SECOND INTERNATIONAL CONGRESS ON BIORHEOLOGY

The following is a list of papers to be presented at the Second International Congress on Biorheology, to be held on 29 December 1974-7 January 1975, at the Weizman Institute of Science, Rehovot, Israel.

Membrane Proteins and Membrane Rheology

MARTIN BLANK

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Laws for the Building Mechanism of Chains of Spheres in Poiseuille Flow

KLAUS BAUCKHAGE

Institut für Thermische Verfahrenstechnik, Technische Universität Clausthal, Germany

Effect of Anti-Adhesive Drugs on Red Cell Sickling in vitro

HAIM I. BICHER*, FERNANDO PADILLA and W. H. VAN WAGNER
Dept. of Pharmacology, University of Arkansas Medical Center, Little Rock, Arkansas, U.S.A.*

Veterans Administration Hospital, Little Rock, Arkansas, U.S.A.

Some Hemorheological and Hematological Parameters in Thalassemia

L. C. CERNY and D. M. STASIW

Masonic Medical Research Laboratory and Utica College, Utica, New York, U.S.A.

Shear Degradation of Heparin

STANLEY E. CHARM and BING L. WONG

Tufts University School of Medicine, Boston, Massachusetts, U.S.A.

Viscoelastic Properties of Human Blood and Red Cell Suspensions

Viscoetastic Properties of Human Blood and Red Cell Suspensions
S. CHIEN, R. G. KING, R. SKALAK, S. USAMI and A. L. COPLEY
Laboratory of Hemorheology, College of Physicians and Surgeons, Columbia University, New York 10032, U.S.A.
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Laboratory of Biorheology, Polytechnic Institute of New York, Brooklyn, New York 11201, U.S.A.
New York Medical College, New York 10029, U.S.A.

Determination of the Transfer Function of a Circulation Model by the Correlation Method Applied to Radioactive Tracers

Determination in the Transfer Transfer

Microscopic Observations of Viscoelasticity of Human Blood in Steady and Oscillatory Shear A. L. COPLEY, R. G. KING, S. CHIEN, S. USAMI, R. SKALAK and C. R. HUANG

Laboratory of Biorheology, Polytechnic Institute of New York, Brooklyn, New York 11201, U.S.A. and New York Medical College, New York 10029,

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Department of Civil Engineering and Engineering Mechanics, Columbia University, New York 10027, U.S.A. and Department of Chemical Engineering and Chemistry, Newark College of Engineering, Newark, New Jersey 07102, U.S.A.

The Effect of Sulphydryl Compounds and Cross-Linking Agents on the Viscous and Viscoelastic Properties of Mucus S. S. Davis, S. Scobii: and A. Inglis

Pharmaceutics Research Group, Pharmacy Department, University of Aston in Birmingham, U.K.

Internal Viscosity of the Red Cell. Problems Associated with Definition of Plasma Viscosity and Effective Volume of Red Cells in the Blood Viscosity Equation

L. DINTENFASS

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Whole-Blood Viscosity in Patients with Intermittent Claudication—Concept of Rheological Claudication

JOHN DORMANDY, EDMIND HOARE and JOHN POSTLETHWAITE

St. James' Hospital, Balham, London S.W.12, U.K

Successful Treatment of Severe Obliterative Arterial Disease by the Rheologically Active Drug Ancrod (Arwin (R))

A. M. EHRLY

Department of Internal Medicine, Division of Angiology, University of Frankfurt am Main, Germany

Improved Deformability of Human Red Cells by Dextrans: Influence of Molecular Weight

A. M. EHRLY, CHR. VOGELER and H. J. KÖHLER

Department of Internal Medicine, Division of Angiology, University of Frankfurt am Main, Germany

Investigation Methods of the Dynamic Behaviour of Biological Materials and Systems

J. L. EICHHORN, CH. KOPP and B. OBRECHT
Groupe de Biomécanique (Institut de Physique Biologique et Institut de Mécanique des Fluides), Université Louis Pasteur, Strasbourg, France

Solution of the Complete Navier-Stokes Equation for Chains of Spheres Transported in Poiseuille Flow

Institut für Thermische Verfahrenstechnik der Technischen, Universität Clausthal, Germany

Fast Reacting Viscosimeter for Low Wall Shear-Stress Measurements

R. FEIDT, A. LYAZID, CH. KOPP and B. OBRECHT

Groupe de Biomécanique (Institut de Physique Biologique et Institut de Mécanique des Fluides), Université Louis Pasteur, Strasbourg, France

Effects of High Shear-Stress on Human Platelets

S. K. Yu and H. L. GOLDSMITH

McGill University Medical Clinic, Montreal General Hospital, Montreal, Canada

Clotting in Layers in the Rheo-Simulator

H. HARTERT

Städt. Krankenhaus Kaiserslautern and Saar-Universität, West-Germany

Conformational Changes of Plasmodium Actin Polymers

Conjurnational Transfer of International Arthropyces S. HATANO, S. FUJIME, H. TANAKA and K. OWARIBE
Institute of Molecular Biology and Department of Physics, Faculty of Science, Nagoya University, Nagoya, Japan

Rheological Behaviour of Blood in Transient Flow

J. C. HEALY and M. JOLY

Département de Biophysique et Biomathématiques, UER 65, Université de Paris 6, France

The Importance of Flow in Blood Vessels

HANS HESS and MARQUART MARSHALL Medizinische Poliklinik, University of Munich, Germany

Abnormal Blood Viscosity in Diahetes Mellitus

EDMUND HOARE, ADRIAN BARNES and JOHN DORMANDY St. James' Hospital, Balham, London S.W.12, U.K.

