

Copy of a printed diagram referenced as "Polypeptide chain configurations"

Contributors

Randall, J. T. (John Turton), 1905-1984

Publication/Creation

June 1952

Persistent URL

<https://wellcomecollection.org/works/mhupmjzf>

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution, Non-commercial license.

Non-commercial use includes private study, academic research, teaching, and other activities that are not primarily intended for, or directed towards, commercial advantage or private monetary compensation. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

or polypeptide chains arranged as shown in Fig. 30a. Silk yields the highest observed value of 3.5 Å. (157), and normally the β -keratins show still lower values, 3.1 to 3.3 Å. (14). While it is possible to suppose that silk and β -keratin have polypeptide chains which are somewhat crumpled and contracted from maximum extension, collagen would require rather special treatment for explanation of a residue extension as low as 2.86

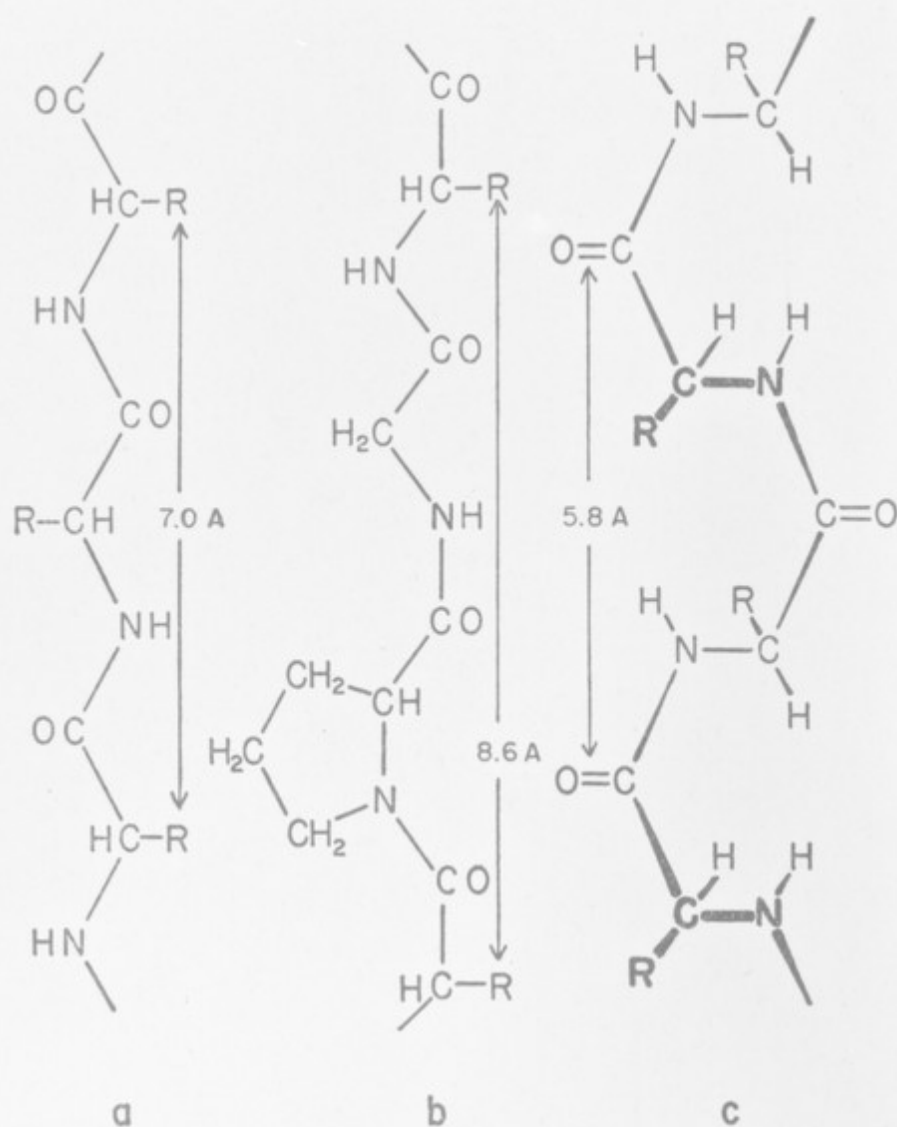


FIG. 30. Polypeptide chain configurations.

Astbury has from time to time proposed different reasons for this low value in collagen. His most recent model (9) is shown in Fig. 30. The partial *cis* configuration of the main chain causes shortening, at the same time allowing the prevalent pyrrolidine (of proline and hydroxyproline) and glycine (hydrogen) side chains (see Section V.2) to be