



# Malcolm Huestis

Senior Scientific Researcher Genentech,  
Inc.

Written by Oliver Kuehm, M.Sc. Trainee



Malcolm Huestis is a Senior Scientific Researcher in the department of Discovery Chemistry at Genentech, Inc., South San Francisco, California, USA. As a subsidiary of the larger Roche Group, Genentech is one of the largest biotechnology companies in the world, employing over 14 000 people. Research is a key priority at Genentech (Roche R&D spend totaled > USD\$10 billion in 2018). Genentech's work is centered on finding new drug targets for diseases, the discovery of drugs for those targets, and their clinical development to meet the medical needs of society. There are many fields of research in constant synergy during the drug discovery and development process. The teams consist of experts in not only chemistry and biology, but also metabolism, formulation, safety assessment, clinical, and legal.

Specifically, the Discovery Chemistry department is involved in the initial discovery of novel small molecules. Following high-throughput screening of known compounds at the Genentech robotic facilities, molecules that bind to the desired protein target are identified. Next, Malcolm and other synthetic organic chemists work to synthesize new, optimized molecules that could potentially be developed into drugs of clinical relevance. Once a potent molecule with good pharmacology is uncovered, Malcolm and the other chemists work together with the legal team to file a patent for the potential drug.



Malcolm benefits from the artistic freedom in problem solving the synthesis of complex molecules. On a day to day basis, Malcolm begins each morning by reading the most recent research published in organic, organometallic, and medicinal chemistry journals. Then, Malcolm moves into the lab to continue his work – checking on reactions that were running overnight, and purifying new molecular substances that have never before existed. In the rest of his time, Malcolm participates in meetings of various levels, observing and contributing to the progress of other researcher's projects, as well as division of labor by outsourcing portions of projects to external partners. In his spare time, Malcolm also plays a role in monitoring finances to maintain and upgrade equipment in the lab, ensuring that his chemistry department has access to the highest quality of equipment and instrumentation for their work. In addition to his work towards the discovery and patenting of new molecules as drug candidates, Malcolm also has the opportunity at Genentech to investigate his own personal research interests, mainly through mentoring undergraduate summer interns:

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