

Thank you for asking me of my opinion on the report

## **"A Scientific Review of Multiple Chemical Sensitivity: Identifying Key Research Needs"**

I think it is a very ambitious effort and a well written report. I do however have some comments and suggestions for additional aspects to consider.

1. It is very possible that the syndrome called multiple chemical sensitivity (MCS) is not one disease entity. This possibility must be considered and have important implications

- Recommendations for medical work up and handling can not wait till hypothetically the background and specific causal risk factors are identified but have to be based on current knowledge on how to handle medically unexplained symptom, see e.g. information on electromagnetic hypersensitivity published by the WHO:

WHO (World Health Organization). Electromagnetic fields and public health. Electromagnetic Hypersensitivity. WHO Fact sheet No296. Geneva: World Health Organization; 2005.

WHO. Electromagnetic Hypersensitivity. Prodeedings. International Workshop ion EMF Hypersensitivity Prague, Czech Republic October 25-27 2004. Working Group Report: Characterization, diagnosis and Treatment (Rapporteur Lena Hillert)

2. The results in the paper by Hillert et al. (Hillert L, Musabasic V, Berglund H, Ciumas C, Savic I. Hum Brain Mapp. 2007 Mar;28(3):172-82. Odor processing in multiple chemical sensitivity.) that speak against neuronal sensitization should be considered.
3. The discussion on alternative ways to classify medically unexplained symptoms should be considered, see e.g.

Sharpe M, Mayou R, Walker J.

Bodily symptoms: new approaches to classification. J Psychosom Res. 2006 Apr;60(4):353-6.

Mayou R, Kirmayer LJ, Simon G, Kroenke K, Sharpe M. Somatoform disorders: time for a new approach in DSM-V. Am J Psychiatry 2005; 162:847-55.

4. Risk perception and risk communication should be considered.
5. The possibility of a nocebo effect should be considered. The study by Landgreber et al is of great interest here although not primarily on MCS:

Landgrebe M, Barta W, Rosengarth K, Frick U, Hauser S, Langguth B, Rutschmann R, Greenlee MW, Hajak G, Eichhammer P. Neuronal correlates of symptom formation in functional somatic syndromes: a fMRI study. Neuroimage 2008;41:1336-44.

6. The publications by Eva Millqvist and coworkers on sensor hypersensitivity and MCS should be considered. I do not think these are identical disorders by sensory hypersensitivity may be one aspect of MCS:

Andersson L, Johansson A, Millqvist E, Nordin S, Bende M. Prevalence and risk factors for chemical sensitivity and sensory hyperreactivity in teenagers. *Int J Hyg Environ Health*. 2008 Oct;211(5-6):690-7.

Johansson A, Millqvist E, Nordin S, Bende M. *Chest* 2006;129:1623-8. Relationship between self-reported odor intolerance and sensitivity to inhaled capsaicin: proposed definition of airway sensory hyperreactivity and estimation of its prevalence.

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Lena Hillert

Lena Hillert, MD, assistant professor]  
KAROLINSKA INSTITUTET  
Inst för Folkhälsovetenskap [Dept of Public Health Sciences]  
Avd för yrkes- och miljömedicin [Div of Occupational and Environmental Medicine]  
Norrbacka 3 tr [Norrbacka 3rd floor]  
SE 171 76 Stockholm  
[SWEDEN]

Tel: +46 8 737 36 55

Fax: +46 8 737 37 70

lena.hillert@ki.se

www.ki.se

www.folkhalsoguiden.se