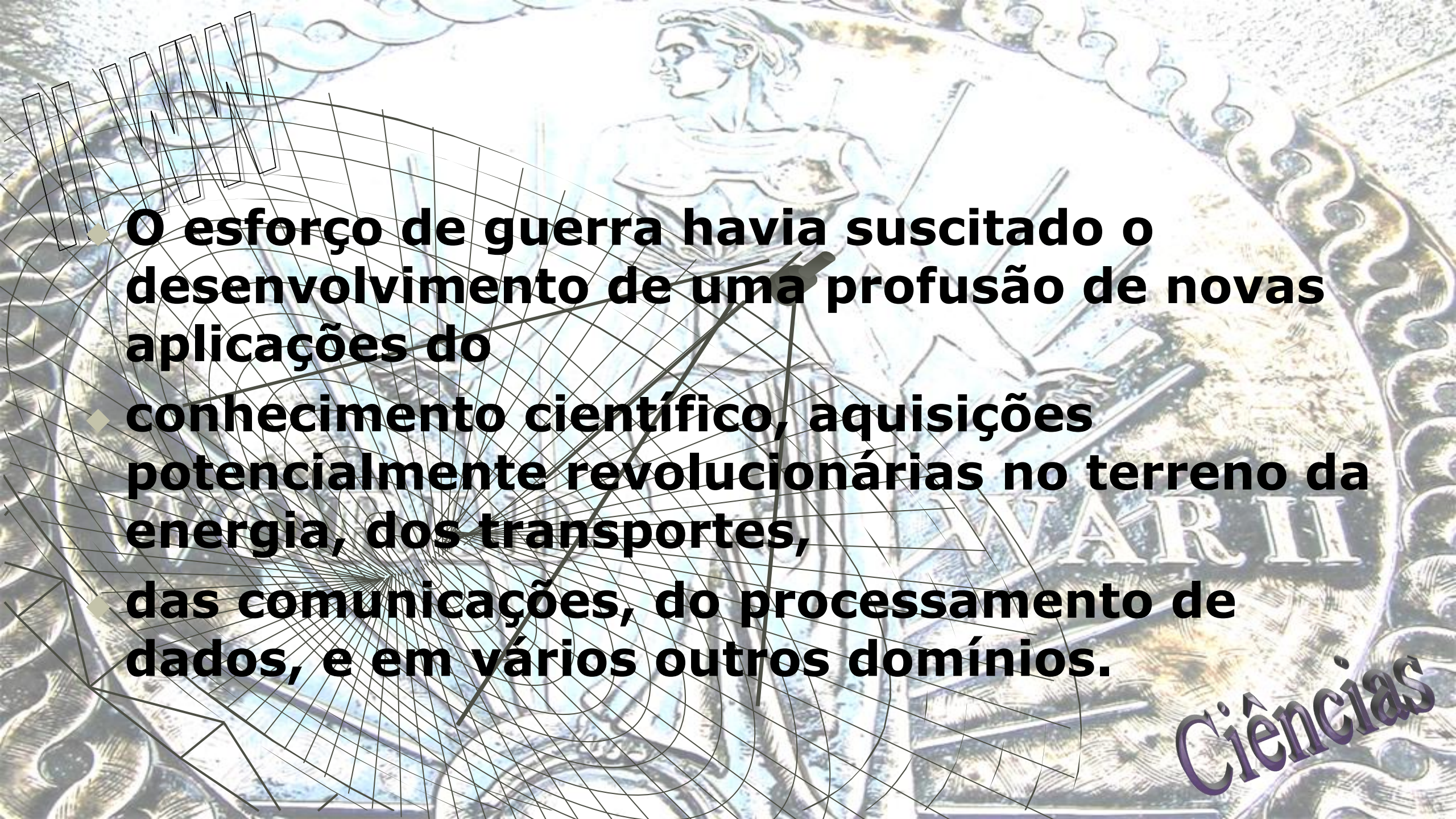
A year ago, production of penicillin was difficult, costly. Today, due to specially devised methods of mass-production, in use by *Helmsley Laboratories, Inc.* and the 20 other firms developed by the government to make penicillin, it is available in tremendous quantities, at progressively lower cost.

