

Department of Biomedical Sciences, University of Padova
C.N.R. Unit for Muscle Biology and Physiopathology
European Community COMETT-TUCEP and TEMPUS JEP TMPBT
ECBF94 SEMINAR

Padova June 6, 1994

PROGRAM

PPI-PAGE of myosin isoforms. C. Janmot, Paris, France.
Analysis of structure-function relationship on skinned muscle fibers by combination of different tests. A. Mounier, Lille, France.
The use of osmotic minipumps to block impulse conduction in peripheral nerve and spontaneous activity in denervated skeletal muscle. A. Megighian, Padova.
Muscle electrostimulation: The new equilibrium state of muscle stimulated for a year at different continuous frequencies. J. Jarvis, Liverpool, U.K.
Isolation of myoblasts from fast and slow regenerating muscles of adult rats. M. Cantini, Padova
Myoglobin determination in muscle tissue extracts for Western blot dystrophin analysis. D. Franciotta, Pavia
Rapid detection of human dystrophin gene mutations by multiplex semi-quantitative PCR (MSQ PCR). G.A. Danieli, Padova
Rapid viral diagnosis: the use of PCR for detection and typing of HPV. F. Bevilacqua, Padova
Straightforward identification of MHCemb by peptide mapping. M. Sandri, Padova
Electroendosmotic preparative electrophoresis: A one-step method for the purification of nearly all the proteins from complex mixtures. A. Peruffo, Udine
Concentration and quantification of SDS-proteins. C. Rizzi, Padova

Organizer: Prof. U. Carraro

Place of the Seminar: Dipartimento di Scienze Biomediche Sperimentali, Via Trieste 75 I-35121 PADOVA, tel. 049-8286510, FAX 8286576.

European Community COMETT-TUCEP and TEMPUS JEP TMPBT
Dipartimento di Scienze Biomediche Sperimentali dell'Università di Padova
C.N.R. Centro di Studio per la Biologia e Fisiopatologia Muscolare

SUMMER COURSE ON PATHOPHYSIOLOGY OF SKELETAL MUSCLE

ECBF94

Electrophoresis and Chromatography of Biopolymers and their Fragments:
Biochemical markers of muscle trophism, plasticity and damage/repair

Padova, June 7-11, 1994

Muscle cryostat sections and cell cultures wielding. SDS PAGE. Non-denaturant and acidic electrophoretic methods. PPI-PAGE. Isoelectrofocussing. 2D PAGE: O'Farrell and other hybrid methods. SDS PAGE Peptide Mapping. Elution of polypeptides from polyacrylamide gel. Electroendosmotic Preparative Gel Electrophoresis (EPGE). Quantitation of proteins solubilized in SDS-mercaptoethanol. Recovery of SDS-proteins by KDS. Staining, identification and characterization of polypeptides on PAGE slabs: Prestaining, Coomassie blue, Silver stain, KDS, Immunoblotting, Overlay techniques, Stains all, Photolabelling, Enzyme activities, Chemical groups. Mono- and bi-dimensional densitometry. Orthogonal Densitometry. HPE: High Performance Electrophoresis (Capillary Electrophoresis). FPLC. Separation and sequencing of PCR-amplified DNA segments by gel electrophoresis. Rapid viral diagnosis: the use of PCR for detection and typing of HPV. In situ hybridization. Analysis of structure-function relationship on skinned muscle fibers by combination of different tests: Slack test (Vmax), Ca and Sr affinities, myosin and troponin electrophoresis. Muscle electrostimulation: The new equilibrium state of muscle stimulated for a year at different continuous frequencies.

Organizer: Prof. U. Carraro.

Tutors: R. Betto, D. Biral, U. Carraro, C. Catani, A. Curioni, A. Dal Belin Peruffo, L. Dalla Libera, G.A. Danieli, C. Janmot, J. Jarvis, A. Megighian, A. Mounier, I. Mussini, C. Rizzi, M. Sandri.

Place of the Tutorials: Dipartimento di Scienze Biomediche Sperimentali, Via Trieste 75 I-35121 PADOVA, tel. 049-8286510, FAX 8286576

Registration Fees: L. it. 500.000 (five hundred thousand)

ECBF93 will be organized in: Bench practices, Tutorials and a One-day Seminar (June 6, 1994). Participants will have the opportunity to openly discuss their research topics and to perform analyses on their own samples. A bench-top manual (in Italian) and a certificate will be provided to participants.

Applications: To be sent to Prof. Ugo Carraro, Dipartimento di Scienze Biomediche Sperimentali, Via Trieste 75, I-35131 Padova, before April 30, 1994. A short Curriculum and notice of specific knowledge and experience must be included. Seven participants will be Junior Researchers or pre-doctors, three participants will be selected among Seniors who need to update their experience or learn new techniques. Participants will be asked to pay Registration Fees after acceptance of their application, but before the Tutorials.

