

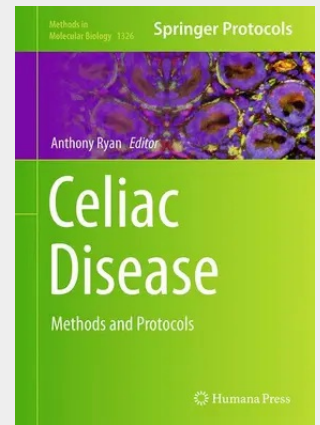
Celiac Disease

Methods and Protocols

This volume provides detailed molecular analysis of the associated pathways and cell types involved in Celiac Disease, and embraces new technologies such as next generation sequencing. The book is divided into three parts: Part I gives a background overview with a number of reviews to describe the history and nature of the disease, its diagnosis, the role of animal models, and study designs for investigating genetic susceptibility. Part II describes molecular techniques, including tissue culture, isolation and cloning of relevant cell types, high content analysis of biopsies, and HLA genotyping. The final part of the book begins with an outline of scripting for data management, focusing on tools that are freely available to researchers who wish to explore them. It also describes analysis pipelines for bioinformatics prediction of antigenicity, quality control and analysis of GWAS data, and transcriptome analysis by next generation sequencing. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls.

Authoritative and thorough, *Celiac Disease: Methods and Protocols* brings together novel and more traditional methods in molecular biology and immunology, in order to provide a tool-kit for all stages for Celiac Disease research—from the practicalities of identifying, obtaining, stabilizing and maintaining high quality samples, to molecular analysis and bioinformatics.

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