

PODIUM PRESENTATIONS

Sunday, September 9

9:00-9:15 Opening Ceremony

Plenary Lecture 1

Platinum Hall

Chair: S. Şenel

9:30-10:15 PL-1 Chitosan: The Road Is Long...
G.F. Roberts

10.15-10.30 Coffee Break

Session 1

Chemical and Physical Aspects

Silver Hall

Chairs: M. Şumnu - W.F. Stevens

10.30-11.00 01-1 Use of some special physical techniques to investigate
chitosan related systems
Franco Rustichelli (Invited Speaker)

11.00-11.20 01-2 Association, aggregation of β -chitosan molecules in acidic
aqueous solutions
R. H. Chen (Invited Speaker)

11.20-11.40 01-3 Spectroscopic Studies of Miscibility and Kinetics of
Thermodegradation of Chitosan Blends
M. Mucha, A. Pawlak

11.40-12.00 01-4 T-SAR guided Conformational and Pattern Analysis of up
to 40 different Chitosans
M. Weinhold, J. Sauvageau, Z. Kaczynski, S. Stolte,
B. Tartsch, P. Clarke, B. Jastorff, J.Thöming

Session 2

Applications-Biomedical

Platinum Hall

Chairs: A.A. Hincal - C.S. Cho

10.30-11.00 02-1 Multipotential amazing material "chitin" for wound
Treatment
Saburo Minami, Yoshiharu Okamoto, Yoshihiro
Shigemasa, Hiroyuki Saimoto, Minoru Morimoto,
Yasuhiko Okamura, Takeshi Tsuka, Eiko Renbutsu, Daiki
Kubomura, Yoshiharu Matahira, Koji Sakamoto, Yoshihiko
Omura (Invited Speaker)

11.00-11.20 02-2 Preparation, Characterization and Performance of
Chitosan and Modified Chitosan Wound Dressing
Piyabutr Wanichpongpan, Wimolsiri Pridasawas,
Lerkmongkol Kittikorn, Wiwat Ruenglerpanyakul

11.20-11.40 02-3 Chitosan Biomaterials with Different Geometries For
Diverse Biomedical Applications
Emir B. Denkbaş

11.40-12.00 02-4 Effect of chitosans on skin-borne microorganisms
Freni Tavaría, Izabela Reis, Marina Paulo, Manuela
Pintado, F. Xavier Malcata

12.00-13.30 Lunch

13.30-14.00

Poster Session

Golden Hall

Plenary Lecture 2**Platinum Hall****Chair: M. Şumnu**

- 14.00- 14.45 PL-2 Recent concepts regarding the physical chemistry of chitosan and their applications
A. Montembault, N. Boucard, L. Notin, S. Iadet, A. Pernet-Poil-Chevrier, S. Popa Nita, R. Rivas, S. Trombotto, L. David, A. Domard

Session 3**Chitooligosaccharides****Silver Hall****Chairs: N. Ünlü - V.G.H. Eijsink**

- 14.45-15.15 03-1 Continuous enzymatic production and biological activities of chitooligosaccharides
Se-Kwon Kim (Invited Speaker)
- 15.15-15.35 03-2 Chitinase – chitooligosaccharide interactions as seen through the eyes of mass spectrometry
F.H. Cederkvist, A. Zamfir, M. Mormann, M.P. Parmer, M. Fröesch, S. Bahrke, K.M. Vårum, M.G. Peter, V.G.H. Eijsink, J. Peter-Katalinic, M. Sørlie
- 15.35-15.55 03-3 Chitin Extraction From Prawn Processing Waste By Biological Methods
A. Ö. Aytekin, M. Elibol
- 15.55-16.15 03-4 Anticancer Mechanism of a Novel Glucosamine Derivative in Murine Skin Cancer Cells
Eresha Mendis, Moon-Moo Kim, Niranjan Rajapakse, Se-Kwon Kim
- 16.15-16.35 Coffee Break

Session 4**Applications-Biomedical****Platinum Hall****Chairs: S. Hekimoğlu - C.Remuñan-Lopez**

