

First Meeting of the Interuniversity Institute of Myology

Montegrotto Terme - Padova (Italy), October 16 – 18, 2004

Continental Hotel Terme - Via Neroniane, 8 - 35036 Montegrotto Terme (Padova)

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Saturday October 16, 2004

14.45 Welcome Address, G Fanò and U Carraro

STRUCTURAL, FUNCTIONAL AND REGULATORY MUSCLE MOLECULES

Chair: P Bruni and C Reggiani

15.00 IDENTIFICATION OF TWO SITES IN OBSCURIN THAT MEDIATE THE INTERACTION WITH ANKYRIN 15
Armani A, Galli S, Sorrentino V

15.15 CROSSBRIDGE PROPERTIES STUDIED BY FAST STRETCHES IN ACTIVATED FROG MUSCLE FIBRES
Colombini B, Bagni MA, Cecchi G

15.30 MYOSIN ORIENTATION IN SKELETAL MUSCLE REVEALED BY X-RAY DIFFRACTION STUDIES DURING SARCOMERE LENGTH OSCILLATIONS
Colombini B, Griffiths PJ, Bagni MA, Amenitsch H, Bernstorff S, Ashley CC, Cecchi G

15.45 MECHANICAL AND KINETIC PROPERTIES OF PURE ISOFORMS OF SKELETAL MYOSIN FRACTION S1 STUDIED BY A SINGLE MOLECULE MECHANICAL APPROACH
Capitanio M, Canepari M, Maffei M, Cicchi R, Pavone FS, Bottinelli R

16.00 ENDOGENOUS TROPONIN COMPLEX REPLACEMENT IN SINGLE SKELETAL AND CARDIAC MYOFIBRILS
Belus A, Piroddi N, Scellini B, Tesi C, Poggesi C

16.15 THE IK-B-HOMOLOGUE CACTUS IS NECESSARY FOR NORMAL NEUROMUSCULAR FUNCTION IN DROSOPHILA MELANOGASTER
Peron S, Beramendi A, Megighian A, Reggiani C, Cantera R

16.30 REGULATION OF GLYCOGEN SYNTHASE BY SARCOPLASMIC RETICULUM-BOUND CAMKII IN RABBIT FAST-TWITCH SKELETAL MUSCLE
Sacchetto R, Bovo E, Damiani E

16.45 TRANSFER OF PLASMID DNA AND OLIGONUCLEOTIDES INTO SKELETAL MUSCLE BY MEANS OF CATIONIC LIPID-BASED VECTORS
Ditadi A, Malerba A, Occhi G, Gamba PG, Scambi I, McLachlan I, Baroni V, Vitello L

17.00 Break

MOTOR CONTROL, AGING AND DENERVATION OF SKELETAL MUSCLE

Chair: U Carraro and F Trimarchi

17.30 AGONIST-ANTAGONIST ACTIVATION DURING ELBOW FLEXION AND EXTENSION AT DIFFERENT ANGULAR VELOCITIES
Bazzucchi I, Marzattinocci G, Felici F

17.45 EFFECTS OF INHIBITORS OF CELL MEMBRANE CALCIUM CHANNELS ON HIGH-FREQUENCY FATIGUE OF FAST AND SLOW SKELETAL MUSCLES
Germinario E, Esposito A, Midrio M, Palade PT, Betto R, Danieli D

18.00 DIFFERENCES IN FORCE/ENDURANCE RELATIONSHIP BETWEEN YOUNG AND OLDER MEN
Bazzucchi I, Marchetti M, Rosponi A, Fattorini L, Castellano V, Sbriccoli P, Felici F

18.15 EFFECTS OF SPHINGOMYELIN DERIVATIVES ON INNERVATED AND DENERVATED RAT SOLEUS MUSCLE
Zanin M, Germinario E, Betto R, Danieli D

18.30 LONG-TERM DENERVATION OF RAT MUSCLE: A TIME COURSE STUDY
Adami N, Biral D, Kern H, Carraro U

18.40 LONG-TERM LOWER-MOTONEURON DENERVATION OF HUMAN MUSCLE: A TIME COURSE STUDY
Caccavale S, Rossini K, Adami N, Kern H, Carraro U

18.50 MYOREGENERATION IN HUMAN DENERVATED DEGENERATED MUSCLE DECREASES AFTER MUSCLE RECOVERY INDUCED BY FES TRAINING
Rossini K, Caccavale S, Adami N, Kern H, Carraro U

19.00 REGENERATION OF LONG-TERM DENERVATED MUSCLE BY FES
Boncompagni S, Kern H, Mayr W, Carraro U, Protasi F

19.15 HELMUT KERN, Guest Speaker

Functional Electrical Stimulation of Skeletal Muscle: Clinical Results of the EU Project RISE

