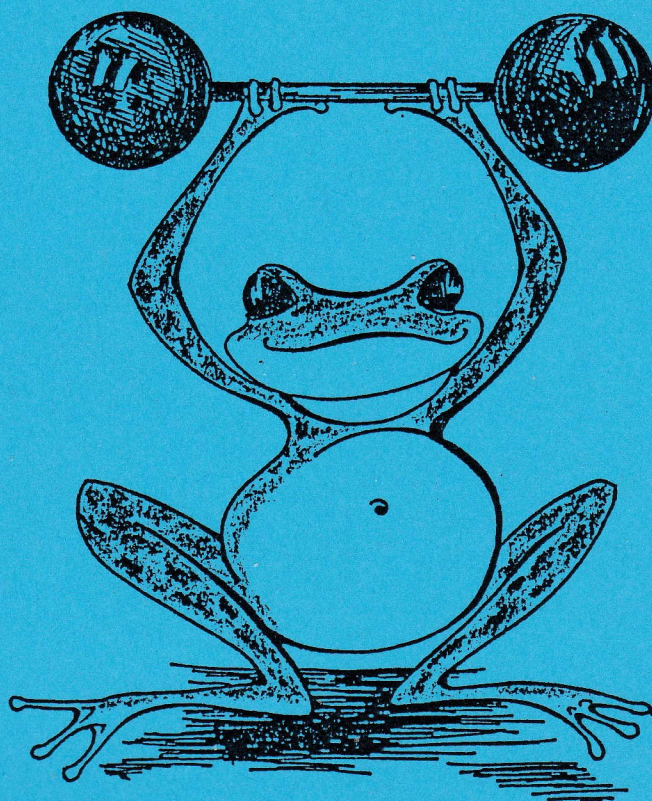


MARECHAL



**XIXth European Conference on
MUSCLE CONTRACTION AND CELL MOTILITY**



September 10th – 13th, 1990
Brussels, Belgium

XIXth European Conference
on Muscle Contraction and Cell Motility
10 - 13 th September 1990
Brussels Belgium

HONORARY PRESIDENT



Organizer of the EMC (Liege, 1972)

ORGANIZING COMMITTEE

**XIXth European Conference on
MUSCLE CONTRACTION AND CELL MOTILITY**

September, 10th - 13th, 1990

Brussels, Belgium

SECRETARY of THE EUROPEAN MUSCLE CLUB

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S. Ghariani, D. Yüksel, V. Callebaut.
Publications: A. Berquin, A. Godfraind-De Becker, J. Lebacqz.
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for which they are most gratefully acknowledged

PROGRAM

Monday 10th september 1990.

9.00 - 14.00: Coming together. Display of Posters.
14.30: Opening of the Conference.

1. New muscle proteins and their possible function
CHAIR: D. Mornet (Montpellier) & G. Offer (Bristol)

LECTURES:

15.00: J. Trinick (Bristol): Structure and function of skeletal vertebrate Titin
15.30: N. Augier (Montpellier): Structure and function of dystrophin
16.00: K. Weber (Goettigen): Twitchin
16.30: Coffee break.

BRIEF LECTURES:

17.00: Ziegler C. & Beinbrech G. (Münster).
Purification and characterization of a 350 kD protein from locust flight muscle.
17.20: Bullard, B. (Heidelberg).
Identification and localization of new proteins in insect flight muscle.
17.40: Michalak, M., Milner, R.E., Fliegel, L., Baksch S. & Opas M., (Toronto).
Calreticulin is the major calcium binding protein in smooth muscle sarcoplasmic reticulum and non-muscle endoplasmic reticulum.
18.00: Damiani, E., Volpe, P. & Margreth, A., (Padova).
Protein composition of junctional sarcoplasmic reticulum of fast and slow muscle.

EVENING: Belgian Beer and Cheese Party (19.00 - 22.00)

Tuesday 11th September 1990.

8.00:

POSTER SESSION.