- 14.45-15.15 04-1 Enlisting chitosan's stimuli-responsive properties for localized protein assembly
Gregory F. Payne, Xiaowen Shi, Yi Liu, Angela T. Lewandowski, Li-Oun Wu, Hsuan-Chen Wu, Reza Ghodssi, Gary W. Rubloff, William E. Bentley (Invited Speaker)
- 15.15-15.35 04-2 Chitosan-graft-polyethylenimine for efficient delivery of akt1 sirna to non small cell lung carcinoma cell line
Dhananjay Jere, Hu-Lin Jiang, Cheng-Xiong Xu, Hyun-Seuk Moon, Rohidas Arote, You-Kyoung Kim, Cheol-Heui Yun, Myung-Haing Cho, Chong-Su Cho
- 15.35-15.55 04-3 Bioadhesive chitosan nanoparticles for effective delivery of mitomycin c in superficial bladder cancer therapy
Can Sarisözen, A. Lale Doğan, Güneş Esendağlı, Yeşim Aktaş, N. Aydın Mungan, Erem Bilensoy
- 15.55-16.15 04-4 Effect of Molecular Weight and Degree of Acetylation on the Physicochemical Characteristics of Chitosan nanoparticles
Goycoolea F.M., El Gueddari N. E., Remuñán-López C., Coggiola A., Lollo G., Domard A., and Alonso M.J.
- 16:15-16.35 Coffee Break

Session 5		Sources, Isolation and Production	Silver Hall
Chairs: F.Hincal - M.G.Peter			
16.35-17.05	05-1	New perspectives of partially deacetylated chitin W. F. Stevens (Invited Speaker)	
17.05-17.25	05-2	Preparation and Evaluation of Corrosion Inhibitors From Sea Foods Wastes M.H.M.Hussain	
17.25-17.45	05-3	Dual-responsive copolymer hydrogels based on Chitosan selectively grafted with poly(N-isopropylacrylamide) <u>Trong-Ming Don</u> , Shu-Chung Chou	
17.45-18.05	05-4	A ¹⁵ N-ssNMR-Based Labeling Procedure for the Determination of DDA of Chitinous Material in Live Fungi Helen R. Watson, <u>David R.W. Hodgson</u> , Robert Edwards, John Davies, Rob Johnson	
18.05-18.25	05-5	Chitosan Films: The Effects of Additives on Barrier and Mechanical Properties Cristiana M. P. Yoshida, Enio N. Oliveira-Jr., <u>Telma Teixeira Franco</u>	

Session 6		Applications-Agriculture	Platinum Hall
Chairs: V.P.Varlamov - R.H.Chen			
16.35-17.05	06-1	Chitosan and its derivatives: prospective biosubstances for developing a sustainable eco-agriculture. N. A. Dzung (Invited Speaker)	
17.05-17.25	06-2	Application of chitosan in plant protection: possibilities and limitations H. Pospieszny (Invited Speaker)	
17.25-17.45	06-3	The bulk oxypropylation of chitin and chitosan and the characterization of the ensuing polyols <u>S. Fernandes</u> , C.S.R. Freire and A. Gandini	
17.45-18.05	06-4	Preparation of novel chitosan-zeolite composites for purification of industrial and urban waters <u>A. Morsli</u> , T. Cacciaguerra, A. Bengueddach, F. Di Renzo, F. Quignard	
18.05-18.25	06-5	Biosorption of Textile Azo-Dyes by Chitosan: Equilibrium and Kinetic Studies <u>A. Szyguła</u> , M. Ruiz, A.M. Sastre, E. Guibal	

Monday, September 10

Plenary Lecture 3		Platinum Hall
Chair: A.A.Hincal		
8:30-9:15	PL-3	Structure And Function Of Family 19 Chitinases <u>Takeshi Watanabe</u> , Yuichiro Kezuka, Takamasa Nonaka, Yoko Nishizawa, Masaru Mitsutomi, Tamo Fukamizo

Session 7		Enzymatic Aspects (Biosynthesis, Biodegradation and Bioactivity)	Silver Hall
Chairs: İ.Vural - B.M.Moerschbacher			
9.15-9.45	07-1	Structural insights into fungal cell wall chitin turnover Ramon Hurtado-Guerrero, <u>Daan M. F. Van Aalten</u> (Invited Speaker)	

- 9.45-10.05 07-2 Tissue-specific Expression of Chitinases In Korean Ginseng (*Panax ginseng* C.A. Meyer)
Jong Kook Moon, Do-Hyun Jo
- 10.05-10.25 07-3 Crystalline Chitin Hydrolyzing Activity of Chitinase Isozymes from the Stomach of Marbled Rockfish *Sebastes marmoratus*
Masahiro Matsumiya, Daisuke Shirase, Takuya Sato, Kazuya Shiota

