A company called Ava is isolating and identifying the molecular components of fine wines, such as Dom Pérignon, with the intention of recreating these wines from scratch in a laboratory. According to TechCrunch [2], the company recently raised $2.5 million, which will help in its mission of making such luxury goods "sustainable." Presumably, Ava would also be able to sell its imitation products at a much lower price.

It's far from guaranteed that Ava will be successful. From a molecular standpoint, wine is a complex potion. The author of the TechCrunch article writes [2]: "Each wine has between 80 to 200 compounds with both synergistic and anti-synergistic effects all in play to make it taste, feel and look the way it does."

Assuming that Ava is able to successfully replicate wine by simply combining chemicals in proper proportions, a big question still remains: Would people actually buy it? ACSH President Hank Campbell and Senior Fellow of Biomedical Science Dr. Alex Berezow debate the issue.

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Yes, I Will Gladly Buy Cheap, Synthetic Wine
By Hank Campbell

50 years ago, California was regarded as cheap wine, primarily used in blends. Science and technology changed all of that. Once upon a time, Cuba had the best cigars, but most of the great cigar makers left after the Communist takeover. They took the seed and, after manually engineering the soil, by the 1990s, Dominican Republic was producing the best cigars.

Today, biological researchers are on the hunt for the microbial secrets of terroir [3], the fungal and bacterial communities that are fundamental to soil, and therefore wine’s flavor. It makes complete sense that in parallel to biology, chemistry would be pursuing its own approach to making great
wine affordable to everyone.

And it makes complete sense that I will buy it. And so should you.

I don’t care about the process on the label; I only care about flavor. A whole lot of other people feel the same way. My wife thought a 2009 Kendall-Jackson Chardonnay was terrific but that the 2013 was not. There are a lot of variables in wine; these variable are why the same grape grown in the same soil can make a good product one year and a bad product in another. If science can control those variables, and make every bottle a great bottle, why wouldn’t we buy it?

The argument against synthetic wine is that wild fluctuations from year to year, and even bottle to bottle, are what make it art. Many people do not want to be adventurous with art; they want to buy what they like. One of my favorite paintings is Francisco de Goya’s *The Miracle of Saint Anthony*, housed at the Carnegie Museum of Art. I am never going to own it, obviously, but there is a 2’ x 9’ space on every wall I will ever own if someone can make an oil on canvas reproduction for me.

If the beauty of art is only in being certified authentic by a centralized authority, then it has become the exact opposite of what art is intended to be. If wine is truly artisanal, then its origin is irrelevant. I don’t care if it’s from France or Chile. California makes great wines today because it has scientifically optimized and leveraged technology to compete with France that, let’s face it, simply got lucky in having good soil.

Scientific progress is the greatest provider of equality in history. When the heavy plow was invented, there was concern that more tillage was going to change the flavor of food. Instead of ruining food, it made Europe the world leader because the same food was more affordable. You no longer have to be born part of the Agricultural 1% to have the same quality food France and America have. Science did that.

Today, if I needed insulin, I’d be fine with GMO insulin. And I can’t tell the difference between mayonnaise made with free range eggs and any other egg. Just like you won’t be able to tell the difference between synthetic and natural wine. The only difference will be the process.

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**No, I Won’t Buy Synthetic Wine... and Nobody Else Will, Either**

By Alex Berezow

I would probably buy it once, just to see what it tastes like, but then I would likely never buy it again.

I do not have any scientific problem with Ava’s approach. Food is just a combination of molecules, so it doesn't really matter how or where the food is made. Ethanol is ethanol, whether it is
fermented by a yeast or synthesized in a laboratory.

However, people have an emotional and romantic attachment to wine. The idea of grapes being harvested in some far-off, enchanted land and being fermented using techniques that have been passed down for generations is part of the fun of buying a bottle of wine. Wine is an artisanal product, and people are willing to pay for that. Think of it as artwork in a bottle.

As an analogy, consider that there is no market for photocopied autographs. Even though a photocopy is practically identical to the original, nobody wants them because they are inauthentic.

More perniciously, I believe synthetic wine will cause anti-science activists to go nuts. It is easy to imagine chemophobic activists marching in the streets warning of "Frankenwine." Our cultural obsession with the false notion that "natural is better" is very powerful. In fact, it is the primary driver of the thoroughly unscientific organic food industry.

Even setting aside all that, I seriously doubt that chemists will be able to reproduce the flavor of wine exactly. Just like how saccharin doesn't taste like sugar, my guess is that synthetic wine will always taste a little "off."

Therefore, at best, I predict that imitation wine will be a novelty item. At worst, it will be a major flop in the marketplace.

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*Now that you've read both sides, what do you think? Would you drink synthetic wine? Let us know in the comments section!*