European Society for Muscle Research

XXIII EUROPEAN MUSCLE CONGRESS

Ruhr-University, Bochum, Germany

12 - 17 September, 1994

Preliminary Scientific Programme:

1. EC-Coupling; 2. Muscle Structure; 3. Thin Filament / S1; 4. Signal Transduction in Muscle Growth and Motility; 5. Smooth Muscle; 6. Cardiac Muscle; 7. Cytoskeleton of Muscle Cell; 8. Muscle Imaging

There will be invited lectures, short talks based on submitted abstracts, and posters. Much time will be allotted to the poster sessions.

Organizers: L.M.G. Heilmeyer, R. Goody, H.G. Mannherz

Fees: DM 190 for Participants in staff position from Western countries, and DM 90 for Western students; additionally DM 10 as a membership contribution to the European Society for Muscle Research. There will be no fee for Eastern students. The fee covers the programme and abstract book, publication of the abstract as well as social events and does not include accommodation and meals (meals will be available at moderate prices in the University cafeterias and restaurants).

Hotel reservations will be arranged by the Verkehrsverein Bochum, from which you will receive a registration card for your special orders and wishes.

Pre-registration form (please copy, as you need) should be sent to: Prof. L.M.G. Heilmeyer, Jr., Institut für Physiologische Chemie, Ruhr-Universität Bochum, D-44780 Bochum, Germany

Pre-Registration Form (non committal)

Family Name First Name

Date of birth Position: Student Post doctoral Academic staff

Industry Other Institution

Mailing address: Street

Postal code City State

Tel Fax E-Mail

Tentative title of my contribution

.....

Date Signature

For further information: XXIII EMC, Congress Office

Institut für Physiologische Chemie, Ruhr-Universität Bochum,

D-44780 Bochum, Germany. Tel: +49 (234) 700.2428; Fax +49 (234) 709.4193;

E-mail: Ludwig Heilmeyer @ ruba.rz.ruhr-uni-bochum-d400.de

International Workshop on

**CARDIAC GROWTH & REGENERATION
A NATO ADVANCED RESEARCH WORKSHOP**

Viterbo (Italy) 19-24 June 1994

Topics

Cardiac muscle cell division and determination; Cardiac Hypertrophy; Angiogenesis; Growth Factors and Cardiac Growth; Gene Transfer to Study Cardiac Growth

For further information, preliminary program and Abstracts forms, please contact:

M. Promontorio

Tuscia Congressi Srl

Via Bassano del Grappa, 4, 00195 Rome (Italy)

tel: +39 6 8080892; fax: +39 6 8080999; telex: 6121421

Engineering Foundation

**NEURAL PROSTHESES:
MOTOR SYSTEMS IV**

Deer Creek Resort and Conference Center, Mt. Sterling, Ohio

July 23-28, 1994

For further information, please contact:

Engineering Foundation Conferences

345 East 47th Street

New York, NY 10017

Fax: 001 212 7057441

SARCOMERIC MYOSINS: STRUCTURE, FUNCTION AND DYSFUNCTION

San Servolo, Venice (Italy), September 22-24, 1994

Topics of the workshop: Atomic structure of myosin crystals; Myosin isoforms in smooth and striated muscles; Myosin heavy chain and light chain genes; Myosin isoforms and contractile function: single fibre studies and in vitro motility assays; Myosin heavy chain and light chain mutations: familial hypertrophic cardiomyopathy.

Lodging, meals and registration fee will cost approximately Lit. 500.000 (five hundred thousand).

A brochure containing detailed information on the Symposium, program registration, abstract kit, accommodation, social program, etc. will be available on request to one of the Organizers:

Stefano Schiaffino, University of Padova, C.N.R. Unit for Muscle Biology and Physiopathology, Via Trieste 75, I-35121 Padova (Italy) fax +39 49 8286576

or

Carlo Reggiani, University of Pavia, Institute of Human Physiology, Via Forlanini 6, I-27100 Pavia (Italy) fax +39 382 423136

4th INTERNATIONAL MUSCLE SYMPOSIUM

March 23rd - 25th, 1995, Zurich

A tradition was established with the organization of the *Vienna Muscle Symposium* meeting every five years. The success of the former three meetings in Vienna was based mainly on the exchange of knowledge and ideas between international scientists presenting basic and experimental research and clinicians demonstrating the application of muscle transplantation. This tradition will be continued at the *4th International Muscle Symposium in Zurich 1995*.

We have the great pleasure in inviting you to attend this meeting with colleagues from different specialities, who are interested in functional neuromuscular reconstructions.

Topics of the Scientific Program

- Basic and experimental research on muscle transplantation
- Factors with influence on regeneration
- Morphology and choice of muscle transplants
- Neurotization of the muscle
- Neuromuscular reconstruction in the paralyzed face
- Functional muscle transplantation in extremities
- Reconstruction of sphincter muscle function
- Functional electrostimulation of muscles
- Documentation of muscular function and evaluation of functional results
- New indications for functional muscle transplantation
- Free papers

Congress Secretariat

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Second Announcement - Call for Papers

A further brochure containing more detailed information on the Symposium, program registration, accommodation, social program, etc. will be available in spring of 1994.

