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DEPARTMENT OF CHEMISTRY

The Discovery of the Structure of DNA

12 Oxford Street
Cambridge 38, Massachusetts, U.S.A.

Agreed for presentation (Kornberg project)

Introduction

story incomplete: early history
one side of the anecdote.

Description of Structure — Imp. of DNA (Stodd)
and Rep. Scheme — DNA formula (Foster nucleotide repeat).
— DNA structure comp.

— Rep. Scheme.

The draft of x-ray crystallography — value of c found given.

Historical account — Pauling : ~~the~~ ρ

— Sturtevant : base ratios

Watson - Biologist } ETC
Crick - Chemist }

— W. C. : base pairing & structure.

History

Early x-ray work Atkins

within the Watkins.

Franklin

Watson - article

α -helix

Pauling story

Cochran, Crick, & Vand

— Power of helix

— strength of solving structure

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end 51?
1952?

discussed of King's College. "4 k₁₀ per letter point"

∴ Not met. went to Soakshop.

the schemes of Not/Pow nets.

distributions.

went of Watkins, Franklin. ex ad.

John Guiththo
(Summer 71)

Gold The perfect com. Sample.

amount of few bases, like with like.

synthetic scheme $A \begin{matrix} \text{A} \\ \text{I} \\ \text{I} \\ \text{I} \end{matrix} \begin{matrix} \text{G} \\ \text{C} \end{matrix}$

replication mechanism.

(A) doubt because of size & ~~base~~ attraction.

~~DE Dept with DV~~

Visit of Chargaff to Carl.

The 1:1 ratios. (now then reading its literature).

(Guiththo, Leung)

except with U.V.

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Letter announced show have - return
Wright date.

Kings Group Dec '52

Pos. concludes there no helical

history of helical ideas (Stokes unpublished)

our conviction reasons for "10" have a repeat
[less than per for model] fixed points

MRC mimeographed report

page was all dimensions. A, B down.

Parbings Paper :

Bragg explains.

Attorney's survey picture.

3 Chem.

kernel chem H atom.

Wolke visit our views & C.
permission to Koble structure.

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Western early effort - discarding of base pairing

backbone in order (for proteins)

difficulties.

merits of models of the bases - historical data of Gulland and
others.

our system on their size.

base pairing
-> Franklin's data (Dorshner)
-> like with like (June Brookhead Thoms)

no. and direction of chains: 2 or 3? (C2 homopolymer)
↑↑ or ↓↓ either a success.

either in base-pairing:

our model of the base-pairing could be excluded.

Western solution. (Griffiths. Letter) (within letter)

backbone distribution. 180 or 360.

Building of accepted model - had not 4 days.

fact-time nature of protein work

From 2 to 4 letters J.D. in Paris.

William visit - their X-ray data - their letters.

File in Paris - 70 Publication

Paris visit Fisher '53

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Lennin

~~Historical~~

① Scientific discovery is historical. adv. of collaboration

② value of preconceived ideas

plus rigorous thinking

plus adventurism

③ can predict weather.

Historical

Weather "Boat" : details of Beau-paris.

Weather "Cruel" : idea of replication :

"helix" : very sailing : - our fault in space of evidence.

base-pair :

recovered but initially discarded.

base-pair :

is part of pub. opinion.

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W. R. R.
H. R. R.

Handwritten notes and scribbles at the top of the page.

W. R. R.

Jim Watson

F.H.C.C.

W. R. R.

Maurice Wilkins

(Gosling)

Stokes

John Griffiths

Peter Perley

Henry Dore

Dr. Lawrence Bragg

(Cochran)

(Feldman)

Handwritten notes and scribbles at the bottom of the page, including names like "Cochran" and "Feldman".