## Strem Chemicals, Inc.

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Catalog # 07-7028

3-[[3,5-Bis(trifluoromethyl)phenyl]amino]-4-[[(9R)-10,11-dihydro-6'-methoxycinchonan-9-yl]amino]-3-cyclobutene-1,2-dione

## **Technical Notes:**

1. **Conjugate Addition:** Conjugate addition reactions of a wide range of nucleophilic enol species with enones, catalyzed by a cinchona alkaloid derived thiourea organocatalyst, have been developed with attending good yields and high enantioselectivities under a mild reaction condition.

$$X = Y = COOR^{1}, COOR^{2}, CN$$

$$X = COOR^{1}, Y = COOR^{3}, NO_{2}$$

$$X = aryl and alkyl$$

$$X = COOR^{1}, Y = COOR^{3}, NO_{2}$$

$$X = COOR^{1}, Y = COOR^{2}, COOR^{2}, COOR^{2}$$

## References:

1. J. Am. Chem. Soc., 2006, 128, 12652-12653.