Name

Address

..... tel fax

I wish to present a paper (topic or preliminary title)

.....

YES, I wish further information

.....
Signature

Molecular and Cell Biology of Muscular Dystrophy

Edited by Terence Partridge

Published by Chapman & Hall
2-6 Boundary Row, London SE1 SHN, (UK)
XVi, 1-344, 1993
ISBN 0412 43440 7

Recent advances in molecular and associated cell biological technology have made skeletal muscle disease particularly important and exciting area of research. This book gives a series of accounts of various aspects of the remarkable breakthrough which has been achieved in our understanding of the Duchenne/Becker muscular dystrophies and the consequences and ramifications of this breakthrough. Current research literature describing the advances being made in molecular and cell biological research is quite incomprehensible to the majority of clinical neurologists, pediatricians and many basic scientists with marginal interests in the muscular diseases, being based on disciplines remote from their training and being heavily laden with acronyms and jargon. The book remedies this problem by presenting the prototype example of the "reverse genetic" approach as successfully applied to Duchenne muscular dystrophy in a generally intelligible manner and by exploring its far-reaching practical consequences in both clinical diagnosis and research.

Basic and Applied Myology:

Perspectives for the 90's

Proceedings of a Conference held in Abano Terme,
Padova (Italy), May 30 - June 1, 1991.

Edited by Ugo Carraro and Stanley Salmons

published by UNIPRESS Padova
Via C. Battisti 231, I-35121 Padova (Italy), XXI, 1-460, 1991

- Chapter 1. Myosin*
 - Chapter 2. Power Output of Muscle Engine*
 - Chapter 3. Muscle Plasticity*
 - Chapter 4. Injury and Repair Induced by Muscle Activity*
 - Chapter 5. Reliable Methods for BAM*
 - Chapter 6. Electrophrenic Pacing*
 - Chapter 7. Dynamic Cardiomyoplasty*
 - Chapter 8. Skeletal Muscle Powered Neosphincter*
 - Chapter 9. Muscle Stimulation in Rehabilitation*
 - Chapter 10. Muscle Transplantation*
 - Chapter 11. Muscle Driven Devices for Cardiac Assistance*
-

The book provide an opportunity for clinicians to learn about some of the interesting new directions currently being followed in skeletal muscle research and for basic scientists to familiarise themselves with emerging medical applications that will continue to call for a substantial input from pure research. This book is a good example of the productive association between basic research in myology and its practical application. In many cases the methodologies are complex and, while the prospects are exciting, the authors are properly cautious about the research that still remains to be done before techniques as these can be implemented safely and on the necessary scale.

MYOLOGY NEWS

Next Issues of B A M

BAM 4 (1), 1994

Guest Editor: Stanley Salmons

EDITORIAL

Stanley Salmons: *Muscle damage*

ARTICLES

Exercise-induced muscle damage: recent developments

PR Bar, JB Rodenburg, RW Koot and GJ Amelink

An in situ single skeletal muscle model of contraction-induced injury: mechanistic interpretation

JA Faulkner, SV Brooks and E Zerba

Biomechanical basis of muscle cellular damage

RL Lieber and J Friden

Structural basis of muscle cellular damage

J Friden and RL Lieber

Intracellular mechanisms involved in damage to skeletal muscle

A McArdle and MJ Jackson

Damage to human muscles by eccentric exercise or reperfusion after ischaemia: a common mechanism?

DA Jones and JM Round

Stimulation-induced muscle damage

J Lexell, JC Jarvis, DY Downham and S Salmons

The relationship of ⁹⁹Tcm-pyrophosphate uptake to muscle damage in chronically stimulated rabbit muscles

VM Cox, JC Jarvis, H Sutherland and S Salmons

Clinical aspects and basic science of muscle strain injuries

TM Best, CT Hasselman and WE Garrett, Jr

Muscle damage in myopathies: the role of immunohistochemistry in the recognition of pathogenetic mechanisms

TR Helliwell

BAM 4 (2), 1994

Guest Editors: T Bajd and R Jaeger

EDITORIAL

T Bajd and R Jaeger: *FES for Movement Restoration*

ARTICLES

Modification of a cochlear stimulation system for FES application

P Strojnik, P Meadows, JH Schulman and D Whitmoyer

A fully implantable ECG triggered multichannel nerve stimulator

H Lanmuller, W Mayr, S Sauermann, G Schnetz, H Thoma and E Unger

Myoelectric and force characteristics in transcutaneous isometric FES

J Mizrahi, E Isakov and Z Suzak

Isometric twitch contractions of selectively stimulated muscles in dog's leg

J. Rozman, B Zorko and T Nghiem

Normalized muscle bending movements along the femur and tibia bones in sagittal plane

