# **Synthesis of Novel Pharmaceutical Synthons**

#### The Problem

Synthesis of novel spirooxindole derivatives useful for searching for and developing bioactive/bio-functional molecules. Spirooxindoles are widely found in bioactive molecules and their synthetic intermediates.

#### The Solution

This technology provides a method to concisely and stereoselectively synthesize novel spirooxindole derivatives from easily accessible starting materials under mild conditions.

# amine-based catalyst system rt R2 Q dr up to >20:1 H 3 up to 94% ee (after crystallization 99% ee)

### 

#### **Applications**

- Pharmaceutical compound synthons
- · Diagnostic compounds
- · Probe molecules for investigating bio-functions

#### **Benefits**

- Synthesis of novel oxa-spirooxindole derivatives
- · Asymmetric synthesis of spirooxindole derivatives with functional groups
- Transformation of the synthesized spirooxindole derivatives can further provide new products

# Stage of Development

Compound samples for bioassay are available on negotiation.

# Opportunity

OIST is seeking industrial partners interested in licensing or developing this technology, including:

- companies interested in using this technology to prepare compounds, compound libraries, research agents, etc.
- companies interested in using the compounds described in this technology to develop new pharmaceuticals, bioactive molecules, and bio-functional molecules
- companies interested in using this technology for further research

#### **Publication**

Cui, H.-L.; Tanaka, F. Chem. Eur. J. 2013, 19, 6213-6216.

# Patent protection

This technology has entered the National Phase: US14/431,935, EP13846040.7, CN201380051394.7, IN646/KOLNP/2015, JP2015-517510

#### For more information

Business Development Section/Technology Licensing Section <a href="mailto:bdtl@oist.jp">bdtl@oist.jp</a> or +81-(0)98-966-8937/ +81-(0)98-966-2249