# Towards the Total Synthesis of the Complex Meroterpenoid Spiroaspertrione A

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In the past years, increasing resistance of methicillin-resistant *Staphylococcus aureus* (MRSA) bacteria towards antibiotic treatment has been observed.[1] Based on several mutations, this pathogen has become more tolerant to β-lactam antibiotics and is now rapidly acquiring immunity towards other types of antibiotics, underlining the importance for the development of novel therapeutics.[2] In this context, the group of Zhang isolated the meroterpenoid spiroaspertrione A (**1**) from a culture extract of the fungus *Aspergillus sp.* TJ23, which was collected from the leaves of *Hypericum perforatum* in Hubei Province, China.[3] Spiroaspertrione A (**1**) consists of a unique spiro[bicyclo[3.2.2]nonane-2,1'-cyclohexane] skeleton containing a lactone as well as a sensitive enone moiety.[3] In addition to the great synthetic challenge to construct this carbocyclic framework, the biological tests revealed a potentiating effect of spiroaspertrione A to oxacillin, reducing its MIC value towards MRSA up to 32 times, rendering this molecule an attractive target for total synthesis.[3]

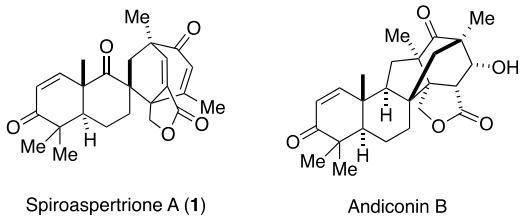


Figure 1. Structure of spiroaspertrione A and biosynthetic precursor andiconin B.[3]

In this presentation, we will report synthetic progress towards this target.

References

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