2. Energy flows.

CHAIR: J. Lebacqz (Brussels) & K.W. Ranatunga (Bristol)

LECTURES:

- 9.00: K.W. Ranatunga (Bristol): Temperature and muscle contraction
9.30: G. Cavagna (Milano): Storage and release of mechanical energy during contraction
10.00: J. Henriksson (Stockholm): The use of in vivo dialysis to study skeletal muscle glucose metabolism
10.30: Coffee Break

BRIEF LECTURES:

- 11.00: Wondolika Y. & Asmussen, G. (Leipzig).
The effects of caffeine and temperature on fast- and slow-twitch muscles of the rat.
11.20: Bottinelli R., Betto R., Danieli-Betto D., Schiaffino S., Reggiani C. (Pavia).
Myosin isoform composition and shortening velocity in skinned fibres of rat skeletal muscles.
11.40: Maréchal G. & Beckers-Bleukx G. (Brussels).
Force-velocity and isomyosins in mouse soleus.
12.00: Medbo J.I. & Tabata I. (Oslo).
Type I and type II muscle fibres work with the same mechanical efficiency during bicycling.

12.20: LUNCH.

13.30:

POSTER SESSION.

ROUND TABLES:

- Schaub M.C. (Zürich): Light chains of striated muscle myosin
Jones D.A. (London): Fatigue and training effects in skeletal muscle
Margreth A. (Padova): Sarcoplasmic reticulum Ca release channels

3. Myogenesis.

CHAIR: U. Carraro (Padova) & D. Parry (Ottawa)

LECTURES:

- 15.00: E.M. Füchtbauer (Bethesda): Molecular biology of myogenesis
15.30: G. Cossu (Roma): Muscle fibres heterogeneity and myogenic lineages
16.00: A. d'Albis (Orsay): Myosin isoforms regulation during post-natal development of the rat: muscle, hormone & nerve dependence.

16.30: Coffee Break.

BRIEF LECTURES:

- 16.50: Jarvis J.C., Sutherland H. & Salmons S.
The effect of chronic electrical stimulation on the speed, power output and fatigue resistance of fast twitch skeletal muscle.
- 17.10: Ausoni S., De Nardi C., Schiaffino S.
Characterization and developmental expression of cardiac troponin I mRNA.
- 17.30: Parry, D.J., Pilgrim, M. & Georganos, S.
Embryonic myoblast and satellite cell lineages in mouse.
- 17.50: Düsterhöft S., Yablonka-Reuveni Z. & Pette D.
Myosin expression in satellite cell cultures from fast and slow twitch muscles of the rat.

EVENING: Astoria Concert & Conference Dinner (20.00).

Wednesday 12th September.

8.00: POSTER SESSION.

4. Regeneration and grafting.
CHAIR: E. Schultz (Madison) & T.A. Partridge (London)

LECTURES:

- 9.00: E. Schultz (Madison): Behaviour of satellite cells in muscle regeneration
- 9.30: M. Grounds (Nedlands): Peptide growth factors in myogenesis and regeneration
- 10.00: U. Carraro (Padova): Use of transplanted skeletal muscle in cardiac assistance
- 10.30: Coffee Break.

BRIEF LECTURES:

- 11.00: Danieli-Betto, D., Megighian, A. (speaker), Catani, C., Midrio, M. & Carraro U.
Muscle regeneration after chronic lidocaine application in innervated and denervated rat soleus muscle.
- 11.20: Moens P.D., Partridge, T.A., Morgan, J.E., Beckers-Bleukx, G. & Maréchal, G. (Brussels).
Mechanical and biochemical modifications induced by an inherited myopathy in orthotopic free grafting of mouse soleus muscle.

11.40: Morgan J., Pagel, C. & Partridge T.A. (London).

The in vivo behaviour of implanted myogenic cells within degenerating MDX muscle.

12.00: Soukup, T., Nordlund, A.K., Bednar J. & Thornell L.E. (Prahá).

Regenerated intrafusal fibres not innervated by sensory axons do not restore their morphological, histochemical and immunocytochemical characteristics in autotransplanted rat EDL muscle.

12.20: LUNCH

13.30:

POSTER SESSION.

ROUND TABLES:

Reggiani C. (Pavia): Contraction and isoforms of contractile proteins

Vial C. (Lyon): Energy metabolism

Rowlerson A. (London): Comparative aspects of muscle proteins

5. Muscle relaxation

CHAIR: M.A. Ferenczi (London) & J.M. Gillis (Brussels)

LECTURES:

15.00: B. Brenner (Ulm): Cross-bridge action: implications for muscle relaxation.

