



## Gustavo Monteiro Silva

Assistant Professor of Biology  
Trinity College of Arts and Science

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### Professional Links

[Silva lab at Duke University](#)

[LinkedIn](#)

[Curriculum Vitae PDF](#)

[NIH Biosketch PDF](#)

### Overview

My main research goal is to understand and be able to control how cells respond to stressful and harmful conditions, which are the underlying causes of many human diseases. To achieve this goal, I study cellular response to stress at the protein level and aim to characterize the different regulatory functions mediated by the ubiquitin-proteasome system (UPS), essential machinery involved in modulating protein dynamics. Ultimately, regulating specific UPS roles will provide new tools to increase cellular tolerance to a variety of environmental stresses, which is highly relevant for a variety of degenerative diseases. The main focus of my lab is to investigate the unprecedented regulation of translation mediated by ubiquitin. I laid the groundwork for this research investigating the ubiquitination response in the budding yeast *Saccharomyces cerevisiae* and we will explore the evolutionary conservation of this pathway and its function in neuronal cells. Our lab is excited to keep pushing the field forward and to use a combination of proteomics, genomics, and molecular methods to understand the mechanisms by which ubiquitin regulates translation, and ultimately, cellular response to stress.

### Current Appointments & Affiliations

- Assistant Professor of Biology, [Biology](#), [Trinity College of Arts & Sciences](#)