M Munih, A Kralj and T Bajd

The influence of stimulation pattern on force and fatigue profiles in FES-induced quadriceps contractions in paraplegics

HM Franken, PH Veltink, A van Harn and HBK Boom

NMES in SCI: comprehensive Management of muscle performance in complete and incomplete paralysis

JM Campbell, PM Meadows, J Monlux, RL Waters and C. Wederich

Aumenting cough by FES in tetraplegia: a comparison of results at three clinical centers

R Jaeger, WE Langhein and AR Kralj

R Jaeger: *Epilogue*

Dear Colleague,

The progressive reduction of research resources in Europe at national level calls for a major effort to generate funding at EC level, since the latter is fortunately in expansion. Both the basic and applied research which are actually coordinated by the EC CA HEART may be financed by at least four EC programs: Biomed, Human Capital and Mobility, Biotechnology and Tempus. Two options are open: 1. Maintain the actual framework of the HEART for coordination, and 2. Include our activities in a more general topic for funding, at least in part, research and researchers.

To achieve the second goal, I am submitting for your consideration the following proposal for the European Network on Applied Myology, which obviously reflects my primary research interests, but which is at the same time original and promising at both research and application levels.

The European Network of Applied Myology

I am really confident that the knowledge accumulated during the last twenty years in basic myology is offering to the medical and non-medical community several options to give answers to very common social demands. A few examples are enough to convince sceptics and offer the draft of an organizational model: 1. Gene therapy via myoblasts; 2. Skeletal muscle as an energy source for implantable devices; 3. Functional muscle transplants and rehabilitation technology; 4. Animal breeding and misconducts controls.

Even a few considerations on the fine tuning of the accumulated knowledge needed to implement the potentials of each of these approaches demand the conclusion that common research is needed and that cross-fertilization is "a must" and may obviously be expected from international (European, *in primis*) cooperation. As to the implementation of the proposal, I suggest that we concentrate our efforts on three goals and prepare applications to: 1. **Human Capital and Mobility for an European Network of Laboratories of Excellence on Applied Myology**; 2. **Biotechnology II** for *ad hoc* studies in subtopics, but as part of a general effort to support Applied Myology; 3. **TEMPUS II** for a Polish program for the Teaching of Applied Myology to both pre- and post-docs as part of a more general effort to establish a Curriculum in Biomedical Sciences. Of course, this would produce as a by-product Curricula for the European counterparts. For this last goal the large majority, if not all, the participants to the EC CA HEART are needed to develop the Cardiac Assistance topic.

Several Institutions are open to participate to the proposal, but your interest and cooperation is essential, and so let me hope that you would take seriously the potentials we may exploit in a common effort.

We have six months to prepare the application, then I am looking forward to your earliest replay (by fax +39-49-8286510) suggesting either subtopics or new goals.

Sincerely,

Ugo Carraro

Co-Organizer of The European Network of Applied Myology

Rewiewers for Basic and Applied Myology

Bam is deeply indebted to the following, who have generously given their time and special knowledge for the review of manuscripts

M.A. Acker, Johns Hopkins University Hospital, Baltimore, U.S.A.
 C. Angelini, Clinica Neurologica, University of Padova, Italy
 G. Arpesella, Policlinico S. Orsola, Bologna, Italy
 C. Baeten, Academic Hospital Maastricht, The Netherlands
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N.S. Williams, The London Hospital, U.K.
M. Yacoub, National Heart & Lung Institute, London, U.K.

BAM
Basic and Applied Myology

ISSN 1120 9992

Content of Volume 1, 1991

Vol 1 (1)

EDITORIAL	4	BAM: Is a new professional activity arising? U Carraro
REVIEW ARTICLE	5	<i>Skeletal Muscle for Biomechanical Circulatory Support.</i> JC Chachques, PA Grandjean, I Bourgeois and A Carpentier
MAIN ARTICLES	13	<i>Differentiating skeletal muscle cells initially express a ventricular myosin heavy chain.</i> DL Bourke, SR Wylie, M Wick and E Bandman
	23	<i>Characterization of a ventricular V1 myosin isoform in rabbit masticatory muscles. Developmental and neural regulation.</i> A d'Albis, C Janmot, JC Mira and R Couteaux
	35	<i>Morphometric analysis and oxygen consumption of developing mouse diaphragm muscle.</i> W Kilarski, A Gorecki and A Gorlich
	43	<i>Electroendosmotic preparative gel electrophoresis and peptide mapping of slow and three fast myosin heavy chains.</i> C Rizzi and U Carraro
	55	<i>The longitudinal distribution of isomyosins in normal and regenerating extensor digitorum longus of the rat.</i> PD Moens and G Marechal
	63	<i>Dissociation between metabolite levels and force fatigue in the early stages of stimulation-induced transformation of mammalian skeletal muscle.</i> CN Mayne, JC Jarvis and S Salmons
	71	<i>Low frequency nerve stimulation of rat EDL muscle: morphology of myofibers and neuromuscular junctions.</i> I Mussini, L Marchioro
	83	<i>Early latissimus dorsi stimulation after cardiomyoplasty procedure: a preliminary study.</i> R Lorusso, C Lucas, F van der Veen, J Habets, T van der Nagel, M Havenith, HJ Wellens and OC Penn
	89	<i>Accessory skeletal muscle ventricles for circulatory support: early experience with SMV's in continuity with the circulation.</i> R Higgins, G Letsou, W Detmer, M Dewar, J Hogan, D Carter, S Ariyan and J Eleftheriades
	95	<i>Four-point walking patterns in paralyzed persons.</i> T Bajd and A Kralj
MYOLOGY NEWS	101	Calendar of events. Methods, Products & Materials
	110	Information for Authors