15.30: S. Sys (Antwerpen): Relaxation of the myocardium

16.00: Rall, J. (Columbus): The role of parvalbumin in skeletal muscle relaxation.

16.30: Coffee Break.

BRIEF LECTURES:

16.50: Ferenczi, M. (London).

Cross-bridge detachment and muscle relaxation studied by photolysis of stereoisomers of caged ATP.

17.10: Palaer R.E., Mulligan I.P. & Ashley C.C. (Oxford).

A comparison of the rates of relaxation between frog and scallop muscle fibres upon photolysis of the caged calcium chelator diazo-2.

17.30: Berquin A. & Lebacqz, J.

Functions of parvalbumin: old questions revisited.

17.50: Lännergren J. & Westerblad H.

Effects of fatiguing stimulation and CO₂ on force and relaxation in isolated mouse muscle fibres.

18.10: Business Meeting.

Thursday 13th September.

8.00:

POSTER SESSION.

6. Genetics and structure of myosins and actins
CHAIR: J.J. Léger (Montpellier) & J. Vandekerckhove (Gent)

LECTURES:

9.00: M.F. Morales (San Francisco):

Origin and transmission of force in subfragment-1.

9.30: P. Eldin (Montpellier):

Actin-myosin interfaces studied by genetic engineered myosin heavy chain fragments.

10.00: W. Kabsch (Heidelberg):

3-D structure of actin.

10.30: Coffee Break.

BRIEF LECTURES:

11.00: Boey W., Everett A.W., Kendrick-Jones J., dos Remedios C.G. (Sidney).

Role of myosin light chains in actomyosin interaction.

11.20: Sri Widada J., Ferraz C., Bartegi A., Fattoum A., Heitz F., Kassab R. & Liautard J-P. (Montpellier).

The mechanism of ATPase regulation by tropomyosin as revealed by directed mutagenesis.

11.40: Hennessey E., Drummond D. & Sparrow J. (York).

Using protein engineering to study actin function.

12.00: Huber P.A.J. & Schaub, M.C. (Zürich).

Formation of an intrachain disulfide bridge in the regulatory light chain dissociates it from the heavy chain of skeletal muscle myosin.

12.20: Conclusion of the Conference.

12.30: LUNCH

13.30:

POSTER SESSION.

ROUND TABLES:

Goldspink G. (London): Gene switching during growth and development of muscle

Eppenberger H. (Zürich): Myocytes and cardiomyocytes in cultures as models for differentiation

Spurway N.C. (Glasgow): Ions and smooth muscle force

17.30: Removal of Posters.

PAPER in CONFERENCE BOOK.

The conference will publish a book printed by INTERCEPT with papers presented by delegates. Here follow the necessary instructions.

1.- The manuscript must be ready for publication: no changes can be made once it has been mailed to the local organizer. It is the responsibility of the author to ensure that the typescript is correct in style, syntax and spelling. The paper will be 3 to 6 printed pages in length. This corresponds to 3 to 6 A4 pages for text and 1 or 2 pages for Tables and Figures.

2.- The text must be typed double spaced throughout on one side of A4 paper with a 3 cm left-hand margin: title in uppercase; initial of first name and last name of authors; affiliation and address; introduction; methods; results; discussion; acknowledgements; references; tables; figures captions.

3.- References are sorted by alphabetical order of first author and referred to in the text by their order #. Give in order:

Order #, authors name and initial of first names, year, journal, volume, first and last page. Example:

1. Smart, S.G., Woods, F.G., 1990, Eur. J. Physiol., 98, 456-463.

4.- Use 1 or 2 pages for Figures and Tables. You may increase the number of Tables and Figures, but then you must reduce the text accordingly. Illustrations should be numbered and referred to in text and caption as Fig.1, Fig.2, etc. Line drawings are normally reduced by 50%; photographs must be grouped into plates with narrow gutters (1-2mm) between figures, dry-mounted on light weight white card with protective overlays: they will normally be reproduced without reduction. The maximum display area is 115 x 170 mm. Tables should be numbered and headed with short titles. Figures and Tables will be inserted in the section Results, unless the authors specify another location.

