The Wavy Blade concept is inspired by the unique flipper of a humpback whale, characterized by the tubercles located at the leading edge. It has been suggested that this shape may have been a result of a natural selection process, since this flipper under some circumstances can produce higher lift than a flipper having a smooth trailing edge and thus could be potentially beneficial when catching food. A thorough literature study of the Wavy Blade concept is made and followed by CFD computations of two wavy blade geometries and a comparison with their baseline S809 airfoil at conditions more relevant for modern wind turbines. The findings in the literature from geometries similar to the hump back whale flipper indicate that the aerodynamic performance can be improved at high angles of attack, but sometimes at the expense of a lower lift slope and increased drag before stall. The numerical results for a blade section based on the S809 airfoil are, however, not as promising as some of the findings reported in the literature for the whale flipper at high angles of attack. These first CFD computations using a thicker airfoil and a higher Reynolds number than the whale flipper indicate that the results may very well depend on the actual airfoil geometry and perhaps also the Reynolds number, and future studies are necessary in order to illuminate this further.