Quantitative Characterization of Thixotropy of Whole Human Blood
C. R. Huang, N. Siskovic, R. W. J. Robertson, W. Fabisiak, E. H. Smithberg and A. L. Copley
Departments of Chemical Engineering and Chemistry and of Mechanical Engineering, Newark College of Engineering, Newark, New Jersey 07102,
U.S.A. and Laboratory of Biorheology, Polytechnic Institute of New York, Brooklyn, New York 11201, U.S.A. and New Medical College, New York 10029, U.S.A.

Study on the Pathogenesis of Microangiopathy in Diabetic Patients with Special Reference to Hemorheological Problems

YUKI HIDE ISOGAI, AKIRA TIDA, KOICHI MOCHIZUKI, TAKUO YOKOSE and MASAKAZU ABE Department of Internal Medicine, Jikei University School of Medicine, Minato-ku, Tokyo, Japan

A Viscometric Study of Sputum Glycoprotein Aggregation

ARNE OLAY JENSSEN* and OLAY SMIDSRØD

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Institute of Marine Biochemistry, University of Trondheim, 7034 Trondheim-NTH, Norway

Hemorheological Changes in Experimental Retrolental Fibroplasia

W. LEMMINGSON

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Viscoelastic Behavior of Canine Tracheal Mucus

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Cartilage Deformation as a Function of Water Flow and Swelling Pressure

ALICE MAROUDAS
Biomechanics Units, Imperial College of Science and Technology, London, U.K.

Low Reynolds Number Exit Flow to a Semi-Infinite Region

Department of Physics, Keio University, Yokohama, Japan

Rheo-Optical Transients in Erythrocyte Suspensions

A. IKAGAWA, M. M. FROJMOVIC and S. G. MASON
Depts. of Chemistry and Physiology, McGill University, Montreal, Canada

Transendothelial Transport of 1311-Albumin

ROBERT M. NEREM, ARNOLD T. MOSBERG and WILLIAM D. SCHWERIN

The Ohio State University, Columbus, Ohio 43210, U.S.A.

Theoretical and Experimental Study of Influence of Parietal Static Stresses on Wave Propagation through Viscous Fluid Contained in Viscoelastic Tubes D. Geiger, P. Flaud, C. Oddou and D. Quemada

L.B.H.P. Universite Paris VII, 75005 Paris, France

The Influence of Rouleaux on the Resistance to Flow Through Capillary Channels at Various Shear Rates

A. A. PALMER and H. J. JEDRZEJCZYK

Department of Medical Research, Kanematsu Memorial Institute, Sydney Hospital, Sydney, N.S.W., Australia

Molecular Models for Permeation through Thin Membranes G. H. MALONE, T. E. HUTCHINSON and STEPHEN PRAGER

University of Minnesota, Minneapolis, Minnesota 55455, U.S.A.

Action of the Bacterial Glycosidases on the Visco-Elastic Properties of Bronchial Secretions F. Puchelle, F. Girard, P. Degand, V. Servais and N. Houdret Unite Rech. Physio-Path. Resp., B.P. 065, 54002 Nancy, France

The Transport Mechanism for 125I Albumin from Serum to Artery Wall

A. SIFLINGER, K. PARKER and C. G. CARO
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Viscometric Study of Mucolysis in Sputum

ARNE OLAV JENSSEN* and OLAV SMIDSRØD Lung Department Regional Hospital, 7000 Trondheim, Norway*

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Efficiency of Mechano-Chemical Cycles

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Microcinephotographic Studies on Red Cell Aggregation in Steady and Oscillatory Shear

S. USAMI, R. G. KING, S. CHIEN, R. SKALAK, C. R. HUANG and A. L. COPLEY

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Laboratory of Biorheology, Polytechnic Institute of New York, Brooklyn, New York 11201 and New York Medical College, New York 10029, U.S.A.

Quantitative Data on Extravascular Transfer of Plasma Proteins by in situ Techniques

SIEGFRIED WITTE
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Decreased Rigidity of Hyperosmolar Erythrocytes by Increasing their ATP-Content or by the Addition of Membrane-Active Substances W. Scheinpflug, A. Glatz and A. M. Ehrly

Department of Internal Medicine, Division of Angiology, University of Frankfurt am Main, Germany

The Rheological Behavior of Normal Tracheo-Bronchial Mucus of Canines

R. L. POWELL, E. F. AHARONSON, W. H. SCHWARZ and D. F. PROCTOR

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Department of Environmental Medicine, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, Maryland, U.S.A.

