

"The identification of clinically significant subgroups is the logical next step in furthering ME-CFS research.

There might be multiple pathways leading to the cause and maintenance of the neurobiologic disregulations and other symptoms experienced by individuals with ME-CFS.

Depending upon the individual and subtype, these may include unique biological, genetic, neurological, and socioenvironmental contributions.

Subgrouping is the key to understanding how ME/CFS begins, how it is maintained, how medical and psychological variables influence its course, and in the best case, how it can be prevented, treated, and cured. I have a paper on this that was published, and it goes into much more detail. [See "Exploratory subgrouping in CFS: Infectious, inflammatory, and other":

[http://www.investinme.org/Documents/Journals/Journal%20of% 20liME%20Vol%201%20lssue%201.pdf] "

- Live Chat Q&A with Chronic Fatigue Syndrome Research and Policy Leader Dr. Leonard A. Jason, PhD

http://www.immunesupport.com/library/showarticle.cfm/ID /8232



Previous IiME Conference Comments

"The conference was so fantastic. I now feel fully armed to battle in ignorance about this disease in Denmark. How can any doctor look at the facts and doubt it is a physical disease" - R

"Just wanted to congratulate you on an excellent conference last week. It was great to see so many of the leading researchers into ME all in one room, and all pulling in the same direction." - C

"I enjoyed participating enormously and think the whole conference was a great success" - Dr S

"It was great to see so many familiar faces, both amongst the audience and the presenters, and as you rightly say, the information conveyed was amazing and exciting." - D

A very good venue too, I noticed others remarked on what a pleasant environment, the term 'the organisers did us proud' came to mind – N

Thank you very much for all the time and effort that the liME team generously gives, voluntarily, to the ME community. This great effort has ensured that the 2007 Conference was a great success. It is so encouraging and reassuring to know that liME is standing firm and campaigning for biomedical research into M

-C

From the Chairman of Invest in ME

Welcome to the third Invest in ME International ME/CFS Conference in London in May 2008 – an event that brings together the best of biomedical research from some of the most renowned experts on ME/CFS in the world.



This third liME conference coincides with publication of the third version of the Journal of liME – a unique publication which combines research, information, news, stories and other articles relating to myalgic encephalomyelitis (ME/CFS). In two and half years liME has now organised three international biomedical research conferences attracting some of the foremost and relevant experts on ME/CFS from around the world and this year's conference is no exception. The blend of biomedical research, objective data and established experience presented by our distinguished speakers is testament to the increasing knowledgebase for ME/CFS.

At the conference you will find citizens of ten nations in attendance – indicating, we hope, not just the popularity of the liME conferences but also the yearning for education and knowledge of the science regarding this illness.

We welcome Dr Judy Mikovits, Dr Leonard Jason, Dr Martin Lerner and Dr John Chia from USA and are grateful to them for taking the time to provide details of their research and vast experience. Our four guests from America are matched by four guests from UK representing old and new research and exhibiting a stunning mix of experience and analysis. We also welcome the Chief Medical Officer, in the shape of Dr. Paul Cosford, Regional Director of Public Health for the East of England and we welcome the Medical Research Council, represented by Dr Joanna Latimer. However, two people whom you will not see at the conference are Mr Alan Johnson and Mrs Ann Keen, Secretary of State and minister responsible for Health, respectively. The Department of Health (DoH) exists to improve the health and wellbeing of people in England – it states this on its website. Yet both ministers have declined our offer to speak at the conference and failed to respond to

subsequent offers to attend (despite both having been

originally invited when the initial conference plans were evolving over eight months ago). (continued on Page 4)

From the Chairman of Invest in ME (continued)

This continues a chain of refusals by the department to try to understand the major issues facing the families of people with ME/CFS by the lack of a government policy for ME/CFS. Yet it is a pity that the UK government continues in failing in its duty of healthcare to its citizens by ignoring the overwhelming evidence which dictates that substantial funding of biomedical research into ME/CFS will likely give results – something recommended in the Gibson Inquiry by establishing a world-leading research community to provide the necessary science for creating treatments and cure for ME/CFS. The conference would have helped the ministers to see for themselves the need for this.

Unfortunately, the Health minister has stated that the Gibson Inquiry has been ignored – replaced by the National Institute of Clinical Excellence (NICE) guidelines which have been heavily criticised by liME and other support groups as lacking in proper objective analysis and offering nothing for people with ME and their families.

Our theme for the conference is Sub Grouping of and Treatments for ME/CFS and we believe now is the time to lobby for a more scientific approach by the governments and healthcare organisations toward treatment of people with ME/CFS.



The need for sub grouping of ME/CFS is becoming more and more accepted and is supported by the increasing biomedical research. The experience and data of researchers such as Dr. Jason, Dr Lerner, Dr Chia, Dr Mikovits, Dr Newton and Dr Kerr, backed by real life experiences of Dr Spurr and Dr Monro shows that there is hope for treating and eventually curing this illness. It is an illness that has no international barriers.

The unrealistic and unjust approach shown by NICE with their recent guidelines for ME/CFS – a

one size fits all methodology based on CBT and GET - is shown not only to be costly or dangerous but also unnecessary and pointless for people with ME/CFS.

Any unbiased and objective assessment of biomedical research data which has been shown in our past conferences would surely agree that dedicated funding of biomedical research into ME/CFS, made within a national strategy for ME/CFS, would be the most cost-effective, moral and sensible approach to take in order to allow hundreds of thousands of patients, carers and families to reclaim their lives and reduce what is an enormous cost to the UK economy.



Yet there may be signs of change - undoubtedly caused by the many dedicated researchers and campaigners who have been continually providing information and advocacy over the many years. Attitudes to ME/CFS are changing. Good quality science is being published in peerreviewed journals (albeit mostly privately funded research). The argument that funding of biomedical research into ME/CFS is denied because of the lack of good quality research proposals is now proven beyond doubt to be specious.

