costos en la obtención de plantas mejoradas para esta característica.

## REGENERATION OF TRANSGENIC HERBICIDE-RESISTANT LETTUCE PLANTS AND PROGENY ANALYSIS

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Lettuce (**Lactuca sativa** L.) is an important vegetable crop world-wide. Efficient genetic transformation protocols can greatly benefit lettuce breeding programs for traits such as virus and herbicide resistance. This report describes the regeneration of transgenic lettuce plants resistant to Liberty, a non-selective herbicide containing phosphinothricin (PPT). Lettuce seeds (cv. Verônica) were desinfected and sown on filter paper moistened with half strength MS medium (Murashige and Skoog, 1962), without sucrose, and pH 5.8. Cotyledon explants from 2-day-old seedlings were excised

and soaked for 30 min. is an overnight culture of Agrobacterium tumefaciens strain EHA101 harboring the plasmid pGV1040, which contains the *gus* gene under control of the CaMV 35S promoter and the *bar* and *nptII* genes under control of the TRI'2' dual promoter. Explants were cocultivated for 2 days and transferred to MS medium supplemented with 0.1 mg/L indol-butyric acid (IBA) and 0.1 mg/L benzylaminopurine (BA), 400 mg/L cefotaxime, 100 mg/L kanamycin, 3% suicrose, pH 5.8 and 0.6% agar. Plants regenerated under kanamycin selection were tested for GUS activity and the presence of foreign genes was confirmed by PCR using specific primers. Ten plants were transferred to soil, acclimatized, and after three weeks sprayed with Liberty (250 ga. i./ha). The seeds of the herbicide resistant plants were sown in a medium containing kanamycin or PPT. The segregation ratio of resistant to non-resistant seedlings was 3:1. However, when GUS activity was analyzed, different ratios were observed, suggesting that gene silencing or some other gene regulation process was occurring. Gene expression in plants of further generation will be evaluated as well as herbicide resistance in field trials.

## TWO DIMENSIONAL ELECTROPHORESIS OF *in vitro* LABELLED