Bringing Genomics and Modern Breeding Tools to a Budding Industry
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Cannabis is projected to become one of the largest crops in Canada, generating domestic sales of up to $8.7 billion annually. Canada is well-positioned to lead globally in both cannabis production and creation of value-added products, including cannabinoid-based pharmaceuticals. To capitalize on this opportunity, growers need access to high-quality varieties that are optimized for large-scale production. There is considerable genetic diversity within the genus Cannabis, which includes both industrial hemp and drug type genotypes with various metabolite profiles and adaptation to different growing conditions. In order to leverage this diversity to create improved varieties Anandia has been characterizing a wide selection of cannabis genotypes using genomics and chemical profiling. We contrast these data with current genotypic groups, genetic families, and strains and in order to build an objective framework for genotypic classification. Having a map of the genotypic and chemical landscape of this crop will be key in the creation of improved genetics for this new industry.