News of recent changes in Scotland has brought hope that the UK government might change its position of indifference. Invest in ME pointed out over a year ago that the best hope for change in policy toward ME/CFS may come from smaller countries. We highlighted the work going on in Norway where the Norwegian minister, prompted by the tremendous work of the Norwegian ME Association, has begun changing course. In Scotland recently new hope comes of the way ahead for the work to develop an ME good practice guide for GPs, known colloquially as the

From the Chairman of Invest in ME (continued)

Scottish GP Guideline. It is intended to inform the meeting of the Cross Party Group on ME/CFS. If this progresses and patients' voices begin to be heard then it will be progress. But if it takes the same course as the NICE guidelines then it will be another wasted opportunity.

Recently some questions were tabled by an MP in the UK parliament in response to pressure from one of his constituents - a severely affected person with ME who has been writing to liME. Ian Pearson answered questions about plans 'to establish an independent scientific committee to oversee research into ME/CFS. He responded by stating that –

"the MRC is planning to set up a panel of experts from different disciplines to look more closely at the area. The panel will come from varied fields including neuroscience, immunology, toxicology and imaging, and will involve interested parties and focus on the subtypes and causes of ME/CFS".

If this proves to be true then valid change may be on the way. However, as we recently stated in our newsletter, Invest in ME take the position that any intention to bring together the biological and psychological ME/CFS factions in order to encourage the MRC to give money is misguided. Whilst a holistic approach need to be taken toward any illness it is difficult to reconcile good science with any examination of relationships between valid and proven biological markers and generic, unproven and sometimes deleterious treatments. This will merely delay the only sure way of finding a cure for ME - biomedical research. The only strategy which makes any sense from a scientific, moral or just viewpoint is to fund biomedical research into ME and treat ME in the same way as cancer, Parkinson's, MS or any other mainstream illness.

We need to adopt proper diagnostic criteria, the Canadian consensus criteria, to differentiate idiopathic chronic fatigue, burn out, overtraining syndrome, fibromyalgia, multiple chemical sensitivities etc. from ME/CFS and find the correct treatment for each of these groups. Basically, we need and want an objective scientific approach to ME/CFS and sub grouping will facilitate this process.

We hope the conference will demonstrate this fact

And so to the conference.

This year we are dedicating the conference to the memory of Dr John Richardson. Dr Richardson devoted his life to the treatment of ME and it is fitting that we remember him at a biomedical research conference carrying the theme of sub grouping and treatments for ME/CFS, especially with regard to research on enteroviruses now being presented and which brings us back to the origins of ME.

In this small way we honour his work and that of other distinguished professionals over the years who worked with Dr Richardson and have continued his work, including Dr Spurr who is cofounder and chairman of the John Richardson Research Group. As Dr Spurr notes John Richardson was a modest man and did not get the credit he deserved.



A day to celebrate research, science and to be able to network in a friendly atmosphere with an eclectic mix of professionals, charities, support groups and others. We shall have details of our ME Book Project on display with Natalie able to discuss this exciting project. The conference day will be a busy time for the liME team and we won't be able to spend as much time discussing with our delegates as we would like. But if you are coming to the conference please come up and say hello. For those who are not coming to the conference but are reading this in our Journal then please stay in touch via email.

We wish everyone an enjoyable conference and a pleasant summer and hope and believe that progress will continue in providing a future treatment/cure for ME.

Best Wishes

Kathleen McCall & the liME team



The 3rd liME International ME/CFS Conference

Dedicated to Dr John Richardson

As liME launch our third annual conference and include a significant part devoted to enteroviral research so we would like to dedicate the conference to a man who devoted a great deal of his life to treating people with ME.

The international reputation that John Richardson acquired in the field of myalgic encephalitis (ME) research sprang from the records that he kept for 40 years of enteroviral infections, mostly coxsackie virus. He realised that enteroviral infections were endemic among his practice population on the south bank of the Tyne, spreading from one family to another and from one generation to the next. The public health authorities seemed to be unaware of it and facilities for identification were rarely available locally.

The clinical features of these infections varied from Bornholm disease—a common short illness with chest pain—to audible pericarditis, serious myocarditis, and valvulitis with dysfunction. Other features were muscle pain, jitter and weakness, sleep disturbance, hypersensitivity to sound and light, and mild confusion. Many organs in the body could also be affected. In the long term the effects were sometimes serious. While some members of a family would escape with a brief febrile illness only, coxsackie infection could leave one person struggling for years with ME or dilated cardiomyopathy. Worse still, John found that the infection would readily pass from the mother to her unborn child, which would be delivered with fibroelastosis or maldevelopment of the heart, or structural defects of the brain or other organs. He tried to prevent this in early pregnancy by giving the mother intramuscular injections of human immunoglobulin.

Early on John believed that ME was an illness that could follow directly from a coxsackie infection and one that was capable of altering the whole personality and abilities of someone he had known for years. The idea that it was just depression or hysteria, a psychoneurosis or "all in the mind," he found not only ludicrous and cruel, but also

"This Dr. John Richardson of Newcastle, and others have documented significant associated cardiac and cardiovascular injury as well as other organ injuries associated with the usual CNS and autonomic changes in this group of patients."

"[Richardson] has followed ME patients...for three to four generations. I am aware of no other physician in the world with such a historic view of ME patients. He has repeatedly demonstrated that many ME patients go on to develop structural heart injury. Richardson has identified more than several hundred cardiopathies in his ME practice."

-Dr. Byron Hyde-

(source http://www.nameus.org/ResearchPages/ResCirculatory.htm)

dangerous, and his records contain several examples of suicide. When patients told him that they had grown tired after taking vigorous or progressively "graded" exercise and found that they had to pay for it by being much worse for the next day or so, he believed them and sought other methods of treatment.

The fame of his records led James Mowbray, professor of immunopathology at St Mary's Hospital, London, to offer him unrestricted facilities for identification of the various strains of the coxsackie group of viruses, as well as other viruses less frequently encountered. Leonard Archard, professor of biochemistry at Imperial College, London, was also helpful in culturing virus in samples of tissue sent to him and both became personal friends. John did not publish these records in the form of his book *Enteroviral and Toxin Mediated Myalgic Encephalitis/Chronic Fatigue Syndrome and Other Organ Pathologies* (Haworth Medical Press) until 2001.

(Continued on page 7)



John also became acquainted with Dr Melvin Ramsay, who defined benign myalgic encephalomyelitis in 1956 after studying an outbreak of Bornholm disease at the Royal Free Hospital, London. John became a founder member of the ME Association, renamed the Ramsay Research Fund in 1999 after Melvyn Ramsay's death.

