Key points from Professor Anthony Komaroff's Highlights of the IACFSME 2014 Conference

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http://bit.ly/1jBbTXd
http://www.meactionuk.org.uk/Komaroff-Summary-San-Francisco-March-2014.htm

Many people whose lives have been impacted by ME/CFS may be able to view the video of Professor Anthony Komaroff's outstanding overview of the 11th International IACFSME Conference held on 20th-23rd March 2014 in San Francisco (http://bit.ly/1gVWVvq). For those who are unable to watch the video, these notes may serve as a useful adjunct for ME/CFS patients in their dealings with doctors, most of whom adhere to the psychiatric model and are completely unaware of the large body of evidence which invalidates that model.

Tony Komaroff is a distinguished Professor of Medicine at Harvard Medical School; his summary at the end of the 51 minute video should not be ignored:

"Case-control studies comparing patients with CFS to both disease comparison groups and healthy controls subjects find robust evidence of an underlying biological process involving:

- the brain and autonomic nervous system
- immune system
- energy metabolism
- oxidative and nitrosative stress

"In summary, the illness is not simply the expression of somatic symptoms by people with a primary psychological disorder".

This accords with the informed opinion of Ian Lipkin, Professor of Epidemiology and Director, Centre for Infection and Immunity at Columbia University, who is also Professor of Pathology & Neurology; he is adamant that ME/CFS is not psychosomatic: "There is no question in my mind that this is a physical disorder" (Co-Cure RES: Interview: Ian Lipkin's Million Dollar Appeal for Microbiome Study; 10th February 2014).

In his presentation, Komaroff said: "It was a fair question 30 years ago to ask whether people with these symptoms might not just be expressing psychiatric distress, amplifying normal body sensations or even fabricating for secondary gain…but today it is no longer a fair question".

Komaroff divided his highlights of the proceedings into various sections including immunology (noting particularly the elevation of interferon-gamma in CFS), basic biology, virology and infectious agents, public health/epidemiology, case definition, exercise provocation studies, paediatrics, brain research and neuro-inflammation: all are well worth viewing and the following notes barely scratch the surface.

In the Immunology section, Komaroff said that a highlight for him was the CFI (multi-centre Chronic Fatigue Initiative) study that found elevated levels of allergy-associated cytokines and chemokines and other pro-inflammatory cytokines and chemokines in patients who had been ill for less than 3 years when compared with those who had been ill for longer than 3 years. He said that this validated the concept that most of the biological action that people were going to be able to detect is more likely to be in the earlier stages of the illness than in the later stages.

In the basic biology section, Komaroff noted that telomeres (the ends of chromosomes) are shorter in CFS patients compared with matched healthy controls and that telomere length is a marker for cellular ageing in that their length reflects the viability of the cell (when the telomere is short enough, the cell dies), so a shorter telomere predicts an increased vulnerability to diseases of ageing such as atherosclerosis, neuro-degenerative diseases and several malignancies. Komaroff noted that a researcher from the CDC "showed us good data that telomeres are shorter in CFS…it's a finding that suggests there is an underlying biological process that is making patient with CFS" age more quickly.

Komaroff spoke about the Stanford Inflammation Studies which looked at 51 inflammation-related molecules (cytokines, chemokines and hormones) and which found that 15 such molecules distinguished cases from controls, or correlated with symptoms severity, or both. He noted the importance of the role of autoimmunity in CFS (substantiated by elevated levels of IL-17) and the significant decreases in several microRNAs (thereby increasing production of pro-inflammatory molecules and providing "internal biological confirmation" of what one would expect to find if these findings were valid).

Komaroff then considered the importance of the Hornig/Lipkin study on IFN-gamma; he first explained the significance of the odds ratio (OR), which compares the frequency of a finding in one group (i.e. like people with CFS) versus the frequency of that finding in a comparison group (i.e. like healthy controls). He said that typically in research the odds ratio range was between 1.0 and 5.0 (an OR of 1.0 means there is no difference in frequency between the two groups being compared, whilst an OR of 5 means there is a fivefold difference between the two groups). In the Hornig/Lipkin study on IFN gamma there were two striking ORs: the study compared 200 cases of those ill for less than 3 years with those ill for more than 3 years and the OR of IF-gamma was 117.3%. Komaroff commented: "I've never seen an OR like that – I'd never seen an association that so strongly discriminates one group from another… that same molecule – IFN-gamma – was found to correlate with a cognitive impairment, comparing a highly impaired cognitively impaired subgroup to a lower impairment subgroup with an OR of 67…..This is a striking statement to me about this molecule and its possible role in this illness. IFN-gamma is thought to be commonly released by viral infection or infection with intracellular bacteria, so it suggests but by no means proves that in CFS there may be an underlying infectious agent".

