



5TH SIENA MEETING

FROM GENOME TO PROTEOME: FUNCTIONAL PROTEOMICS

Sept. 2-5, 2002, Siena, Italy
Auditorium Istituti Biologici, Via Laterina 8, Siena

Organizers:

D. F. Hochstrasser and J.-C. Sanchez, University of Geneva, Switzerland.

L. Bini and V. Pallini, University of Siena, Italy.

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The meeting is sponsored by

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PROGRAM

SUNDAY SEPTEMBER 1st

16.00 – 19.00 Registration
19.30 Welcome Party

MONDAY SEPTEMBER 2nd

8.00 - 9.15 Registration, Opening Remarks and Welcome Address
9.15 - 10.00 Opening Nobel Lecture: **R. DULBECCO**
10.00 - 12.20 PLENARY SESSION 1
12.20 - 14.15 Lunch
14.15 - 15.15 PLENARY SESSION 2
15.20 - 18.20 PARALLEL SESSIONS: Mass Spectrometry And Related Technologies, Human Disorders

TUESDAY SEPTEMBER 3rd

9.00 - 9.45 Main Lecture: **D.J. CAHILL**
9.45 - 10.45 PLENARY SESSION 3
11.05 - 12.45 PLENARY SESSION 4
12.45 - 14.30 Lunch
14.30 - 15.50 PLENARY SESSION 5
15.55 - 18.10 PARALLEL SESSIONS: Pharmacology and Toxicology, Oncology, Bioinformatics
19.00 Social Dinner

WEDNESDAY SEPTEMBER 4th

9.00 - 9.45	Main Lecture: A. AGUZZI
9.45 - 12.50	PLENARY SESSION 6
12.50 - 14.45	Lunch
14.45 - 15.30	Main Lecture: M. DESJARDINS
15.35 - 17.30	PARALLEL SESSIONS: Eukaryotic Cells And Tissues, Prokaryotes
17.15 - 20.00	VISIT TO POSTERS and Wine and cheese tasting

THURSDAY SEPTEMBER 5th

9.00 - 10.40	PLENARY SESSION 7
11.00 - 12.20	PLENARY SESSION 8
12.20 - 14.15	Lunch
14.15 - 15.00	Closing Main Lecture: M. UHLÉN
15.00 - 15.15	Concluding Remarks

SUNDAY SEPTEMBER 1st

- 16.00 – 19.00 Registration (*Main Auditorium, Via Laterina,8*)
19.30 Welcome Party (*below the tower of Piazza del Campo*)

MONDAY SEPTEMBER 2nd

- 8.00 – 9.00 Registration
9.00 – 9.05 **OPENING REMARKS**
D.F. Hochstrasser, J.-C. Sanchez, L. Bini, V. Pallini
9.05 – 9.15 **WELCOME ADDRESS**
P. Tosi (President of Siena University)
P. Neri (Department of Molecular Biology)

OPENING NOBEL LECTURE

- 9.15 – 10.00 **NEW DEVELOPMENTS OF THE GENOME PROJECT**
R. Dulbecco (*La Jolla, California, USA*)

PLENARY SESSION 1 TECHNICAL ASPECTS

Chairperson: T. Rabilloud

- 10.00 – 10.20 **PREFRACTIONATION OF COMPLEX PROTEIN SAMPLES BY FREE FLOW ELECTROPHORESIS ALLOWS REPRODUCIBLE ACCESS TO LOW ABUNDANCE PROTEINS**
C. Eckerskorn, G. Weber, P. J. A. Weber, U. Schneider, M. Nissum, A. Posch (*Munich, Germany*).
- 10.20 – 10.40 **PROTEOME ANALYSIS BY MULTI-DIMENSIONAL LIQUID CHROMATOGRAPHY GEL-ELECTROPHORESIS AND THE MOLECULAR SCANNER**
T. Nadler, Y. Huang, B. Wagenfeld, K. Parker, R. Lotti, G. J. Vella, P.-A. Binz, M. Müller, R. Gras, D. F. Hochstrasser, W. Bienvenut, J.-C. Sanchez, G. Corthals, R. D. Appel (*Framingham, MA, USA; Geneva, Switzerland*)
- 10.40 – 11.00 **COFFEE BREAK**
- 11.00 – 11.20 **2-D ELECTROPHORESIS TECHNOLOGY: PERFECTION IN VIEW?**
A. Görg, G. Boguth, O. Drews, A. Köpf, G. Reil, R. Wildgruber, W. Weiss (*Freising-Weihenstephan, Germany*)
- 11.20 – 11.40 **TWO-DIMENSIONAL MAPS IN SOFT IPG GELS: OPTIMIZATION OF THE GEL MATRIX**
M. Bruschi¹, G. Candiano¹, L. Musante¹, G. M. Ghiggeri¹, F. Perfumo¹, B. Herbert², P. G. Righetti³ (*Genova, Verona, Italy*)
- 11.40 – 12.00 **REAL AND IMAGINARY ARTEFACTS IN TWO-DIMENSIONAL ELECTROPHORESIS**
B. Herbert, J. McCarthy, F. Hopwood, D. Oxley, M. Laver, J. Grinyer, A. Goodall, A. Castagna, P. G. Righetti, K. Williams (*Sydney, Australia; Verona, Italy*)
- 12.00 – 12.20 **STREAK-FREE 2-D MAPS GENERATED WITH NARROW RANGE BASIC IPG STRIPS**
B. Bjellqvist, I. Olsson, K. Larsson, R. Palmgren (*Uppsala, Sweden*)
- 12.20 - 14.15 **LUNCH**

PLENARY SESSION 2
PROTEIN CHARACTERIZATION

Chairperson: S. Patterson

- 14.15 – 14.35 **THE NEW AGE OF GLYCOPROTEOMICS**
N. Packer, N. Wilson, B. Schulz, H. Joshi, C. Cooper, N. Karlsson (*Sydney, Australi*)
- 14.35 – 14.55 **COMPARATIVE MAPPING AND QUANTITATION OF PHOSPHORYLATION SITES FROM GEL-DERIVED PROTEINS USING A MULTIDIMENSIONAL MASS SPECTROMETRY APPROACH**
R. S. Annan (*King of Prussia, PA, USA*)
- 14.55 – 15.15 **A METHOD FOR DETECTION OF OXIDATION OF CYSTEINES: PEROXIREDOXINS ARE OXIDISED *IN VIVO* AT THE ACTIVE SITE CYSTEINE DURING OXIDATIVE STRESS**
T. Rabilloud, S. Luche, M. Chevallet, J. Lunardi, M. Heller, R. Aebersold, E. Wagner, L. Penna, , A. Van Dorsselaer, E. Leize-Wagner (*Grenoble, Strasbourg, France; Seattle, WA, USA*)

ORAL PARALLEL SESSIONS A

MASS SPECTROMETRY AND RELATED TECHNOLOGIES I

Chairperson: R. Aebersold

- 15.20 – 15.35 **SEQUENCING OF TRYPTIC PEPTIDES BY PSD IN MALDI-TOF-MS MADE EASY BY A REFINED SULFONATION CHEMISTRY**
U. Hellman (*Uppsala, Sweden*)
- 15.35 – 15.50 **CHARACTERIZATION OF MODIFIED PROTEINS USING GRAPHITE POWDER MICRO-COLUMNS IN COMBINATION WITH GEL ELECTROPHORESIS AND ADVANCED MASS SPECTROMETRY**
M. R. Larsen, S. J. Cordwell, P. Roepstorff (*Odense Denmark; Sydney Australia*)
- 15.50 – 16.05 **COMBINED FRACTIONAL DIAGONAL CHROMATOGRAPHY – A VERSATILE TOOL FOR HIGHLY SENSITIVE GEL-FREE PROTEOME ANALYSIS**
K. Gevaert, J. Van Damme, G. R. Thomas, H. Demol, A. Staes, N. Berdenis, M. Puype, L. Martens, M. Goethals, J. Vandekerckhove (*Ghent, Belgium; Basel, Switzerland*)
- 16.05 – 16.20 **THE DETECTION OF CANCER BIOMARKERS FROM 10,000 CELLS USING ION TRAP MS WITH LASER CAPTURE MICRODISSECTION**
S.-L. Wu, W. S. Hancock, G. G. Goodrich, S. T. Kunitake (*San Jose, CA, USA*)
- 16.20 – 16.35 **A GROUP OF IgG-BINDING PROTEINS IN HUMAN PLASMA DETECTED BY COMBINING NON-DENATURING AND DENATURING TWO-DIMENSIONAL GEL ELECTROPHORESIS**
T. Manabe, O. Hamada, O. Tani, N. Yamaguchi, J. Mukai (*Matsuyama, Japan*)
- 16.35 – 16.50 **COFFEE BREAK**

MASS SPECTROMETRY AND RELATED TECHNOLOGIES II

Chairperson: J. Yates

- 16.50 – 17.05 **NEW STRATEGIES FOR PROTEIN PROFILING IN COMPLEX PROTEIN SAMPLES USING ETTAN 2-D DIGE**
A. Sutcliffe (*Little Chalfont, U.K*)
- 17.05 – 17.20 **A NOVEL MALDI-MASS SPECTROMETRIC SEQUENCING METHOD FOR THE CHARACTERIZATION OF DISEASE-RELATED PROTEIN SEQUENCE MODIFICATIONS FROM PROTEOME ANALYSES OF PATIENT SAMPLES**
C. Koy, S. Mikkat, R. Hoffrogge, K. Tanaka, C. Sutton, M. Resch, M. O. Glocker (*Rostock, Duisburg, Germany; Manchester, UK*)