Vol 1 (2)

REVIEW ARTICLES	121	<i>Calreticulin: a functional analogue of calsequestrin?</i> M Michalak and RE Milner
	129	<i>Skeletal muscle ventricles for cardiac assistance.</i> R Ruggiero, H Niinami, TL Hooper, A Pochettino, RL Hammond, H Lu, AD Spanta, H Nakajima, H Nakajima, JD Mannion, MA Acker, CR Bridges, DR Anderson, M Colson, A Kantrowitz, S Salmons and LW Stephenson
MAIN ARTICLES	139	<i>The effect of low dose dexamethasone on skeletal muscle regeneration in vivo.</i> CA Mitchell, MD Grounds and JK McGeachie
	145	<i>Dystrophin and dystrophin homologue in the uterus: diversity of dystrophin isoforms in smooth muscles.</i>

	D Medioni, F Pons, J Leger, M Anoal, D Mornet, JL Viala and JJ Leger
153	<i>Myosin isoforms in white, red and pink muscles of the teleost Sea Bass (<i>Dicentrarchus Labrax</i>, L.).</i>
	V Bassani and L Dalla Libera
157	<i>Myothermic calibration for skeletal muscle.</i>
	AW Stewart
163	<i>Simultaneous heat and fluorescence measurements on mammalian slow-twitch skeletal muscle.</i>
	AW Stewart
177	<i>Function and metabolism of velopharyngeal muscle in normal and cleft palate patients.</i>
	A Altorjay, I Altorjay, K Sass and I Sohar
MYOLOGY NEWS	187 Calendar of events; Books
	199 Information for Authors

Vol 1 (3)

REVIEW ARTICLE	209	<i>Membrane phosphorylation in vascular and cardiac muscles: comparative analysis and functional role.</i>
		AE Antipenko
MAIN ARTICLES	237	<i>Effect of hypothyroidism on the expression and transitions of some developmental isoforms of troponin T in rat striated muscles.</i>
		MA Sabry and GK Dhoot
	241	<i>Myotrophic action of an anabolic steroid (nandrolone decanoate) in normal, but not in chronically stimulated, rabbit limb muscles.</i>
		S Salmons
	253	<i>Effect of cardiomyoplasty on left ventricular diastolic function.</i>
		EI Cabrera Fischer, JC Chachques, A Garcia, E de Fortezza, F Harb, C. Cron and A Carpentier
	259	<i>Restoration of intestinal continuity after rectal excision by electrostimulated smooth and striated muscles.</i>
		M Pescatori, F Caracciolo and G Anastasio
MYOLOGY NEWS	263	Calendar of events; Books
	275	Information for Authors

Vol 1 (4)

MAIN ARTICLES	285	<i>Slow myosin heavy chains in cat jaw and limb muscles are phenotypically distinct: expression of jaw-specific slow myosin phenotype in regenerated and chronically stimulated jaw muscles.</i>
		JFY Hoh, S Hughes, ML Walker, LHD Kang and AW Everett
	295	<i>Rapid adaptive growth of the tibialis anterior muscle of the rabbit in response to mechanical stimulation.</i>
		JP Canavan, J Easton, G Goldspink and DF Goldspink
	305	<i>On the mechanism of fat accumulation in wrapped latissimus dorsi muscle (Cardiomyoplasty), and the effect of chronic L-Carnitine administration.</i>
		M-L Dubelaar, CMHB Lucas and WC Hulsmann
	311	<i>Biotransformation of skeletal muscle used for long-term dynamic aortomyoplasty.</i>
		AJ DelRossi, AC Cernaianu, RA Vertrees, JH Cilley Jr, WA Baldino, RC Camishion
	317	<i>Morphological properties of skeletal muscle in spastic paraplegia.</i>
		R Scelsi and S Lotta
MYOLOGY NEWS	327	Calendar of events; Books
	339	Acknowledgments
	341	Content of Volume 1
	345	Author index
	347	Subject index

Content of Volume 2, 1992

Vol 2 (1)