John's own international reputation grew rapidly after an international symposium on myalgic encephalitis was held in Cambridge, United Kingdom, in 1989. He chaired the conference and the book that followed in 1992, *The Clinical and Scientific Basis of Myalgic Encephalomyelitis*, edited by Dr Byron Hyde, not only contains a chapter written by John, but is

John gave up all NHS work in 1992 and his appointment as a senior police surgeon. However, he continued to see patients privately. Most came from the United Kingdom, but some also from France, Republic of Ireland, Belgium, and Norway.

dedicated to him.

He refused fees, but suggested instead a contribution to the research fund that he established. This he used partly to finance scientific papers that he wrote and partly as gifts to individuals and university departments where the effects of long term survival of virus in the human body were being studied. His own papers were into what part of the brain was involved in ME. John also used the patient contributions to finance an annual international conference in his local area. The pursuit of these researches did not prevent him playing a full part in the general practice of which he was a partner, including training medical students sent to him by the university.

Outside medicine his main interest was music, especially playing the three manual pipe organ, which with assistance he had built in his own house and for which he composed 28 pieces.

John Richardson, former general practitioner Ryton, Tyne and Wear (b 1915; q Durham 1952), died in the Freeman Hospital, Newcastle, on 18 July 2002. The above information was taken from the BMJ obituary for John Richardson by Hewan Dewar.

The John Richardson Group

The Newcastle Group was founded by Drs John Richardson, Hewan Dewar and Irving Spurr back in 1993. Its purpose was to promote research into the origin and consequences of viral infections (entero viruses in particular). The group was renamed following the death of Dr John Richardson in 2002. The group also organises an annual conference which attracts many eminent participants from around the world.

More articles from Dr John Richardson: -

- Myalgic Encephalomyelitis: Guidelines for Doctors Journal: J of Chronic Fatigue Syndrome, Vol. 10(1) 2002, pp. 65-80
- Enteroviral and Toxin Mediated Myalgic
 Encephalomyelitis/Chronic Fatigue Syndrome
 and Other Organ Pathologies (Hardcover)

ME Story

I am a fully grown man of 44, I am now into my 6th year, soon planned to get married but my girlfriend is very worried about what to expect - the outlook will be for her having to deal with me as I get worse.

I have got to the stage where I can no longer breathe through my nose channel despite 4 operations. They have said there is nothing more they can do so I am now finding myself becoming very fatigued by about 11am sleeping for about 9 hours per day and again during the night, I have lost a lot of weight gone from 12 stone down to 9 stone in one month.

I wish the government would put more money into research to find a cure for this bad, painful illness.

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Conference Introduction

This Conference makes clear the rapidly changing understanding of ME-CFS and related "syndromes of uncertain origin". It provides confirmation of earlier insights concerning viral infections as a common basis of the illness and adds to these the growing recognition of the impact of infection on nervous system, particularly the, autonomic nervous system, endocrine and cardiovascular systems.

The validity of the WHO ICD classification of ME as a neurological condition is justified whilst the interrelated impact on other major body systems is demonstrated. The inadequacies of the widely used CDC 1994 research criteria are now clear and much more careful definitions of ME are needed if the accurate diagnosis necessary for effective treatment and management of the illness are to be provided.

The key to accurate diagnosis is the careful clinical separation of different sub-groups within the ME spectrum which will, at the same time, assist deeper understanding of this multi-system and multi-organ disorder.

The key to accurate diagnosis is the careful clinical separation of different sub-groups within the ME spectrum which will, at the same time, assist deeper understanding of this multisystem and multi-organ disorder.

The speakers bring to the Conference years of extensive research and clinical studies that provide new grounds for hope for those who suffer from ME and their carers. It will encourage and inform clinicians and clinical administrators who are wrestling with the complexities of a growing number of patients with this illness and provided better grounds for treatment and the assessment of benefits, insurance and care needs for patients.

Dr Leonard Jason has led the field in pressing the case for sub-groups to better understand and treat the illness.

Drs John Chia and Martin Lerner are specialists in virally-induced infectious diseases which affect both the nervous system and the heart, two major



features of sick ME patients.

Dr Irving Spurr has for many years cared for and investigated ME patients in Weardale in collaboration with the late Dr John Richardson and Dr Byron Hyde. As a GP he has a long experience of this complex illness and its treatment within the UK.

Dr Jean Monro has a great deal of expert clinical experience and developed extensive diagnostic and treatment protocols for ME and related illnesses and provides a private hospital service in addition to seeing patients in other settings.

Dr Julia Newton has documented and studied the extensive dysautonomia commonly found in many ME patients and responsible for the well known variations in blood pressure, body temperature, balance etc.

Dr Judy Mikovits, as Director of the newly formed Whittemore-Petersen Institute, will provide an up date on the progress of the Institute which is the first one founded to bring together research, clinical assessment and treatment of ME patients. Can we establish such an Institute in the UK?

Dr Jonathan Kerr has pioneered the groundbreaking genetic studies of ME patients and shown the strong links with infection, chemicals, mitochondrial and nerve dysfunction. His latest work includes the identification of clinical phenotypes that provide sound grounds for subgroups within the spectrum of ME and point to more focussed treatment.

The poverty and misinformation of the psychiatric lobby that dominates the UK understanding of CFS-ME is exposed by this Conference. The work presented will no longer allow the ill-founded somatisation and (bio)psychosocial theories to remain credible.

Enjoy!

Malcolm Hooper



ME Story

I have lived with severe M.E. and a lot of ignorance and prejudice, for 13 years. On many occasions I have been told that there is nothing wrong with me, I am just trying to get attention, or that I am too lazy to do anything. My response is, that if I was going to "fake" being ill then I wouldn't choose an illness where I was going to be disbelieved, ignored, treated badly by most people, loose all of my friends and have my family reject me! - Sarah

Chief Medical Officer

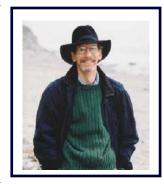
'..there is a paucity of good research evidence and very little research investment for a serious clinical problem that in likelihood has a pervasive impact on the individual and the community.