- 17.20 – 17.35 **UNIQUE SCANNING CAPABILITIES OF A NEW HYBRID LINEAR ION TRAP MASS SPECTROMETER USED FOR HIGH SENSITIVITY PROTEOMIC APPLICATIONS**
P. Ilisiu (*Concord, Ontario Canada*)
- 17.35 – 17.50 **PARALLEL PEPTIDE TANDEM MASS SPECTROMETRY ON A TIME-OF-FLIGHT MASS ANALYZER**
S. O. Purvine, E. C. Yi, N. Zhang, M. Marelli, J. Aitchison, B. Schwikowski, D. R. Goodlett
(*Seattle, WA, USA*)
- 17.50 – 18.05 **MASS SPECTROMETRY BASED STRATEGIES FOR INVESTIGATING PROTEIN PHOSPHORYLATION**
M. Ward, H. L. Byers, K.-Y. Leung, T. Scales, H. Reynolds, R. Williamson, B. H. Anderton
(*London, UK*)
- 18.05 – 18.20 **CLINICAL PROTEOMIC STRATEGIES BASED ON SELDI PROTEINCHIP® TECHNOLOGY**
W. E. Rich, E. Dalmaso, E. Fung (*Fremont, CA, USA*)

ORAL PARALLEL SESSIONS B

HUMAN DISORDERS I

Chairperson: M. Dunn

- 15.20 – 15.35 **DISCOVERING FUNDAMENTAL PROCESSES IN MIGRAINE BY ANALYZING DYNAMIC CHANGES IN CEREBROSPINAL FLUID COMPOSITION THROUGHOUT FLUCTUATING CLINICAL STATES**
M. Harrington, R. Cowan, A. Fonteh (*Pasadena, CA, USA*)
- 15.35 – 15.50 **CHANGES in the MURINE and Human Proteome Caused by Huntington 's Chorea**
C. Zabel, J. Klose (*Berlin, Germany*)
- 15.50 – 16.05 **IMPORTANCE OF PROTEINS THAT METABOLIZE POLYUNSATURATED FATTY ACIDS IN THE PATHOGENESIS OF ALZHEIMER'S DISEASE**
A. Fonteh, M. Harrington (*Pasadena, CA, USA*)
- 16.05 – 16.20 **A PANEL OF CSF BIOMARKERS FOR THE DIAGNOSIS OF ALZHEIMER DISEASE**
O. Carrette, I. Demalte, A. Scherl, O. Yalkinoglu, G. Koenig, P.R. Burkhard, D.F. Hochstrasser, J.-C. Sanchez (*Geneva, Switzerland; Wuppertal, Germany*)
- 16.20 – 16.35 **PROTEOMIC ANALYSIS OF ARTICULAR CARTILAGE; DEFINITION OF A DISEASE PHENOTYPE IN OSTEOARTHRITIS?**
R. Wait, M. Hermansson, M. C. Bolton, S. Begum, S. Alexander, J. Saklatvala (*London, UK*)
- 16.35 – 16.50 **COFFEE BREAK**

HUMAN DISORDERS II

Chairperson: P. Sinha

- 16.50 – 17.05 **SECRETED PROTEOMIC PATTERN OF CAROTID ATHEROSCLEROTIC PLAQUES. COMPARISON BETWEEN NORMAL VESSELS, NON-COMPLICATED AND COMPLICATED ATHEROSCLEROTIC PLAQUES IN HUMANS**
S. Mas, O. Meilhac, M.C. Duran, J.L. Martin-Ventura, E. Goytia, J. Tuñon, J.B. Michel, J. Egido, F. Vivanco (*Madrid, Spain ; Paris, France*)
- 17.05 – 17.20 **COMPARISON OF RNA AND PROTEIN EXPRESSION LEVELS IN PANNUS TISSUE FROM PATIENTS SUFFERING FROM RHEUMATOID ARTHRITIS**
H.-J. Thiesen, A. Francke, P. Lorenz, D. Koczan, M. Bantscheff, S. Moeller, M. O. Glocker
(*Rostock, Germany*)
- 17.20 – 17.35 **FUNCTIONAL PROTEOMICS TO INVESTIGATE PROTEIN PHOSPHORYLATION IN HEALTH AND DISEASE**
E. H.C. Dirksen, B. J.M. Braakhuis, R. H. Brakenhoff, A. J.R. Heck, M. Slijper
(*Utrecht, Amsterdam, the Netherlands*)
- 17.35 – 17.50 **ANALYSIS OF THE HIV-1 TAT ACETYLATION BY MASS SPECTROMETRY: ENZYMATIC ACETYLATION OF LYSINE 50 AND NONENZYMATIC ACETYLATION**

OF MULTIPLE CYSTEINE RESIDUES

W. Dormeyer, A. Dorr, M. Ott, M. Schnölzer (*Heidelberg, Germany*)

17.50 – 18.20

OPPORTUNITIES FOR MAJOR PUBLIC INITIATIVES IN PROTEOMICS

S. Hanash (*Ann Arbor, MI, USA*)

TUESDAY SEPTEMBER 3rd

MAIN LECTURE

9.00 – 9.45 **GENERATION OF HIGH-DENSITY PROTEIN ARRAYS**
D. J. Cahill (*Berlin, Dortmund, Germany; Dublin, Ireland*)

**PLENARY SESSION 3
PROTEIN QUANTITATION**

Chairperson: H. Langen

9.45 – 10.05 **THE DEVELOPMENT OF NON 2D-GEL BASED METHODS FOR THE QUANTITATIVE ANALYSIS OF MEMBRANE PROTEIN EXPRESSION AND MODIFICATION**
P. James (*Lund, Sweden*)

10.05 – 10.25 **TOWARD A HIGH THROUGHPUT QUANTITATIVE PROTEOMICS PLATFORM**
R. H. Aebersold, H. Lee, E. Yi, D. Goodlett, A. Keller, A. Neshvizhskii, X.-J. Li, P. Pedrioli, S. Chen, A. Tao, T. Griffin (*Seattle, WA, USA*)

10.25 – 10.45 **PROTEIN DIFFERENTIAL EXPRESSION ANALYSES IN YEAST USING ACID CLEAVABLE ICAT TECHNOLOGY ON MULTIPLE MASS SPECTROMETRIC PLATFORMS**
D. Patterson, S. Hattan, P.r Juhasz, J. Marchese, B. Williamson, A. Graber, N. Khainovski, A. Romeo, F. He, S. Martin (*Framingham, Worcester, MA, USA*)

10.45 – 11.05 **COFFEE BREAK**

**PLENARY SESSION 4
PROTEIN-PROTEIN INTERACTIONS**

Chairperson: J. Van Oostrum

11.05 – 11.25 **HIGH-THROUGHPUT ROBOTIC ISOLATION OF MONOCLONAL ANTIBODIES**
M. Silacci, S. Scheurer, G. Elia, D. Neri (*Zurich, Switzerland*)

11.25 – 11.45 **FUNCTIONAL ORGANIZATION OF AN EUKARYOTIC PROTEOME BY SYSTEMATIC ANALYSIS OF PROTEIN COMPLEXES**
A.-C. Gavin, R. Krause, M. Börsche, P. Grandi, A. Bauer, J. Schulz, J. Rick, P. Bork, B. Seraphin, G. Neubauer, G. Superti-Furga, B. Kuster (*Heidelberg, Germany; Gif sur Yvette, France*)

11.45 – 12.05 **DISCOVERY OF NETWORKS OF INTERACTING PROTEINS AT THE NUCLEAR PORE COMPLEX USING AUTOMATED MALDI-TOF/TOF MS**
L. Huang, R. J. Chalkley, K. Hansen, N. P. Allen, M. Rexach, A. L. Burlingame (*San Francisco, CA, USA*)

12.05 – 12.25 **RECEPTOR TYROSINE KINASES: TARGETS FOR PROTEOMIC ANALYSES**
R. A. Bradshaw, D. R. Tyson, C. De-Fraja, S. Cermelli, Y. Y. Wu, E. D. Foehr, S. Kim, Y. Hamai, S. Raffioni, L.M. Thompson (*Irvine, CA, USA*)

12.25 – 12.45 **MORE THAN THE SUM OF THE PARTS: FUNCTIONAL PROTEOMICS AND THE INTEGRATING ROLE OF PROTEIN NETWORKS IN NEUROBIOLOGY**
W.P Blackstock, J. Choudhary, A. Rowley, S.G.N.Grant, H.Husi (*Herts, Edinburgh, UK*)

12.45 – 14.30 **LUNCH**

**PLENARY SESSION 5
PHARMACEUTICAL AND CLINICAL APPLICATIONS**

Chairperson: D.F. Hochstrasser

14.30 – 14.50 **THE CLINICAL POTENTIAL OF THE HUMAN PLASMA PROTEOME**
L. Anderson, N. Anderson (*Washington, DC, USA*)