REVIEW ARTICLE	5	<i>The influence of revascularisation, vasoactive drugs and exercise on the regeneration of skeletal muscle, with particular reference to muscle transplantation</i> P Roberts and JK McGeachie
MAIN ARTICLES	17	<i>Identification of multiple myotube and myosin heavy chain types during embryonic development of chicken skeletal muscles</i> K Williams, R Zak and GK Dhoot
	27	<i>Immunofluorescent localization of vimentin and desmin intermediate filaments in regenerating rat skeletal muscle</i> AM Kaminska and A Fidzianska
	33	<i>In vivo effect of triiodo-L-Thyronine on sarcolemmal Ca^{2+}, Mg^{2+}-Adenosine Triphosphatase in rats</i> JZ Szabo, K Nosztray, E Varga, K Guba and AJ Szentmisklosi, J Szegi
	39	<i>Relation between the changes in the turnover rate of contractile proteins, activation of satellite cells and ultrastructural response of neuromuscular junctions in the fast-oxidative-glycolytic muscle fibers in endurance trained rats</i> T Seene and M Umnova
MYOLOGY NEWS	47	Calendar of events; Books
	57	Acknowledgments
	59	Errata
	61	Information for Authors

Vol 2 (2)

EDITORIAL	71	<i>ECBF93 Seminar, a cell biology tutorial for basic and applied myologists: Invitation and call for papers.</i> U Carraro
REVIEW ARTICLE	73	<i>Skeletal muscle counterpulsation</i> DVE Cumming, SS Shah, R Logan Sinclair, CW Pattison, JR Pepper and MH Yacoub
MAIN ARTICLES	83	<i>Actin isoform and intermediate filament protein expression in human developing skeletal muscle</i> ML Bochaton-Piallat, P Ropraz, G Gabbiani, G Santeusano, G Palmieri, S Schiaroli and LG Spagnoli
	89	<i>Temperature-induced precocious transitions of myosin heavy chain isoforms in the white muscle of the arctic charr (<i>Salvelinus alpinus</i>, L.)</i> I Martinez and G. Wibeche Pettersen
	97	<i>Myosin heavy chains in striated muscle after immobilization</i> J Szczepanowska, A Jakubiec-Puka
	107	<i>Small and large scale preparative purification of myosin light and heavy chains by selective KDS precipitation of myosin subunits: yield by SDS PAGE and quantitative orthogonal densitometry</i> M Sandri, C Rizzi, C Catani and U Carraro
	115	<i>Effect of treatment with an anabolic steroid (Nandrolone decanoate) on physiological and morphological characteristics of unconditioned and conditioned canine latissimus dorsi muscles</i> E Hohenhaus, A Pochettino, RL Hammond, H Niinami, H Lu, AD Spanta, RJ Pluymers, JC Jarvis, S Salmons, and LW Stephenson
	127	<i>Total and regional blood flows in latissimus dorsi muscle transplanted into the rectus femoris site in rabbits.</i> HW Burton, TR Stevenson and KP Gallagher

MYOLOGY NEWS	135	Calendar of events; Books
	146	Information for Authors

Vol 2 (3)

EDITORIAL	157	<i>Summer course on pathophysiology of skeletal muscle.</i> U Carraro
MAIN ARTICLES	159	<i>Aortic counterpulsation with a valved skeletal muscle ventricle: short-term studies of coronary flow and left ventricular function</i> TL Hooper, RL Hammond, H Niinami, H Lu, H Nakajima, R Ruggiero, H Nakajima, and LW Stephenson
	169	<i>Effect of Mg-ADP on the structure of actin in the F-actin-myosin subfragment 1 complex</i> YS Borovikov and VP Kirilina
	175	<i>Differential expression of myosin in developing muscles of urodelan amphibians</i> A Saadi, CL Gallien and C Chanoine
	183	<i>Characterization of sheep semimembranosus muscle and associated satellite cells: expression of fast and slow myosin heavy chain</i> G Molnar and MV Dodson
	191	<i>Rat myogenesis in vitro: MHC1 expression in myotubes co-cultured with either spinal cord or dorsal ganglia explants</i> M Cantini, ML Massimino, S Sivieri, A Cossarizza and C Catani
	203	<i>Expression of myogenic proteins in vitro in myoblasts and myotubes of normal and dystrophic muscles of (ReJ 129) mice</i> L Brocks, P van der Ven and AM Stadhouders
	213	<i>The role of myogenic lineages and extrinsic factors in development of muscle cell phenotype in regenerating skeletal muscles</i> P Kyprianou, K Krishan and GK Dhoot
	221	<i>Myosin expression in heterotopic autografts of avian skeletal muscle following short-term and long-term regeneration</i> TW Miller and RS Hikida
COMMUNICATIONS	235	<i>Rapid somatic growth and muscle damage in a salmonid fish</i> JS Christiansen, I Martinez, M Jobling and AB Amin
MYOLOGY NEWS	241	Calendar of events; Books
	243	Information for Authors

Vol 2 (4)