Insufficient attention has been paid to differential outcomes and treatment responses in children and young adults, the severely affected, cultural, ethnic and social class groupings.'

- The CMO Working Group on CFS/ME 2002

The International ME/CFS Conference 2008—Sub Grouping of/Treatments for ME/CFS

John Herd is a passionate spokesperson and crusader for patients' rights. He has been called a "veteran advocate" by the CFIDS Association for faithful attendance at major conferences, and is "on a first-name basis with most of the pioneers" in ME/CFS research and patient care



I'm delighted to read that the International ME/CFS Conference 2008 has chosen its theme to be Sub Grouping of/Treatments for ME/CFS.

In the end of the 90's Lenny Jason and I encouraged the then operational health department's Name Change Workgroup (NCW) to include in its recommendations a call for a system of sub-grouping patients.

Although sub-grouping had been very briefly mentioned in a few journal articles, the subject had been given almost no attention.

In the years since the NCW distributed its recommendations there has been somewhat increased talk of the importance of sub-grouping, but there remains no standardized system of sub-grouping patients my biologic test results and/or symptom presentation.

In research presentations researchers present stratified subgroups of patients based upon the specific data they are testing for.

Because there is no standardized system of sub-grouping patients, it is often difficult to compare the results of studies or to know if studies are comparing similar populations.

Development of a standardized sub-grouping system would alleviate the problem of different researchers applying differently the various research diagnostic criteria and even applying single criterion differently.

Such a system may also help us get beyond the logjam of differing views about what is M.E. and what is CFS as our science progresses.

John Herd

Professor Malcolm Hooper

Professor Hooper graduated from University of London and had held appointments at Sunderland Technical College, Sunderland Polytechnic and the University of Sunderland, where he was made Emeritus Professor of Medicinal Chemistry in 1993.



He has served at many UK universities as well as in India and Tanzania.

He has inaugurated links with Indian research institutions and universities and celebrated 25 years of productive and on-going links which have, particularly, involved the design and development of new drugs for tropical diseases and an exploration of natural products associated with Ayurvedic medicine. He has published some 50 papers in peer-reviewed journals in the field of medicinal chemistry together with major reviews on the Chemotherapy of Leprosy, the Chemistry of Isatogens. He edited one book on the Chemotherapy of Tropical Diseases.

He acted as a referee for a number of important journals and served on one editorial board. He has served on committees of the Council for National Academic Awards (CNAA), the World Health Organisation (WHO) and the Science and Engineering Research Council (SERC).

Professor Hooper is a member of a number of learned bodies, including the Royal Chemical Society, the British Pharmacological Society and the Society for Drug Research (SDR), now renamed the Society for Medicines Research, where he has served on the committee for 12 years and served as Chairman for 2 years. This involved the planning and organising of major national and international conferences. He was appointed Chief Scientific Advisor to the Gulf Veterans Association (GVA) and accepted by the Ministry of Defence (MoD) as their nominee on the Independent Panel established to consider the possible interactions between Vaccines and NAPS tablets.

He has also served on the Gulf Support Group convened at the Royal British Legion. His involvement with the GVA brought contact with Chronic Fatigue Syndrome/Myalegic Encephalomyelitis (ME/CFS) and related disorders. Gulf War Illness/Syndrome (GWI/S) has much in common with ME/CFS.

He is Patron of the Sunderland and South Shields M.E. Association and a member of the John Richardson Research Group, which includes eminent physicians and scientists performing research into ME/CFS, where one recent aspect has been the identification of organochlorine pesticide poisoning being misdiagnosed as M.E./CFS. He has addressed meetings of the Pesticide Exchange Network and consulted to the Organo-Phosphate Information Network (OPIN).

He worked with the Autism Research Unit (ARU) at the University of Sunderland for over 20 years, leading to involvement in biochemical studies to offer help, support and treatment for people with autism. This has also lead to research and urine-analysis of Indolyl-Acroyl-Glycine (IAG), which is an unusual metabolite found in excess of 90% of people examined in different groups of GWV, ME/CFS and Organo-Phosphate (OP) poisoning sufferers. He served on the General Synod of the Church of England from 1970 to 1980 and he is a Christian Lay Leader, Preacher and Teacher.

He has been involved in three environmental campaigns:

- Toxic waste dumping, including campaign against sewage in the sea presenting to the Select Committee on Sewage Treatment and Disposal
- GWIS, presenting to the Defence Select Committee
- M.E./CFS and OP/Pesticide poisoning

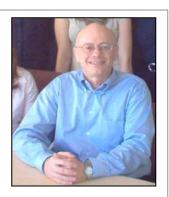
Professor Hooper will be chairing the International ME/CFS Conference 2008.

For additional articles by Professor Hooper on the liME web site see http://tinyurl.com/6ylm3r

Dr. Leonard Jason

Prof. of Clin. & Community Psychology, Director, Center for Community Research, DePaul University, Chicago

Dr. Leonard Jason, Ph.D., is among the most prolific of all ME/CFS researchers. For more than a decade, Dr. Jason and his team at DePaul University's Centre for Community Research have worked to define the scope and impact of ME/CFS worldwide.



Dr Jason is Vice President of the International Association for Chronic Fatigue Syndrome (now the IACFS/ME) and has been a key driver of CFS research since 1991, and is uniquely positioned to support collaboration between CFS researchers, patients, and government decision makers. His studies have shown that the direct and indirect costs of ME/CFS amount to \$20 billion in the U.S. each year, and more than 1 million people suffer from ME/CFS as opposed to the estimated 20,000 people originally reported by the CDC (Centers for Disease Control and Prevention).

Conference Presentation

Case Definitions of ME/CFS - Including Paediatric Case Definition

It is important to determine which case definition to use in defining the ME/CFS syndrome.

The benefit of classifying patients into diagnostic categories is that it facilitates communication among clinicians and researchers, selection of treatment methods, and prediction of response to treatment.

Currently, scientists throughout the world use the Fukuda et al. (1994) CFS case definition.

Efforts to develop a case definition can be traced back even earlier.

In 1955, there was an outbreak of a CFS-like illness at the Royal Free Hospital, and Ramsay, the medical consultant in charge, published a definition of this disease using the term Myalgic Encephalomyelitis (ME).