- 14.50 – 15.10 **SELECTING TARGETS FOR THERAPEUTIC VALIDATION THROUGH DIFFERENTIAL PROTEIN EXPRESSION USING CHROMATOGRAPHY-MASS SPECTROMETRY**
S.D. Patterson, T.E. Ryan, M.D. Bond, B.M. Domon, I.N. McCaffery (*Rockville, MD, USA*)
- 15.10 – 15.30 **INDUSTRIAL-SCALE PROTEOMICS: FROM LITRES OF PLASMA TO CHEMICALLY SYNTHESIZED PROTEINS**
 T Baussant, G. Böhm, P. Botti, L. Bougueleret, J. Colinge, Isabelle Cusin, H. Gaertner, M. Heller, Silvia Jimenez, A. Johnson, M. Kussmann, L. Menin, C. Menzel, F. Ranno, P. Rodriguez-Tome, J. Rogers, K. Rose, M. Villain, D. Wetmore (*Meyrin/Geneva, Switzerland*)
- 15.30 - 15.50 **APPLICATION OF PROTEOMICS TECHNOLOGIES IN PHARMACEUTICAL INDUSTRY**
H. Langen (*Basel, Switzerland*)

ORAL PARALLEL SESSIONS A

PHARMACOLOGY AND TOXICOLOGY I

Chairperson: L. Anderson

- 15.55 – 16.10 **CYTOSKELETAL ALTERATIONS ASSOCIATED WITH ANTI-MICROTUBULE DRUG RESISTANCE IN CHILDHOOD ACUTE LYMPHOBLASTIC LEUKAEMIA (ALL)**
N. Verrills, B. Walsh, G. Cobon, M. Kavallaris (*Randwick, North Ryde, Australia*)
- 16.10 - 16.25 **PROTEOMIC INSIGHTS INTO THE CARDIOPROTECTIVE MECHANISMS OF MYOCARDIAL PRECONDITIONING**
 D.K. Arrell, S.T. Elliott, I. Neverova, E. Marban, J.E. Van Eyk (*Kingston, ON, Canada; Baltimore, MD, U.S.A*)
- 16.25 - 16.40 **IDENTIFICATION OF PEROXISOME PROLIFERATION BIOMARKERS BY SURFACE-ENHANCED LASER DESORPTION/IONIZATION PROTEINCHIP(R) BIOLOGY SYSTEM**
R. Chu, W. Zhang, H. Lim, A. V. Yeldandi, C. Herring, L. Brumfield, J. K. Reddy, M. Davison (*Bridgewater, NJ, Chicago, IL, Fremont, CA, USA*)
- 16.40 – 16.55 **COFFEE BREAK**

PHARMACOLOGY AND TOXICOLOGY II

Chairpersons: K. Rose

- 16.55 – 17.10 **EFFECT OF ROSIGLITAZONE ON THE DIFFERENTIAL EXPRESSION OF DIABETES ASSOCIATED PROTEINS IN PANCREATIC ISLETS OF C57BL/6 LEP/LEP MICE**
G. Schmid, V. Converset, A. Nolan, S. Wang, M. V. Sennitt, D. F. Hochstrasser, M. A. Cawthorne, J.-C. Sanchez (*Geneva, Switzerland; Buckingham, UK*)
- 17.10 – 17.25 **PROTEOMIC ANALYSIS OF LYMPHOMA CELLS FOLLOWING TREATMENT WITH A DEMETHYLATING DRUG**
 F. Poirier, R. Joubert-Caron, M. Caron (*Bobigny, Strasbourg; France*)
- 17.25 – 17.40 **PEPTIDOMICS-BASED DISCOVERY OF NOVEL ENDOGENOUS NEUROPEPTIDES IN THE BRAIN**
 M. Svensson, K. Sköld, P. Svenningsson, P.E. Andrén (*Uppsala, Sweden*)

ORAL PARALLEL SESSIONS B

ONCOLOGY

Chairperson: D. Cahill

- 15.55 – 16.10 **PROTEOMIC IDENTIFICATION OF THE UP/DOWN-REGULATED PROTEINS INVOLVED IN APOPTOSIS TRIGGERED BY INHIBITION OF UBIQUITIN-PROTEASOME PATHWAY IN MO7E LEUKAEMIC CELLS**
B.F. Jing, H.X. Wang, J. Wang, K. He, M. Yu, M.R. Hu, K.H. Wei, S.C. Yang, B.F. Shen, X.M. Zhang (*Beijing, China*)
- 16.10 – 16.25 **AQUAPORINS EXPRESSION IN RENAL CELL CARCINOMA**
C. Valsecchi, C. Sarto, G. Doro, P. Mocarelli (*Milano, Italy*)
- 16.25 – 16.40 **DIFFERENTIAL EXPRESSION OF GLUTATHIONE S-TRANSFERASE M3 IN CHEMO- AND THERMORESISTANT CELL LINES FROM PANCREAS ADENOCARCINOMA**
A. Urbani, J. Poland, G. Reifenberger^a, M. Schnölzer, P. Sinha (*Berlin, Heidelberg, Germany; Roma, Italy*)
- 16.40 – 16.55 **COFFEE BREAK**

BIOINFORMATICS

Chairperson: A. Bairoch

- 16.55 – 17.10 **POSITIONAL INDEXING FOR LARGE COLLECTIONS OF TWO-DIMENSIONAL GEL ELECTROPHORESIS IMAGES**
S. Luhn, M. Berth, M. Hecker, J. Bernhardt (*Greifswald, Germany*)
- 17.10 – 17.25 **AUTOMATED PROTEIN IDENTIFICATION FROM TANDEM MASS SPECTROMETRIC DATA USING BIO-INSPIRED ALGORITHMS**
P. Hernandez, R. Gras, R.D. Appel (*Geneva, Switzerland*)
- 17.25 – 17.40 **N-TERMINAL MYRISTOYLATION PREDICTIONS BY NEURAL NETWORK ENSEMBLES**
G. Bologna, A.L. Veuthey, R.D. Appel (*Geneva, Switzerland*)
- 17.40 – 17.55 **AN INTEGRATED DATABASE SYSTEM FOR PROTEOME ANALYSES MANAGING PROJECT SPECIFIC DATA ON SAMPLES, GELS, SPOTS, MS-DATA, PROTEIN ID AND CORRELATIONS THEREOF**
M. Blueggel, G. Körting, J. Glandorf, J. Vagts, R. Reinhardt, D. Chamrad, H. Thiele (*Dortmund, Bremen, Germany*)
- 17.55 – 18.10 **THE PHOSPHOSITE DATABASE: A BIOINFORMATICS TOOL FOR STUDYING THE PHOSPHOPROTEOME**
P. V. Hornbeck, B. Zhang, E. Skrzypek (*Beverly, MA, USA*)
- 19.00 **SOCIAL DINNER** (*Certosa di Pontignano*)

WEDNESDAY SEPTEMBER 4th

MAIN LECTURE

9.00 - 9.45 **THE IMMUNOBIOLOGY OF PRION DISEASES**
A. Aguzzi (*Zurich, Switzerland*)

**PLENARY SESSION 6
BIOLOGICAL AND BIOMEDICAL APPLICATIONS**

Chairperson: J.-C. Sanchez

- 9.45 - 10.05 **COMPARATIVE TWO-DIMENSIONAL MAPPING OF PRION PROTEIN ISOFORMS IN HUMAN CEREBROSPINAL FLUID AND CENTRAL NERVOUS SYSTEM**
P. G. Righetti, A. Castagna, N. Camprostrini, A. Farinazzo, G. Zanusso, S. Monaco (*Verona, Italy*)
- 10.05 - 10.25 **CARRYING PROTEOMICS ONE STEP FURTHER: FUNCTIONAL ANALYSIS OF ORGANELLES AND MULTI-PROTEIN SIGNALING COMPLEXES**
L. A. Huber (*Vienna, Austria*)
- 10.25 - 10.50 **COFFEE BREAK**
- 10.50 - 11.10 **PROTEOMIC STRATEGIES TO IDENTIFY TUMOUR HETEROGENEITY AMONG LOW-GRADE PAPILLARY TCCS. CORRELATION WITH RECURRENCE**
J. E. Celis (*Copenhagen, Denmark*)
- 11.10 – 11.30 **CHEMORESISTANCE IN CANCER CELLS: UPDATE USING FUNCTIONAL PROTEOME ANALYSIS**
J. Poland, H. Lage, A. Urbani, M. Schnölzer, D. Schadendorf, P. Sinha
(*Berlin, Heidelberg, Mannheim, Germany; Rome, Italy*)
- 11.30 – 11.50 **PROTEOMIC ANALYSIS OF REJECTION FOLLOWING CARDIAC TRANSPLANTATION**
M. J. Dunn, J. Westbrook, S. Borozdenkova, M. Rose (*London, Harefield, UK*)
- 11.50 - 12 10 **A PROTEOMIC APPROACH TOWARD THE IDENTIFICATION OF NEW VACCINE CANDIDATES**
G. Grandi (*Siena, Italy*)
- 12.10 - 12.30 **DISCOVERY IN THE PLANT WORLD – QUALITY MARKERS, TOLERANCE AND GMOs**
B.J. Walsh, S.C. Cordwell, D.D. Van Dyk, P.J. Sharp, W. Rathmell, C.W. Wrigley, D.J. Skylas
(*Sydney, Australia*)
- 12.30 - 12.50 **INVESTIGATING METABOLIC PATHWAYS IN THE PROTEOME OF *ORYZA SATIVA* USING 2D-GELS, 2D-CHROMATOGRAPHY, AND THE RICE GENOME DATABASE**
P.A. Haynes, A. Koller, N.L. Andon, D. Schieltz, M. Washburn, B.M. Lange, C. Deciu, R. Ulaszek, L. Hays, D. Wolters, J. Wei, J.R. Yates, III (*San Diego, CA, USA*)
- 12.50 - 14.45 **LUNCH**