10.25-10.45 Coffee Break

Session 8 Applications-Biomedical Platinum Hall

Chairs: J.Akbuğa - F.M.Goycoolea

- 9.15-9.45 08-1 Chitosan Derivatives – are the Daughters better than the Mother?
H. E. Junginger (Invited Speaker)
- 9.45-10.05 08-2 N-trimethyl Chitosan Microparticles Prepared by a Supercritical Drying Process as Carriers for Pulmonary Delivery of Therapeutic Proteins and Vaccines
Maryam Amidi, Hubert C. Pellikaan, Anne H. de Boer, Daan J.A. Crommelin, Gideon Kersten, Wim Jiskoot, Wim E. Hennink
- 10.05-10.25 08-3 Colloidal Chitosan for Vaccine Delivery
Thierry Delair, Alexandre Drogoz, Severine Munier, Bernard Verrier, Laurent David, Alain Domard
- 10.25-10.45 Coffee Break

Session 9 Enzymatic Aspects (Biosynthesis, Biodegradation and Bioactivity) Silver Hall

Chairs: B. Arica Yegin - S.K. Kim

- 10.45-11.15 09-1 Substrates and Products of Chitin- and Chitosan-Modifying Enzymes
Nour Eddine El Gueddari, Andreas Schaaf, Markus Kohlhoff, Christian Gorzelanny, Bruno M. Moerschbacher (Invited Speaker)
- 11.15-11.35 09-2 Biotechnological Process for Chitin Recovery out of Shrimp Waste
Gabriele Daum, Helen Stöber, Kerstin Veltrup, Friedhelm Meinhardt, Bernward Bisping
- 11.35-11.55 09-3 Costs and Benefits of Processivity in Enzymatic Degradation of Chitin and Other Insoluble Polysaccharides
Svein J. Horn, Audun Sørbotten, Pawel Sikorski, Bjørnar Synstad, Morten Sørli, Gustav Vaaje-Kolstad, Kjell M. Vårum, Vincent G.H. Eijsink
- 11.55-12.15 09-4 Involvement Of Loops In Catalysis In Family 19 Chitinases
Wimal Ubhayasekera, Ce Mun Tang, Reetika Rawat, Sharon Wing Tak Ho, Mee-Len Chye, Sherry L. Mowbray

Session 10 Applications-Biomedical Platinum Hall

Chairs: E. Bilensoy - H.E. Junginger

- 10.45-11.15 10-1 Thiolated Chitosans: Design, Functions and Applications
Andreas Bernkop-Schnürch (Invited Speaker)
- 11.15-11.35 10-2 CANCELLED
- 11.35-11.55 10-3 Chitosan-based Vaccine Delivery System for Immunization against the Foot and Mouth Disease (FMD)
Can Çoçalışkan, R. Neslihan Gürsoy, Musa Alkan, Fuat Özyörük, Sevda Şenel
- 11.55-12.15 10-4 Rheological And Spectroscopic Characterization Of The Gelification Process Of Chitosan-based Injectable Biomaterials
L. F. Boesel, R. L. Reis, J. San Román

12.15-13.00 Poster Session Golden Hall

- 13.00-14.00 Lunch
14.00 Tour
20.00 Gala Dinner

Tuesday, September 11

Plenary Lecture 4

Platinum Hall

Chair: **A. Domard**

8:30-9:15 PL-4 Characterisation Of Chitin And A Study Of Its Acid-Catalysed Hydrolysis
A. Einbu, K.M. Vårum

Session 11

Physical and Chemical Aspects of Chitin and Chitosan

Silver Hall

Chairs: **Y. Aktaş - F. Rustichelli**

9.15-9.45 11-1 Protein-Ligand Interactions of Chitooligosaccharides with the Chitolectin
HC gp39 and with Chitinases
Sven Bahrke, Jón M. Einarsson, Jóhannes Gíslason,
Martin G. Peter (Invited Speaker)

9.45-10.05 11-2 Study Of The Kinetics For Depolymerization Of Chitosan
By Using Acetic Acid
Kuo-Huang Hsieh, Yu-Dung Lin, Ching-Ting Tsao

10.05-10.45 Coffee Break

Session 12

Applications-Food,Textile

Platinum Hall

Chairs: **N. Gürsoy - H. Pospieszny**

9.15-9.45 12-1 Chitosan Application In Food Preparation And Digestion.
Jan Kopečný (Invited Speaker)

