MULTIPLE CHEMICAL SENSITIVITIES

Multiple Chemical Sensitivities (MCS) is a term applied to complaints of persons who report recurrent non-specific symptoms, referable to multiple organ systems, that the victims believe are provoked by exposure to low levels of chemical, biological, or physical agents.[i] The diagnosis, treatment and etiology of MCS has been a troublesome medical and social concern for victims, physicians and our courts. For the most part, federal courts have denied claims based on MCS since MCS is a controversial diagnosis that has been excluded under *Daubert*[ii] as unsupported by sound scientific reasoning or methodology.[iii] But some state courts have recently allowed MCS opinions on causation,[iv] and a recent position statement by The American College of Occupational and Environmental Medicine endorsed a five-part research agenda for studying the problem.[v] An evaluation of these perspectives is helpful in understanding the policy decisions affecting the syndrome.

A typical federal court decision concerning MCS is *Summers v. Missouri Pacific Railroad System*[vi], a Federal Employees Liability Act claim. Mr. Samuels and Mr. Potts, while traveling from Oklahoma to Texas in the second engine of a four-engine locomotive, noticed diesel exhaust in the cab. Both experienced headaches and had difficulty breathing; individual symptoms included weakness, dizziness, nausea and tightness in the chest. The defendant railroad referred plaintiffs to Dr. Alfred Johnson of the Environmental Health Center in Dallas who diagnosed toxic exposure to diesel fumes resulting in injury to the central nervous and respiratory systems, causing "chemical sensitivity." In the doctor's opinion, plaintiffs' condition rendered them unable to perform most types of employment. Plaintiffs were then referred to Dr. Thomas Chester, who concluded plaintiffs' exposure to diesel exhaust had resulted only in moderate carbon monoxide poisoning. He opined the diesel exposure incident could not have caused plaintiffs' chronic health problems since the effects should have dissipated within several days. Dr. Chester recommended neuropsychological testing for Mr. Summers and referred him to Dr. Susan Franks for that purpose. Dr. Franks examined Mr. Summers and, while not providing a diagnosis, found he was experiencing a probable dementia consistent with toxic exposure and thought he was brain-damaged. The appellate court affirmed the trial court's grant of defendant's motion in limine to exclude the testimony of Drs. Johnson and Franks. The court wrote:

> The trial court ultimately concluded that Dr. Johnson's diagnosis was in fact MCS. Thus, the court ruled his testimony inadmissible under Fed. R. Evid. 702 and *Daubert*. The district court's rationale was that Dr. Johnson performed none of the tests–"a scratch test, patch test, or a RAST test for IG antibodies"–used to confirm whether or not a patient is suffering from "chemical sensitivity." Appellants' App. at 131. Instead, Dr. Johnson relied on the patient's history, a physical examination, and the results of "Spect" and "Booth" tests. The district court found that these latter tests "have been the subject of much criticism by the scientific community as not having met acceptable scientific levels of methodology and criteria, and are not designed to test for the recognized medical condition of chemical sensitivity." Plaintiffs do not dispute this finding, and we therefore may not disturb the court's conclusion that 'the record does not demonstrate that Dr. Johnson has made a valid diagnosis of the generally accepted

condition of chemical sensitivity based on objective testing."

> Of course, district courts must be careful not to "don the amateur scientist's cap in ruling on scientific validity." But, trial judges remain free to determine as a threshold question whether an expert is in fact predicating her conclusions on the scientific theory, procedure, or principle on which she purports to rely. Were this not so, an expert whose opinion rests on faulty scientific underpinnings might be permitted to testify simply by placing an acceptable label on otherwise inadmissible "scientific knowledge."
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> We also affirm the district court's exclusion of Dr. Franks' testimony. The court found that Dr. Franks, as a psychologist, "is not an expert in the field of medicine or toxicology," *see* Appellants' App. at 132, and further found that her opinion was based in part on testing that was still "in the research stage and [had] not been validated." Plaintiffs provide us with no evidence indicating that the district court's resolution of this issue was in error. *Id.* at 604-605 (citations omitted).

