Syntheses, Spectroscopy and Crystal Structures of (*R*)-*N*-(1-Aryl-ethyl)salicylaldimines and [Rh{(*R*)-*N*-(1-aryl-ethyl)salicylaldiminato}(η^4-cod)] Complexes

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Condensation of salicylaldehyde with enantiopure (*R*)-(1-aryl-ethyl)amines yields the enantiopure Schiff bases (*R*)-*N*-(1-aryl-ethyl)salicylaldimine (HSB*; aryl = phenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl (**4**), 4-bromophenyl (**5**), 2-naphthyl). These Schiff bases readily react with dinuclear (acetato)(η^4-cyclooctа-1,5-diene)rhodium(I), [Rh(μ-O_2CMe)(η^4-cod)]$_2$, to afford the mononuclear complexes, cyclooctadiene-((*R*)-*N*-(1-aryl-ethyl)salicylaldiminato-$\kappa^2 N,O$)-rhodium(I), [Rh(SB*)(η^4-cod)] (SB* = deprotonated chiral Schiff base = salicylaldiminate; aryl = phenyl (**7**), 2-methoxyphenyl, 4-methoxyphenyl, 4-bromophenyl, 2-naphthyl). The complexes have been characterized by IR, UV/vis, ^{1}H/^{13}C NMR and mass spectrometry, optical rotation as well as by single-crystal X-ray structure determination for **4**, **5** and **7**. The structure of **5** shows C–Br$\cdots\pi$ contacts. Compound **7** is only the second example of a Rh(η^4-cod) complex with a six-membered Rh-*N,O*-chelate ring.

Key words: (*R*)-Schiff Bases, Rh(η^4-cod) Complexes, Chelate Complexes, π Interactions, Optical Activity, Chirality