Here are some resources to learn about the structure of proteins in general:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Learning about chemical interactions in biological macromolecules | | | | |
| # | Resource Name | Authors (where available) | Link/Detail | Comment |
| 1 | Online Macromolecular Museum  https://earth.callutheran.edu/Academic_Programs/Departments/BioDev/omm/images/600x214xomm_logo1.png.pagespeed.ic.X6qQHivDa_.png | Yasi Mojab and David Marcey | <http://earth.callutheran.edu/Academic_Programs/Departments/BioDev/omm/jsmolnew/bonding/chymo.html> | An Introduction to Chemical Bonds and Protein Structure |
| 2 | PDB-101  RCSB PDB | David Goodsell and Maria Voigt | <http://pdb101.rcsb.org/learn/videos/what-is-a-protein-video> | What is a Protein? |
| 3 | Internet Course on **The Principles of Protein Structure** | Organized by [Birkbeck College](http://www.cryst.bbk.ac.uk/default.html) | <http://www.cryst.bbk.ac.uk/PPS95/course/3_geometry/index.html> | Protein Geometry |
| 4 | PDB-101  RCSB PDB | Shuchismita Dutta, Rachel Kramer Green, and Catherine L. Lawson | <http://pdb101.rcsb.org/learn/guide-to-understanding-pdb-data/biological-assemblies> | asymmetric units and biological assemblies |
| 5 | PDB-101  RCSB PDB | David Goodsell | <http://pdb101.rcsb.org/learn/guide-to-understanding-pdb-data/introduction> | Introduction to PDB Data |

To learn more about the Piwi Mutants discussed in the case:

* + For Piwi mutant A see <https://doi.org/10.1073/pnas.1106676108>.
  + For Piwi mutant B see <https://doi.org/10.1073/pnas.1213283110>.
  + For Piwi mutant C see

<http://www.genesdev.org/cgi/doi/10.1101/gad.209841.112>.