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Right simple injective FGF-ring

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ABSTRACT.

A ring R is called right FGF-ring if every finitely generated right R-module embeds in a free (projective) . A ring is called right simple-injective if R_R is simple R-injective, that is, if I is a right ideal of R and $\gamma : I \to R$ is an R-morphism with simple image, then $\gamma(x) = c.x$, is left multiplication by an element $c \in R$. There is a conjecture due to Carl Faith which asserts that every right FGF-ring is a Quasi-Frobenius ring (QF). In this paper we establish the conjecture in case that the ring is a simple injective ring by showing that the right simple-injective FGF ring is a right self- injective.

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