BULLETIN

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MONTREAL QUE
H3C 3P8

FEBRUARY 1989 FEVRIER

VOL 20 (1)

ISSN: 0068-9653

CANADIAN SOCIETY FOR IMMUNOLOGY

SOCIETE CANADIENNE D'IMMUNOLOGIE

REGIONAL CORRESPONDANT MARITIME

RESEARCH PROJECTS:

Andrew C. Issekutz, M.D., Associate Professor, Pediatrics and Microbiology

During acute inflammation formed elements in the blood interact with the microvascular wall and chemical mediators sometimes resulting in vascular and tissue injury. We are investigating the mechanisms of injury during inflammation induced by immunological and microbial stimuli. A variety of in vivo radioisotope techniques are used to quantitate inflammation and evaluate, using pharmacological and immunological agents, the contribution of various inflammatory mediators in neutrophil, monocyte, platelet interactions with microvasculature at inflammatory sites and their roles in the development of vascular injury. These in vivo events are dissected using vascular endothelial cell cultures in which the adherence of leukocytes to endothelium, transendothelial migration and endothelial cell injury are reproduced in vitro. Current work includes: a) isolation and analysis of the mechanisms of action of a novel 45 K dalton macrophage cytokine produced by rabbit and human macrophages which is active in inducing neutrophil infiltration into tissues in response to the endotoxin of gram negative bacteria; b) determination of the role of this cytokine vis a vis other cytokines e.g. IL-1, TNF in vascular injury during tissue inflammation induced by gram negative bacteria and their role in leukocyte sequestration in the lungs during bacteremia - endotoxemia; c) the use of pharmacological probes and anti-inflammatory agents (e.g. platelet activating factor antagonists, lipoxygenase-cyclooxygenase inhibitors, corticosteroids, O2 radical scavengers, novel protease and complement inhibitors) to evaluate in vivo the contribution of various mediator systems to inflammation and injury in immune complex vasculitis, bacterial, cytokine and chemotactic factor induced reactions; d) with Thomas Issekutz, analysis of the role of cytokines in regulation of neutrophil and lymphocyte migration into arthritic joints in an animal model of human arthritis.

Thomas B. Issekutz, M.D., Associate Professor, Pediatrics and Microbiology

One of the hallmarks of chronic inflammation is the presence of large numbers of lymphocytes and macrophages in the inflammed tissues. Although considerable information exists on the migration of neutrophils and monocytes into acute and chronic inflammatory sites, much less is known about the factors controlling the recruitment of lymphocytes into these tissues.

Our goal has been to dissect the events leading to the accumulation of lymphocytes. A model for studying the migration of radiolabelled lymphocytes into cutaneous inflammatory sites induced by delayed type hypersensitivity reactions, viral infection or gram negative bacterial endotoxin was developed in the rat. Our studies have shown that a subset of small T cells preferentially accumulated in these cutaneous lesions rather than migrating from the blood into lymphoid organs. These "inflammatory-site-seeking" lymphocytes migrated into the skin in response to the cytokines interferon-α/β, interferon-γ, tumor necrosis factor alpha and beta, but not to the interleukins 1 or 2. Furthermore, IFN-α/β stimulated the accumulation of T cells in viral induced reactions, IFN-γ mediated migration to DTH reactions, and TNFα acting synergistically with the IFNs appeared to mediate lymphocyte recruitment by endotoxin. Lymphocyte adherence to microvascular endothelial cells in vitro has demonstrated that stimulation of endothelium with the same cytokines which induced migration in vivo caused a selective adherence of the "inflammatory-site-seeking" lymphocyte subset. Monoclonal antibodies which block this adhesion have been produced and are being used to delineate the receptors involved in in vitro adherence and in vivo migration to inflammation. These antibodies are also being employed to further characterize the "inflammatory-site-seeking" lymphocyte subpopulation at the cellular and molecular levels.

The study of the inflammatory reaction induced by chronic Pseudomonas aeruginosa lung infection in the rat as a model of Cystic Fibrosis is another area of our investigations. The objective is to evaluate the role of cytokines in the chronic pulmonary inflammation. Finally, we are collaborating with Andrew Issekutz on studies of joint inflammation in a rat model of arthritis.