5.- Mail two paper copies of the manuscript, with handwritten editing comments (if necessary) and one diskette copy, labeling the manuscript file by name of first author and the graphic files with their identifying format. Mark the name of main author and the type of word and graphic processors used on the paper label of the diskette. If you have not used a computer to write your paper, then mail a third manuscript free of any editor's/author's corrections, taking care that there is no handwriting on it: this manuscript will be read by the computer of the printer. Mail your manuscript as soon as possible. The ultimate deadline is the last day of the Conference, 13 th september 1990. Papers will be examined by order of arrival and the first 80 papers accepted will be published. Papers received afterwards will also be examined, but their publication will depend on negotiations with the Publisher.

6.- Proofs will be checked by the editor; however it may be necessary to consult the author, who must be prepared to respond to faxes within 2 working days between 20 september and 30 december 1990. Photos (Black and White only; 600 B.Fr./photo) will be charged to the authors separately. Orders for offprints will be mailed to authors separately.

7.- The Conference book will be ready by January 1990. You will receive by mail the number of books which you have ordered. Its pre-publication price is 1800.- FB, offered until the last day of the Conference, 13 th september 1990.

FILM, DEMONSTRATIONS and BOOKS.

Colleagues who want to project films, present demonstrations or sell books which they have written or edited are invited to mail their proposals to the local organizer.

DISCUSSIONS.

Colleagues who want to participate in the Discussions following the lectures or in the Round Tables are invited to get in touch with the relevant chairman.

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Growth, development and aging of human muscle : studies of whole muscle cross-sections.
- A2 Mascarello F. & Rowleron A.
Development of muscle fibres in a "pure" fast-twitch muscle.
- A3 Stoiber W. & Sanger A.M.
Early differentiation of muscle fibre types in cyprinids
- A4 Eppenberger-Eberhardt M.E., Messerli M., Riesinger I., Schwarb P., Wallimann T. & Eppenberger H.M.
Two populations of mitochondria expressing mitochondrial creatine kinase are found in cultured adult rat cardiomyocytes.
- A5 Orlov V.S.
Mechanism of cell fusion in myogenesis of skeletal muscle by means of intercellular pinocytosis
- A6 Parry D.J., Pilgrim M. & Georganos S.
Embryonic myoblast and satellite cell lineages in mouse.
- A7 Koumans J.T.M., Akster H.A., Booms G.H.R., Lesaens C.J.J. & Osse J.W.M.
Myosatellite cells in white axial muscle of growing fish.
- A8 Grounds M.D. & McGeachie J.K.
Comparison of muscle precursor cell (MPC) replication in regenerating muscle isografts and crush injured muscle
- A9 Morgan J., Pagel C. & Partridge T.
The in vivo behaviour of implanted myogenic cells within degenerating MDX muscles
- A10 Brocks L., Jap P.H.K., Ramaekers F.C.S. & Stadhouders A.M.
Cytoskeletal IFP expression during postnatal development of dystrophic mouse muscle using confocal scanning laser microscopy (CSLM).
- A11 Round J.M., Sewry C.A. & Jones D.A.
Regeneration in normal and dystrophic human muscle.
- A12 Moens P.D., Partridge T.A., Morgan J.E., Beckers-Bleukx G. & Marechal G.
Mechanical and biochemical modifications induced by an inherited myopathy in orthotopic free grafting of mouse soleus muscle.
- A13 Takagi M., Nakamura T., Tsuzuki N. & Kohama K.
Changes in the muscle fiber types of rat skeletal muscles during growth as examined by anti-neurofilament antibody and myosin ATPase reactions.
- A14 Dusterhoft S., Yablonka-Reuveni Z. & Pette D.
Myosin expression in satellite cell cultures from fast and slow twitch muscles of the rat.