MAIN LECTURE

14.45 – 15.30 **PHAGOCYTOSIS IN THE GENOMIC ERA**
M. Desjardins (*Montréal, Québec, Canada*)

ORAL PARALLEL SESSIONS A

EUKARYOTIC CELLS AND TISSUES

Chairperson: R.A. Bradshaw

- 15.35 – 15.50 **QUALITATIVE AND QUANTITATIVE PROTEOME ANALYSIS OF NUCLEI PROTEINS IN HUMAN FIBROBLASTS USING MULTI-DIMENSIONAL SEPARATION INTERFACED TO SEQUENCING MALDI AND ESI MASS SPECTROMETRY**
J. Malmström, K. Larsen, L. Malmström, E. Tufvesson, K. Parker, J. Marchese, B. Williamson, S. Hatten, D. Patterson, S. Martin, P. Juhasz, G. Westergren-Thorsson, G. Marko-Varga (Lund, Sweden; Framingham, MA, USA)
- 15.50 – 16.05 **MOLECULAR ANALYSIS OF PHAGOSOME FORMATION IN A MODEL PHAGOCYTE (*TETRAHYMENA THERMOPHILA*)**
A. Tiedtke, G. Scheidgen-Kleyboldt (Muenster, Germany)
- 16.05 – 16.20 **AN INTEGRATED PROTEOMIC TECHNOLOGY PLATFORM FOR ANALYSIS OF CELLULAR PHOSPHOINOSITIDE BINDING PROTEINS**
C. Pasquali, C. Chabert, D. Bertschy-Meier, C. Gillieron, C. Arod, C., M. Camps and C. Rommel (Geneva, Switzerland)
- 16.20 – 16.35 **REDOX PROTEOMICS: CELLULAR RESPONSES TO OXIDATIVE STRESS**
E. Gianazza, I. Eberini, H. Demol, M. Puype, J. Vandekerckhove, S. Casagrande, V. Bonetto, P. Ghezzi, M. Fratelli (Milan, Italy; Ghent, Belgium)
- 16.35 – 16.50 **THE MUSCLE PROTEOME: POSSIBLE GENETIC ALTITUDE ADAPTATION IN TIBETANS**
C. Gelfi, S. De Palma, M. Ripamonti, I. Eberini, P. Cerretelli, C. Marconi, R. Wait (Milan, Italy; London, UK)
- 16.50 – 17.05 **FUNCTIONAL PROTEOMICS ANALYSIS OF SIGNAL TRANSDUCTION PATHWAYS BY G-PROTEIN COUPLED RECEPTORS**
J. Godovac-Zimmermann (London, UK)
- 17.05 – 17.20 **MOVING STABLE ISOTOPES UP INTO THE FOOD CHAIN: QUANTITATIVE PROTEOMICS IN *C. elegans* USING METABOLIC LABELING**
J. Krijgsveld, J. Johansen, R. Ketting, A. J.R. Heck (Utrecht, The Netherlands)
- 17.20 – 17.35 **TARGETING OF TUMOR MARKERS AND TUMOR-ASSOCIATED ANTIGENS IN HUMAN RENAL CELL CARCINOMA USING PROTEOME-BASED METHODS**
B. Seliger, R. Lichtenfels, D. Atkins, M. Menig, J. Bukur, T. Halder, F. Lottspeich, A. Ackermann, J. Beck, B. Mühlenweg, W. Brenner, S. Melchior, R. Kellner (Mainz, Munich, Darmstadt, Germany)

ORAL PARALLEL SESSIONS B

PROKARYOTES

Chairperson: L. Bini

- 15.35 – 15.50 **PRE-FRACTIONATION OF MICROBIAL PROTEINS BASED ON PHYSICAL AND FUNCTIONAL PROPERTIES**
S. J. Cordwell, M. R. Larsen (Sydney, Australia; Odense, Denmark)
- 15.50 – 16.05 **THE IMMUNOREACTIVE PROTEOME OF *ESCHERICHIA COLI*: THE IMPORTANCE OF HEAT SHOCK PROTEINS AND THE IMPLICATIONS FOR BIOPHARMACEUTICAL PURITY**
K.M. Champion, S.W. Frie, J. C. Nishihara, G.T. Moreno, A.J.S. Jones, M. Vanderlaan (South San Francisco, CA, USA)
- 16.05 – 16.20 **DIAGNOSING COMPOUND MECHANISM OF ACTION USING PROTEOMICS**
E. Schiller, R. VanBogelen (Ann Arbor, MI, USA)
- 16.20 - 16.35 **IMPACT OF THE TRANSCRIPTIONAL REGULATOR PLCR ON THE SECRETOME OF *BACILLUS CEREUS***
M. Gohar, O. A. Økstad, N. Gilois, V. Sanchis, A.-B. Kolstø, D. Lereclus (Guyancourt, Paris, France; Gent, Belgium; Oslo, Norway)

- 16.35 – 16.50 **PROTEOMIC APPROACH TO THE STUDY OF THE ENCAPSULATED STRAIN JNR7/87 AND THE UN-ENCAPSULATED FP23 ISOGENIC MUTANT OF *STREPTOCOCCUS PNEUMONIAE***
R. Raggiaschi, B. Canas, F. Iannelli, M. Oggioni, S. Liberatori, G. Pozzi, V. Pallini, L. Bini (*Siena, Italy*)
- 16.50 – 17.05 **EVIDENCE OF AROMATIC-INDUCED PROTEINS IN *ACINETOBACTER RADIORESISTENS* MEMBRANE PROTEOME**
M.G. Giuffrida, E. Pessione, C. Barello, R. Mazzoli, L. Prunotto, A. Conti, C. Giunta (*Colleretto Giocosa, Turin, Italy*)
- 17.05 – 17.45 **COFFEE BREAK**
- 17.15- 20.00 **VISIT TO POSTERS - WINE AND CHEESE TASTING**

THURSDAY SEPTEMBER 5th

PLENARY SESSION 7 BIOINFORMATICS AND KNOWLEDGE BASES

Chairperson: R. D. Appel

- 9.00 - 9.20 **BACTERIAL PROTEOME DATABASE: COMBINATION OF 2-DE, ICAT AND PROTEIN CLASSIFICATION DATA**
K.-P. Pleissner, T. Eifert, F. Schmidt, S. H.E. Kaufmann, T. F. Meyer, P. R. Jungblut (*Berlin, Germany*)
- 9.20 - 9.40 **HIERARCHICAL ANALYSIS OF LARGE 2D-GEL EXPERIMENTS**
A. Rubinfeld, G. Hadas, T. Keren-Lehrer, Z. Smilansky (*Tel Aviv, Israel*)
- 9.40 - 10.00 **ERROR TOLERANT SEARCHING OF UNINTERPRETED MS/MS DATA**
J. S. Cottrell, D. M. Creasy (*London, UK*)
- 10.00 - 10.20 **USING PEPTIDE SIGNAL INTENSITY DISTRIBUTIONS FOR A BETTER INTERPRETATION OF MOLECULAR SCANNER DATA**
M. Müller, R. Gras, W. V. Bienvenut, P.-A. Binz, C. Pasquarello, D. F. Hochstrasser, R. D. Appel (*Geneva, Switzerland*)
- 10.20 – 10.40 **CURRENT STATUS OF THE HPI AND HAMAP ANNOTATION PROJECTS AT SWISS-PROT**
A. Bairoch (*Geneva, Switzerland*)
- 10.40 - 11.00 **COFFEE BREAK**

PLENARY SESSION 8 THE STUDY OF COMPLEXITY

Chairperson: A.L. Burlingame

- 11.00 – 11.20 **PROTEOMICS AND FUNCTIONAL GENOMICS**
J. van Oostrum (*Basel, Switzerland*)
- 11.20 - 11.40 **TOWARDS COMPREHENSIVE PROTEOMICS OF CELLS**
J. R. Yates, M. MacCoss, C. Wu, H. McDonald, A. Saraf, R. Sadygov (*La Jolla, CA, USA*)
- 11.40 - 12.00 **“NIGMS” PROTEIN STRUCTURE INITIATIVE FOR STRUCTURAL GENOMICS**
J. C. Norvell, C. Edmonds (*Bethesda, MD, USA*)
- 12.00 - 12.20 **FROM PROTEOMICS TO BIOMARKER OF DRUG EFFECTS**
R. Hillenbrand, F. Legay (*Basel, Switzerland*)
- 12.20- 14.15 **LUNCH**

CLOSING MAIN LECTURE

- 14.15 – 15.00 **REPORTER LIGAND BASED PROTEOMICS FOR WHOLE GENOME ANALYSIS**
M. Uhlén (*Stockholm, Sweden*)
- 15.00 - 15.15 **CONCLUDING REMARKS**
V.Pallini, L. Bini, J.-C. Sanchez, D.F. Hochstrasser

POSTERS

THE INHIBITION OF UNWANTED PROTEOLYSIS DURING SAMPLE PREPARATION: EVALUATION OF ITS EFFICIENCY IN CHALLENGE EXPERIMENTS

L. Castellanos-Serra, D. Paz-Lago (*Havana, Cuba*)

LIQUID PHASE SEPARATIONS IN POTEOMICS – CAN THEY CLOSE THE GAP BETWEEN STRUCTURAL AND FUNCTIONAL INFORMATION ?

