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Justin D. Thomas* (justmas@gmail.com), Department of Mathematics, 255 Hurley, Notre Dame, IN 46556. *Kontsevich's Swiss Cheese Conjecture.*

We prove a conjecture of Kontsevich which characterizes the Hochschild cohomology of an E_n algebra A as the universal E_{n+1} algebra acting on A . The notion of an action of an E_{n+1} algebra on an E_n algebra is defined using the swiss cheese operad of Voronov. This operad was introduced to address Deligne's conjecture. We will discuss the story surrounding Deligne's conjecture, introduce the swiss cheese operad, and sketch a proof of Kontsevich's conjecture. (Received September 08, 2010)