



diffraction

von LAUE

NOBELPRIS 1914



Max Perutz (hemoglobin)

John Kendrew (myoglobin)

1962



penicillin, vitamin B-12, vitamin D

DOROTHY HODGKIN 20

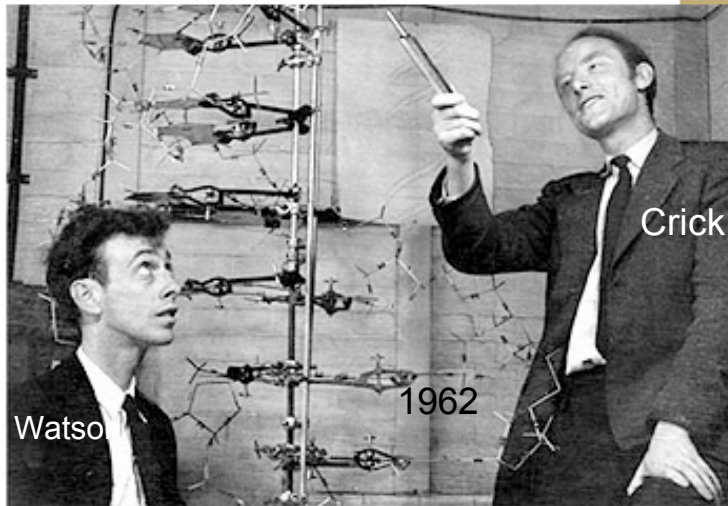
1964



