

Structural biology response to biomedical threats

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Structural information can guide the response to biomedical challenges, including structure-based drug discovery. However, highly accurate and detailed structural information is only one piece of knowledge necessary to understand the big picture of medical disorders. The analysis of medical data in the context of other in-vitro and in-vivo experimental is crucial to provide a rapid response to emerging biomedical challenges and threats like COVID-19. The recent advances in experimental and bioinformatics methods may revolutionize drug discovery, albeit only when these data are integrated into an effective data management framework, like the Advanced Information System, we proposed in 2017. The creation and curation of such a system are a Grand Challenge for biomedical sciences. By definition, a Grand Challenge is a challenging, costly, and long-term project, usually not appreciated by those looking for immediate returns.