1125-11-670 **Guillermo Mantilla-Soler*** (g.mantilla691@uniandes.edu.co), Bogotá, Colombia. *New results on arithmetic equivalence using a Galois representation analog of Tate's isogeny theorem.* Preliminary report.

Let K be a number field and let $\zeta_K(s) = \sum_{n=0}^{\infty} \frac{a_n(K)}{n^s}$ be its Dedekind zeta function. Motivated by Tate's isogeny theorem we show that $\zeta_K(s)$ is completely determined by $a_\ell(K)$ for ℓ prime. This new characterization of arithmetic equivalence is a priori weaker than previously known ones, but in a Galois theoretical sense, we believe, is more natural. (Received September 09, 2016)