Komaroff noted the role of infectious agents and the fact that essentially no infectious microorganism had been found in serum but he questioned whether this was the case in circulating white blood cells, brain or other tissue. He noted particularly the impressive work of Dr John Chia on enteroviruses in CFS (82% VPI +ve in CFS compared with 19% in controls and 63% enteroviral dsRNA +ve in patients compared with 10% in controls) and expressed his despair that no-one had attempted to replicate this important work.

In the brain research section of his highlights, Komaroff discussed the work of Marcie and Mark Zinn from Stanford, whose qEEG (quantified electroencephalogram) studies demonstrated a remarkable ability to distinguish CFS from healthy controls; he also spoke about the Japanese studies showing an activation of key brain immune cells (microglia and astrocytes) using PET scans, noting that "past studies have demonstrated reduced cortical blood flow, reduced glutamate - an important neurotransmitter - reduced serotonin transporter and increased dopamine biosynthesis".

On the issue of neuro-inflammation, Komaroff said: "There is, and you've heard it repeatedly in the last three days, a theory that CFS might reflect an ongoing activation of immune cells in the brain, not in the periphery, but in the brain" and he went on to discuss the Japanese study that clearly showed an increased signal, giving evidence of immune activation in multiple areas of the brain, the intensity of the signal correlating with cognitive impairment.

In the Question and Answer session, Komaroff was asked if neuro-inflammation was not encephalomyelitis, to which he replied: "Yes. If it were confirmed by multiple other investigators it would, for me, say that there is a low-grade, chronic encephalitis in these patients, that the image we clinicians have of encephalitis as an acute and often dramatic clinical presentation that can even be fatal has – may have – blinded us to the possibility that there may be an entity of long-lasting – many years long – cyclic, chronic, neuro-inflammation and that that underlies the symptoms of this illness", commenting that it was "entirely plausible and these data are consistent with it".

Another questioner asked Komaroff about CBT, to which he replied: "I don't want to get dragged into discussion of the role of CBT because I know it's a polarised issue. It wasn't discussed at this conference. I'd be happy to talk with you individually though".

He went on to say about case definitions: "In terms of whether all investigators should use a common case definition, yes, that would be the ideal. I think the problem is that not all investigators agree on what's the best and easiest to implement case definition, and part of the problem with choosing any one (definition) is that if there is a lot of literature already that uses another case definition besides the one that you regard as currently best, that it'll be hard to compare the results of any studies going forward with the published research that already exists, so I don't think there's a good answer to that question and if there is, I don't have it".

Professor Komaroff was thanked on behalf of the IACFSME for his elegant presentation, as were attendees for supporting the IACFSME: “For those of you who are health care providers, I want to thank you for providing care for our patients even though they may be sullied by the mainstream and not believed by many”.

The Stanford Symposium on 19th March 2014 and the 11th International IACFSME Conference on 20th-23rd March were significant milestones along the seemingly endless road to the legitimisation of ME/CFS as a serious neuro-inflammatory disorder.

It is pertinent that the title of the IACFSME Conference was "Translating Science into Clinical Practice". The greatest challenge facing the ME/CFS community is not only obtaining funding but is the translating of what is known about ME/CFS from bench to bedside.

In order to do so, it is necessary to change the prevailing mindset within medicine, which is that the condition is a functional/behavioural disorder and therefore no investigations or treatment other than behavioural interventions are required. Tests that show there is something very wrong in ME/CFS patients are proscribed by NICE at the behest of the psychiatrists who advise the UK Establishment on the disorder (none of whom appeared to be present at either meeting) and who continue to dominate the scene in the UK, thus preventing those clinicians who do wish to translate medical science into medical practice from doing so.

The prevailing propaganda that ME/CFS can be “cured” by CBT and GET is all that the busy UK doctor hears. Indeed, the promotion of the PACE trial behavioural interventions as being the cost-effective and successful interventions of choice continues unabated (Lessons from the PACE trial. Professor Peter White; Bristol University School of Social and Community Medicine, 2nd April 2014).

Given the significance of what was presented at these two conferences, it is imperative that the researchers themselves effectively disseminate their findings to the broader medical community and do not rely on the media or medical press to do so, especially in the UK, where the Science Media Centre -- of which Professor Sir Simon Wessely is a founder member -- tightly controls what appears in the UK media about medical and scientific issues, in particular, about ME/CFS (see: http://www.meactionuk.org.uk/The-SMC-and-its-campaign-against-MECFS.htm)

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