Recently, the Canadians have developed a clinical case definition, the IACFS/ME has developed a pediatric case definition of ME/CFS, and the CDC has developed an empirical case definition.

This talk will summarize some of the issues and controversies involving these case definitions.

Additional links for Dr Jason:

- Jason L, et al., "The Economic impact of ME/CFS: individual and societal level cost," Dynamic Medicine, 2008 7:6 (8 April 2008) [PDF Format]
- Jason L, "Exploratory subgrouping in CFS: Infectious, inflammatory, and other": http://www.investinme.org/Documents/Journals/Journal%20of%20liME%20Vol%201%20lssue%201.pdf

Dr. Jonathan Kerr

Jonathan Kerr qualified in medicine from Queen's University of Belfast (1987), and completed training as a medical microbiologist (1995).

He has worked as a microbiologist in Belfast, Manchester and London, taking up post as a Consultant Senior Lecturer in Microbiology at Royal Brompton Hospital / Imperial College in June 2001, and then Sir Joseph Hotung Clinical Senior Lecturer in Inflammation at St George's University of London in 2005.



His interest in Chronic Fatigue Syndrome (CFS) began during a study of the consequences of parvovirus B19 infection, when he showed that a percentage of infected cases developed CFS which persisted for several years. He is now the principal investigator in a programme of research in CFS. This involves development of a diagnostic test using mass spectrometry, analysis of human and viral gene expression in the white blood cells, and clinical trials of immunomodulatory drugs.

Dr. Jonathan Kerr and colleagues at St. George's University of London reported in the July 27, 2005 issue of the Journal of Clinical Pathology that a preliminary study of 25 CFS patients and 25 matched healthy controls revealed abnormalities in 35 of 9,522 genes analyzed using microarray technology. Polymerase chain reaction studies showed the same results for 16 of these genes. Dr. Kerr has recently defined seven genomic subtypes of CFS based on 88 genes that are expressed differently in CFS patients than they are in normal controls.

The study, and its results, raises some important questions. The first of which pertains to the need for funding of microbiological CFS research. He is funded (>£1 million) by the CFS Research Foundation (www.cfsrf.com), a charitable organization based in the U.K., and leads a group of 5 scientists at St George's.

Conference Presentation Gene Expression in ME/CFS: a Means of Subtyping

Chronic Fatigue Syndrome / myalgic encephalomyelitis (CFS/ME) is a multisystem disease, the pathogenesis of which remains undetermined. We set out to determine the precise abnormalities of gene expression that occur in blood of CFS/ME patients. We analysed gene expression in peripheral blood from 25 CFS/ME patients diagnosed according to the Centers for Disease Control (CDC) diagnostic criteria and 50 normal blood donors using the Affymetrix U133+2 microarray using a cut-off fold-difference of expression ≥2.5. Genes showing differential expression were further analysed using quantitative PCR in 55 CFS/ME patients and 75 normal blood donors. Differential expression was confirmed for 88 genes, 85 of which were upregulated and 3 downregulated. Highly represented functions were haematological disease and function, immunological disease and function, cancer, cell death, immune response and infection. Clustering of QPCR data from CFS/ME patients revealed 7 subtypes with distinct differences in SF-36 scores, clinical phenotypes and severity.

Additional links for Dr Kerr:

 Jonathan Kerr, Seven genomic subtypes of Chronic Fatigue Syndrome / Myalgic Encephalomyelitis (CFS/ME): a detailed analysis of gene networks and clinical phenotypes. J Clin Pathol. 2007 Dec 5. ub ahead of print] PMID: 18057078 [PubMed - as supplied by publisher]

Dr Martin Lerner

Dr Martin Lerner is certified by the American Board of Internal Medicine and is an Infectious Disease Specialist. He held a residency in Internal Medicine, at Harvard Medical Services. Boston City Hospital and Barnes Hospital, St. Louis, MO. Washington University School of Medicine, M.D. Two Years, National Institute of Allergy and Infectious Diseases, Epidemiology Unit. Alumni Awardee, Washington University School of Medicine.



Three years research fellow in infectious diseases at the Thorndike Memorial Laboratory, Boston City Hospital and Harvard Medical School under the direction of Dr. Maxwell Finland, (founder of subspecialty infectious diseases). Also awarded a 1-year fellowship in molecular biology under the direction of Dr. James Darnell, Massachusetts Institute of Technology, Cambridge Massachusetts. He was Chief of the Division of Infectious Diseases and Professor of Internal Medicine at Wayne State University School of Medicine, 1963-1982. Chief of the Department of Medicine at Hutzel Hospital, Wayne State University, Detroit, MI 1970–1982. He established a clinical virology laboratory and trained 33 physicians in the subspecialty of infectious diseases at Wayne State University, (1963-1982). He was elected member American Society for Clinical Investigation, American Association of Physicians. He is a member of the committee preparing the National Boards in Medical Examiners, US, and a member of the training grant committee, National Institute of Allergy and Infectious Diseases, NIH. Master of the American College of Physicians. He was Governor for Michigan American College of Physicians, 1991 – 1994.

Dr. Lerner has published over 10 papers since 1993 on the role of subclinical myocarditis in a subset of CFS patients. He has also reported success with long courses of antiviral therapy in patients with chronic EBV and CMV infections. Dr. Lerner uses antibody tests for early antigen to CMV and EBV that are not available in most commercial laboratories; he believes that they are better for differentiating active from latent infections. Although these papers received very little attention in the past, there has been interest in the tie between viral myocarditis and CFS recently since a series of three papers from Germany have found HHV-6 and parvovirus B-19 to be the most common viruses found in biopsies of patients with viral myocarditis. Both viruses are also implicated in CFS/ME.

Dr Lerner holds Five Patents for Diagnosis and Treatment of CFS.

Conference Presentation

A Twenty Year Journey to Understanding and Treatment of the Chronic Fatigue Syndrome Including A Longitudinal Study of Groups A and B CFS Patients, 2000-2006

The Energy Index point score (EI), (copyright, Lerner AM and Deeter RG, 1999), (0-10) is a simple reliable metric easily evaluating the functional capacity at each CFS patient-physician visit. A hanging sign in the examining room, with physician and patient together, is used. Validation of the EI was done using two methods: a) 20 CFS patients and 22 healthy adults, matched for sex, age, place and time; EI, CFS = 3.6; EI, healthy adults = 9.9, p=<0.0001, and b) 55 CFS patients evaluated at the same time by the EI and Fatigue Severity Score, correlation 0.67, p=0.0066. Improvement to disappearance of CFS symptoms correlate with an increasing EI.

