1145-VL-2834 **Felix Gotti***, Department of Mathematics, UC Berkeley, Berkeley, CA 94720. *Factorizations in Puiseux algebras.*

Let M be an additive submonoid of the positive cone of rational numbers, and let $F[M]$ be the monoid algebra of M over a field F. In this paper, we study some algebraic properties that can be transferred between M and $F[M]$. We start by studying the irreducible polynomial expressions in $F[M]$; in particular, we generalize Gauss's Lemma and Eisenstein's Criterion so we can use them both in $F[M]$. Then we prove that M is a BF-monoid (resp., an FF-monoid) if and only if $F[M]$ is a BFD (resp., FFD). Finally, we illustrate that the property of having finitely many irreducible divisors cannot be transferred from M to $F[M]$. (Received September 25, 2018)