Based on the chiral backbone of trans-1,2-cyclohexane diamine a variety of bifunctional ammonium salt catalysts with hydrogen-bonding donor moieties can be synthesized to facilitate asymmetric reactions like the enantioselective α-fluorination of β-ketoesters [1]. Chiral quaternary urea- and thiourea-containing ammonium salt catalysts have already been introduced and proved their applicability in various different asymmetric transformation reactions [2,3]. In addition, we recently researched on the synthesis of chiral quaternary ammonium salt catalysts based on a guanidine hydrogen-bond donor group. In on-going investigations focusing on the optimization and on the applications of catalysts of this sort, we have introduced several promising synthesis routes starting from trans-1,2-cyclohexane diamine. This presentation gives an overview on the designed quaternary ammonium salt hydrogen bond catalysts, their synthesis, as well as on their possible applications.