K.K. Unger, M. Quaglia, E. Machtejevas, C. du Fresne, R. Ditz, R. Hendriks (*Mainz, Darmstadt, Germany*)

STUDIES ON METHODS FOR SUBCELLULAR PROTEOME EXTRACTION FROM TISSUE CULTURE CELLS

A. Abdolzade-Bavil, J. Anders, M. Kröger, R. Hendriks (*Darmstadt, Germany*)

STUDIES ON METHODS FOR REMOVAL OF HIGHLY ABUNDANT PROTEINS FROM HUMAN PLASMA

J. Anders, M. Wehsling, R. Hendriks (*Darmstadt, Germany*)

THE USE OF GRADIFLOW TECHNOLOGY TO FURTHER FACILITATE PLASMA PROTEOMIC ANALYSIS.

V. Locke, D. Rothemund, A. Liew, T. Thomas, V. Wasinger, G.L. Corthalsfe, D. Rylatt (*Sydney, Australia; Geneva, Switzerland*)

HIGH SENSITIVITY DETECTION OF PROTEINS IN TWO-DIMENSIONAL GELS BY FLUOROPHORE LABELLING PRIOR TO FIRST DIMENSION ISOELECTRIC FOCUSING

P. Jackson, S. Kramer, D Sissors, T. Erickson, J. Trometer, M. Bobrow (*Cambridge, UK; Boston MA, USA*)

MULTIDIMENSIONAL CAPILLARY ELECTROPHORETIC SEPARATION OF PROTEIN MIXTURES

W. W. P. Chang, L. Ngo, L. Ames, I. Obegi, M. P. Hall, L. V. Schneider (*Palo Alto, CA, USA*)

2D-DIGE – ACCURATE QUANTITATIVE PROTEOME ANALYSIS. APPLICATION OF AN INTERNAL STANDARD TO 2-DIMENSIONAL ELECTROPHORESIS

J. Yan, A. Alban, I. Currie, S. Lewis (*Buckinghamshire, UK*)

THREE-DIMENSIONAL ELECTROPHORESIS FOR THE DEPLETION OF HIGHLY ABUNDANT PROTEINS

P. J. A. Weber, G. Weber, R. Kussian, C. Obermaier, M. Mast, M. Hauptmann, A. Posch, C. Eckerskorn (*Kirchheim, Germany*)

THE POTENTIAL OF FREE FLOW ELECTROPHORESIS IN PROTEOMICS FOR SUBCELLULAR FRACTIONATION EXEMPLIFIED BY YEAST MITOCHONDRIA

G. Weber, P. J. A. Weber, C. Eckerskorn, U. Schneider, M. Nissum, A. Posch, M. Ueffing, T. Meitinger, H. Zischka (*Oberschleißheim, Germany*)

PROTEOGLYCAN AND PROTEOME PROFILING OF CENTRAL HUMAN PULMONARY FIBROTIC TISSUE UTILIZING MINITURIZED SAMPLE PREPARATION

K. Larsen, J. Malmström, L. Hansson, C.-G. Löfdahl, O. Nørregard-Jensen, G. Marko-Varga, G. Westergren-Thorsson (*Lund, Odense M, Sweden*)

COMPARISON OF PROTEIN RECOVERY ON 2-DE GELS USING TWO SDS-PAGE RUNNING CONDITIONS

B. Jarrold, F. Wang (*Cincinnati, Ohio, USA*)

TWO DIMENSIONAL GEL ELECTROPHORESIS IN PROTEOMICS

S. Hoving, H. Voshol, H. Towbin, J. van Nostrum (*Basel, Switzerland*)

AUTOMATED HIGH-THROUGHPUT PROCESSING OF MOUSE LIVER SAMPLES FOR A PROTEOMIC STUDY USING MALDI-TOF MASS SPECTROMETRY

J. Goscinski, J. Öhman, M. Rafian Nejad, Y. Laurin (*Uppsala, Sweden*)

SAMPLE SOLUBILIZATION EFFECTS RESOLUTION IN TWO-DIMENSIONAL ELECTROPHORESIS WITH IPG

M. F. Goldfarb (*Portland, ME, USA*)

METHODS FOR THE STUDY OF CEREBROSPINAL FLUID COMPOSITION

M. Harrington, R. Biringer, A. Hühmer, P. Bondarenko, H. Amato, W. Hancock, I. Jardine, N. Dalleska, A. Fonteh (*Pasadena, San Jose, CA, USA*)

INCREASED DETECTION OF CEREBROSPINAL FLUID PROTEINS USING A PREFRACTIONATION STEP PRIOR TO TWO-DIMENSIONAL ELECTROPHORESIS

S. Folkesson, M. Puchades, P. Davidsson (*Göteborg, Mölndal, Sweden*)

MICROSTRUCTURES FOR SOLID-PHASE EXTRACTION OF PROTEOMICS SAMPLES

S. Ekström, J. Malmström, J. Bergkvist, L. Wallman, M. Löfgren, J. Nilsson, T. Laurell, G. Marko-Varga (*Lund, Sweden*)

**LASER CAPTURE MICRODISSECTION AND PROTEOMICS-BASED APPROACHES –
POSSIBILITIES AND LIMITATIONS**

R. A. Craven, R. E. Banks (*Leeds, UK*)

**LC-MS FACILITATES THE DEFINITION OF SEPARATION CONDITIONS OF COMPLEX PROTEIN
MIXTURES**

E. Boschetti, P. Santambien, V. Brenac, L. Bourgeois (*Cergy, France*)

**HIGH-THROUGHPUT OPTIMIZATION AND PURIFICATION OF EXPRESSED PROTEINS USING
EC-SELDI-MS**

L. Lomas, T. Yip, E. Boschetti (*Fremont, CA, USA; Cergy, France*)

ANALYSIS OF COMPLEX AUTOANTIBODY-REPERTOIRES BY SELDI-TOF

F.H. Grus, S.C. Joachim, N. Pfeiffer (*Mainz, Germany*)

**STRUCTURAL CHARACTERIZATION OF GEL-SEPARATED GLYCOPROTEINS BY TANDEM HIGH
RESOLUTION MASS SPECTROMETRY**

K Håkansson, M. R. Emmett, A. G. Marshall, P. Davidsson, C. L. Nilsson (*Tallahassee, FL, USA; Göteborg, Sweden*)

**USE OF 2D GEL ELECTROPHORESIS AND MASS SPECTROMETRY FOR PRIMARY STRUCTURE
ELUCIDATION OF A RECOMBINANT GLYCOPROTEIN**

M. Mreyen, S. Hussmann, K. Müller, H. E. Meyer, A. Herrmann, M. Blüggel (*Dortmund, Erkrath, Germany*)

**IDENTIFICATION OF THE PHOSPHORYLATED AMINO ACID RESIDUES OF THE MAIZE HMG B
PROTEINS BY MASS SPECTROMETRY**

G. Bauw, C. Stemmer, K. D. Grasser (*Aalborg, Denmark*)

ANALYSIS OF PHOSHOPEPTIDES WITH MS³

M. Scigelova, G. Woffendin, H. Buyers, M. Ward, D. Hanger (*Hempstead, London, UK*)

PHOSPHOPROTEOMICS MADE SIMPLE

A. Amoresano, E. Quemeneur, G. Marino (*Naples, Italy; Marcoule, France*)

A NEW CSF AND SERUM MARKER FOR THE DIAGNOSIS OF CREUTZFELD JACOB DISEASE

E. Guillaume, C. Zimmermann Catherine, P. Burkhard Pierre, J.-C. Sanchez, D. F. Hochstrasser (*Geneva, Switzerland*)

PROTEOMICS OF CEREBROSPINAL FLUID IN ALZHEIMER'S DISEASE

M. Puchades, S. Folkesson, A. Brinkmalm, K. Blennow, M. Sjögren, N. Andreassen, C.L. Nilsson, P. Davidsson
(*Göteborg, Mölndal, Sweden*)

**EVIDENCE IN CEREBROSPINAL FLUID FOR ALTERED BRAIN CHOLESTEROL METABOLISM IN
ALZHEIMER'S DISEASE USING DIFFERENTIAL PROTEOMICS**

K. Lannoy, V. Kostanjevecki, A. Daniels, C. Missiaenng, M. Dauwe, G. De Meyer, M. Sjogren, N. Andreasen, K. Blennow,
V. De Brabandere, E. Vanmechelen (*Gent, Belgium. Mölndal, Stockholm, Sweden*)

**DETECTION OF DIFFERENCES IN THE PATHOPHYSIOLOGICAL MECHANISMS BETWEEN
NEURODEGENERATIVE DISORDERS IN A PROTEOMIC STUDY OF CEREBROSPINAL FLUID PROTEINS**

P. Davidsson, C. Sihlbom, M. Lindbjer, B. Dellheden, A. Westman-Brinkmalm, N. Andreasen, M. Sjögren, K. Blennow,
C.L. Nilsson (*Göteborg, Mölndal, Piteå, Sweden*)

**ICTAL AND INTERICTAL CHANGES IN PROTEINS THAT METABOLIZE POLYUNSATURATED FATTY
ACIDS IN CEREBROSPINAL FLUIDS OF MIGRAINEURS AND CONTROL SUBJECTS**