(Look at "THE DOCTOR HUNTS" section on *THE DOCTOR HUNTS* for more and more.)
C.A.S. New York papers for this and others.

Supplementary Notes:
Penicillin is
PENICILLIN



Ciências

- 
- **O esforço de guerra havia suscitado o desenvolvimento de uma profusão de novas aplicações do**
 - ◆ **conhecimento científico, aquisições potencialmente revolucionárias no terreno da energia, dos transportes,**
 - ◆ **das comunicações, do processamento de dados, e em vários outros domínios.**

Ciências

Estrutura do DNA

◆ Prémio Nobel 1953



Francis Crick



James Watson



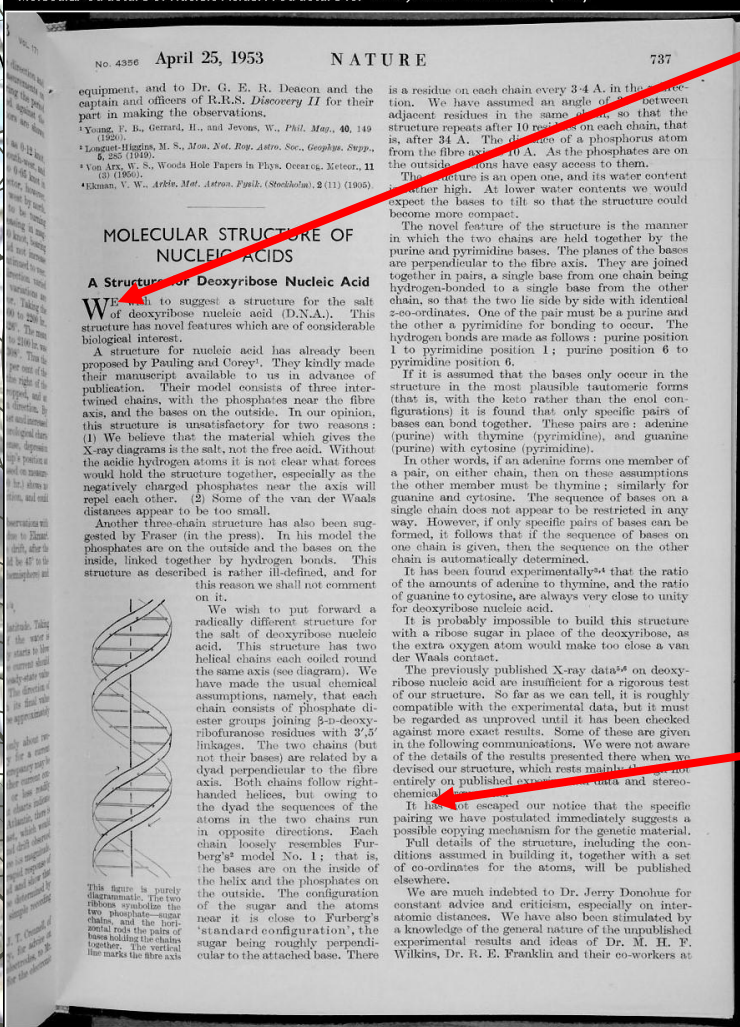
Maurice Wilkins



Rosalind Franklin

Ciências

James D. Watson and Francis H. C. Crick
"Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid" (1953)



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Macmillan Magazines Ltd; and with the permissions of James Watson and Francis Crick.