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Rheology of Artificial Blood Vessels

MASAMITSU HASEGAWA and TAKEHIKO AZUMA

Department of Physiology, Shinshu, University Medical School, Matsumoto, Japan

Platelet Contractile Force in Relation to Streaming in Human Thrombosthenin Solutions

Rogoff-Wellcome Medical Research Institute, Coagulation Unit, Tel Aviv University Medical School, Beilinson Hospital, Petah Tiqva, Israel

Blood Rheology in Patients with Depressive and Schizoid Anxiety

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Blood Rheology in Occlusive Arterial Disease Following Successful Cadaveric Kidney Transplantation L. Dintenfass* and L. S. Ibels

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Velocity Profiles of RBCS in vivo Obtained by Laser Doppler Anemometry S. Einay*, H. J. Berman†, R. L. Fuhro†, P. R. DiGiovanni‡, S. Fine§ and J. D. Fridman

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Measurement of Blood Flow in vivo by Laser Doppler Anemometry through a Microscope

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Boston University, Boston, Massachusetts; *Dept. of Biophysics and Biomedical Engineering, Northeastern University, Boston, Massachusetts; ||Electro-Optics Department, Raytheon Co., Sudbury, Massachusetts, U.S.A.

The Clotting of the Lysed White Cells of Limulus Induced by Endotoxin

STEPHEN L. GAFFIN

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Studies of the Structure of the Thick Filament of Muscle by Laser Light Scattering

Douglas J. Jolly and Robert Josephs*

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Some New Accessories to the Weissenberg Rheogoniometer. An Exhibit.

R. G. KING and A. L. COPLEY
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Relaxation Times and Diffusion Constants by Laser Light Scattering of a Well-Characterized DNA Sample

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Influence of Plasma Substitutes on the Rheological Properties of Blood in vitro and in vivo

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The Clinical Significance of Amoeboid Movement in Human Leucocytes

Department of Internal Medicine, University Hospital of Lund, S-221 85 Lund, Sweden

A Continuum Theory of Amoeboid Pseudopodium Extension

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Department of Mathematical Science, Rensselaer Polytechnic Inst., Troy, New York 12181, U.S.A.*

Department of Chemistry, State University of New York at Albany, New York 12222, U.S.A.

The Influence of Plasma Fibrinogen on Blood Viscosity during Reconstructive Arterial Surgery: the 'Fibrinogen Sensitive' Patient John Postlethwaite and John Dormandy

St. James' Hospital, Balham, London S.W.12, England

Mechanism of Muscle Contraction: Nucleotide Complexes of Actomyosin

Polymer Department, Weizmann Institute of Science, Rehovot, Israel

Periodic Flow of a Viscous Fluid Superposed on Steady Flow in an Orthotropic Initially Stressed Elastic Tube

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Rheology of Blood and Syndrome of Plasma Hyperviscosity J. F. Stoltz, C. Vigneron, A. Rovel, S. Gaillard and A. Larcan

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Studies on Mechanochemical Proteins: Comparative Studies on Skeletal and Heart Heavy Meromyosin Subfragment-1 using Immobilized ATP Affinity Chromatography Columns

RAPHAEL LAMED, ANDRAS MUHLRAD and AVRAHAM OPLATKA

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Rheology of Normal and Aldehyde-Treated Erythrocytes in Dextran T-70 Solutions

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Contractility of Amoeba Cytoplasm

DOUGLASS L. TAYLOR Biology Department, Harvard University, Cambridge, Massachusetts, U.S.A.

Dissociation of Motility from DNA Synthesis in NIL-8 Hamster Cells

Imperial Cancer Research Fund, London, England; Israel Institute for Biological Research, Ness Ziona, Israel (present address)

Muscle Proteins: Conformational Changes Induced by Substrate or Substrate Analogs in the ATPase Active Site of Myosin

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Regulation of Muscle Contraction: Affinity Chromatography of Myosin Deficient in Ca2+ Binding Light Chain

Moshe M. Werber, Avraham Oplatka and Raphael Lamed Polymer Department, Weizmann Institute of Science, Rehovot, Israel

Laser Light Scattering Studies of the Coupling between ATP Splitting and Molecular Movement of Actomyosin Systems in Solution A. Hochberg, W. Low, R. Tirosh, J. Borejdo and A. Oplatka

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An Hydrodynamic Model for Muscle Contraction

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Contraction of Smooth Muscle by Molecularly-Dispersed Myosin Species J. Borejdo and A. Oplatka

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The Adhesion Force of Chorioretinal Scars in vivo and after Death

Eye Department, Hadassah University Hospital, Jerusalem, Israel

In Situ Rheological Characterization of Epithelial Mucus

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Interaction of Connective Tissue with Strongly Binding Macromolecular Probes

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Water Permeation Rates through Gel Layers and Macromolecular Solutions

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Dynamic Aspects of Water Penetration into Transferred Lipid Multilayers

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