A. Fonteh, R. Cowan, M. Harrington (*Pasadena, USA*)

**PROTEOMIC INVESTIGATION OF SUBJECTS CARRYING THE G20210A MUTATION IN THE
PROTHROMBIN GENE**

A. Viganò, V. Tumidei, E. Biguzzi, E.M. Faioni, P.M. Mannucci, R. Wait, C. Gelfi (*Segrate, Milano, Italy; London, UK*)

PROTEOMICS OF MYOCARDIAL STUNNING

M. Y. White, S. J. Cordwell, H. CK McCarron, A. M Prasan, G. Craft, B. D Hambly, R. W Jeremy (*Sydney, Australia*)

**PROTEOME ANALYSIS OF LIPOFUSCIN GRANULES INVOLVED IN THE PATHOGENESIS OF AGE-
RELATED MACULAR DEGENERATION**

B. Ueberle, F. Schütt, J. Kopitz, F. G. Holz, M. Schnoelzer (*Heidelberg, Germany*)

**MAPPING OF POTENTIAL INTESTINAL AUTOANTIGENS RECOGNIZED BY IGA ANTIBODIES
COLLECTED FROM PATIENTS WITH ACTIVE CELIAC DISEASE**

S.Porkertová, L.Hernychová, O.Pozler, L.Tučková, D.Sánchez, J.Stulík (*Hradec Králové, Prague, Czech Republic*)

HUMAN BRONCHOALVEOLAR LAVAGE - A BIOFLUID MIRRORING PULMONARY PATHOLOGY

A. Plymoth, CG. Lofdahl, M. Dahlbäck, T. Fehniger, H. Lindberg, G. Marko-Varga (*Lund, Sweden*)

CHARACTERIZATION OF IMMUNE RESPONSES AND PROTEIN PROFILES IN PATIENTS WITH INTERSTITIAL LUNG DISEASES

B. Magi, L. Bini, M.G. Perari, A. Fossi, N. Nikiforakis, E. Bargagli, S. Liberatori, V. Pallini, P. Rottoli (*Siena, Italy*)

EVALUATING SERUM PROTEIN PROFILES FOR BIOMARKER DISCOVERY USING TWO-DIMENSIONAL ELECTROPHORESIS

M. P. Molloy, K. T. Landschulz, D. R. Knight, R. VanBogelen (*Ann Arbor, MI; Groton, CT, USA*)

MAPPING OF PROTEINS IN HUMAN SALIVA

M. Lindahl, B. Ghafouri, C. Tagesson (*Linköping, Sweden*)

THE USE OF PROTEOMIC TECHNIQUES TO IDENTIFY ANTIBODY TARGETS IN SCHISTOSOMIASIS

S.L. Hall, R.S. Curwen, R.A. Wilson (*York, UK*)

PROTEOMIC APPROACH TO THE IDENTIFICATION OF PROSTASOMAL PROTEINS

S. Liberatori, L. Bini, B. Canas, E. Carlini, C.A. Palmerini, G. Arienti, V. Pallini (*Siena, Perugia, Italy*)

A PROTEOMIC APPROACH TO DIFFERENTIAL PROTEIN EXPRESSION IN MODELS OF OCULAR PATHOLOGY

S. De Palma, C. Gelfi, S. Begum, R. Wait, D. Baynes, S. Bertuzzi (*Segrate, Milano, Italy; London, UK*)

ON THE BIOLOGICAL ROLE OF ANNEXIN 1 IN AGING AND DISEASE, BY PROTEOME ANALYSIS

F. Boraldi, L. Bini, S. Liberatori, A. Armini, V. Pallini, R. Tiozzo, I. Pasquali-Ronchetti, D. Quaglino (*Modena, Siena, Italy*)

PROTEIN PROFILES OF NORMAL- AND PSORIATIC SKIN BY TWO-DIMENSIONAL GEL ELECTROPHORESIS AND MASS SPECTROMETRY

A. A. Alaiya, L. Carlén, S. Becker, G. Auer, M. Bäckdahl (*Stockholm, Sweden*)

CONTRACTILE SAPHENOUS VEIN SMOOTH MUSCLE PROTEINS, INCLUDING F-ACTIN CAPPING PROTEIN, ARE ALTERED BY HAEMODYNAMIC STRESS

E. M^cGregor, L. Kempster, M. Gosling, M. J. Dunn, J. T. Powell (*London, Coventry UK*)

AN UPDATE OF HUMAN COLOSTRAL FAT GLOBULES MEMBRANE PROTEOME

D. Fortunato, L. Perono Garoffo, G. Dellavalle, L. Napolitano, S. Quaranta, C. Giunta, A. Coscia, S. Costa, G. Brunello, M. Cavaletto, M.G. Giuffrida (*Colleretto Giacosa, Torino, Italy*)

HUMAN OSTEOBLASTS DIFFERENTIATION THROUGH PROTEOMICS

A. Santucci, L. Trabalzini, F. Chellini, C. Capperucci, A. Paffetti, B. Frediani, R. F. Marcolongo, P. Martelli (*Siena, Italy*)

ABOUT MULTIPLE FORMS OF PCNA, OR PROTEOMICS APPROACH (MICROPROTEOMICS) TO PCNA HETEROGENEITY

S. Naryzhny, H. Lee (*Sudbury, Ontario, Canada*)

AUTOMATED LC-MS/MS DATA ANALYSIS OF A NOVEL ALCOHOL DEHYDROGENASE FORM ISOLATED FROM PIGEON LIVER

A. Jonsson, L. Hjelmqvist, H. Jörnvall, R. O'Malley, N. Swainston, P. Young, A. Millar, J. Langridge (*Stockholm, Sweden; Manchester, UK*)

BUFFER CONDITIONS IDENTIFICATION FOR IMPROVED RECOVERY OF CELL CYCLE MARKER

M. Uggeri, U. Cucchi, C. Mercurio, H. Kalisz, B. Valsasina (*Nervino, Italy*)

PROTEIN CHANGES ASSOCIATED WITH APOPTOSIS INDUCED BY PDT WITH PURPURIN-18 IN HL60 CELLS

B. Magi, A. Ettorre, M. Andreassi, L. Bini, S. Liberatori, R. Raggiaschi, V. Pallini, P. Neri, A. Di Stefano (*Siena, Italy*)

PATHWAY MAPPING AND FUNCTIONAL PROTEOMICS

M. Palmer (*Bedford, MA, USA*)

IDENTIFICATION OF PPAR γ INDUCED CHANGES IN HUMAN ADIPOCYTE SECRETED PROTEINS USING A PROTEOMICS APPROACH

J. Östling, C.T Montague, L. Griffiths, C. Lenaghan, B. Dahllöf (*Mölndal, Sweden; Alderly Park, UK*)

GLUTATHIONYLATION OF HUMAN THIOREDOXIN: A POSSIBLE CROSS TALK BETWEEN THE GLUTATHIONE AND THIOREDOXIN SYSTEMS

V. Bonetto, S. Casagrand, M. Fratelli, E. Gianazza, T. Massignan, G. Chang, A. Holmgren, P. Grezzi (*Milan, Italy; Stockholm, Sweden*)

EPOETIN ALFA, EPOETIN BETA AND DARBOPOETIN ALFA: 2D-PAGE ISOFORMS CHARACTERISATION

AND MASS SPECTROMETRY ANALYSIS

A. Caldini, G. Moneti, A. Fanelli, A. Bruschetini, S. Mercurio, G. Pieraccini, F. Luceri, E. Cini, A. Ognibene, G. Messeri (*Firenze, Italy*)

ANALYSIS OF MYOFILAMENT PROTEIN ALTERATIONS IN A SWINE ISCHEMIC-INDUCED HEART FAILURE MODEL

I. Neverova, K.A. Bennetts, J.E. Van Eyk (*Kingston, ON, Canada*)

CHARACTERIZATION OF A PORCINE GLYCOGEN STORAGE VARIANT, THE RN⁻ MUTATION IN PRKAG3

J. Hedegaard, P. Horn, C. Bendixen, R. Lametsch, P. Roepstroff, E. Bendixen (*Tjele, Odense, Denmark*)

PROTEOME-BASED COMPARISON OF THE PERMANENT CELL LINE EA.HY 926 WITH ITS TWO PROGENITORS, A549 AND HUVE CELLS

P. Lutter, U. Falkenberg, S. Bailey, M. Blüggel, H. E. Meyer, P. Weingarten (*Dortmund, Germany*)

PROTEOME ANALYSIS OF AN ENDOTHELIAL CELL MODEL

P. Lutter, U. Falkenberg, S. Bailey, C. Hüls, P. Weingarten (*Dortmund, Germany*)

IDENTIFICATION OF PROTEIN CHANGES IN AGING HUMAN DERMAL FIBROBLASTS BY PROTEOME ANALYSIS

F. Boraldi, L. Bini, S. Liberatori, A. Armini, V. Pallini, R. Tiozzo, I. Pasquali-Ronchetti, D. Quaglino (*Modena, Siena, Italy*)

ANNOTATING THE HUMAN GENOME: CHARACTERIZATION OF A FUSE-BINDING PROTEIN 2 IN HUMAN DERMAL FIBROBLASTS

S. Liberatori, A. Armini, F. Boraldi, R. Tiozzo, I. Pasquali-Ronchetti, D. Quaglino, L. Bini, V. Pallini (*Siena, Modena, Italy*)

PROTEOME AND GLYCOME STUDIES OF TH1 AND TH2 CELLS

T. Nyman, K. Rautajoki, T. Satomaa, N. Salovuori, J. Saarinen, R. Lahesmaa (*Turku, Helsinki, Finland*)

ANALYSIS OF THE HUMAN PLATELET SECRETEOME

J. A. Coppinger, D. J. Cahill, D. J. Fitzgerald, P. B. Maguire (*Dublin, Ireland*)

PROTEOMIC AND TRANSCRIPTOMIC-BASED TECHNOLOGIES DEFINE DOME FORMATION IN CELL CULTURES AS EXPRESSION OF AN EARLY STAGE OF MAMMARY GLAND LACTOGENIC DIFFERENTIATION

