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Matt Baker* (mbaker@math.gatech.edu) and **Joe Rabinoff**. *The skeleton of the Jacobian, the Jacobian of the skeleton, and lifting meromorphic functions from tropical to algebraic curves.*

Given a smooth, proper, connected curve X over a non-Archimedean field and a skeleton Γ of the Berkovich analytification X^{an} , there are two natural real tori which one can consider: the tropical Jacobian $\text{Jac}(\Gamma)$ and the skeleton of the Berkovich analytification $\text{Jac}(X)^{\text{an}}$. We show that the skeleton of the Jacobian is canonically isomorphic to the Jacobian of the skeleton as principally polarized tropical abelian varieties. As a consequence, we determine exactly which principal divisors on Γ , in the sense of tropical geometry, are the retractions of principal divisors on X . We use this to prove that there is a rational map $f : X \dashrightarrow \mathbf{P}^3$ whose tropicalization, when restricted to Γ , is an isometry onto its image. (Received September 14, 2013)