- A15 Wessels A., Soffers C.A.S., Bredaan J.J. & Moorman A.F.M.
Expression of a "cardiac-specific" myosin heavy chain in intrafusal fibres of the developing human muscle spindle.
- A16 Navez, M. & Colson-Van Schoor M.
Post-natal isomyosins in masticatory muscles of growing rats
- A17 Soussi-Yanicostas N., Barbet J.P., Laurent-Winter C., Barton P., Butler-Browne G.S.
Transition of myosin isozymes during development of human masseter muscle. Persistence of developmental isoforms during postnatal stage.
- A18 Kunze I., Gaunitz U. & Asaussen G.
Developmental changes in the water and fat content of shank- and chew- muscles of the rat.
- A19 Martinez I., Ofstad R. & Olsen R.L.
Developmental transitions of myosin heavy chains in the skeletal muscle of the teleost, Salvelinus alpinus alpinus
- A20 Williams K., Zak R. & Dhoot G.
The distribution of slow skeletal and cardiac muscle type myosin heavy chains in embryonic chicken skeletal muscle
- A21 Hasselbaink H., Labruyère W., Moorman A. & Lamers W.
Creatine kinase isozyme expression in prenatal rat heart.
- A22 Ausoni S., De Nardi C., Schiaffino S.
Characterization and developmental expression of cardiac troponin I mRNA
- A23 van Keampen M.J.A., Gros D., Moorman A.F.M. & Lamers W.H.,
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- A25 Lamers W.H., Wessels A. & Moorman A.F.M.
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- A26 Coulic, V.
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- B2 Hatfaludy S., Apor P., Shansky J. & Vandeburgh H.H.
Metabolic adaptations of skeletal muscle in elite athletes and in vitro skeletal muscle cells
- B3 Pousson M. & Goubel F.
Effect of two kinds of training on elastic properties of rat soleus muscle.
- B4 Sanger A.M., Lackner R.
Training effects of the fine structure of fish axial muscle

- 85 Fikkan T. & Dahl H.A.
Training-induced fibre type transformation in human m. triceps brachii.
- 86 Loughna P. & Morgan M.J.
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- 87 Lu D.-X. & Müntener M.
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- 88 Stevens L. & Mounier Y.
Biochemical and contractile properties of rat muscle proteins after spaceflight
- 89 Asaussen G. & Soukup T.
Suspension hypokinesia performed in young growing rats results in retardation of differentiation of the adult histochemical pattern in the soleus muscle
- 810 Vogtman M. & Asaussen G.
Recovery of mechanical properties of the soleus muscle after suspension hypokinesia of young rats
- 811 Goldspink G., Scutt A., Gerlach G.F., Dhoot G.K., Turay L., Jaenicke Th. & Bicik V.
Mammalian muscle fibres express slow and repress fast myosin genes in response to active and/or passive tension
- 812 Jaenicke Th., Martindale J., Loughna P.T., Chang K.C., Williams P. & Goldspink G.
Mechanical signals involved in the expression of the slow type genes and the determination of muscle fibre-phenotype in the mammalian soleus
- 813 Sohar I., Rohan J. & Guba F.
Effect of fiber size on proteinase activity in the stretched skeletal muscles.
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- 820 Rosenblatt J.D.
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- B21 Romanenko, A.V.
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- B22 Parr T., Bardsley R.G., Buttery P.J.
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- B23 Morano, I.
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- B24 Yüksel D. & Maréchal G.
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- B25 Scapolo P.A., Vegetti A. & Mascarello F.
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- B26 Morano I., Adler K., Agostini B., Mommaerts W.F.H.M. & Ruegg J.C.
Cardiac myosin during hibernation: different expression of isoenzymes as a strategy to survive at low temperature
- B27 Adler K., Morano I., Ganten U., Ganten D. & Ruegg J.C.
Effects of cold adaptation on the expression of cardiac myosin heavy chain isoenzymes (MHC) of normotensive (WKY) and spontaneously hypertensive rats (SHRSP)
- B28 Lucas M., Keller A., Goblet C., Lamande M. & Lazar M.
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- B30 Cossu G., De Angelis L., Cusella-De Angelis M.G. & Molinaro M.
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- C3 Scelsi R., Poggi P. & Azan G.
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- C5 Brand T., Munkel B., Sharma H.S., Bleese N., Schaper W. & Schaper J.
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- C7 Gabrielescu E., Ciobanu A., Butur G., Nicolau N. & Nutu O.
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- D3 Polyák E., Kónya L., Csabina S., Csongor J., Fülöp I., Kövér A., Bíró T. & Tamás G.
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- D4 Schot R. & van Mastrigt, R.
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