I. Zucchi, L. Bini, D. Albani, R. Valaperta, M. Scotti, E. Mento, S. Liberatori, R. Raggiaschi, L. Susani, V. Pallini, P. Vezzosi, R. Dulbecco (*Segrate-Milan, Siena, Italy; La Jolla, CA, USA*)

STUDY OF THERAPY RESISTANCE IN CANCER CELLS WITH FUNCTIONAL PROTEOME ANALYSIS

J. Poland, H. Lage, A. Urbani, M. Schnölzer, D. Schadendorf, P. Sinha (*Berlin, Heidelberg, Mannheim, Germany; Roma, Italy*)

ULTRASENSITIVE AND DIFFERENTIAL PROTEOMICS OF PROSTATE CANCER USING MULTI-PHOTON-DETECTION

M. Cahill, W. Wozny, P. Volkovitsky, A. Drukier, C. Sastri, W. Stegmann, K. Schroer, J. Predic, A. Schratzenholz (*Mainz, Germany*)

THE IDENTIFICATION OF PROTEIN MARKERS AS INDICATORS OF RADIATION-INDUCED DAMAGE USING PROTEOMICS

S. Szkanderová, J. Stulík, J. Vávrová, L. Hernychová, V. Neubauerová (*Hradec Kralove, Czech Republic*)

PROTEOME ANALYSIS IN CANCER RESEARCH: DIFFERENTIAL DISPLAY VIA 2D-PAGE

K. Stühler, S. A. Hahn, H. E. Meyer (*Bochum, Germany*)

ALTERATIONS IN PROTEIN GLYCOSYLATION IN OVARIAN CANCER: A PROTEOMICS-BASED INVESTIGATION

D. H. Jackson, R. A. Craven, N. Wilkinson, R. Tonge, J. Nickson, T. Perren, R. Hutson, G. Lane, P. Selby, R. E. Banks (*Leeds, Alderley Park, UK*)

PROTEIN EXPRESSION PROFILING IN CHK2 OVEREXPRESSING A549 CELL LINE

L. Dillen, W. Cools, C.-M. Denis, J. Vialard (*Beerse, Belgium*)

HUMAN 20S PROTEASOME: REFERENCE MAP, POST-TRANSLATIONAL MODIFICATIONS, AND COMPARATIVE CANCER CELL LINES ANALYSES

O. Burlet-Schiltz, S. Claverol, E. Neuhauser, S. Uttenweiler-Joseph, B. Xu, J. E. Gairin, B. Monsarrat (*Toulouse, France*)

HYPOXIA-INDUCED TYROSINE PHOSPHORYLATION OF VDAC PROTEINS IN GUINEA PIG BRAIN SYNAPTOSOMES

S. Liberatori, B. Canas, C. Tani, L. Bini, G. Buonocore, O.P. Mishra, M. Delivoria-Papadopoulos, J. Godovac-Zimmermann, R. Bracci, V. Pallini (*Siena, Italy; London, UK; Philadelphia, PA, USA*)

THE EFFECT OF HYPOXIA ON RAT MUSCLE; A MESSENGER RNA AND PROTEOMIC STUDY

M. Ripamonti, S. De Palma, D. Pagin, M. Samaja, R. Wait, C. Gelfi (*Segrate, Milano, Italy; London, UK*)

PULMONARY EDEMA INDUCED BY ALLERGEN CHALLENGE: PROTEIN PROFILING OF RAT BRONCHOALVEOLAR LAVAGE (BAL) FLUID BY MALDI TOF MASS SPECTROMETRY AND TWO-DIMENSIONAL GEL ELECTROPHORESIS

L. Signor, M. Stoeckli, N. Beckmann, B. Tigani (*Basel, Switzerland*)

ANALYSIS OF THE RAT LIVER PEROXISOMAL PROTEOME BY 16-BAC/SDS-2D-GELELECTROPHORESIS AND MASS SPECTROMETRY

M. Islinger, H. Zischka, A. Voelkl (*Heidelberg, Germany*)

ITALIAN COW BREEDS: WHAT ARE THE DIFFERENCES IN 2D?

P. Roncada, A. Gaviraghi, G. F. Greppi (*Milano, Italy*)

FROM GOAT MILK TO CHEESE: EVALUATION OF CHANGES BY TWO DIMENSIONAL ELECTROPHORESIS

P. Roncada, A. Gaviraghi, G. F. Greppi (*Milano, Italy*)

APPLICATION OF PROTEOMICS FOR FAST IDENTIFICATION OF SPECIES-SPECIFIC PEPTIDES FROM MARINE SPECIES

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VITELLOGENINE HETEROGENEITY IN ZEBRAFISH OOCYTE

L. Bianchi, S. Liberatori, C. Tani, M. Fabbrini, L. Bini, F. Argenton, P. Soldani, V. Pallini, P. Neri (*Siena, Padova, Italy*)

PROTEOMICS IN VETERINARY MEDICINE: ITS USEFULNESS TO STUDY CANINE GAMMOPATHIES AND RENAL DISORDERS

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PROTEOME OF BOVINE SERUM

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THE EFFECT OF OXIDATION OR ALKYLATION ON THE SEPARATION OF WOOL KERATIN PROTEINS BY TWO-DIMENSIONAL ELECTROPHORESIS

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PROTEOME OF RAT CEREBROSPINAL FLUID: EFFECTS OF COBALAMIN DEFICIENCY 4

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PROTEOMIC ANALYSIS OF RAT TESTICULAR TISSUE FOLLOWING LONG-TERM EXPOSURE TO JET FUEL VAPOR

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PROTEOMIC STUDY OF THE TOXIC EFFECT OF ACRYLONITRILE ON RAT LIVER PROTEIN EXPRESSION

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PROTEOME ANALYSIS OF EFFECT OF HYDRAZINE ON RAT LIVER

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J. Gallego-Delgado, A. Lazaro, D. Gómez-Garre, F. Mazarbeitia, J. Fortes, S. Mas, M.C. Duran, F. Vivanco, J. Egido (*Madrid, Spain*)

USE OF DIFFERENTIAL IN-GEL ELECTROPHORESIS TO UNDERSTAND THE MECHANISM OF ACTION OF ANTIDEPRESSANT DRUG

M. Knowles, K. Salim, N. Rupniak, G. McAllister, M. Shearman, S. Hunt, C. de Felipe, P. Guest (*Harlow, UK*)

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ANALYSIS OF THE RAT LIVER PEROXISOMAL PROTEOME BY 16-BAC/SDS-2D-GELELECTROPHORESIS AND MASS SPECTROMETRY

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CHANGES IN PROTEIN EXPRESSION PROFILES IN CLAMS EXPOSED TO AROCLOR 1254 AND COPPER

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A PROTEOMIC APPROACH IN ECOTOXICOLOGY; A STUDY OF PROTEIN PATTERN IN TISSUES OF FISH AND MUSSELS EXPOSED TO PCB IN A LABORATORY AND FIELD EXPERIMENT

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PROTEOME ANALYSIS OF THE ROLE OF CATALASE AND OXYR ON FREE LIFE AND SYMBIOSIS FROM *R.ETLI*

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PROTEOMIC CHANGES IN *ESCHERICHIA COLI* TG1 AFTER METABOLIC ENGINEERING FOR ENHANCED TRICHLOROETHYLENE BIODEGRADATION

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2D REFERENCE MAPS OF ALKALINE *E. COLI* AND *SACCHAROMYCES CEREVISIAE* PROTEINS USING IMMOBILIZED PH GRADIENTS UP TO PH 12 AND MALDI-TOF-MS

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PROTEOME ANALYSIS OF *ESCHERICHIA COLI* W3110 EXPRESSING THE PUTATIVE SIGMA FACTOR PSFS

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A PROTEOMIC ANALYSIS OF *E. COLI* MINICELLS

E.-M. Lai, U. Nair, A. Henry, J. R. Maddock (Ann Arbor, MI, USA)

INITIAL PROTEOME STUDIES ON *METHYLOCOCCUS CAPSULATUS* (BATH)

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COMPARATIVE PROTEOMICS OF *STAPHYLOCOCCUS AUREUS*

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EFFECT OF pH STRESS ON PROTEIN EXPRESSION BY *STREPTOCOCCUS MUTANS* GROWN IN CONTINUOUS CULTURE

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PROTEOMIC ANALYSIS OF THE SPECIFIC ANTIBODY PATTERN IN *FRANCISELLA TULARENSIS* LVS CHALLENGED C3H/HEJ (*LPS^D*) AND C3H/HEN (*LPS^N*) INBRED MURINE STRAINS

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A DISSECTION OF THE BIFIDOBACTERIAL PROTEOME UPON BILE SALT STRESS: 2-DE, LC-MS/MS, AND EXPLOITATION OF THE GENOME

S. Parche, M. Affolter, D. Vilanova, R. Zink (Lausanne, Switzerland)

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P. Jagtap, H. Keller, K. Runge, M. Eppinger, C. Baar, S. C. Schuster (Tübingen Germany)

STRUCTURAL CHARACTERISATION OF THE UREASE HOLOENZYME FROM *HELICOBACTER PYLORI* BY LC-MS AND MS/MS

E. Gustafsson, H. Karlsson, C. L. Nilsson (Goteborg, Sweden)

***RHIBIUM ETLI* AND *SINORHIZOBIUM MELILOTI* IN AEROBIC OR FERMENTATIVE METABOLISM INDUCED PROTEINS REVEALED BY PROTEOME ANALYSIS**

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THE USE OF PROTEOME TO IDENTIFYING FUNCTIONS REQUIRED FOR BIOFILM DEVELOPMENT BY *RHIZOBIUM ETLI* AND *SINORHIZOBIUM MELILOTI*

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STRESS RESPONSE OF LACTIC ACID BACTERIA: A CLOSER VIEW

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PROTEOMIC ANALYSIS OF THE *BACILLUS SUBTILIS* MEMBRANE PROTEINS

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ANALYSIS OF THE *CANDIDA ALBICANS* PROTEIN PATTERN IN RESPONSE TO THE PHOTODYNAMIC THERAPY BY TWO-DIMENSIONAL GEL ELECTROPHORESIS AND MASS-SPECTROMETRY

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PROTEOMIC ANALYSIS OF THE INFLUENCE OF NITRIC OXIDE IN *CANDIDA ALBICANS*

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IMPORTANT ROLE OF ANTIBODIES IN THE RESOLUTION OF SYSTEMIC CANDIDIASIS

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THE COMPLEXITY OF THE *CANDIDA ALBICANS* CELL WALL PROTEOME: A REACHABLE PARADIGM?

