

AApeptides: From Structure to Function

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The identification and development of sequence-specific peptidomimetics is of significance in bioorganic chemistry and chemical biology. A new class of peptidomimetics termed "AApeptides" was recently developed by our group. The synthesis of AApeptides can be conveniently achieved on the solid phase. Similar to other peptidomimetics, AApeptides are resistant to proteolytic degradation, and possess limitless potential to introduce chemically diverse functional groups. Moreover, they are able to fold into well-defined secondary and tertiary structures. The functions of AApeptides have also been recently explored, including structure-based design of AApeptides for the mimicry of the primary and secondary structure of bioactive peptides, and combinatorial library for the discovery of potential molecular probes and drug leads.