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Peptidomics of *Arabidopsis thaliana*

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Peptidomics is study of all the peptides in an organism, some of which are signaling molecules. Peptides are polymers of amino acids. For the purpose of this work, peptides are defined as proteins being less than 15 kDa in size. Peptides can arise either from genes with small open reading frames or by proteolytic processing of a larger polypeptide precursor. Known peptides have many different physiological functions. We hypothesize that plants have many peptides that have not yet been discovered. To test this hypothesis, we are attempting to identify the peptidome of the plant *Arabidopsis thaliana*. *Arabidopsis* proteins were extracted, fractionated by size, separated by reverse phase chromatography, and analyzed by mass spectrometry. To date, we have identified several proteins using this methodology.