

## Martek Biosciences Corp. v. Nutrinova Inc.

Nos. 08-1459, -1476, Fed. Cir. (Newman, Lourie, Rader, Gajarsa,\* Moore)

***A patentee may prove infringement by “any method of analysis that is probative of the fact of infringement,” and circumstantial evidence may be sufficient.***

On September 3, 2009, the Federal Circuit, inter alia, affirmed the district court’s denial of Lonza’s motion for judgment as a matter of law following the finding that Lonza infringed U.S. Patents No. 5,340,594 and No. 6,410,281, and reversed and remanded the district court’s grant of JMOL that U.S. Patent No. 6,451,567 was invalid and the construction of the claim term “animal” in U.S. Patent No. 5,698,244. The patented technology related to microorganisms that produce lipids with high concentrations of omega-3 highly unsaturated fatty acids such as docosahexaenoic acid (DHA) suitable for human and animal consumption as food additives. The Federal Circuit stated:

All of the '281 patent claims recite the following functional limitation: “the culture medium containing the non-chloride sodium salt as the primary source of sodium results in reduced fermentor corrosion compared to the culture medium containing sodium chloride as the primary source of sodium.” The trial court construed that limitation to mean “the culture medium causes less chemical wearing of the vessel in which the microorganisms are grown as compared to the level of chemical wearing away to a vessel caused by a culture medium comprising sodium chloride as the primary source of sodium.” Lonza moved for JMOL, asserting that Martek failed to prove infringement as a matter of law by failing to conduct comparative testing to demonstrate that Lonza’s culture medium causes less chemical wear as compared to a culture medium containing sodium chloride (NaCl) as the primary source of sodium. Because substantial evidence supports the jury’s infringement verdict, we hold the district court did not err when it denied Lonza’s motion.

A patentee may prove infringement by “any method of analysis that is probative of the fact of infringement,” and circumstantial evidence may be sufficient. To demonstrate that Lonza’s accused process meets the functional claim limitation, Martek presented testimony from two experts, each of whom concluded that Lonza’s culture medium—which contains NaOH as the primary sodium source—causes less corrosion as compared to the hypothetical culture medium—which contains NaCl as the primary sodium source. Dr. Duquette, an expert in the field of corrosion, testified that Lonza’s process uses fermentors made of 304-type stainless steel, which is highly susceptible to corrosion. Second, he explained that he need not conduct actual tests in order to conclude that Lonza’s culture medium causes less fermentor corrosion than the hypothetical medium because “the literature is quite clear” regarding the corrosive effects of chlorides on stainless steels. Moreover, Dr. Duquette explained: “And it’s just not a rule of thumb, it’s a scientific fact that if you increase the chloride

concentrations in any aqueous medium as far as stainless steel is concerned, you will cause more corrosion . . . .”

Dr. Wang, Martek’s fermentation science expert, also testified that Lonza’s process causes reduced corrosion as compared to the hypothetical medium. He reviewed Lonza’s fermentation records and testified that he had calculated the concentration of chloride ions present in Lonza’s culture medium as compared to the concentration of chloride ions present in the hypothetical medium. He concluded that Lonza’s culture medium contains about one-third of the chloride ions as the hypothetical medium. Dr. Wang then explained that decreasing the chloride content of the medium will cause less corrosion on 304-type stainless steel and thus concluded that Lonza’s culture medium would be less corrosive than the hypothetical medium. *Id.* Based on the testimony of Drs. Duquette and Wang, the jury could have reasonably concluded that Lonza’s culture medium causes less chemical wear as compared to a culture medium containing NaCl as the primary source of sodium. . . .

Martek did not rely on conclusory expert testimony to demonstrate that Lonza’s medium reduces corrosion. As detailed above, Martek presented testimony from two experts, each of whom conceptually analyzed the accused process and testified that it must meet the functional claim limitation based on the composition of Lonza’s culture medium and the known effects of chloride concentration on stainless steel corrosion. Contrary to Lonza’s reading of *Kim*, we did not articulate a general rule requiring one who alleges infringement of a claim containing functional limitations to perform actual tests or experiments on the accused product or method. Instead, we stated only that “*Kim* did not prove infringement because she presented no testimony based on the accused products themselves that supported a finding of infringement.” *Id.* Here, Martek presented expert testimony based on the accused process that supports a finding of infringement. Because Martek presented substantial evidence supporting the jury’s infringement verdict, the district court did not err when it denied Lonza’s JMOL motion.

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