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Satoshi Murai, Department of Pure and Applied Mathematics, Osaka University, Suita, Osaka, 565-0871, Japan, and **Isabella Novik*** (novik@math.washington.edu), Department of Mathematics, University of Washington, Seattle, WA 98195-4350. *Face numbers and the fundamental group.*

A conjecture of Kalai posits a lower bound on the number of edges of a $(d - 1)$ -dimensional triangulated manifold Δ in terms of d , the minimum number of generators of the fundamental group of Δ , and the number of vertices of Δ . We will discuss the proof of this conjecture and several related results. Our proofs rely on the μ -numbers introduced by Bagchi and Datta and on their algebraic and topological interpretations. (Received July 04, 2016)