CURRICULUM VITAE

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General Information

Name: Lynda Maria Stuart

Office Address: Massachusetts General Hospital
55 Fruit Street
Gray Jackson 1402
Boston, MA 02114 United States
Phone: (617) 724-2890
Place of Birth: Jamaica

Education:

1990	B.A. (Hons) (Medical Science/Social and Political Science), II:1, Cambridge University, England
1993	M.B.,B.S. (Medicine), with 2 distinctions, U. of London
2002	PH.D. (Immunology), U. of Edinburgh

Postdoctoral Training:

02/03-01/07	Wellcome Trust Clinician Scientist, Immunology, U. of Edinburgh
06/03-02/07	Instructor in Pediatrics, Massachusetts General Hospital/Harvard Medical School

Licensure and Certification:

1996	Member of the Royal College of Physicians, UK
2005	United States Medical Licensing Exam

Academic Appointments:

1998-1999	Lecturer Pediatric Nephrology, Guy's Hospital, London, UK
1999-2002	Wellcome Trust Clinical Training Research Fellow, U. of Edinburgh, Edinburgh, UK
2003-2007	Wellcome Trust Clinician Scientist, U. of Edinburgh, Edinburgh, UK
2003-2007	Instructor in Pediatrics, Massachusetts General Hospital, Boston, MA

Hospital or Affiliated Institution Appointments:

07/93-02/94	House Physician in Nephrology/Internal Medicine, Royal London Hospital, London, UK

02/94-08/94	House Surgeon in Pediatric/General Surgery, Norfolk & Norwich Hospital. , Norfolk, UK
08/94-02/95	Senior House Physician in Neurology, Rheumatology and Internal Medicine, Royal Postgraduate Medical School, London, UK
02/95-08/95	Senior House Physician in Cardiology, Royal Brompton National Heart and Lung Hospital, London, UK
08/95-02/96	Senior House Physician in Intensive Care , Guy's Hospital, London, UK
02/96-08/96	Senior House Physician in Nephrology, John Radcliffe Hospital, Oxford, UK
09/96-09/97	Specialist Registrar in Nephrology, Nephrology, Guy's Hospital, London, UK
10/97-10/98	Specialist Registrar in Internal Medicine, University Hospital, Lewisham, London, UK
10/98-04/99	Lecturer / Honorary Registrar in Pediatric Nephrology, Guy's Hospital, London, UK
05/02-02/03	Specialist Registrar in Nephrology, Edinburgh Royal Infirmary , Edinburgh, UK

Major Committee Assignments:

1991-1992	European Medical Students Association, Executive Committee Member, U of London
1998-1999	Government Task Force on staff involvement in the NHS, Advisor, UK National Health Service
2000-2004	International Medical Education Trust , Director, Other

Professional Societies:

1999-2003	British Society for Immunology , Member
2001-2003	Renal Association of Britain , Member
2001-2005	Medical Research Society , Member
2005-2007	Society for Leukocyte biology, Member

Awards and Honors:

1991	Rogers Fund, Medical Research Council, UK
1991	Commonwealth Foundation Elective Prize, Commonwealth Foundation
1991	Elective Prize, British Medical and Dental Students' Trust
1993	Distinctions in clinical pharmacology and therapeutics and surgery, U. of London
1999-2002	Wellcome Clinical Training Fellowship, Wellcome Trust UK
2003-2007	Wellcome Trust Clinician Scientist Award, Wellcome Trust UK
2005	Presidential Student/Post-doctoral Award, Society of Leukocyte Biology
2007-2009	Howard M. Goodman Fellowship, Massachusetts General Hospital

2007-2009 Claflin Distinguished Scholar, Massachusetts General Hospital

Research, Teaching, and Clinical Contributions

Narrative report of Research, Teaching, and Clinical Contributions

Report

I am an MD PhD, trained in Nephrology and Internal medicine in the UK but currently focusing solely on basic science research. My research interest is in the area of immunology with a particular focus on the innate immune system and phagocytosis.

