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Natural Products

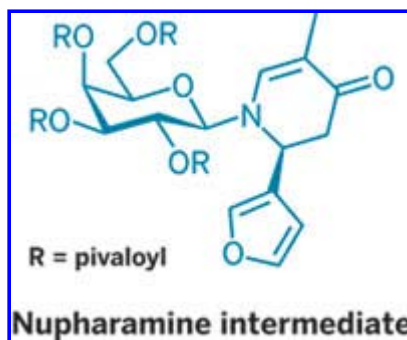
Chemical Beaver Tale

Researchers build an enantiomerically pure component of the beaver's scent gland

[Sarah Everts](#)

The Canadian beaver's scent glands were once a source of pricy perfumes, and extracts from the glands continue to be used in homeopathic medicine for treating hysteria. But on a different note, researchers in Germany have synthesized a component of the odoriferous cocktail through a methodology that uses sugar groups to confer chirality in organic molecules (*Angew. Chem. Int. Ed.*, 10.1002/anie.200805606).

Horst Kunz and colleagues at the University of Mainz report the first enantioselective synthesis of an all-cis nupharamine found in the beaver's scent gland. In one of the 10 synthesis steps, a bulky pivaloyl-decorated sugar is attached to an intermediate enolate (shown) that eventually leads to an indole moiety. The presence of the bulky carbohydrate directs cis protonation of the enolate; without the sugar, trans protonation occurs.



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BEAVER-INSPIRED German researchers use a component of the beaver's scent gland to develop enantioselective synthetic methods.

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