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The validated Energy Index (EI) point score (1-10) was calculated for each CFS patient every 3 months at physician visits. A CFS patient has an EI < 5. A CFS patient with an EI of 0 is bedridden; a CFS diagnosis is no longer present at an EI > 5. The EI effect size is 0.25, a medium effect size is 0.5. A large effect size is > 0.8. Administrations of antiviral drugs were given within a defined pharmacokinetic therapeutic window.

Eighteen CFS patients with elevated serum IgG serum antibody titers to cytomegalovirus (HCMV) were treated with intravenous ganciclovir 5mg/Kg q 12 h for 30 days. At evaluations, 24 weeks later, 13 patients (72%) returned to their premorbid healthy states (Infectious Diseases in Clinical Practice, 1997:6;110-117). In a second study, 25 CFS patients with elevated serum antibody titers to Epstein-Barr virus (EBV), Early Antigen (Diffuse) and/or EBV, viral capsid antigen (VCA, IgM) were treated with valacyclovir (14.6 mg/Kg po q 6 h) for 6 months. This valacyclovir dose achieved serum acyclovir Cmax > 7µm and high antiviral activity versus EBV (ID50, 4.4 – 13.3µm), but no antiviral activity versus HCMV. The CFS patients El functional capacity as well as EBV and HCMV serum antibody titers were again assessed after 1, 3 and 6 months of valacyclovir. We concluded that the 16 CFS patients with EBV persistent infection (EBV single-virus subset) improved after 6 months, but 9 CFS patients with elevated serum antibody titers to "both" EBV and HCMV did not benefit from valacyclovir (Drugs of Today, 2002:38;549-561). With this guidance, a randomized double blinded controlled 6 month study of EBV subset single virus (no HCMV serum antibody) showed an El rise after 6 months of +1.12 units (122 Kcal/day), in the valacyclovir group while the placebo group improved +0.42 units (65 Kcal/day), Invivo 2007:21;707-714.

The current inclusive CFS data (May 1, 2001—December 31, 2007) regardless of duration of CFS illness from this treatment center of 201 CFS patients reveal demographic and epidemiologic data, 156 (77.6%) female; 45 (22.4%) male. The mean age of CFS patients is 45.2 years, BMI 26.4 Kg/m2. These 201 CFS patients are two distinct groups with similar demographics; (A) CFS Herpesvirus Illness (EBV, HHV6, HCMV) with no co-infections, and Group (B) CFS Herpesvirus Illness (EBV, HCMV,HHV6) "with" mimicking, co-infections, both A group and B group meeting international criteria for diagnosis of CFS. (Fukuda, Ann Intern Med. 1994:121;953-9). The major co-infections of Group B are Lyme Disease, Babesiosis and Adult Rheumatic Fever.

The subsequent data here are those of CFS Group A who were ill an average of 5.2 years before receiving antiviral therapy. Data for CFS Group B are not included. There are 138 group A CFS patients, 104 females (75.4%) and 34 males (24.6%). The mean age is 46.4 years, BMI 26.7 Kg/m2. Patients were further identified by the presence of elevated serum antibody titers to EBV, HCMV, or HHV6. CFS patients (>95%) had abnormal oscillating flat or inverted T-waves at 24Hr ECG monitor and abnormal cardiac wall motion at rest (11.5%) and stress (24.1%). Cardiac biopsies from CFS patients seen in 1997 showed a non-inflammatory cardiomyopathy with myofiber disarray, myofiber drop out, apoptosis, and cardiac replacement fibrosis.

Among the 138 Group A herpesvirus CFS patients there were single virus infections, EBV patients (27.5%); HCMV (13.8%); and HHV6 (1.4%). However, more commonly, each CFS patient was infected with several herpesviruses simultaneously: (79 patients with multiple herpesvirus infections (57.2%)). There were EBV/HCMV co-infections (28.3%); EBV/HHV6 co-infections (10.9%); HCMV/HHV6 co-infections (5.1%); and EBV/HCMV/HHV6 co-infections (13.0%). Specific long-term pharmacokinetic therapy was administered to each patient until the EI point score reached 8, at which time, antiviral medicines were tapered, stopped, or continued, as appropriate with no change in the EI point score. The EI point score at 3 month intervals for the 6 years of the study was recorded. There were a mean of 46 EI patients at each 3 month time interval and 25 time intervals over the 6 year longitudinal study. The mean EI for the 138 CFS patients at baseline was 4.5. The mean final EI point score was 6.0, an increase of 1.5 EI units and, therefore, a large EI effect size change (Spearman's p nonparametric correlation test, Spearman's p=0.562, p=0.0019). These data indicate that specific long-term anti-herpesvirus pharmacokinetic administration of valacyclovir/valganciclovir provides long-term significant benefit to Group A CFS patients.

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There was no toxicity to this long-term antiviral therapy as given. For the non-statistician, the data show that the benefit to the CFS patient has the quality of truth 998 times out of a1,000! For the evidence-based physician requiring placebo controlled double blinded trials for veritude, without recognition of the differences between Group A and Group B CFS patients, as defined here, it is likely that the evidence based trial may have falsely yielded "no benefit" from the antiviral therapy.

Additional links for Dr Lerner:

- Martin Lerner, Valacyclovir treatment in Epstein-Barr virus subset chronic fatigue syndrome: thirty-six months follow-up. In Vivo. 2007 Sep-Oct;21(5):707-13. PMID: 18019402 [PubMed - indexed for MEDLINE]
- Martin Lerner, Immunoassay with cytomegalovirus early antigens from gene products p52 and CM2 (UL44 and UL57) detects active infection in patients with chronic fatigue syndrome. J Clin Pathol. 2008 May;61(5):623-6. Epub 2007 Nov 23. PMID: 18037660 [PubMed - in process]

Dr Julia Newton

Senior Lecturer at the Institute of Cellular Medicine, Newcastle University

Dr Newton is Senior Lecturer at the Institute of Cellular Medicine, Newcastle University. She is the academic lead of the internationally renowned Cardiovascular Investigation Unit (Falls and Syncope Unit) which is arguably the largest autonomic nervous system testing laboratory in Europe.

