Added, November 2014.   In the notes on simplicial duality, existence and uniqueness of triangulations for topological manifolds was discussed. Subsequent work of M. Freedman in the early 1980s gives examples of compact $4-$ dimensional manifolds which are not homeomorphic to simplicial complexes, and one can combine work of D. Galewski and R. Stern from the 1970s with recent work of C. Manolescu to prove the existence of compact manifolds which are not homeomorphic to simplicial complexes in every dimension greater than 4. Some references are given below:

Freedman, Michael H.; **Quinn, Frank**. Topology of 4-manifolds. Princeton Mathematical Series, 39. *Princeton University Press, Princeton, NJ,* 1990.

Galewski, David E.; **Stern, Ronald J.** Classification of simplicial triangulations of topological manifolds. *Ann. of Math.* **111** (1980), no. 1, 1--34.

Manolescu, Ciprian. Pin(2)-equivariant Seiberg-Witten Floer homology and the Triangulation Conjecture. ArXiv online preprint: **http://arxiv.org/abs/1303.2354v3**

For further discussion also see the following:

http://ldtopology.wordpress.com/2013/03/16/manolescu-refutes-the-triangulation-conjecture/