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Paolo Aceto, Corey Bregman, Christopher W Davis, JungHwan Park and Arunima Ray* (aruray@pim-bonn.mpg.de), Vivatsgasse 7, 53111 Bonn, Germany. *Isotopy and equivalence of knots in 3-manifolds.*

We show that in a prime, closed, oriented 3-manifold M , equivalent knots are isotopic if and only if the orientation preserving mapping class group is trivial. In the case of irreducible, closed, oriented 3-manifolds we show the more general fact that every orientation preserving homeomorphism which preserves free homotopy classes of loops is isotopic to the identity. In the case of $S^1 \times S^2$, we give infinitely many examples of knots whose isotopy classes are changed by the Gluck twist. (Received September 14, 2020)