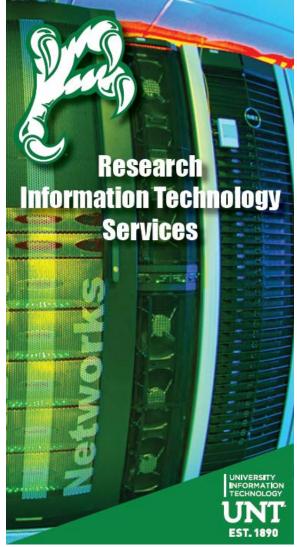# Biology Seminar

# Dr. Ravi Vadapalli

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## Opportunities in Biological Sciences through Research Information Technology Services

"Understanding the Rules of Life: Predicting Phenotype" is one of the National Science Foundation's 10 Big Ideas—called the Big Idea hereafter. The main theme of this Big Idea is to predict the future characteristics of biological organisms. Areas of interest include human disease risk, drug therapy responses, crop productivity, environmental remediation, and genetics. The UNT Department of Biological Sciences is actively engaged in several application areas within the Big Idea. By leveraging and potentially expanding the existing interdisciplinary research collaborations through data integration, analysis, modeling and informatics, new research innovations, new ideas and workforce training capabilities are possible. The University of North is one of the few universities in the U.S. to host both the services of High-Performance Computing with Data Science and Analytics in one office—Research Information Technology Services. Our goal is to help researchers and students expedite both scientific computing and analytics opportunities leading to groundbreaking research innovations, extramural funding opportunities, and skilled workforce training. In this presentation, I will provide an overview of Research Information Technology Services, programs and opportunities. Then, I will discuss how we can help develop and support disciplinary and interdisciplinary collaborations in one or more of the application areas within the Big Idea. I will conclude the presentation with a few examples of application areas, ongoing grant collaborations, and workforce training opportunities.



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