

**Keywords:** negative limitation, anticipation, a product which would literally infringe if later in time anticipates if earlier

**Summary:** A prior art composition that “optionally includes” an ingredient anticipates a claim for the same composition that expressly excludes that ingredient.

*Upsher-Smith Laboratories Inc. v. PamLab LLC*  
75 U.S.P.Q.2d 1213  
Decided June 17, 2005

## **I. Facts**

Upsher-Smith Laboratories (“Upsher-Smith”), owned two patents for vitamin supplements targeted at preventing folic acid and vitamin B<sub>12</sub> deficiencies. A folic acid deficiency can cause high homocysteine levels, a factor in heart attacks and strokes, and a vitamin B<sub>12</sub> deficiency can cause brain damage, nervous system damage, and pernicious anemia. Both patents claimed vitamin supplement compositions consisting of vitamin B<sub>12</sub>, folic acid (folate), and vitamin B<sub>6</sub>. The prior art taught compositions of vitamin B<sub>12</sub>, folic acid, and vitamin B<sub>6</sub> in combination with other vitamins and antioxidants to provide additional health benefits. However, the inventor of the Upsher-Smith patents, Dr. Herbert, discovered that the antioxidizing properties of the antioxidants partially destroyed the vitamin B<sub>12</sub> and folate. Therefore, to distinguish the prior art, both Upsher-Smith patents required the compositions to be “essentially free of antioxidants.” In fact, Upsher-Smith admitted that this negative limitation was the only thing distinguishing their claims from the prior art.

However, although the prior art failed to recognize Dr. Herbert’s discovery that antioxidizing properties destroy vitamin B<sub>12</sub> and folate, the prior art already recognized that specific antioxidants destroy vitamin B<sub>12</sub> and folate. For example, an article published more than forty years before the filing date recognized that vitamins C and E, which are both known antioxidants, were incompatible with vitamin B<sub>12</sub>. Additionally, an article published twenty years ago by Dr. Herbert himself taught that vitamin C destroyed vitamin B<sub>12</sub>. Therefore, the prior art recognized that specific antioxidants destroyed vitamin B<sub>12</sub> and folate, even though the prior art did not recognize the reason why the destruction occurred. The reason for the destruction of vitamin B<sub>12</sub> and folate was discovered later by Dr. Herbert and used to obtain the Upsher-Smith patents.

Upsher-Smith sued PamLab for infringement of both patents. However, the district court granted PamLab’s summary judgment motion of invalidity for anticipation and obviousness based on a European Patent Application. The European Application disclosed the same compositions claimed in the Upsher-Smith patents, except that instead of requiring the compositions to be “essentially free of antioxidants,” the application disclosed “optionally includ[ing]” antioxidants. Thus, the European Application disclosed vitamin compositions made with or without antioxidants and the Upsher-Smith application disclosed the same vitamin compositions made expressly without antioxidants. Consequently, the district court found that the European Application anticipated the asserted claims of the Upsher-Smith patents.

## **II. Issues**

1. Does the European Application that optionally includes antioxidants anticipate the Upsher-Smith claims which expressly exclude antioxidants?

2. Did the district court err in not placing the burden on PamLab to show that the negative limitation exists in the prior art?
3. Does the European Application's discussion of the benefits of adding antioxidants to the compositions teach away from expressly excluding antioxidants?
4. Does the European Application teach a "genus" of compositions that cannot anticipate the "species" of compositions claimed in the Upsher-Smith patents?

### **III. Discussion**

1. Yes. The European Application teaches every element of the Upsher-Smith claims. The court relied on the long-standing axiom, "a product which would literally infringe if later in time anticipates if earlier." The European Application's "optional inclusion" of antioxidants includes compositions that do not contain antioxidants. Therefore, because compositions made according to the European Application would infringe the asserted Upsher-Smith claims, "those compositions anticipate the asserted claims despite no express teaching to exclude the antioxidants in the European Application."

The court went on to recognize that although Dr. Herbert was probably the first to discover the scientific principles behind the increased effectiveness of vitamin B12 and folate compositions, his discovery did not entitle him to remove prior art from the public domain. The court, explained that "[t]he public remains free to make, use or sell prior art compositions or processes, regardless of whether or not they understand their complete makeup or the underlying scientific principles which allow them to operate." (Quoting *Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1348-49 (Fed. Cir. 1999)). The court compared this situation to a similar example where people used fire for thousands of years without knowing oxygen was a component of combustion. The first person to discover the role of oxygen could not have hypothetically claimed a method of making fire with oxygen. Inventions cannot be removed from the public domain by explaining the scientific reasons behind the inventions.

2. No. PamLab established a *prima facie* case of anticipation by showing that the European Application would have infringed the Upsher-Smith claims if it was presented later in time. Therefore, the burden was properly placed on Upsher-Smith to provide rebuttal evidence.
3. Undecided. The court declined to address the teaching away argument because "a reference is no less anticipatory if, after disclosing the invention, the reference then disparages it." Consequently, the teaching away argument was inapplicable to the anticipation analysis.
4. No. Although a prior "genus" will not necessarily prevent patenting of a "species," this principle was inapplicable. The Upsher-Smith claims are not limited to a "species" of the compositions taught by the European Application because they are as broad as the claims in the European Application.

### **III. Conclusion**

The district court's grant of summary judgment on invalidity was affirmed.

As a practical matter, a negative limitation in a claim can be overcome by showing that the limitation occurs in the prior art even if the limitation is not required. Additionally, a discovery of the scientific principles behind an invention will not remove the invention from the public domain.