20.30 IIM Social Dinner

Sunday October 17, 2004

REGENERATIVE PATHWAYS AND MUSCLE DISEASES

Chair: A. Musarò and R Bottinelli

- 9.00 **SKELETAL MUSCLE OF MICE OVEREXPRESSING FRG1 SHOWS HISTOLOGICAL AND FUNCTIONAL SIGNS OF MUSCULAR DYSTROPHY**
Brocca L, Pellegrino MA, Moggio M, Green M, Tupler R, Bottinelli R
- 9.15 **TRANSGENIC MOUSE MODELS OF MUSCLE WASTING AND REGENERATION**
Dobrowolny G, Giacinti C, Pelosi L, Nicoletti C, Barberi L, Molinaro M, Rosenthal N, Musarò A
- 9.30 **HYALURONIC ACID BASED DRESSING AS ANTI-FIBROSIS AGENT IN THE TREATMENT OF MUSCLE INJURY**
Vindigni V, Mazzoleni F, Carraro U
- 9.45 **STRESS GENE EXPRESSION IN SKELETAL MUSCLES AFTER MODERATE EXERCISE**
Marini M, Lapalombella R, Scordari A, D'Aloia C, Margonato V, Esposito F, Veicsteinas A
- 10.00 **GENE EXPRESSION MODIFICATIONS IN RAT HEART FOLLOWING MODERATE PHYSICAL EXERCISE**
Margonato V, Veicsteinas A, Samaja M, Ventura C, Lapalombella R, Scordari A, Carinci P, Marini M
- 10.15 **CONTRACTILE PROPERTIES OF SINGLE MUSCLE FIBERS FROM NORMAL DOGS AND DOGS AFFECTED BY GOLDEN RETRIEVER MUSCULAR DYSTROPHY**
Rinaldi C, Pansarasa O, Bottinelli R, Blot S, D'Antona G
- 10.30 Break

MUSCLE DISEASES 2

Chair: A Uncini and V Sorrentino

- 11.00 **IDENTIFICATION AND FUNCTIONAL STUDIES OF MUTATION IN THE RYR1 GENE IN PATIENTS WITH MALIGNANT HYPERTHERMIA**
Rossi D, De Smedt P, Galli L, Orrico A, Franci D, Petrioli F, Lorenzini S, Tegazzin V and Sorrentino V.
- 11.15 **PROTEIN AND MOLECULAR DIAGNOSIS IN LGMD2A**
Nascimbeni AC, Fulizio L, Spinazzi M, Fanin M, Angelini C
- 11.30 **LIMB-GIRDLE MUSCULAR DYSTROPHIES TYPE 2A AND 2B: CLINICAL AND RADIOLOGICAL ASPECTS**
Borsato C, Padoan R, Stramare R, Fanin M, Angelini C
- 11.45 **AN ENDOCRINOLOGICAL AND NEUROPSYCHOLOGICAL INVESTIGATION IN MYOTONIC DYSTROPHY TYPE 1 (DM1)**
Romeo V, Squarzanti F, Mongiat M, Gasparoni P, D'Ascenzo C, Pegoraro E, Angelini C
- 12.00 **FAMILIAL IDIOPATHIC HYPERCKEMIA**
Capasso M, De Angelis MV, Pace M, Zuccarini F, Di Muzio A, Uncini A
- 12.15 **FAMILIAL IDIOPATHIC HYPERCKEMIA: A POSSIBLE PREDISPOSITION TO STATIN-INDUCED MYOPATHY**
Capasso M, Di Muzio A, De Angelis MV, Uncini A
- 12.30 **MUSCLE INFECTION IN CHRONIC HEPATITIS B**
Capasso M, Di Muzio A, Comar M, Campello C, Robuffo I, Gambi A, De Angelis MV, Uncini A

14.00 – 15.00 Meeting of the IIM Council

REGULATORY MECHANISMS OF MYOGENESIS 1

Chair: F. Protasi and G Cecchi

- 15.00 **TNF α AND AVP EXERT OPPOSITE EFFECTS ON MUSCLE REGENERATION**
Moresi V, Adamo S, Molinaro M, Coletti D
- 15.15 **CHARACTERIZATION OF MYOGENIC FACTORS DERIVED FROM A STABLE MACROPHAGE CELL LINES**
Malerba A, Scambi I, Segat D, Frigo M, De Coppi P, Gamba P, Boldrin L, Cavallini L, Bellomo R, Fanò G, Vecchiet L, Vitiello L, Baroni D
- 15.30 **3D-CULTURE OF ISOLATED CELLS AND TISSUE EXPLANTS IN RELATIVE MICROGRAVITY: NEW PERSPECTIVES AND POSSIBLE APPLICATIONS**
Steimberg N, Rovetta F, Boniotti J, Mazzoleni G
- 15.45 **MUSCLE TISSUE ENGINEERING USING SINGLE FIBRE ISOLATION TECHNIQUE: IN VITRO AND IN VIVO PROSPECTIVES**
Boldrin L, Flaibani M, Malerba A, Slanzi E, Pozzobon M, Baroni D, Messina C, Zanesco L, Gamba PG, Vitiello L, Elvassore N, De Coppi P
- 16.00 **THE OXIDATIVE DAMAGE INDUCES MODIFICATIONS OF Ca²⁺ TRANSPORT SYSTEM IN HUMAN SATELLITE CELLS**
Beccafico S, Belia S, Puglielli C, Pietrangelo T, Fulle S

