commercial ones and they can be easily applied as animal feed additives.

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PS – R25

4. Biotechnological food and biofactories

Inulinase activity of soybean and yacon meal fermented with *Aspergillus niger*

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The aim of this work was to evaluate the inulinase activity of *Aspergillus niger* 18 in soybean meal and *A. niger* 01 in yacon meal using solid state fermentation (SSF). Inulinase activity had optimum pH at 5 to *A. niger* 18 in soybean meal, reaching 3.4 U mL^{-1}, decreasing in pH 4 and 6. The maximum enzyme stability was between pH 4 and 5, decreasing in higher values. *A. niger* 01 in yacon meal showed a wide range of optimum pH, between 4 and 7, reaching above 4.0 U mL^{-1}, what indicates high versatility of this enzyme. The stability had similar results, showing none activity in pH higher than 8. The optimum temperature to *A. niger* 18 in soybean meal was 55 °C. The stability was below 55°C. The optimum and stability temperature of *A. niger* 01 in yacon meal had both an interesting result. The inulinase activity increased from 25 to 95°C, reaching more than 4.0 U mL^{-1}. In conclusion, the thermostability of the enzyme studied using yacon as substrate is convenient for industrial utilization and prebiotics production, plus the biochemical character of the enzyme varies depending on combination of substrate and microorganism.

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PS – R26

4. Biotechnological food and biofactories

New role of sawtooth transcription factors in the shift to photoautotrophic growth in plants

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DELLA proteins are central modulators of transcriptional circuits that transduce environmental signals to developmental processes. They interact physically with transcription factors (TFs) and alter their activity. One of them is SAWTOOTH2 (SAW2), a TF involved in the control of leaf shape through the limitation of growth in leaf margins by the repression of *KNOX* genes, including *KNAT1/BREVIPEDICELLUS*. Therefore, we pursued two questions: (1) Do DELLA proteins regulate KNOX activity through their interaction with SAW TFs? And (2) do SAW proteins have additional functions in development?

Here we further characterize the interaction, describing the protein domains involved and showing that DELLA proteins indeed interact with SAW2 in plant cells. Moreover, *KNAT1::GUS* expression was enhanced in Arabidopsis seedlings that accumulate DELLAs, suggesting that SAW protein activity would be inhibited by DELLAs.

Moreover, transcriptomic analysis of *saw1 saw2* seedlings indicates that the glyoxylate cycle is functionally repressed by SAW. In agreement with the need for an active glyoxylate cycle during germination, seedling establishment was improved in the *saw1 saw2* mutant, suggesting a new role of SAW proteins in the shift between heterotrophic and photoautotrophic growth.

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PS – R27

4. Biotechnological food and biofactories

Exploratory study of perception, information and knowledge about genetically modified organisms (GMO) in Colombia

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Due to the preconceived ideas that often have the population about biotechnology, this study has been structured to explore perception, information and knowledge about genetically modified organisms (GMO).

This is a pilot study, applied at the Universidad Antonio Nariño (UAN), whose objective was to structure and validate a methodology that can be applied in an analysis of national coverage, with the support of the Ministry of Health and Social Protection of Colombia.

The target population of the survey corresponds to students, teachers and administrators of the UAN (16,000), who were invited by email to participate through the institutional platform. It was a response of 1730 participants (10.8%), corresponding to 22 cities in different regions of the country. The 60% sample corresponded to students, 21% to teachers, and the 18% administrative.

The survey is designed with questions related to knowledge of the concept of GMO, its relationship with crops and food, information and the perception on the characteristics of the GMO and its consumption. Also included questions related to demographic information.