

"Cyclic Modular  $\beta$ -Sheets: Divalent Structures Based on  $\beta$ -Amyloid" Woods, R. J.; Nowick, J. S. Presented at the 229th National Meeting of the American Chemical Society, San Diego, CA, March 2005; paper ORG 730.

**Abstract:** This paper presents a new class of bivalent macrocyclic  $\beta$ -sheets that consist of two linked cyclic modular  $\beta$ -sheets and are designed to inhibit the aggregation of  $\beta$ -amyloid. The cyclic modular  $\beta$ -sheets, which are composed of two  $\delta$ -ornithine turn units [*JACS* **2003**, *125*, 876] and the unnatural amino acid  $\beta$ -strand template *Hao* [*JACS* **2000**, *122*, 7654], robustly fold in aqueous solvents. Synthetic and structural studies will be described and the application of molecular modeling to the design of  $\beta$ -amyloid aggregation blockers will be discussed. Ongoing efforts to inhibit  $\beta$ -amyloid aggregation will also be presented.

