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On Bernstein algebras. (English summary)

Non-associative algebra and its applications (Oviedo, 1993), 164–170, *Math. Appl.*, 303, *Kluwer Acad. Publ., Dordrecht*, 1994.

The paper begins with a review of some main results on Bernstein algebras. With the assistance of a free nuclear Jordan-Bernstein algebra over a set of r generators it is proved that if A is a nuclear Bernstein algebra generated by r elements, then $(\text{Ker } w)^{2r+2} = \langle 0 \rangle$, where w is the weight homomorphism. It is also shown that every free nuclear Jordan-Bernstein algebra possesses derivations that are noninner. Finally, the authors find all nuclear Bernstein algebras satisfying the following conditions: (1) $(\text{Ker } w)^3 \neq \langle 0 \rangle$. (2) If B is a proper nuclear Bernstein subalgebra of A , then $(\text{Ker } w')^3 = \langle 0 \rangle$, w' being the restriction of the weight of A to B . (3) The quotient $\tilde{A} = A/I$, where I is an ideal with $I \subset \text{Ker } w$ satisfies $(\text{Ker } \tilde{w})^3 = \langle 0 \rangle$.

{For the entire collection see [MR1338148 \(96a:17001\)](#)}

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