William Henry Bragg

1914

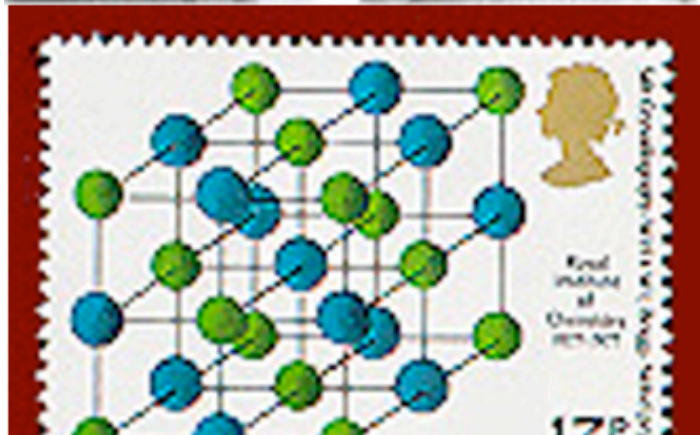
William Lawrence Bragg



Watso

1962

Crick



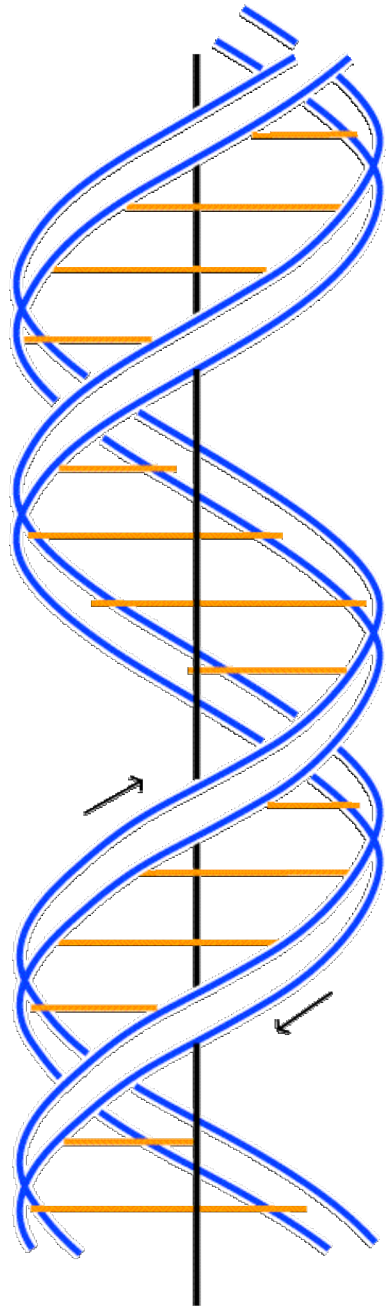
Rosalind Franklin



MACROMOLECULES OF THE LIVING CELL

