

Cambridge University (2002-2003):

- First grant from Royal Society: Enantioselective β -C–H activation and coupling with olefins (2002).
- First observation of Pd-catalyzed asymmetric β -oxidation with peroxides using a chiral auxiliary (2003).

Brandeis University (2004-2007):

- Submitted NIH grant: proposed asymmetric β -C–H activation of amines and ketones using transient amino-ketone and amino-oxazoline chiral directing groups (2005).
- Established a Pd(II)/Pd(0) redox catalytic cycle for coupling C–H bonds with organotin and organoboron reagents (2005).
- Received NSF grant on C–H activation directed by weak coordination (2006).
- Established significant promoting effect of cations such as Na⁺, K⁺, and Cs⁺ in carboxyl directed C–H activation and the potential of weak coordination in directing palladation of C–H bonds (2007).

The Scripps Research Institute (2007-present):

- Discovery of chiral mono-protected amino acid ligands (MPAA) for broad range of enantioselective C–H activation reactions.
- Realization of remote C–H activation using U-shaped templates.
- Discovery of chiral acetyl-protected aminoethyl quinoline (APAQ) ligand for enantioselective β -methylene C–H activation: new methods for β -chiral centers.
- Discovery of mono-N-protected aminomethyl oxazoline (MPAO) ligands for enantioselective β -C–H activation of isobutyric amides: new methods for α -chiral centers.