Javed Aman
May 2020 Generals Exam Reading List

1. **(Textbook)** Compeau, Phillip and Pevzner, Pavel. (2018). Bioinformatics Algorithms: An Active Learning Approach. 3rd Edition (Chapter 1-10)
2. Kobren, Shilpa Nadimpalli and Chazelle, Bernard and Singh, Mona, An Integrative Approach Uncovers Genes with Perturbed Interactions in Cancer (October 12, 2019). CELL-SYSTEMS-D-19-00446. Available at SSRN: https://ssrn.com/abstract=3468494 or http://dx.doi.org/10.2139/ssrn.3468494
3. Kobren, Shilpa Nadimpalli, and Mona Singh. “Systematic domain-based aggregation of protein structures highlights DNA-, RNA- and other ligand-binding positions.” *Nucleic acids research* vol. 47,2 (2019): 582-593. doi:10.1093/nar/gky1224
4. Nidhi Sahni, Song Yi, Mikko Taipale, Juan I. Fuxman Bass, Jasmin Coulombe-Huntington, Fan Yang, Jian Peng, Jochen Weile, Georgios I. Karras, Yang Wang, István A. Kovács, Atanas Kamburov, Irina Krykbaeva, Mandy H. Lam, George Tucker, Vikram Khurana, Amitabh Sharma, Yang-Yu Liu, Nozomu Yachie, Quan Zhong, Yun Shen, Alexandre Palagi, Adriana San-Miguel, Changyu Fan, Dawit Balcha, Amelie Dricot, Daniel M. Jordan, Jennifer M. Walsh, Akash A. Shah, Xinping Yang, Ani K. Stoyanova, Alex Leighton, Michael A. Calderwood, Yves Jacob, Michael E. Cusick, Kourosh Salehi-Ashtiani, Luke J. Whitesell, Shamil Sunyaev, Bonnie Berger, Albert-László Barabási, Benoit Charloteaux, David E. Hill, Tong Hao, Frederick P. Roth, Yu Xia, Albertha J.M. Walhout, Susan Lindquist, Marc Vidal, Widespread Macromolecular Interaction Perturbations in Human Genetic Disorders, Cell, Volume 161, Issue 3, 2015, Pages 647-660, ISSN 0092-8674, https://doi.org/10.1016/j.cell.2015.04.013. (http://www.sciencedirect.com/science/article/pii/S0092867415004304)
5. Walter Kolch, Dirk Fey, Colm J. Ryan, Francesco Raimondi, Robert B. Russell; Studying how genetic variants affect mechanism in biological systems. *Essays Biochem* 26 October 2018; 62 (4): 575–582. doi: https://doi.org/10.1042/EBC20180021
6. González-Sánchez, J.C., Raimondi, F. and Russell, R.B. (2018), Cancer genetics meets biomolecular mechanism—bridging an age-old gulf. FEBS Lett, 592: 463-474. doi:10.1002/1873-3468.12988
7. Joan Segura, C. O. S. Sorzano, Jesus Cuenca-Alba, Patrick Aloy, J. M. Carazo, Using neighborhood cohesiveness to infer interactions between protein domains,

Bioinformatics, Volume 31, Issue 15, 1 August 2015, Pages 2545–2552, https://doi.org/10.1093/bioinformatics/btv188

8. Wang, X., Wei, X., Thijssen, B. *et al.* Three-dimensional reconstruction of protein networks provides insight into human genetic disease. *Nat Biotechnol* 30, 159–164 (2012). https://doi.org/10.1038/nbt.2106
9. Anna Laddach, Joseph Chi-Fung Ng, Sun Sook Chung, Franca Fraternali, Genetic variants and protein–protein interactions: a multidimensional network-centric view, Current Opinion in Structural Biology, Volume 50, 2018, Pages 82-90, ISSN 0959-440X, https://doi.org/10.1016/j.sbi.2017.12.006.
10. Wang, Haidong & Segal, Eran & Ben-Hur, Asa & Koller, Daphne & Brutlag, Douglas. (2004). Identifying Protein-Protein Interaction Sites on a Genome-Wide Scale. Advances in Neural Information Processing Systems 17. 17.
11. Cunningham, J.M., Koytiger, G., Sorger, P.K. *et al.* Biophysical prediction of protein–peptide interactions and signaling networks using machine learning. *Nat Methods* 17, 175–183 (2020). https://doi.org/10.1038/s41592-019-0687-1