I run a research group within the Department of Pediatrics with a joint appointment in the Center for Computational and Integrative Biology at Massachusetts General Hospital. My group is a medium size with 3 postdoctoral fellows, a clinical fellow and research assistant. As research group leader I am actively involved in the scientific training of the fellows in my group and in the department. This includes training them both at the bench and in experimental design and the critical interpretation of data. In addition, I have provided each of my fellows one-to one training in fellowship and grant writing, what I believe to be an essential aspect of scientific training. My group is one of 5 interdisciplinary groups that make up Developmental Immunology in Pediatrics at MGH. We work independently but in close collaboration to address issues related to innate immunity. As a Principal Investigator in this department I am involved in managerial and administrative level decisions concerning not only my own group but also the department in general. In addition I have close collaborative relationships with other groups both at MGH (Dr Kathryn Moore, Lipid Metabolism) and outside of the MGH. These include Joel Bader at John's Hopkins and Michel Desjardins, University of Montreal.

My research, both past and present, has been in the area of innate immunity and phagocytosis. Phagocytosis is an evolutionarily conserved process required for tissue remodeling and host defense. During phagocytosis particles are recognized by cell surface receptors that trigger rearrangement of the actin-cytoskeleton and internalization of the bound particle into a de novo, membrane-limited organelle known as the 'phagosome'. From within the phagosome many of the innate and adaptive immune functions associated with phagocytosis are initiated. My previous work has focused on the identifying evolutionary conserved mechanisms of phagocytosis. I have generated a system-based model of the phagosome and intend to extend this work to model host-pathogen interactions in silico to generate hypothesis that will be tested in vitro. In addition, I have studied the recognition of self and non-self ligands by cell surface receptors, including TLRs and phagocytic receptors, and intracellular pathogen recognition proteins such as the NACHT-LRR (NLR) proteins. My current interest is to developing systems based approaches to understand phagocytosis and to generate and test novel hypothesis concerning the host-pathogen interaction in this context. My ultimate goal is to understand how phagocytes decipher self from non-self to initiate appropriate effector responses. I believe that a detailed understanding of phagocytosis will provide insights into the role of phagocytes in remodeling inflamed tissue and in the innate and adaptive immune responses required to contain pathogens.

Funding Information

1999-2002	P.I., Wellcome Trust, UK, Dendritic cells, apoptotic cells and autoimmunity
2003-2007	P.I., The Wellcome Trust, UK, Defective Clearance of Dying Cells, Aberrant, Dendritic Cell Maturation and Autoimmunity
2006	P.I., Center for the Study of Inflammatory Bowel Disease at MGH, Identification of the transporter for MDP in phagocytes
2007-2008	Supervisor, MGH Fund for Medical Discovery (FMD), The Role of Rac GTPases in Innate Immunity
2007-2008	Supervisor, Cystic Fibrosis Foundation, C. elegans model of innate immunity in cystic fibrosis
2007-2009	P.I., Claflin Distinguished Scholar, Dissecting the Mechanism and Consequences of Apoptotic Cell Phagocytosis Using a Systems Biology Approach in the Model Organism, Drosophila Melanogaster

Report of Teaching

Local contributions

Local Invited Presentations

Seminar

2006-	Identification of the transporter for MDP in phagocytes, Massachusetts General Hospital
2006-	Systems biology analysis of the Drosophila Phagosome, Massachusetts General Hospital

Advisory and Supervisory Responsibilities in Clinical or Laboratory Setting

2006-2008	3 Postdoctoral Research Fellows for 500 hrs/year, Basic science training, Harvard Medical School
2006-2008	1 Clinical Fellow for 500 hrs/year, Bench research training, Harvard Medical School
2006-2007	1 Graduate Students for 150 hrs/year, co-supervisor of masters project, U. Of Massachusetts

Regional, national, or international contributions

Invited Presentations

Regional

2006- Phagocytosis - defining complexity, U of Massachusetts*[Seminar]*

National

2003- Dendritic cell clearance of apoptotic cells: lessons from the mouse, Apoptotic cell clearance Gordon Research Conference*[Invited Lecture]*

2005- Using systems biology to examine the Drosophila phagosome and define the basic template of phagocytosis, Gordon Research Conference*[Invited Lecture]*

2007- Phagocytosis - defining complexity, Apoptotic cell clearance Gordon Research Conference*[Plenary Presentation]*