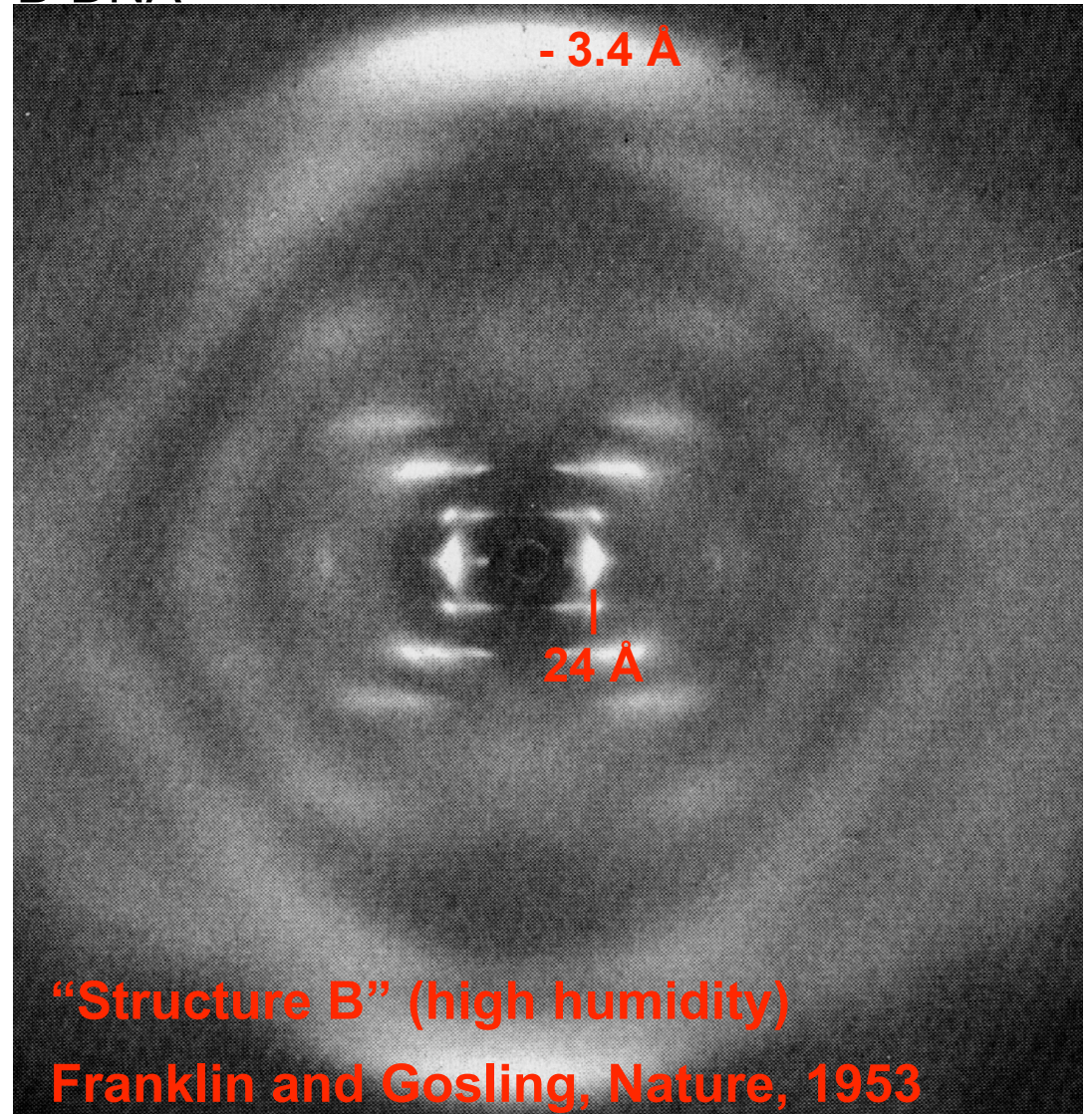
חוקולות גדולות מהתא החי

ISRAEL

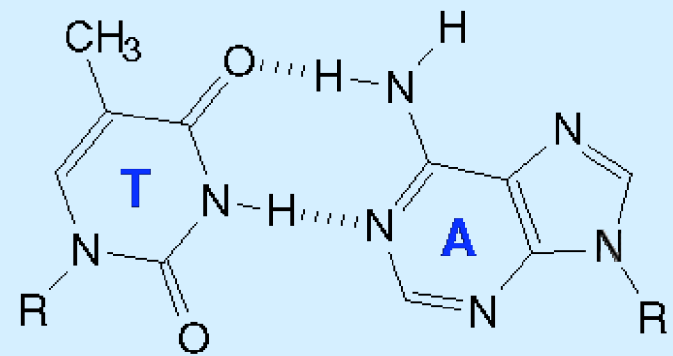
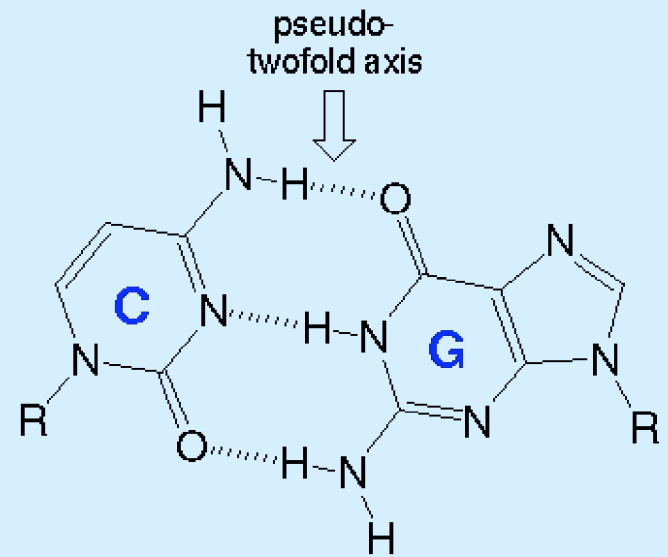
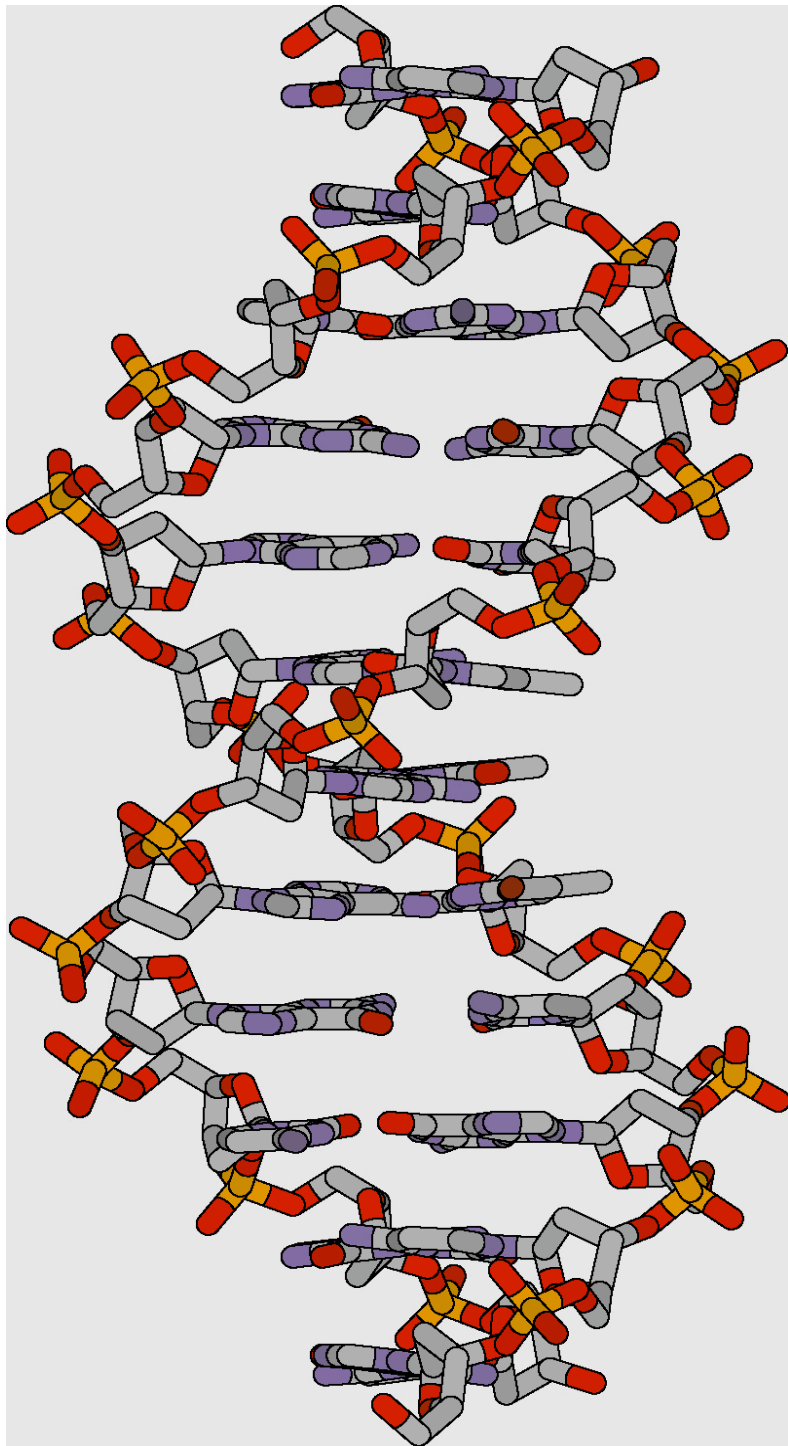


