

Copy of a printed diagram referenced as "Relation of DNA to Haemoglobin for the Gregynog lectures given by Professor Randall"

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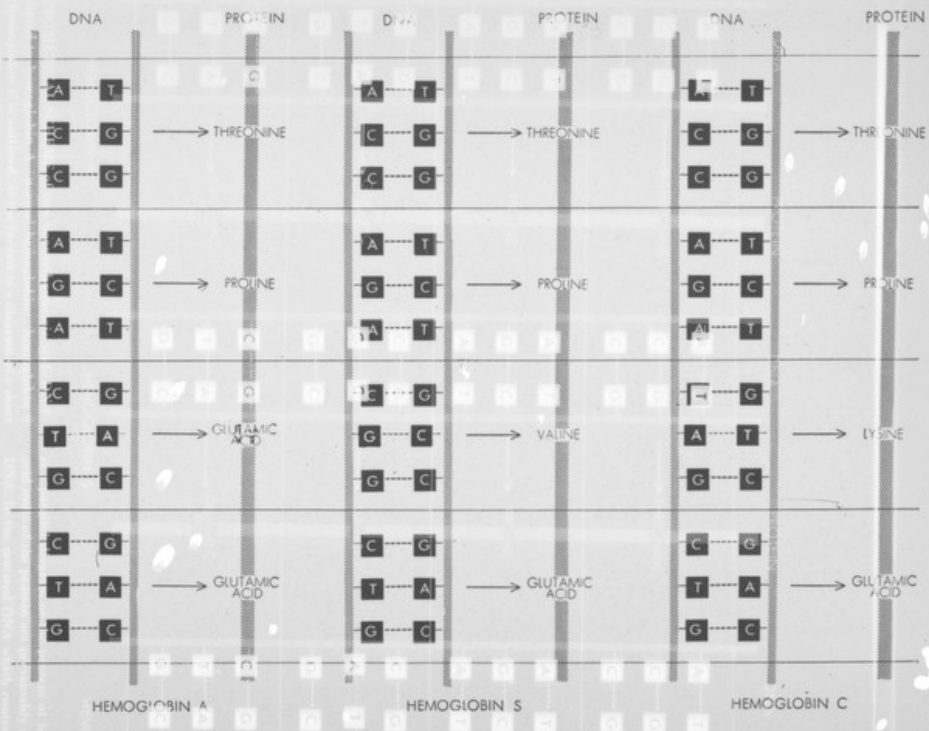
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HYPOTHETICAL SCHEME of how deoxyribonucleic acid (DNA) is related to hemoglobin A (normal hemoglobin), hemoglobin S and hemoglobin C is outlined. At the far left is a diagram of a short segment of DNA. The two chains of the DNA are joined by pairs of bases (squares). There are four bases: adenine (A), thymine (T), cytosine (C) and guanine (G). To the right of this diagram

is a parallel diagram of the protein of hemoglobin A. The amino acid units of the protein are presumably related to segments of the DNA. In the mutated DNA which controls the synthesis of hemoglobin S and hemoglobin C the pairing of bases may be altered at one point (shaded by colored squares). This might account for the difference in one amino acid of the three forms of hemoglobin.

... than the sickle cell disease. ...

... New York ...

... the change ...