

# POINTED HOPF ALGEBRAS WITH STANDARD BRAIDING ARE GENERATED IN DEGREE ONE

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ABSTRACT. We show that any finite-dimensional pointed Hopf algebra over an abelian group  $\Gamma$  such that its infinitesimal braiding is of standard type is generated by group-like and skew-primitive elements. This fact agrees with a long-standing conjecture by Andruskiewitsch and Schneider. We also show that the quantum Serre relations hold in any coradically graded pointed Hopf algebra over  $\Gamma$  of finite dimension and determine how these relations are lifted in the standard case.

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2000 *Mathematics Subject Classification.* 16W30.

The work was partially supported by CONICET, FONCyT-ANPCyT, Secyt (UNC), MinCyT (Córdoba).