

Discovery chemistry



Mercachem has an experienced group of skilled chemists (100 persons, 45% Ph.D. and 55% M.Sc./B.Sc.) who have built over the past years an unprecedented collective knowledge solving synthetic challenges for companies working in the field of pharmaceuticals, agrochemicals, animal health, flavors and fragrances and specialty chemicals. Mercachem is offering the following services:

- Development of novel chemistry and methodology
- Design and parallel synthesis of small focused libraries
- Single compound synthesis
 - reference compounds
 - metabolites and impurities
 - intermediates and building blocks

Chemistry expertise

Chemists at Mercachem have knowledge about all common chemical transformations and are in particular strong in

- (Asymmetric) hydrogenation
- Chiral synthesis and purification
- Halogenated compounds
- Transition metal-mediated C-C and C-N bond forming reactions (large catalyst library in house)
- Heterocyclic chemistry – synthesis of novel heterocycles
- Amino acid chemistry – synthesis of peptides and peptidomimetics
- Sulfur chemistry
- Organometal mediated synthesis
- Natural products chemistry

Mercachem offers lab-scale (100 mg – 1 kg) synthesis using state-of-the-art reaction methods and techniques.

Mercachem offers parallel synthesis of focused libraries for hit- and lead optimization on a multi-mg scale. Flexible reaction stations enable to cover a wide range of common chemistries in a parallel fashion. Purification is performed efficiently by employing preparative LC-MS systems. The latest techniques for rapid purification in a parallel fashion are employed.

Novelty

Although projects are always performed under confidentiality and on an exclusive basis for a customer, regularly chemists from Mercachem are listed as inventors on patents issued by our customers e.g. W02009007098, W02009003650, W02005028479, W02004074266 and W02004016581. This underlines the important contributions that Mercachem chemists make in projects. The scientific impact of our chemists is further illustrated by publications in peer reviewed journals e.g. *Eur. J. Org. Chem.*, 2010, 15, 2852 and *Tet. Lett.*, 2010, 51, 543.

Knowledge

In 2007 Mercachem has implemented a company wide Electronic Laboratory Notebook (ELN) in which all reactions are registered. Today, the ELN consists of more than 65,000 chemical transformations and is growing with a rate of 18,000 per year. This system ensures that the knowledge of individual chemists is retained and remains accessible. In combination with individual online access to the most recent and relevant literature, the chemists have great resources available to efficiently identify reaction pathways to address a synthetic challenge.

Project management

Each project is supervised by an experienced project manager who ensures efficient execution of your chemistry projects supported by an electronic project management system. The chemists are result-driven to complete a project within the set timeline. Review of the performance since 2005 shows that more than 95% of the performed projects are completed successfully within the set of requirements of the customer.

Working with Mercachem ensures efficient execution of your chemistry projects.