EDITORIAL	253	<i>Report on the 23rd Janez Plecnik memorial meeting</i> I Erzen
REVIEW ARTICLES	255	<i>Dystrophin-significance for diagnostics of neuromuscular diseases</i> M Meznaric-Petrusa, I Erzen and J Zidar
	261	<i>Pathophysiology of the glucocorticoid myopathy: a short review</i> Z Grubic and M Brank
MAIN ARTICLES	269	<i>Impact of deletion screening in differential diagnosis of Becker and limb-girdle muscular dystrophies</i> B Peterlin, J Zidar and N Zupancic
	271	<i>Multifactorial pathogenesis of rhabdomyolysis in alcoholic leading to acute renal failure: Case report with a review of etiologic factors</i> T Rott
	277	<i>Histochemical and morphometric characteristics of the vastus lateralis muscle in children</i> E Snoj-Cvetko and I Erzen
	285	<i>Magnetic resonance imaging of muscular dystrophies and neuropathies</i> D Suput, A Zupan, A Sepe and F Demsar
	291	<i>Interferon inhibits myogenesis in vitro and in vivo</i> KL Garrett, MD Grounds, MAL Maley and MW Beilharz

	299	<i>Expression of troponin T isoforms in developing rat and guinea pig hearts</i> P Kyprianou and GK Dhoot
	303	<i>Sex difference in reinnervation of soleus muscle in dystrophic (dy2j) mice</i> G Desyprys and DJ Parry
	309	<i>Relationship between an endogenous calcium binding protein (S-100ab) and Ca^{2+} transport in frog skeletal muscle</i> G Fanò, V Marsili, F Protasi, MA Mariggiò, S Fulle, E Cecchini and G Menchetti
	317	<i>Potassium channels in the cardiomyocyte sarcolemma: Opening under the influence of hypoxia</i> AP Babenko, VO Samoilov and S Kazantseva
MYOLOGY NEWS	325	Calendar of events;
	326	Acknowledgments
	328	Content of Volume 2
	332	Author index
	334	Subject index
	336	Information for Authors

Content of Volume 3, 1993

3 (1), 1993

Hormone regulation of skeletal muscle

Anne d'Albis, Guest Editor

		Hot BAM One: Section I
EDITORIAL	5	<i>Hot BAM One - Hormone regulation of skeletal muscle</i> A d'Albis
REVIEW ARTICLES	7	<i>The hormonal control of myosin isoform expression in skeletal muscle of mammals (A review)</i> A d'Albis and G Butler-Browne
	17	<i>Thyroid hormones and muscles bioenergetics</i> P Kaminsky, M Klein and M Duc
MAIN ARTICLES	23	<i>Identification of thyroid hormone receptor transcripts in muscle of a perennibranch amphibian (Proteus anguinus)</i> T Duong Ho Huynh, CL Gallien, JP Durand and C Chanoine
	27	<i>Expression of α-actin genes in developing skeletal muscles of hypothyroid rats</i> S Alonso, GE Lyons, E Prost, I Garner, AM Kelly and M Buckingham
	37	<i>Neural and thyroidal control of IIB myosin heavy chain and its mRNA during development</i> GE Lyons, B Gambke, AM Kelly and NA Rubinstein
	47	<i>Reversal of hypothyroid rat soleus myosin isoform and shortening velocity changes</i> A Montgomery, K Schwartz and C Wisnewsky
	59	<i>Effects of thyroid hormone on growth and differentiation of L6 muscle cells</i> A Muller, MJ Zuidwijk and C van Hardeveld
MYOLOGY NEWS	69	Calendar of events; Books; BAM: Next Issues
	75	Information for Authors

3 (2), 1993

Hormone regulation of skeletal muscle

Anne d'Albis, Guest Editor

		Hot BAM One: Section II
ARTICLES	85	<i>The role of thyroid hormones in the growth of striated muscles in the neonatal rat</i> JP Canavan, J Holt and DF Goldspink

	93	<i>Inhibition of carbonic anhydrase III exerts paradoxical influences on the soleus muscle of hypo and hyperthyroid rats</i> RR Tremblay, F Gaumont, J Milot, B Candas and CH Coté
	103	<i>Increased connective tissue in skeletal muscles of hypophysectomised rats treated in vivo with human growth hormone</i> BH Moreland, R Derek Wood, CM Ayling and D Schulster
	111	<i>Muscle fibre size in the palmaris longus and anterior head of the biceps femoris during growth: effects of hypophysectomy, food restriction and muscle function</i> EJ Stark, AV Everitt, RA Armstrong and CD Shorey
	121	<i>Androgen control of myofiber number and size in the rat levator ani muscle</i> C Tobin, Y Joubert and MC Lebart
	133	<i>Metabolic effects of steroid hormones in skeletal muscle</i> A Holmang
	143	<i>Hormones and cytokines in the regulation of muscle proteolysis during sepsis</i> P-O Hasselgren
MYOLOGY NEWS	157	Calendar of events; Books; BAM: Next issues
	163	Information for Authors