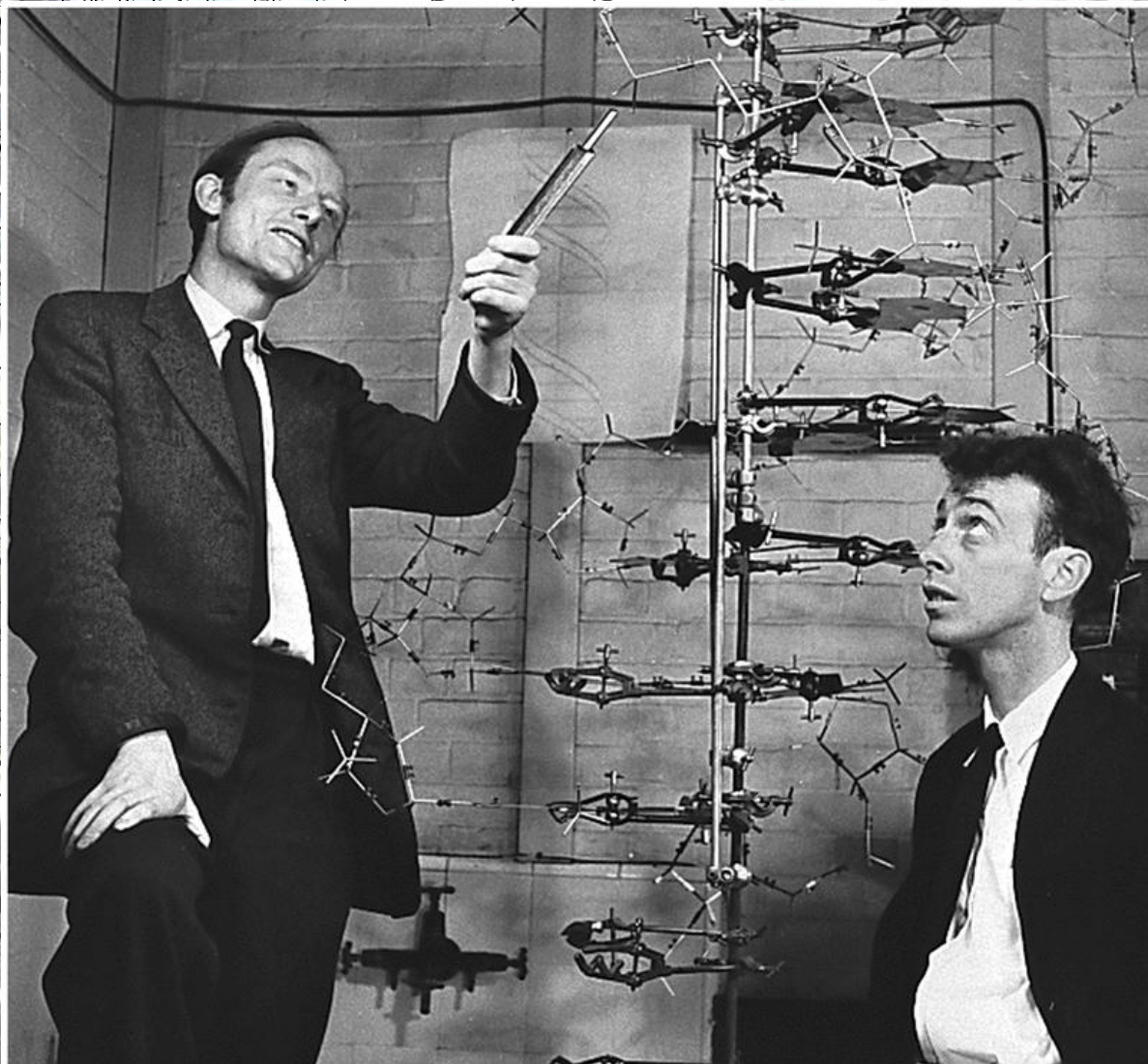
We wish to suggest a structure for the the salt of deoxyribonucleic acid (DNA). This structure has novel features which are of considerable biological interest.

Nós gostaríamos de sugerir uma estrutura para o DNA. Esta estrutura tem novas características que são de considerável interesse biológico.

It has not escaped our notice that the specific pairing we have postulated immediatly suggests a possible (repliactioon) mechanism for the genetic material.

Não nos escapou que o emparelhamento específico que nós postulamos, imediatamente sugere um possível mecanismo de replicação para o material genético

Ciências



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Ciencias

Código com 4 letras

A T C G

**Medicina
Forense**

Engenharia genética

**Genes -
Genoma**

Ciências



Ciências

Exploração Fundos oceânicos

Harry Hess



(Photograph courtesy of Department of Geological and Geophysical Sciences, Princeton University.)

- Princeton Geologist
- CO of USS Cape Johnson during WWII
 - Conducted sonar mapping of sea floor while transiting from battle to battle during the island-hopping campaign in the Pacific
- Developed theory that new ocean crust forming and spreading laterally at mid-ocean ridges

Ciências