- 1) Chemical assumptions (covalent structure, keto tautomers),
 - 2) Chargaff's rules ($C/G=1$, $A/T=1$),
 - 3) Fiber data
- => Structure of B-DNA

We wish to suggest a structure for the salt of deoxyribose nucleic acid (D.N.A.). Watson & Crick, 1953.



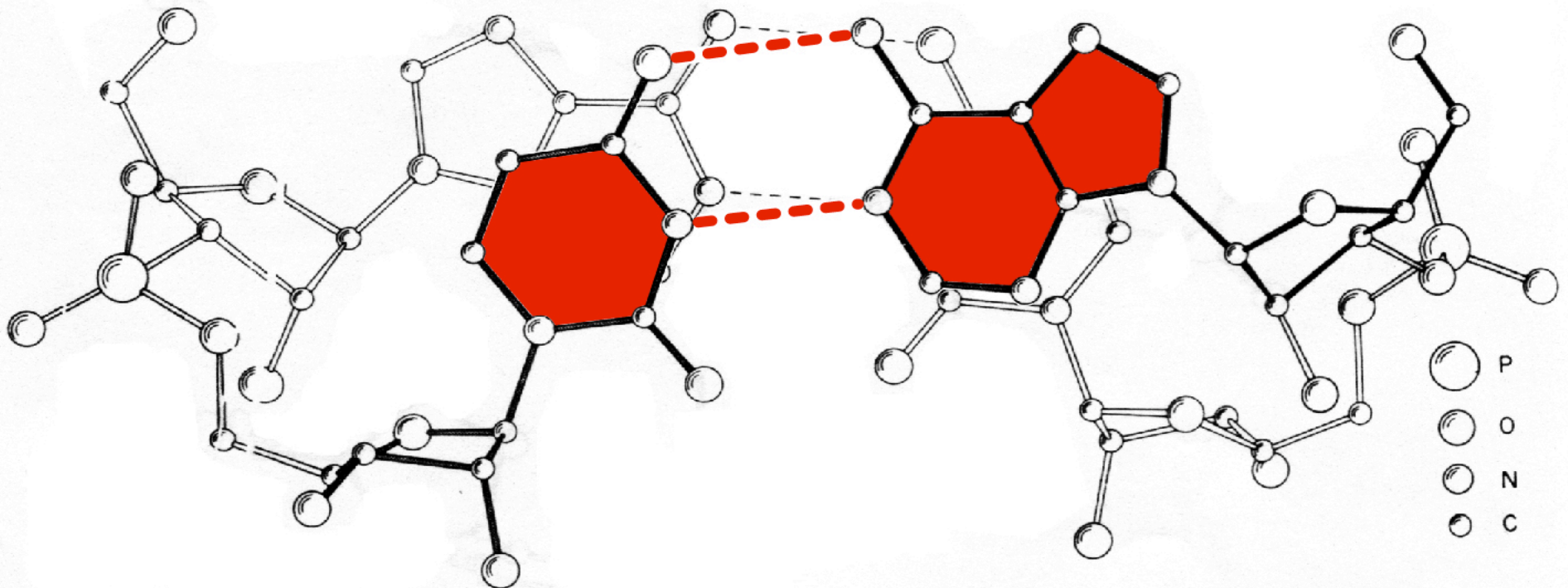
“Structure B” (high humidity)
Franklin and Gosling, Nature, 1953



