

Das **Institut für Biochemie** lädt gemeinsam mit dem Ortsverband der
Gesellschaft Deutscher Chemiker zu einem

K o l l o q u i u m d e r G D C h

Großer Hörsaal des Instituts für Biochemie

Felix-Hausdorff-Str. 4, Greifswald

Montag, 11. Dezember 2017, 16 Uhr c.t.

Prof. Dr. Christoph Dieterich

Bioinformatik und Systemkardiologie; Universitätsklinikum Heidelberg

spricht zum Thema:

On RNA species, modifications and beyond

Abstract:

Over 150 unique chemical modifications of RNA are known to date. Until recently, mRNA modifications were underrepresented in scientific literature, specifically internal modifications in mRNA and their roles in gene expression control were not considered in detail. The developments of new sequencing techniques and discoveries from genetic studies have intensely renewed the interest in understanding the effects of internal mRNA modifications.

I will present our workflow for site-specific transcriptome-wide mapping of RNA editing events, discuss functional consequences and how we currently extend it to address additional mRNA modifications.

Non-canonical RNA splicing will be covered in the second half of my talk. Specifically, circular RNAs (circRNA) originate from back-splicing events, which link a downstream 5'-splice site to an upstream 3'-splice site. Several back-splicing junctions (BSJ) have been described in heart biopsies from human, rat and mouse hearts (Werfel et al., 2016; Jakobi et al., 2016). In our current research, we use human induced pluripotent stem cell derived cardiomyocytes (hiPSC-CMs) to identify circRNA and host gene dynamics in cardiac development and disease. In parallel, we explore interactions of selected candidates in mouse and rat via RIP-seq experiments.

Einladende

Prof. Dr. Sabine Müller

PD Dr. Heike Kahlert

Vorsitzende des Ortsverbandes der GDCh