Abstract: As is well known and easy to prove the Weyl algebras A_n over a field of characteristic zero are simple. Hence any non-zero homomorphism from A_n to A_m is an embedding and m \geq n. V. Bavula conjectured that the same is true over the fields with finite characteristic. It turned out that exactly one half of his conjecture is correct (m \geq n but there are homomorphisms which are not embeddings).

If we replace the Weyl algebra by its close relative symplectic Poisson algebra (polynomial algebra with F[x_1, ..., x_n; y_1, ..., y_n] variables and Poisson bracket given by \{x_i, y_i\} = 1 and zero on the rest of the pairs), then independently of characteristic all homomorphisms are embeddings.