DALHOUSIE UNIVERSITY

FELLOWSHIP/STUDENTSHIP IN IMMUNOLOGY

Applications are invited from M.D. or Ph. D. candidates and graduate students for research training in the immunology and immunopharmacology of acute and chronic inflammation. In vitro cellular and hybridoma techniques and in vivo models of human inflammatory diseases are employed. In training salary support is available. Address inquiries to Dr. Andrew C. Issekutz, Department of Pediatrics, Infection and Immunology Research Laboratory, I.W.K. Children's Hospital, 5850 University Avenue, Halifax, Nova Scotia, B3J 3G9, Canada.

Residence

Accommodation has been arranged at Connaught Hall of Residence, 41 Tavistock Square, London, WC1H 9EX. It is hoped that members will reside in the Hall during the School. The charge for bed and breakfast will be approximately £17.00 per night inclusive of VAT. As places in the Hall are limited early application for accommodation is requested.

Application Forms

Application forms may be obtained from Mr. R. E. Marshall, School Secretary, Department of Pharmaceutical Sciences, Royal Pharmaceutical Society of Great Britain, 1 Lambeth High Street, London, SE1 7JN.

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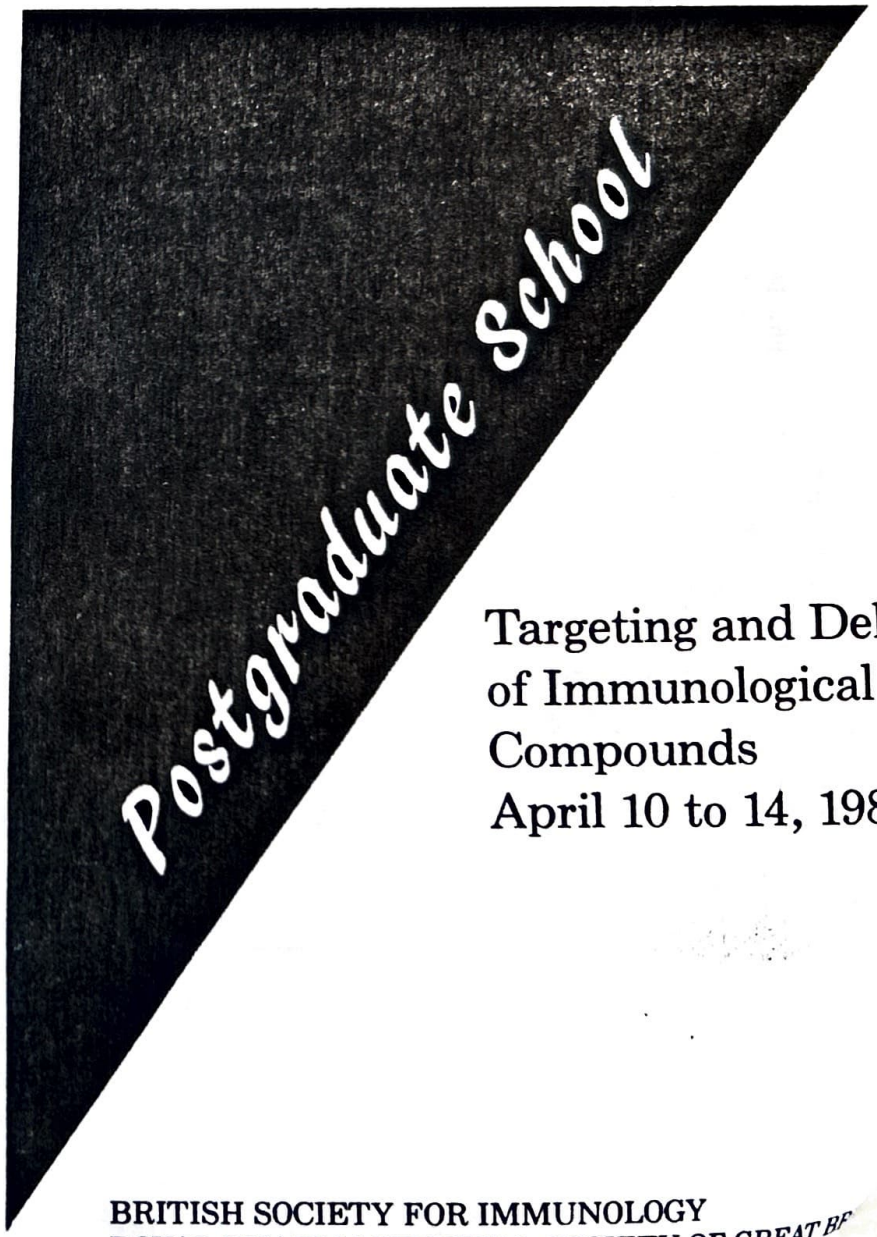