2007- Phagocytosis - defining complexity, Phagocyte Gordon Research Conference*[Invited Lecture]*

International

2006- Phagocytosis - defining complexity, U of Oxford, UK*[Invited Lecture]*

2007- Wellcome Trust Advanced Course: Functional Genomics and Systems Biology, The Wellcome Trust Genome Campus, Hinxton, Cambridge, UK , Wellcome Trust*[Seminar]*

Bibliography

Original Articles

1. Ren Y, **Stuart L**, Lindberg FP, Rosenkranz AR, Chen Y, Mayadas TN, Savill J. Nonphlogistic clearance of late apoptotic neutrophils by macrophages: efficient phagocytosis independent of beta 2 integrins. J Immunol. 2001;166(7):4743-50.
2. **Stuart LM**, Lucas M, Simpson C, Lamb J, Savill J, Lacy-Hulbert A. Inhibitory effects of apoptotic cell ingestion upon endotoxin-driven myeloid dendritic cell maturation. J Immunol. 2002;168(4):1627-35.
3. Lucas M, **Stuart LM**, Savill J, Lacy-Hulbert A. Apoptotic cells and innate immune stimuli combine to regulate macrophage cytokine secretion. J Immunol. 2003;171(5):2610-5.
4. **Stuart LM**, Takahashi K, Shi L, Savill J, Ezekowitz RA. Mannose-binding lectin-deficient mice display defective apoptotic cell clearance but no autoimmune phenotype. J Immunol. 2005;174(6):3220-6.

5. **Stuart LM**, Deng J, Silver JM, Takahashi K, Tseng AA, Hennessy EJ, Ezekowitz RA, Moore KJ. Response to Staphylococcus aureus requires CD36-mediated phagocytosis triggered by the COOH-terminal cytoplasmic domain. J Cell Biol. 2005;170(3):477-85.
6. Kocks C, Cho JH, Nehme N, Ulvila J, Pearson AM, Meister M, Strom C, Conto SL, Hetru C, **Stuart LM**, Stehle T, Hoffmann JA, Reichhart JM, Ferrandon D, Rämet M, Ezekowitz RA. Eater, a transmembrane protein mediating phagocytosis of bacterial pathogens in Drosophila. Cell. 2005;123(2):335-46.
7. Lucas M, **Stuart LM**, Zhang A, Hodivala-Dilke K, Febbraio M, Silverstein R, Savill J, Lacy-Hulbert A. Requirements for apoptotic cell contact in regulation of macrophage responses. J Immunol. 2006;177(6):4047-54.
8. **Stuart LM**, Boulais J, Charriere GM, Hennessy EJ, Brunet S, Jutras I, Goyette G, Rondeau C, Letarte S, Huang H, Ye P, Morales F, Kocks C, Bader JS, Desjardins M, Ezekowitz RA. A systems biology analysis of the Drosophila phagosome. Nature. 2007;445(7123):95-101.

Reviews/Chapters/Editorials

1. **Stuart LM**. Hypertension in the Afro-Caribbean patient. Postgraduate Doctor. 1999.
2. **Stuart L**, Hughes J. Apoptosis and autoimmunity. Nephrol Dial Transplant. 2002;17(5):697-700.
3. Fraser IP, **Stuart L**, Ezekowitz RA. TLR-independent pattern recognition receptors and anti-inflammatory mechanisms. J Endotoxin Res. 2004;10(2):120-4.
4. **Stuart LM** and Ezekowitz RAB. Drosophila and the basic paradigms of phagocytosis. Biologist. 2005;52(1):39-44.
5. **Stuart LM**, Ezekowitz RA. Phagocytosis: elegant complexity. Immunity. 2005;22(5):539-50.
6. **Stuart LM**, Henson PM, Vandivier RW. Collectins: opsonins for apoptotic cells and regulators of inflammation. Curr Dir Autoimmun. 2006;9:143-61.

Clinical Communications

1. **Stuart LM**, Rice PS, Lloyd G, Beale RJ. A soldier in respiratory distress. Lancet. 1996;347(8993):30.

Thesis

1. Lynda M Stuart. Cell death, dendritic cells and downregulation of the immune response. Edinburgh, UK: U of Edinburgh;2003.