



BIOINFORMATICS SEMINAR

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UNIVERSITY OF DELAWARE

A PIPELINE TO EXTRACT INFORMATION ON PLANT STRESS RESPONSE FROM SCIENTIFIC LITERATURE

As sessile organisms, plants encounter various types of biotic and abiotic stresses and respond in a variety of ways, for example, by changing the rate of photosynthesis and stomatal closure. However, stress affects their growth and development and results in loss of their production, especially relevant for crops. Thus, crop improvement programs have focused on developing crops that can tolerate these stresses. As a result, the number of studies in this area and derived publications has significantly increased over the years. Automatically mining the information on plant genes that are involved or regulate stress could assist biologists conducting research enormously, as it would facilitate retrieval and consolidation of information. For this reason, we have established a pipeline that integrates text mining methods to efficiently retrieve information on stress genes and their relations to function and processes in plants. We expect that this set of plant stress genes collected through the described pipeline will enable further understanding of the underlying mechanisms of stress tolerance in plants.

BIOGRAPHY

Rita Hayford is a Ph.D. Candidate in the Bioinformatics Data Science Program. She conducts her research project under the supervision of Dr. Cathy Wu of the University of Delaware (UD) and Dr. Venu Kalavacharla of Delaware State University (DSU)/ USDA-NIFA. She obtained a bachelor's degree in Herbal Medicine from Ghana – West Africa. She earned a master's degree in Agriculture (concentration in Plant Sciences) from DSU. Before joining UD for her Ph.D. studies, she served as a Research Technician in the Molecular Genetics and Epigenomics Lab at DSU. Rita has a broad research interest in Bioinformatics, Systems biology, and Text Mining, and her current research is focused on understanding plant stress response using transcriptomics and text mining methods. She is a recipient of the UD Dissertation Fellowship Award and Graduate Scholars Award.

CBCB SEMINAR

4/11/2022

3:30-4:30PM

AP BioPharma

Room 140

(590 Avenue 1743)

or via ZOOM:

<https://udel.zoom.us/j/93068494454>

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