Targeting and Delivery of Immunological Compounds

April 10 to 14, 1989

BRITISH SOCIETY FOR IMMUNOLOGY
ROYAL PHARMACEUTICAL SOCIETY OF GREAT BR
SCHOOL OF PHARMACY, UNIVERSITY OF LONDO

The School

The School, which is organised jointly by the Royal Pharmaceutical Society of Great Britain, the British Society for Immunology together with the School of Pharmacy, University of London will be held on Monday, April 10 to Friday, April 14, 1989. There will be a programme of lectures, and discussion groups.

The aim of the School is to provide scientists working in industry, hospital, academic and government agencies with a background and comprehensive review of the recent developments and potential of targeting and delivery of immunological compounds.

The course will provide a theoretical base suitable for both scientists new to this field and experienced workers. There will be plenty of opportunity for exchange of views between participants, and informal discussions with the speakers.

The following topics will be among those covered in the course:

The immune system; Phagocytic cells; Physiological handling of proteins; Delivery and targeting; Surfactant systems; Assessment of purity of peptides and proteins; Vaccines – an overview; Peptide vaccines; Delivery of vaccines to the gut; Oral vaccination to venoms; Vaccination to polio; Vaccination to malaria; Immunoglobulins in therapy; Production and manipulation of monoclonal antibodies; Genetic manipulation of antibodies; Immunotoxins; Standardisation of immunoglobulins; Bone marrow transplantation; Manipulation of atopic allergy; IgE and control of allergy; Anti-idiotype vaccines; Immunoglobulin coupled liposomes; Cytokines in therapy; Immunomodulation of macrophages; Interferons; LAK cells.

Staff

Joint Principals of the School:	Professor M. Newton, School of Pharmacy, University of London
	Professor N. A. Staines, King's College, London
Course Leader:	Dr. G. Buckton, School of Pharmacy, University of London
School Secretary:	Mr. R. E. Marshall, Royal Pharmaceutical Society of Great Britain

The lecturers will include: Dr. F. R. Balkwill, Biological Therapy Laboratory, Imperial Cancer Research Fund, London; Professor P. Brandtzaeg, Institute of Pathology, University of Oslo, Norway; Dr. M. K. Brenner, Dept. of Haematology, The Royal Free Hospital, London; Dr. D. H. Calam, National Institute for Biological Standards and Control, Potters Bar, Herts; Dr. M. Clark, Immunology Division, Cambridge University; Professor A. T. Florence, School of Pharmacy, University of London; Professor H. Gould, Division of Biomolecular Sciences, King's College, London; Professor C. R. Hopkins, Dept. of Biochemistry, Imperial College of Science and Technology, London; Dr. R. Jefferis, Dept. of Immunology, University of Birmingham Medical School; Dr. L. D. Leserman, INSERM-CNRS, Marseille, France; Professor N. A. Mitchison, Tumour Immunology Unit, University College, London; Dr. R. R. C. New, Department of Parasitology, Liverpool School of Tropical Medicine; Dr. R. C. Rees, Dept. of Virology, the University of Sheffield; Professor I. M. Roitt, Dept of Immunology, Middlesex Hospital Medical School, London; Dr. G. K. Scadding, Middlesex Hospital, London; Professor M. W. Steward, Immunology Unit, London School of Hygiene and Tropical Medicine; Professor E. Tomlinson, Advanced Drug Delivery Research, Ciba-Geigy Pharmaceuticals, Horsham; Dr. R. Thorpe, Division of Immunology, National Institute for Biological Standards and Control, Potters Bar, Herts; Dr. E. Wawrzynczak, Drug Targeting Laboratory, Institute of Cancer Research, Surrey.