Recently a state appellate court found for a claimant in a workers' compensation case and denied an employer's request to discontinue compensation, deeming it proper to admit a treating medical expert's opinion diagnosing claimant with multiple chemical sensitivity and finding claimant totally disabled.[vii] The employee was a registered nurse working in operating rooms at Brigham and Women's Hospital. For more than three years the operating room environment exposed her to ethylene oxide, formaldehyde, diesel fuel and other chemicals used in cleaning solutions. On August 6, 1993 after a ten hour shift in an operating room, she experienced a severe headache and nasal stuffiness. Upon awakening the following morning she had a fever, red nose and swollen right cheek, all of which a hospital physician confirmed three days later. That doctor diagnosed chronic sinusitis and considered her as disabled at that time. About ten months later Dr. LaCava, a board-certified pediatrician, examined Ms. Canavan, took her history, and conducted a number of diagnostic tests. He diagnosed arthritis, paresthesias, organic brain syndrome, chemical induced headaches, immunodeficiency, and multiple chemical sensitivities secondary to chemical poisoning at the hospital. Dr. LaCava, who is also certified by the American Board of Environmental Physicians, which is not recognized by the American Board of Medical Specialties, defined multiple chemical sensitivity as a "systemic reaction of the body with multiple symptoms to multiple kinds of chemicals, which may be chemically unrelated, which are commonly present in the every day working and living environment where that environment has not been meticulously cleaned up and had the chemical sources removed." According to Dr. LaCava the multiple chemicals that claimant had been exposed to at the hospital during her employment rendered her totally disabled and directly caused her medical condition.

The hospital countered with Dr. Acetta, board-certified by the American Board of Medical Specialties in allergy and immunology, who diagnosed chronic non-allergic rhinitis caused by non-specific stimuli in one's everyday environment. He testified the employee's condition was not work related and not physically disabling. Dr. Acetta testified multiple chemical sensitivities is "not accepted as a diagnostic disease by mainstream allergists/immunologists and occupational medicine physicians." He considered that claimant

suffered from Munchausen syndrome, a psychological disorder which explained her symptoms.

The appellate court addressed the hospital's contention that Dr. LaCava's opinions concerning diagnosis, disability and causation should have been excluded pursuant to the *Daubert* test as adopted by the Massachusetts Supreme Judicial Court by first acknowledging there may be no general acceptance in the medical community of the diagnosis of MCS. But the court pointed out general acceptance is but one of the many factors that can be examined to determine whether the reasoning or methodology underlying the testimony is scientifically valid. The court stated:

> Here, the employee's medical expert was well aware and informed about the nature of the chemicals to which the employee had been exposed during her tenure of employment. Based upon that knowledge and the diagnostic tests that he performed, he could reasonably infer that her condition was caused by her exposure to chemicals in the workplace. The amount and duration of that exposure need not have been proved. Further, the judge would properly take into account that Dr. LaCava's opinion was buttressed by his knowledge that other patients of his who had been similarly employed in the same pod at the hospital were similarly afflicted. In those circumstances, the judge did not err in admitting Dr. LaCava's opinion on causation and adopting it over that of the conflicting testimony of Dr. Acetta. *Id.* at 47 (citations omitted).

As treating doctors rely on increasingly sophisticated treating methods and find more support for their causation theories in published scientific literature, courts will permit additional medical testimony outside the mainstream as possessing sufficient reliability.

i M.R. Cullen, *The worker with multiple chemical sensitivities: an overview.* Occup Med.; 2:655-661, 1987.

ii 509 U.S. 579, 113 S.Ct. 2786 (1993).

iii *See Bradley v. Brown,* 42 F.3d 434, 438-39 (7th Cir 1994); *see generally,* Kenneth R. Foster & Peter W. Huber, *Judging Science: Scientific Knowledge and the Federal Courts* 59 (1997) ("Chemical ecologists have failed to provide criteria that allow a doctor to decide when somebody does not suffer from MCS which is one of the main reasons why MCS is regarded skeptically by mainstream medicine").

iv *Theresa Canavan's Case*, 720 N.E.2d 43 (Mass.App.Ct. 1999); *Hottinger v. TruGreen Corp.,* Ind. Cir. Ct. Delaware Cnty., No. 18A02-9509-CV-545, 3/9/99.

v Multiple Chemical Sensitivities: Idiopathic Environmental Intolerance. June 8, 1999

vi 132 F.3d 599 (10th Cir. 1997).

vii *Theresa Canavan's Case*, 720 N.E.2d 43 (Mass.App.Ct. 1999).