A. Pitarch, M. Sánchez, C. Nombela, C Gil (*Madrid, Spain*)

ANALYSIS OF PROTEIN EXPRESSION PATTERNS IN *SACCHAROMYCES CEREVISIAE* FOLLOWING TREATMENT WITH RAPAMYCIN

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EXPRESSION PROTEOMICS OF WHOLE CELL EXTRACTS AND CELL WALL PROTEINS OF *SACCHAROMYCES CEREVISIAE* ECM33 Δ A CELL WALL MUTANT

R. Martínez, L. Monteoliva, E. López, C. Nombela, C. Gil (*Madrid, Spain*)

PROTEOME ANALYSIS OF *SACCHAROMYCES CEREVISIAE* CELL WALL SOLUBLE PROTEINS IN CELL WALL MUTANTS

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PROTEOMIC AND GENETIC CHARACTERIZATION OF TUBER PATATIN ISOFORMS IN *S. TUBEROSUM* CV. KURAS

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CHARACTERISATION OF PROTEINS INVOLVED IN THE DEVELOPMENT OF *TUBER BORCHII* FRUIT BODY

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PROTEOMIC ANALYSIS OF PHOSPHORYLATED PROTEINS EXPRESSED IN *TUBER BORCHII* MYCELIUM

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PROTEOMIC IDENTIFICATION OF NOVEL *ARABIDOPSIS THALIANA* CELL WALL PROTEINS RESPONSIVE TO PATHOGEN ATTACK

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PROTEOME ANALYSIS IN *ARABIDOPSIS THALIANA*

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PROTEOMIC CHARACTERISATION OF *ORYZA SATIVA* LEAF TISSUE IN RESPONSE TO SALT STRESS

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PROTEOME ANALYSIS (pI 4-7) OF BARLEY GRAINS AND MALT: IDENTIFICATION OF MAJOR SPOTS FROM 2D-GELS

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PROTEOME ANALYSIS (pI 6-11) OF BARLEY GRAINS AND MALT, AND VISUALIZATION OF PROTEIN PATTERNS BY 2D-PAGE/WESTERN BLOTTING

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PROTEOME ANALYSIS OF DIFFERENTIALLY EXPRESSED PROTEINS OF DEVELOPING ANTHERS OF MAIZE MUTANT *GAMETOPHYTIC MALE STERILE-2* BY 2-D ELECTROPHORESIS

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PROTEOMIC CHARACTERISATION OF *NICOTIANA TABACUM* PLANT MITOCHONDRIA OVER-EXPRESSING HSP70

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MOLECULAR SCANNER PROJECT: OPTIMISATION OF THE MATRIX DEPOSITION; α -CYANO-4-HYDROXY CINNAMIC ACID SOLUBILITY IN VARIOUS SOLVENTS

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TAGLESS EXTRACTION – RETENTATE CHROMATOGRAPHY MASS SPECTROMETRY: A NEW GLOBAL STRATEGY FOR MONITORING PROTEIN EXPRESSION

W. E. Rich, E. Boschetti, S. R. Weinberger, R. Viner, L. Lomas, V. Thulasiraman, V. Chang, P. Ho, M. J. Horn, W. McEldoon (*Fremont, Sunnyvale, CA, USA*)

ADDING A NEW DIMENSION TO MASS SPECTROMETRIC FRAGMENTATION OF BIOMOLECULES – MS^N

ON A MALDI QIT TOF MS

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COMPARATIVE ANALYSIS OF PROTEIN IDENTIFICATION RESULTS USING TWO DIFFERENT TECHNIQUES, 2D GEL ELECTROPHORESIS AND MUDPIT

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RAPID IDENTIFICATION OF TRYPTIC PEPTIDES BY PROTEINCHIP TANDEM MASS SPECTROMETRY

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PEPTIDE SEQUENCING USING CHEMICALLY ASSISTED FRAGMENTATION-MALDI

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PROTEOMIC ANALYSES USING A FULLY AUTOMATED NANO-ELECTROSPRAY SYSTEM

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HIGH THROUGHPUT HIGH SENSITIVITY PROTEIN IDENTIFICATION VIA THE O-MALDI QSTAR

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HIGH THROUGHPUT DE NOVO SEQUENCING

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MAPPING OF TNF-FAMILY LIGAND-RECEPTOR SIGNALLING COMPLEXES BY A SHOTGUN PROTEIN IDENTIFICATION METHOD

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MULTIDIMENSIONAL HPLC AS A FRONT-END-TECHNIQUE FOR SEPARATION AND IDENTIFICATION OF COMPLEX PROTEIN AND PEPTIDE SAMPLES

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BIA-MS COMBINING TECHNOLOGY: A SENSITIVE AND POWERFUL TOOL FOR IDENTIFICATION OF INTERACTING MOLECULES

F. Lopez, C. Pichereaux, O. Burlet-Schiltz, B. Monsarrat, J.-P. Estève, L. Pradayrol (*Toulouse, France*)

HIGH SENSITIVITY PROTEIN ANALYSIS USING A COMBINATION OF VARIABLE FLOW CHROMATOGRAPHY AND INTELLIGENT DATA DEPENDANT ACQUISITION ON A Q-TOF MASS SPECTROMETER

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AN INVESTIGATION INTO THE DYNAMIC RANGE OF PROTEIN IDENTIFICATION; MALDI vs. ELECTROSPRAY ON A Q-TOF MASS SPECTROMETER

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INFLUENCE OF DIFFERENT ALKYLATION AGENTS ON MALDI-TOF ANALYSIS

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AN INTEGRATED METHOD FOR COUPLING MICROSCALE HPLC TO MALDI MASS SPECTROMETRY FOR THE RAPID CHARACTERIZATION OF PROTEIN DIGESTS

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MICROFLUIDIC SYSTEM FOR HIGH-THROUGHPUT PROTEOMIC ESI-MS ANALYSIS

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ION TRAP MULTIPLE TANDEM MASS SPECTROMETRY IN PEPTIDE SEQUENCING AND PROTEOMICS

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IMLSTM - A METHOD FOR SEQUENCING INTACT PROTEINS BY IN-SOURCE FRAGMENTATION USING NOVEL "MASS-DEFECT" LABELS

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THE PLANT PROTEOME ANNOTATION PROJECT OF THE SWISS-PROT PROTEIN KNOWLEDGEBASE

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POST-TRANSLATIONAL MODIFICATIONS IN THE SWISS-PROT PROTEIN KNOWLEDGEBASE

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THE MAKE 2D-DB II PACKAGE - CONVERSION OF FEDERATED 2-DE GEL DATABASES INTO A RELATIONAL FORMAT AND INTERCONNECTION OF DISTRIBUTED DATABASES

K. Mostaguir, C. Hoogland, P-A Binz, R.D. Appel (*Geneva, Switzerland*)

AN IMAGE ANALYSIS APPROACH TO QUANTIFY SILVER STAINED SPOTS ON 2 DE GELS

M. Sögtrop, S. Hauck, M. Ueffing, S. Suppmann (*Munich, Germany*)

STATISTICAL MODELS OF SHAPE FOR THE ANALYSIS OF PROTEIN SPOTS IN 2-D ELECTROPHORESIS GEL IMAGES

M. Rogers, J. Graham, R.P. Tonge (*Manchester; Cheshire, UK*)

USING STATISTICAL IMAGE MODELS TO CONDUCT OBJECTIVE EVALUATION OF 2D GEL IMAGE ANALYSIS PACKAGES

M. Rogers, J. Graham, R.P. Tonge (*Manchester, Cheshire, UK*)

DISCOVER THE POSSIBILITIES: DATA MINING IN MASS SPECTROMETRY WITH GENEDATA METABOLIST™

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MULTIVARIATE DATA ANALYSIS OF THE COD PROTEOME: CHARACTERIZATION OF PROTEIN CHANGES DURING ICE STORAGE

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PROTEIN IDENTIFICATION AND CHARACTERIZATION TOOLS ON THE EXPASY PROTEOMICS SERVER

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INTACT - AN OPEN STANDARD AND SOFTWARE FOR PROTEIN-PROTEIN INTERACTION DATA

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DATA ANALYSIS AND QUALITY MANAGEMENT IN HIGH-THROUGHPUT PROTEOMICS

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