- 16.15 **SPHINGOSINE 1-PHOSPHATE AFFECTS THE ELECTRIC PROPERTIES OF THE PLASMA MEMBRANE IN C2C12 MYOBLASTS**
Squecco R, Formigli L, Sassoli C, Chellini F, Quercioli F, Zecchi S, Tiribilli B, Francini F
- 16.30 **ORGANIZATION OF THE SARCOPLASMIC RETICULUM DURING MUSCLE DEVELOPMENT**
Cusimano V, Giacomello E, Sorrentino V
- 16.45 **MHC ISOFORM EXPRESSION IN BOVINE SINGLE FIBRES STUDIED AT RNA AND PROTEIN LEVEL**
Toniolo L, Maccatrozzo L, Patruno M, Mascarello F, Reggiani C
- 17.00 **MYOSIN HEAVY CHAIN ADULT ISOFORMS EXPRESSION IN DIFFERENT SKELETAL MUSCLES OF CATTLE**
Maccatrozzo L, Patruno M, Toniolo L, Reggiani C, Mascarello F
- 17.15 **FIBRE TYPES, MHC ISOFORM EXPRESSION AND SINGLE FIBRE CONTRACTILE PROPERTIES IN FELINE SKELETAL MUSCLES**
Pavan E, Toniolo L, Maccatrozzo L, Patruno M, Mascarello F, Reggiani C
- 17.30 **INSIDE MUSCLE –TENDON UNIT BY SURFACE MECHANOMYOGRAM (MMG) AND FORCE SIGNAL**
Orizio C, Gobbo M
- 18.15 Open Convention of the IIM

Monday October 18, 2004

REGULATORY MECHANISMS OF MYOGENESIS 2

Chair: G Fanò and U Carraro

- 9.00 **SARCOLEMMA IONIC CONDUCTANCE IN CULTURED MUSCLE FIBRES OF mdx, COL VI KO, dy/dy AND WT MICE**
Canato M, Pavan E, Vassanelli S, Megighian A, Reggiani C
- 9.15 **CALCIUM COMPARTMENTS AND GENE EXPRESSION ACTIVATION IN L6 MYOGENIC CELLS**
Naro F, De Arcangelis V, Coletti D, Canato M, Molinaro M, Adamo S, Reggiani C
- 9.30 **THE HETEROLOGOUS EXPRESSION OF SARCOGLYCANS**
Gastaldello S, Sandonà D, Maddaloni C, D'Angelo S, Martinello T, Chan Yi-umo, Betto R
- 9.45 **DYSTROPHIN-ASSOCIATED-GLYCOPROTEIN AND VINCULIN-TALIN-INTEGRIN-COMPLEXES DURING MYOGENESIS. TIMING APPEARANCE AND LOCALIZATION IN NORMAL HUMAN SKELETAL MUSCLE CULTURE**
Di Mauro D, Magaudda L, Mancinelli R, Trimarchi F
- 10.00 **EXPRESSION OF VASOPRESSIN RECEPTORS IN MYOGENESIS**
Alvisi M, Ciccone L, Naro F, Adamo S
- 10.15 **EXTRACELLULAR NUCLEOTIDES AFFECT MYOGENESIS**
Martinello T, Paganin M, Sandonà D, Betto R
- 10.30 **THE ROLE OF EXTRACELLULAR GTP ON DIFFERENTIATION OF C2C12 MYOBLASTS**
Pietrangelo T, Mancinelli R, Fulle S, Fanò G
- 10.45 **ROLE OF cAMP SIGNALLING IN MYOGENIC CELLS**
De Arcangelis V, Némoz G, Molinaro M, Adamo S, Naro F
- 11.00 **SPHINGOSINE 1-PHOSPHATE REGULATES MYOGENIC DIFFERENTIATION. A MAJOR ROLE FOR S1P2 RECEPTOR**
Donati C, Meacci E, Nuti F, Becciolini L, Farnararo M, Bruni P
- 11.15 **SPHINGOSINE 1-PHOSPHATE INDUCES CYTOSKELETAL REORGANIZATION IN C2C12 MYOBLASTS**
Chellini F, Sassoli C, Nosi D, Meacci E, Bruni P, Formigli L, Zecchi-Orlandini S
- 11.30 **INVOLVEMENT OF PHOSPHATIDIC ACID IN ACTIN FIBER FORMATION IN DIFFERENTIATING L6 MYOBLASTS**
Komati H, De Arcangelis V, Adamo S, Némoz G, Naro F
- 11.45 **A QUANTITATIVE STUDY ON REGULATORY MOLECULES INVOLVED IN THE POST-NATAL GROWTH OF PIG**
Caliaro F, Maccatrozzo L, Toniolo L, Reggiani C, Mascarello F, Patruno M