

About the Molecular and Genetics Core

The Molecular Genetics Core is a service core of the [UW Diabetes and Endocrinology Research Center](#) established to help the diabetes research community through expert service and advice in molecular techniques.

The Molecular and Genetics Core (MGC) has been in operation since May 1996 and has been managed by Libby Rutledge, Ph.D. since February 2000. Åke Lernmark, Ph.D. is the Director of the MGC.

The goal of the MGC is to provide technical support and services to the diabetes research community through quantitative gene expression (RT-PCR, Northern blotting), genotyping, genetic mapping, positional cloning, and by providing a resource for bioinformatics.

The MGC has served affiliates from a variety of UW departments (Chemistry, Comparative Medicine, Dentistry, Gerontology and Geriatric Medicine, Immunology, Nutritional Sciences, Pathology, Pediatrics, Rheumatology, and Urology) and locations (Children's Hospital, Pacific Northwest Research Institute, Oregon Health Sciences University, Johns Hopkins, Medical College of Wisconsin, and laboratories in Sweden, The Netherlands, and Korea) as well as participated in nationwide diabetic clinical studies and databases (the SEARCH study, SwedenII and DISS studies, Diabetes Control and Complications Trial). Completed projects include several genotype assays for human, mouse, and rat genes for studies involving over 3,000 samples. Services provided by the MGC have contributed to several publications [Publications](#).

Training

The MGC has trained several personnel from other laboratories in specific techniques, particularly those relating to quantitative real-time PCR, so that they can utilize these skills in their own laboratory setting. Trained personnel have been from Montana, Sweden, and The Netherlands, as well as the University of Washington system. In 19xx the MGC hosted the European Association for the Study of Diabetes (EASD) Scientist Training Course. Thirty participants from 14 different countries (who spent a week in Seattle) were taught all of the ins and outs of gene expression. The course was a resounding success. In addition, the MGC has trained many undergraduate students in all methods carried out by the Core. The training has been a valuable experience for these students who then go on to apply for medical school, graduate school, or seek employment in the biotechnology field.

Undergraduate Research

Several UW undergraduate students have been trained in techniques of the MGC. These students have worked as volunteers, as work-study, hourly, and for course credit. Past students are:

Ben Snyder
Marjan Zarghami

Sergio Sapetto
Ian Reyes
Prashant Gaur
Morgan Peterson
Jeff Posadas (current student)

Presentations

Stratagene Interview in [Stratagies](#)
Introduction to quantitative PCR to graduate class in Nursing, [May 20, 2005](#)
Statagene User Group Presentation, [May 26, 2005](#)

Publications

For a list of publications with work carried out by the MGC click [here](#).

About MGC Personnel

Director Åke Lernmark is the R H Williams Professor of Medicine in the School of Medicine, and Adjunct Professor in Immunology.
<http://depts.washington.edu/rhwlab/>

Manager Libby Rutledge brings a range of experiences to the MGC in addition to previous techniques offered by the MGC. She has expertise in research involving endocytosis and cellular trafficking as well as viral vector design and construction for use in gene therapy. Libby's [CV](#) is available by clicking here.

Assistant Manager Brian Van Yserloo is expert in quantitative real-time PCR techniques.

Technician Jana Hoehna has learned the techniques offered by the Core and assists in research projects in quantitative real-time PCR.

Undergraduate student, Jeff Posadas, recipient of Mary Gates Scholarship Award, is working on a research project about the phylogenetic relationship of the *Gimap* gene family in rats.

The MGC seeks to expand its abilities and relies on the needs of the DERC Affiliates to bring problems that require new and innovative solutions. The MGC looks forward to meeting your research needs.