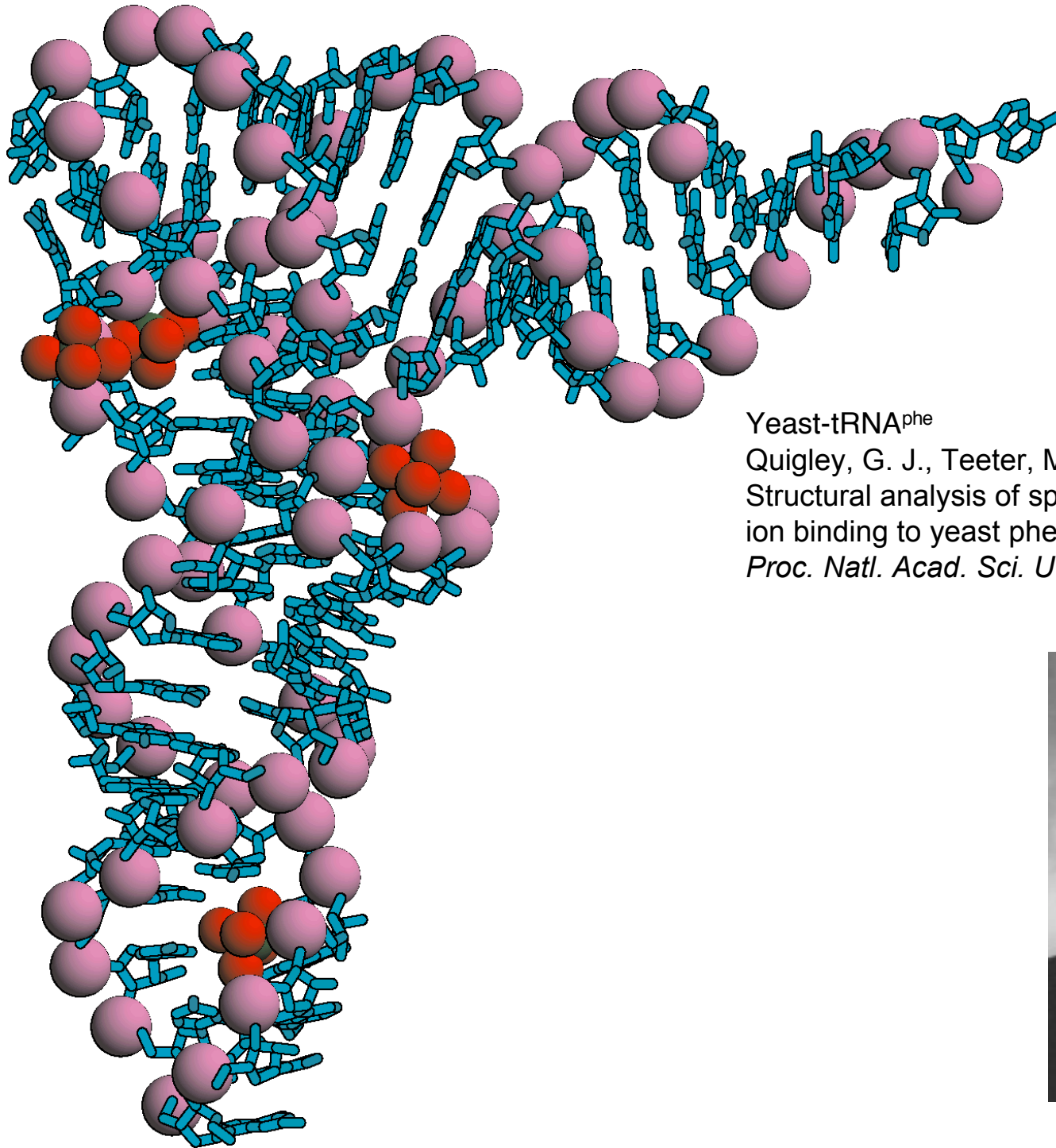
Double Helix at Atomic Resolution

JOHN M. ROSENBERG, NADRIAN C. SEEMAN,
JUNG JA PARK KIM, F. L. SUDDATH,
HUGH B. NICHOLAS* & ALEXANDER RICH

Department of Biology, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139