Fees for the School

The fees for the School are £125 for members of the Royal Pharmaceutical Society or the British Society for Immunology. For non-members the fee is £200. In addition to the course, lunch, morning coffee, afternoon tea and an evening event are included in this fee.

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233 Sherman Hall
Buffalo, New York 14214
(716) 831-2848

RICK MILLER CHOSEN FOR 1989 CINADER LECTURESHIP

The selection of Dr. Rick Miller as the Third Annual Bernhard Cinader Lecturer is a signal honour for a gifted scientist and for a geographic centre of talent and imagination. Dr. Miller is the first and present Chairman of the Department of Immunology at the University of Toronto. He is credited with a series of important achievements towards our understanding of immune regulation, a topic that is inherent in the scientific contributions that have led to the foundation of the lectureship. Dr. Cinader's early work established how the state of immunological tolerance to a self protein influences the antibody response to an injected structurally related non-self (foreign) protein. Dr. Miller's contribution to this field is an analysis of self-reactive T cells which may stabilize the state of immunological tolerance. He refers to these white blood cells as veto cells because they veto the action of cells that could destroy foreign grafted tissue. Rick Miller has not only contributed to scientific progress but has also played an important role in national and international scientific exchanges. He acted as Chairman of the Program Committee of the 6th International Congress of Immunology and edited with Cinader "Progress in Immunology VI". The great success of this congress and of this influential book has increased the already high world esteem for Canada's immunology.

RICK MILLER CHOISI COMME CONFÉRENCIER CINADER 1989

Le choix du Dr Rick Miller comme troisième conférencier Bernhard Cinader est un hommage autant pour ce chercheur doué que pour la communauté immunologique de Toronto. Le Dr Miller est le premier directeur du Département d'Immunology de l'Université de Toronto. Par de nombreuses réalisations, il a apporté une contribution majeure à la compréhension de l'immunorégulation, un sujet éminemment pertinent à l'esprit des conférences Bernhard Cinader. Les premiers travaux du Dr Cinader avaient démontré comment un état de tolérance immunologique à une protéine du soi pouvait influencer la réponse humorale contre une protéine étrangère. La contribution du Dr Miller à ce domaine a été d'analyser les cellules T auto-réactives qui stabilisent l'état de tolérance immunologique. Il a appelé ces globules blancs des "cellules veto" ce qui définit bien leur propriété de s'opposer à l'action des cellules qui rejettent les greffes. Rick Miller a non seulement contribué au progrès de la science mais il a aussi joué un rôle important au plan des échanges scientifiques nationaux et internationaux. Il fut président du comité de programme du 6ième congrès international d'Immunologie dont il édita, avec le Dr Cinader, les compte-rendus "Progress in Immunology VI". Le grand succès de ce congrès et de ce livre a contribué à souligner le calibre mondial de la recherche en Immunologie au Canada.

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for Immunology

APPLICATION FOR MEMBERSHIP

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Numéro de téléphone

PROFESSIONAL QUALIFICATIONS (Degrees)

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Special field(s) of interest

Sujet(s) d'intérêt particulier

Signature of Applicant (Date)

Signature du candidat (Date)

SPONSORS (2 members of the Canadian Society for Immunology)

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Applicants should append a curriculum vitae and a list of publications with full titles.

Please complete this form, obtain signatures of Sponsors, and return with 11 copies, including appendices to::

Les candidats doivent joindre un curriculum vitae et une liste des publications incluant les titres.

Veuillez compléter ce formulaire, obtenir les signatures des parrains, et le faire parvenir en 11 copies (y compris les appendices) a:

CSI c/o, Dr. C.A. Ottaway, Room 6360,
Medical Sciences Building, University of Toronto,
1 King's College Circle,
Toronto, Ontario, Canada, M5S 1A8.

I wish to receive correspondence in English ___.

Je desire recevoir la correspondance en francais ___.