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## **Presentation Abstract**

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Presentation Title:	Somatostatin-positive inhibitory interneurons mediate inter-dentate gyrus inhibition
Location:	WCC Hall A-C
Presentation time:	Sunday, Nov 16, 2014, 1:00 PM - 5:00 PM
Presenter at Poster:	Sun, Nov. 16, 2014, 4:00 PM - 5:00 PM
Торіс:	++B.09.d. Oscillations and synchrony: Other
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Abstract:	Somatostatin-expressing (SOM+) GABAergic neurons of the dentate gyrus (DG) were thought to be local-circuit interneurons with their axons primarily restricted to the same side of the DG. Recent studies found a group of SOM+ GABAergic neurons with long-range axonal projections to the contralateral DG. However, the function of these long-range projections remain unknown. In this study, we combined optogenetics and electrophysiology to identify

	the targets of SOM+ GABAergic long-range projections in the contralateral DG. Our preliminary results showed that SOM+ neurons mediate inter-DG inhibition with target-cell-type-specific efficacy and connectivity. Intriguingly, interneurons receive stronger inhibition compared to granule cells. SOM+ neuron-mediated inhibition may provide an association signal for coordinated function of bilateral DGs and warrants further study.
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