Dr Newton has been working on autonomic dysfunction in ME/CFS patients. She has a reputation in the investigation of autonomic function in the pathogenesis of fatigue with a research programme funded by the MRC, ME Research UK and Liver North.



She founded and chairs the local multidisciplinary Fatigue Interest Group.

Conference Presentation

Autonomic Dysfunction: Identification of Aetiologically Distinct Subject groups within ME/CFS

The talk today will focus on the physiological changes that occur when humans stand, and how autonomic nervous system responses to assuming the upright position may be impaired in those with CFS/ME.

Additional links for Dr Newton:

Symptoms of autonomic dysfunction in chronic fatigue Syndrome J.L. NEWTON, O.
 OKONKWO, K. SUTCLIFFE, A. SETH, J. SHIN and D.E.J. JONES From the Fatigue Interest group
 and Liver Research Group, Institute for Cellular Medicine, University of Newcastle,
 Newcastle, UK Received 5 March 2007 and in revised form 24 April 2007

Dr John Chia

Dr Chia is an infectious disease specialist practicing in Torrance, California, USA and has published research recently (*Chronic fatigue syndrome associated with chronic enterovirus infection of the stomach*) on the role of enteroviruses in the aetiolgy of ME/CFS – an area which has been implicated as one of the causes by a number of studies. There are more than 70 different types of enteroviruses that can affect the central nervous system, heart and muscles, all of which is consistent with the symptoms of ME/CFS. By analyzing samples of stomach tissue from 165 patients with CFS,



Dr. Chia's team discovered that 82% of these individuals had high levels of enteroviruses in their digestive systems. Dr Chia's research may result in the development of antiviral drugs to treat the debilitating symptoms of ME/CFS.

Conference Presentation The Role of Enteroviruses Infection in CFS/ME

JOHN K. CHIA, M.D., ANDREW Y. CHIA, B.S. EV Med Research, Lomita, CA.

The aetiology of chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) remains elusive after almost three decades of investigations. Enteroviruses (EV) are clear causes of acute respiratory and gastrointestinal infections, with tropism for the central nervous system, muscles and heart. Chronic EV infections were implicated as causes of CFS/ME by a few European investigators. Pioneer studies detected EV RNA sequences in the blood of CFS/ME patients, but the results were not replicated by other investigators. Observations from in vitro experiments and from animal models of EV infection, however, clearly established a state of chronic persistence through the formation of double stranded RNA, similar to findings reported in muscle biopsies of CFS/ME patients. Production of non-cytopathic viruses, with partial deletion of the 5' untranslated region of the viral genome, was recently reported in mice with chronic EV myocarditis. Similar to the European studies, our recent data suggested that EV could be a major trigger/cause among the diverse etiologies for CFS/ME. Our studies confirmed EV RNA sequence in the peripheral blood leukocytes (PBL) taken from CFS/ME patients, and the relative frequency of RNA detection correlated with the severity of symptoms. In addition, administration of a-interferon and ribavirin or the combination of a-and y-interferon to CFS/ME patients with persistent EV infection resulted in significant improvement of clinical symptoms and suppression of EV RNA. Symptomatic relapses and reappearance of EV RNA in PBL after drug discontinuation lend support to the pathogenic role of EV in these patients. Demonstration of EV capsid protein 1 in 82% of stomach biopsies taken from more than 250 CFS/ME patients, and the finding of EV RNA and the growth of non-cytopathic EV in the same tissues provided compelling evidence for persistent EV infection. Renewed interest is needed to further study the cause-effect relationship between viral persistence and clinical symptoms of CFS/ME. Controlled trials with future antiviral drugs will likely provide the ultimate evidence for the pathogenic role of EV in CFS/ME.

Additional links for Dr Chia:

 John Chia, Chronic fatigue syndrome is associated with chronic enterovirus infection of the stomach. J Clin Pathol. 2008 Jan;61(1):43-8. Epub 2007 Sep 13. PMID: 17872383 [PubMed indexed for MEDLINE]

Dr Irving Spurr

Dr Irving Spurr is a GP with 30 years in practice and has over 20 years of experience of running ME/CFS diagnostic and treatment clinics. Dr Spurr worked with the late Dr John Richardson on enteroviruses and their implication in ME/CFS and has been a Trustee and the chairman of the John Richardson Research Group for 20 years, and is currently the chairman of the group.



Conference Presentation

A GP's experience of Diagnosis and Treatment of ME/CFS

Dr Jean Monro

Dr. Jean Monro is the Medical Director of the Breakspear Hospital and is an internationally recognised specialist in environmental medicine.

Dr Monro is a Fellow of the American Academy of Environmental Medicine, a Board Certified US examination. Dr Monro has previously been Medical Advisor to Sanity and Medical Advisor to the Coeliac Association.

In early 2007, Dr Monro was asked to be a witness for the <u>House of Lords' Select Committee on Science and Technology</u> on allergy treatments.



Dr Jean Monro has a background in hospital general medicine and worked at the <u>National Hospital</u> <u>for Nervous Diseases</u>, Queen Square, London, researching migraine and multiple sclerosis. She entered full-time practice in environmental medicine in 1982 and in 1988 established <u>Breakspear</u> Hospital for alleray and environmental medicine

She has many publications to her name and regularly speaks at conferences worldwide.

Conference Presentation Case Studies of Diagnosis and Treatments of ME/CFS

Additional links for Dr Monro:

http://www.breakspearmedical.com/

Dr Judy Mikovits

Dr. Mikovits obtained her Ph.D. in Biochemistry and Molecular Biology from George Washington University. Dr. Mikovits served as a senior scientist at Biosource International, where she led the development of proteomic assays for the Luminex platform that is used extensively for cytokine activity assessment in therapy development. She also served as Chief Scientific Officer and VP Drug Discovery at Epigenx Biosciences, where she lead the development and commercialization of DNA methylation inhibitors for cancer therapy and of cell and array-based methylation assays for drug discovery and diagnostic development.