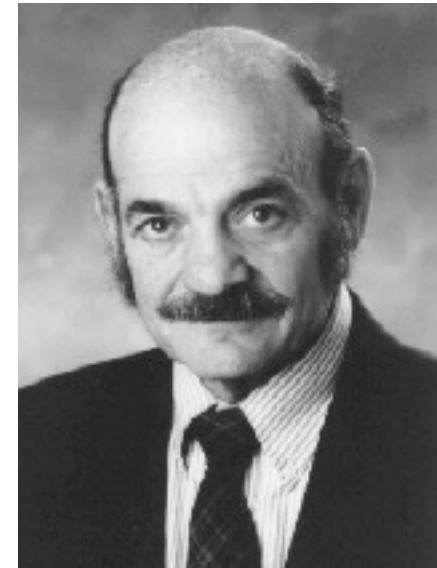


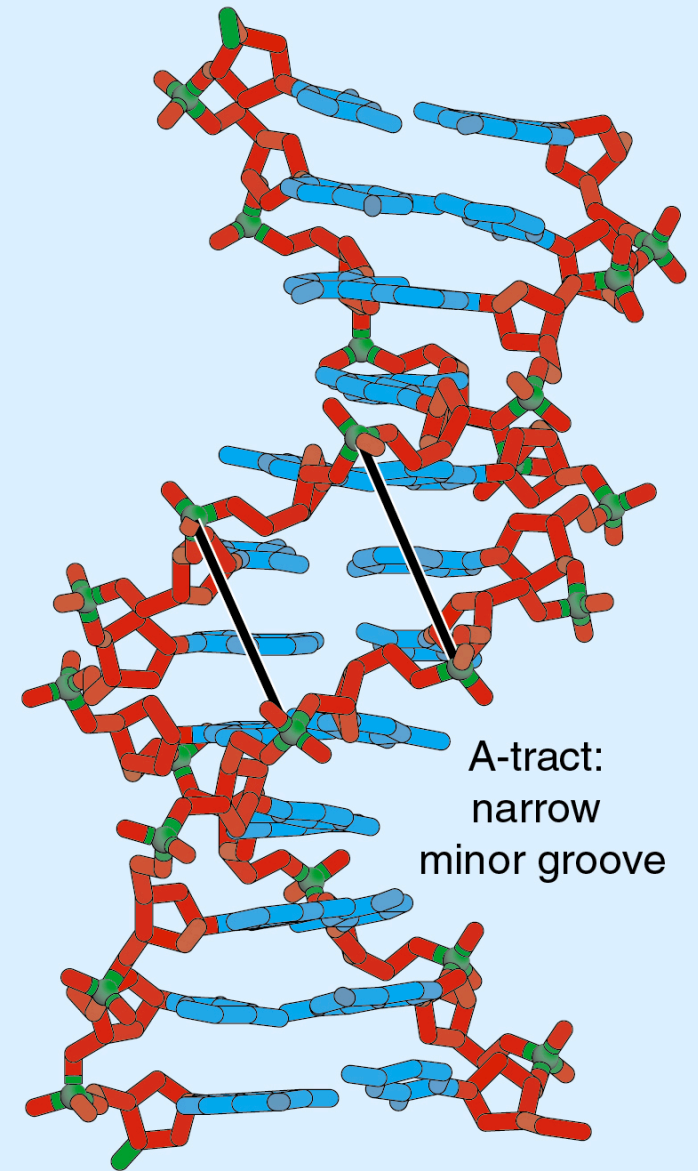
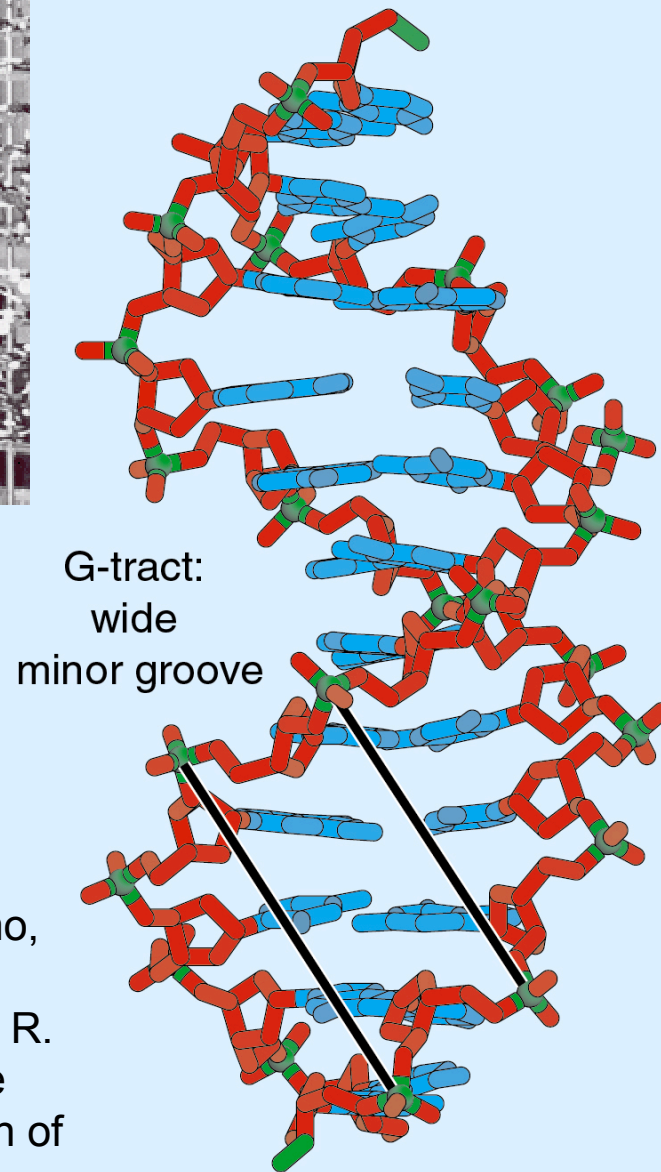
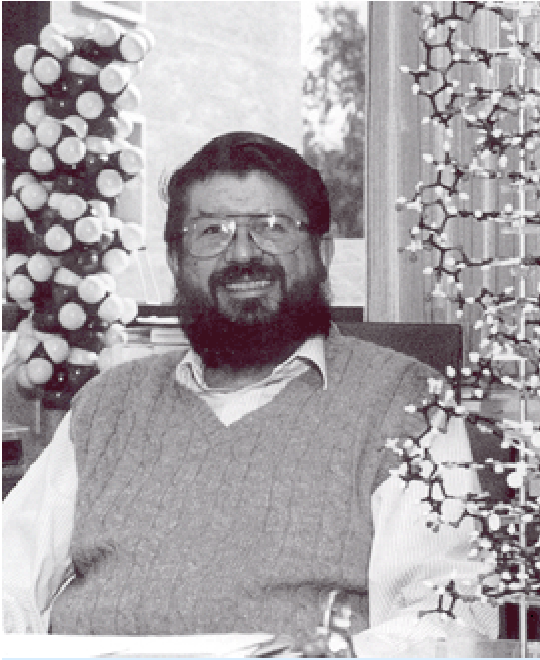
Nature, 243, 1973, 150-154



Yeast-tRNA^{phe}

Quigley, G. J., Teeter, M. M. and Rich, A. (1978)
Structural analysis of spermine and magnesium
ion binding to yeast phenylalanine transfer RNA.
Proc. Natl. Acad. Sci. U.S.A., **75**, 64-68.





Wing, R., Drew, H., Takano, T., Broka, C., Takana, S., Itakura, K. and Dickerson, R. E. (1980) Crystal structure analysis of a complete turn of B-DNA. *Nature*, **287**, 755-758.