9.45-10.05 12-2 Evaluation Of Prebiotic Potential Of Chitooligosaccharides
Jorge M. Pinto, Sérgio C. Sousa, João Fernandes, M. Manuela E. Pintado,
Ana M. P. Gomes, F. Xavier Malcata

10.05-10.45 Coffee Break

Plenary Lecture 5

Platinum Hall

Chair: **G.F. Roberts**

10.45-11.30 PL-5 Novel Nasal Applications for chitosan for drug therapy
Lisbeth Illum

Session 13

Applications-Biomedical

Silver Hall

Chairs: **N. Bergışadi - A. Bernkop-Schnürch**

11.30-12.00 13-1 Introduction of Chitin and Its Derivatives for the Design of Medical
Devices Based on the Requirements of EU
Directives
Marcin H. Struszczyk (Invited Speaker)

12.00-12.20 13-2 Neuroprotective Effects of Carbamazepine in Traumatic
Brain Injury Animal Model
Turkoglu O.F., Eroglu H., Celikmez R., Gurcan O.,
Bodur E., Sargon M. F., Oner L., Beskonakli E.

12.20-12.40 13-3 Alginate-Chitosan Scaffolds For Tissue Engineering Applications
Eylem Öztürk, Kaan Keçeci, Mehmet Ali Ergün, Muzaffer Eroğlu,
Yasemin Mısırlı, Emir Baki Denkbaş

12.40-13.45 Lunch

Session 14		Applications-Biomedical	Platinum Hall
Chairs: Ö. Özer - L. Illum			
11.30-12.00	14-1	Chitosan For Nucleic Acid Delivery Jülide Akbuğa (Invited Speaker)	
12.00-12.20	14-2	PEGylated Chitosan Nanoparticles for Gene Delivery <u>Ongun M. Saka</u> , Nalan D. Ozturk, Asuman Bozkir	
12.20-12.40	14-3	A New Vaccine Delivery System With Chitosan Derivatives For Intranasal Immunisation: In Vitro/In Vivo Evaluations <u>Burcu Sayin</u> , Satyanarayana Somavarapu, Xiong Wei Li, Oya Alpar, Sevda Şenel	
12.40-13.45		Lunch	
13.45-14.15		Poster Session	Golden Hall
Plenary Lecture 6			Platinum Hall
Chair: K.M. Vårum			
14.15- 15.00	PL-6	Recent advances in chitosan-based vectors as delivery systems for biotherapeutics Oya Alpar (UK)	
Session 15		Applications-Biomedical	Silver Hall
Chairs: E.B. Denkbaş - G.F. Payne			
15.00-15.20	15-1	Anti-inflammatory effects of carboxybutyrylated glucosamine via inhibiting iNOS and COX-2 expressions in mouse macrophages <u>Niranjan Rajapakse</u> , Moon-Moo Kim, Eresha Mendis, Se-Kwon	
15.20-15.40	15-2	Physico-Chemical Properties Of Chitosan Hydrogels Covalently Crosslinked With Genipin <u>Susana Vilchez</u> , Montserrat Porras, Jordi Esquena, Pilar Erra	
15.40-16.00	15-3	Chitosan As An Antibacterial Compound: Insights Into Its Mode Of Action <u>Dina Raafat</u> , Hans-Georg Sahl	
16.00-16.30		Coffee Break	
Session 16		Applications-Biomedical	Platinum Hall
Chairs: O. Alpar - N.A. Dzung			
15.00-15.20	16-1	Specific Interaction Between Chitosan And Matrix Metalloprotease 2 Decreases The Invasive Activity Of Human Melanoma Cells <u>Christian Gorzelanny</u> , Birgit Pöppelmann, Elwira Strozyk1, Bruno M. Moerschbacher, Stefan W. Schneider	
15.20-15.40	16-2	Chitosan-DNA Liquid-Crystalline Particles As A Background For Design Of Nanoconstructions K. G. Skryabin, <u>V.P. Varlamov</u> , A.V. Il'ina, V. Salyanov, Yu.M. Yevdokimov	
15.40-16.00	16-3	Biomimetic apatite coated chitosan scaffolds: invastigation of osteoblastic activity <u>Sezin Aday</u> , T. Tolga Demirtaş, Seda Tıǧlı, Menemşe Gümüşderelioǧlu	
16.00-16.30		Coffee Break	
16.30-17.30		ROUND TABLE DISCUSSION	Platinum Hall
Characterization, Standardization and Regulation			
17.45		Award and Closing Ceremony	Platinum Hall