She is Research Director at the Whittemore Peterson Nevada CFS centre for Neuro-Immune disorders and has co-authored over 40 peer reviewed publications that address fundamental issues of viral pathogenesis, hematopoiesis and cytokine biology.

Conference Presentation

How Sub Grouping Will Affect Research Strategies: Towards a Molecular Definition of ME/CFS

J. A. Mikovits, PhD¹, V.C. Lombardi, PhD¹, D. L. Peterson, MD¹ and F.W. Ruscetti, PhD². ¹Whittemore Peterson Institute, Reno, NV, USA ²Cancer Inflammation Program, National Cancer Institute (NCI), Frederick MD. USA

Myalgic Encephalomyelitis/Chronic Fatique Syndrome (ME/CFS) is a heterogeneous disease with unknown etiology. Previous studies have shown that viral specific immune responses and immune abnormalities play critical roles in the pathogenesis of ME/CFS. The central problem in the management of patients with CFS is the lack of biomarkers for patient stratification into subgroups according to distinct immune responses, virus infections and neurological abnormalities. This situation hinders both the diagnostic process and development of specific treatments. The overall goal of our current research program is to define viral and host parameters that correlate with distinct disease phenotypes. We have taken advantage of the latest technologies, which allow for multiplex analysis from a single sample to better define a cohort with molecular signatures of immune response and correlate those signatures with virus infections using a custom pan viral DNA microarray. We used our clinically well defined cohort for serum cytokine and chemokine profiling using a bead based suspension ELISA for 25 cytokines and chemokines on a Luminex platform in 90 patients and 120 healthy controls; pan custom viral expression microarrays in 40 patients done at two different time points; profiling of innate immune defects including RNase L function and cytotoxic subset profiling as well as correlating microbial induced gastrointestinal inflammation chronic immune activation. Data will be also be presented on a subgroup of patients who developed a defect in functional T cell subsets characterized by a clonal rearrangement of the T-cell receptor gamma (TCRg). These patients form a distinct subgroup that is characterized by a significantly increased incidence of the development of Non-Hodakins Lymphoma (NHL).

Additional links for Dr Mikovits:

http://lib.bioinfo.pl/auth:Mikovits,J



IIME International ME/CFS Conference DVDs

Invest in ME have available the full presentations from both of the International ME/CFS Conferences in London of 2007 and 2006. These professionally filmed and authored DVD sets each consist of four discs, in Dolby stereo and in PAL (European) or NTSC (USA/Canada) format. Containing 9 $\frac{1}{2}$ hours (2007 DVD set) and 6 hours (2006 DVD set) – with all presentations plus interviews with ME presenters and news stories from TV programmes.

These DVDs have been sold in over 20 countries and are available as educational tools – useful for healthcare staff (GPs, paediatricians, occupational therapists and others connected with the treatment of ME), researchers, scientists, educational specialists, media, ME support groups and people with ME and their carers/parents.

Full details can be found at http://www.investinme.org/InfoCentre%20Education%20Homepage.htm or via emailing liME at meconference@investinme.org.

Price £15 each (UK), £16 (Europe) and £17 (USA/Canada/Australia/New Zealand) - including p&p.



IiME International ME/CFS Conference 2008 DVD

We hope to have a DVD of the 2008 conference available for sale in June. The price is still to be determined but will not be more than the 2007 or 2006 DVDs. Full details via emailing liME at this address - meconference@investinme.org.

QUOTABLE QUOTES ABOUT ME/CFS Myalgic Encephalomyelitis / Chronic Fatigue Syndrome also known as PVFS (Post Viral Fatigue Syndrome) sometimes known as cFIDS (Chronic Fatigue & Immune Dystunction Syndrome) in the USA compiled by Mangaret Williams on behalf of the charity Invest in ME Registered Charity Number 11,14035 April 2007 Copies available from Invest in ME Telephone 01603 701980 or 02392 252365 http://www.investsems.org of Pont Mrs Sue Waddle, 18 Claremont Gardens, Purbrook, Waterlooville, PO7 SLL, UK PRICE 63.50 All profit from the sale of this booklet will go to the charity

Quotable Quotes on ME/CFS

This 42 page booklet has been compiled by Margaret Williams and contains a plethora of quotes from ME experts and from others relating to ME, ME/CFS, CFS/ME and CFS. This is an invaluable document for researchers, healthcare staff, politicians, media, ME support groups and people with ME.

The booklet will aid those composing letters, performing research, verifying analysis and for general reference purposes. Price £3.50 + £1 postage/packing for UK delivery (for Europe and USA/Canada/Australia/New Zealand please email for costs of p&p).

http://tinyurl.com/5kk8b8

International ME/CFS Conference Agenda 23rd May 2008

Start	Presenter	Presentation
08:00	Registration Coffee/tea morning refreshments	
09:00	IiME	Welcome to the Conference
09:05	Professor Malcolm Hooper	Introduction to the IIME International ME/CFS Conference
09.15	Dr. Leonard Jason	Case Definitions of ME/CFS
10:15	Dr. Jonathan Kerr	Gene Expression in ME/CFS: a means of Subtyping
10:45	Coffee/tea Break	
11:05	Dr. Martin Lerner	A Twenty Year Journey to Understanding and Treatment of the Chronic Fatigue Syndrome Including A Longitudinal Study of Groups A and B CFS Patients, 2000-2006
12:05	Dr. Julia Newton	Autonomic Dysfunction: Identification of aetiologically Distinct Subject Groups within ME/CFS
12:35	Lunch	
13:35	Dr. John Chia	The Role of Chronic Enteroviruses in CFS/ME
14:35	Dr. Irving Spurr	A GP's experience of Diagnosis and Treatment of ME/CFS
15:10	Coffee/tea Break	
15:30	Dr Jean Monro	Case Studies of Diagnosis and Treatments for ME/CFS
16:00	Dr. Judy Mikovits	How Sub Grouping Will Affect Research Strategies for ME/CFS: Towards a Molecular Definition of ME/CFS
16:50	Professor Malcolm Hooper & Speakers	Summary - and Plenary Session / Open forum / Questions
17:30	Adjourn	