3 (3), 1993

EDITORIAL	172	<i>The hot Section on BAM methods</i> L Dalla Libera:
ARTICLES	173	<i>Satellite cells isolated from sheep skeletal muscle are not homogeneous</i> G Molnar and MV Dodson
	181	<i>Heterogeneity of slow skeletal myosin heavy chain in foetal rat skeletal muscles</i> GK Dhoot and A d'Albis
	191	<i>Skeletal muscle culture conditioned media influence the DNA synthesis of tumor cells</i> P Arslan, ML Massimino and M Cantini
	195	<i>Myosin light chain kinase as a marker for smooth muscle: a polyclonal antibody study</i> M Mastroianni, GB Ambrosio, G Scannapieco, G Vescovo and L Dalla Libera
	201	<i>Mechanical damage and inflammation of skeletal muscles in the disease course of muscular dystrophic mice</i> T Totsuka, K Watanabe, I Uramoto, M Nagahama, T Kumagai, T Yoshida, K Shimada and T Mizutani
	211	<i>Effects of a pre-operative physical training on latissimus dorsi muscle in patients undergoing dynamic cardiomyoplasty: a preliminary report</i> R Lorusso, V Borghetti, M De Fabritiis, R Scelsi, U Carraro and O Alfieri
		Hot Section: BAM Methods
	219	<i>Analysis of structure function relationship on skinned muscle fibers by combination of different tests: Ca and Sr affinities, slack test (Vmax), myosin and troponin electrophoresis</i> Y Mounier, L Stevens and C Cordonnier
	221	<i>The use of osmotic minipumps to block impulse conduction in peripheral nerve and spontaneous activity in denervated skeletal muscle</i> A Megighian, D Danieli Betto and K Rossini
	225	<i>Isolation of myoblasts from fast and slow regenerating muscles of adult rats</i> M Cantini and U Carraro
	229	<i>Rapid detection of human dystrophin gene mutations by multiplex semi-quantitative PCR (MSQ PCR)</i> FA Saad, F Galvagni and GA Danieli
	233	<i>Myoglobin determination in muscle tissue extracts for Western blot dystrophin analysis</i> D Franciotta, E Zardini, GV Melzi d'Eril and A Belardinelli

	235	<i>Separation by gel electrophoresis under non dissociating conditions (PPi PAGE) of the native isoforms of myosin</i> A d'Albis and C Janmot
	239	<i>Electroendosmotic preparative electrophoresis: A one-step method for the purification of nearly all the proteins from complex mixtures</i> A Curioni, A Dal Belin Peruffo and L Furegon
	245	<i>Straightforward identification of MHCemb by peptide mapping</i> M Sandri, C Rizzi, A Bruson and C Catani
MYOLOGY NEWS:	251	Calendar of events; Books; BAM: Next issues
	258	Information for Authors

3 (4), 1993

Skeletal Muscle-Cardiac Assist in The Americas

Larry W. Stephenson, Guest Editor

EDITORIAL	267	<i>Hot BAM Two - Skeletal muscle-cardiac assist in America</i> LW Stephenson
ARTICLES	271	<i>Skeletal muscle ventricle:1993 up date</i> S Isoda, H Nakajima, RL Hammond, GA Thomas, H Lu, HO Nakajima, AD Spanta and LW Stephenson
	281	<i>Clinical and experimental effects of the unstimulated (static) right Latissimus Dorsi cardiomyoplasty on left ventricular function</i> RR Lazzara, DR Trumble, JA Magovern and GJ Magovern
	289	<i>Cardiomyoplasty in 26 patients with up to six years follow-up</i> DM Braile, MJF Soares, MCZ Rodrigues, SL Ramin, RS Thevenard, M Zaiaantchick and DRS Souza
	303	<i>Cardiomyoplasty: our experience after six years</i> HE Almada, L Molteni and RF Ferreira
	307	<i>Dynamic cardiomyoplasty: now and the future</i> AP Furnary, JS Swanson and A Starr
	313	<i>Difficulties in the assessment of cardiac function in patients after cardiomyoplasty</i> HR Levin, PW Cho, J Tsitlik and MA Acker
	317	<i>Ventricular and skeletal muscle function in cardiomyoplasty: experimental observations</i> DT George, JD Sink and WP Santamore
	329	<i>"Indirect myocardial revascularization" Historical development and current progress. A potential application of cardiomyoplasty</i> V Blood, M Magno and J Mannion
	341	<i>Beyond transformation: skeletal muscle satellite cell as a possible source of neomyocardium</i> D Marelli, D Greentree and RC-J Chiu
MYOLOGY NEWS:	349	Calendar of events; Books; BAM: Next issues;
	356	Acknowledgements
	358	Cumulative Content of Volumes 1-3
	365	Cumulative Author Index of Volumes 1-3
	368	Cumulative Subject Index of Volumes 1-3
	372	Information for Authors