



Proceedings of the 18th Meeting

**WORKING GROUP
on PROLAMIN ANALYSIS and TOXICITY**

Edited by
Martin Stern
University of Tübingen

Verlag Wissenschaftliche Scripten
Zwickau 2004

Impressum

Proceedings of the 18th Meeting

WORKING GROUP on PROLAMIN ANALYSIS and TOXICITY

2-5 October, 2003
Stockholm, Sweden

Wichtiger Hinweis:

Das Werk, einschließlich aller seiner Teile, ist urheberrechtlich geschützt.
Jede Verwertung außerhalb der engen Grenzen des Urheberrechtsgesetzes ist ohne
Zustimmung des Verlages unzulässig und strafbar. Das gilt insbesondere für
Vervielfältigungen, Übersetzungen, Mikroverfilmungen und die Einspeicherung
und Verarbeitung in elektronischen Systemen.

Scientific Organisation

Prof. Dr. Martin Stern

Universitätsklinik für Kinderheilkunde und Jugendmedizin
Hoppe-Seyler-Str. 1, 72076 Tübingen, Germany
Phone ++49 7071 2983781; Telefax ++49 7071 295477
email: martin.stern@med.uni-tuebingen.de

Sponsor and Host

Dr. Lars-Börje Sjöberg / Olle Ericsson
Semper AB

Torsgatan 14, 105 46 Stockholm, Sweden
Phone ++46 8 677 3130; 3920, Telefax ++46 8 677 3156
email: lars-borje.sjoberg@arlafoods.com
email: olle.ericsson@arlafoods.com

Cover picture

Thomas Mothes

2004 Verlag Wissenschaftliche Scripten

Thurmer Straße 30, 08066 Zwickau, Germany
Phone ++49 3 75 44 59-0, Telefax ++49 3 75 44 59-4
email: info@verlag-wiss-scripten.de

ISBN: 3-937524-04-5

Table of contents

List of Participants 11

Program 19

I. Analytical research reports

U. Immer, S. Haas-Lauterbach

Statistical evaluation of gliadin ring trial 23

A.I. Ranz, A. Venteo, C. Vela, A. Sanz

Ingezim gluten. Immunoenzymatic assay for gluten detection
using monoclonal antibody R5 37

V.V. Doña, C. A. Fossati, F. G. Chirdo

Interference of denaturing and reducing agents
on gliadin/antibody interaction 51

E. García, A. Hernando, J.R. Mujico, M. Lombardía, E. Méndez

Matrix effects in the extraction and detection of gliadins in foods
by R5 ELISA and MALDI-TOF mass spectrometry 59

S. Ferre, E. García, E. Méndez

Measurement of hydrolysed gliadins by a competitive ELISA based on
monoclonal antibody R5: analysis of syrups and beers 65

F. Kahlenberg, E. Méndez, T. Mothes

Epitope specificity of monoclonal antibody R5 71

L. Spaenij-Dekking, Y. Kooy, J.-W. Drijfhout, F. Koning

The use of T-cell epitopes in food analysis for dietary therapy
of coeliac disease 79

P. Ferranti, G. Mamone, D. Melck, F. Addeo

A mass spectrometric-based assay for predicting gliadin modification
by tissue transglutaminase 85

<i>J.R. Mujico, M. Lombardía, E. Méndez</i>	
Detection of wheat DNA in foods by a quantitative real-time PCR system: can the measurement of wheat DNA be used as a non-immunological and complementary tool in gluten technology?	91
<i>D. Gabrovská, J. Rysová</i>	
Experience with sample preparation: defatting procedure and cocktail solution extraction	99
<i>S. Iametti, F. Bonomi, E. Sironi, L. Scafuri</i>	
Improved protocols for ELISA determination of gliadin in some wheat-derived foods	103
<i>A. Hasselberg, B. Kruse, I. Malmheden Yman</i>	
Quantification of gluten in food samples - comparison of two assays.....	109
<i>S. Denery</i>	
IgE-binding proteins in wheat allergy	119
<i>R. van Eckert, T.W. Jordan</i>	
Characterisation of the European reference gliadin	121
<i>C. L. Klein, S. Yazgan, F. Franchini</i>	
The certified reference material for gliadin from European wheat: status quo	125

II. Clinical research reports

<i>H. Wieser, W. Engel</i>	
Preparation of HMW subunits of wheat glutenin used for studies on coeliac disease.....	131
<i>A. Whelan, S. Naughton, J. Dunne, S. Wilson, R. Willoughby, M. Abuzakouk, C. Feighery</i>	
EMA negative coeliac disease	137

<i>E. Schwertz, F. Kahlenberg, T. Richter, M. Stern, K. Conrad, K.-P. Zimmer, T. Mothes</i>	
Peptide-based assay for diagnosis of coeliac disease	143
<i>R. Troncone, R. Auricchio, F. Paparo, M. Maglio, A. Franzese, F. Lombardi</i>	
Intestinal immune response to gliadin in type 1 diabetes.....	149
 III. Symposium:	
“Clinical studies on thresholds for gluten sensitivity in coeliac disease”	
<i>D. H. Dewar, P. J. Ciclitira</i>	
Clinical studies on thresholds for gluten sensitivity in coeliac disease: Introduction	155
<i>C. Catassi</i>	
The gluten microchallenge study	159
<i>K. Kaukinen, P. Collin</i>	
Wheat starch and trace amounts of gluten in the treatment of coeliac disease	161
<i>A. Ivarsson</i>	
Coeliac disease – is there a dietary prevention?.....	165
<i>C. Hallert</i>	
General and practical limitations of a gluten-free diet in coeliac disease.....	173
 IV. Further contributions	
<i>H. Deutsch</i>	
Topics from Codex and Labelling in 2003	179

V. Codex Alimentarius work, perspectives and action plan*M. Stern*

Perspectives and action plan 187

*M. Stern*Report of the Working Group on Prolamin Analysis
and Toxicity (WGPAT) 189Report of the 25th Session CCNFSDU Bonn 2003 193