ceocfointerviews.com
© All rights reserved
Issue: August 23, 2021

SafeRx Pharmaceuticals is solving a critical dimension of the U.S. opioid epidemic

Dr. Michael Presti
Founder/CEO

SafeRX Pharmaceuticals
https://saferxpharmaceuticals.com/

https://youtu.be/zgW3qyMdnfI

Contact:
Michael Presti, MD PhD
833-723-3790 (833-SAFERX0)
info@saferxpharmaceuticals.com

Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine

"The reality is that this isn't like COVID, there is no vaccine on the way and there will never be any single "silver bullet" solution to the opioid epidemic. But SafeRx is developing a solution to a previously unaddressed dimension of this crisis responsible for nearly one-quarter of fatal prescription overdoses- the combination of opioids with alcohol." Dr. Michael Presti

CEOCFO: ***Dr. Presti, the first thing I see on the SafeRx Pharmaceuticals site is, "An answer to the American Opioid Crisis." What is your approach?***
Dr. Presti: Thank you for the question, Lynn. And let me first emphasize that the operative word in that phrase is "an" answer, because there is no such thing as "the" answer to the opioid crisis, it's a complex problem that is going to require a multifaceted approach. The reality is that this isn't like COVID, there is no vaccine on the way and there will never be any single "silver bullet" solution to the opioid epidemic. But SafeRx is developing a solution to a previously unaddressed dimension of this crisis responsible for nearly one-quarter of fatal prescription overdoses- the combination of opioids with alcohol. You see Lynn, consuming alcohol with an opioid is extremely hazardous, because when these substances are combined in the body they cause what is known as a "synergistic reaction". Which means they produce much more intense suppression of the nervous system, increasing the risk of overdose and fatal respiratory depression dramatically.

CEOCFO: ***Has this been looked at before or has it been somewhat under the radar?***
Dr. Presti: Well, the hazard of combining alcohol with opioids is certainly well-established in the medical community, and in a survey SafeRx recently conducted among Pain Medicine specialists, 100% of respondents either "agreed" or "strongly agreed" with the statement, *"The risk of prescription opioid overdose is significantly increased in patients who consume alcohol with their medication."* So certainly, the

standard of care is to provide education about these risks and to advise all patients prescribed an opioid to avoid concurrent alcohol consumption.

And patients typically get these warnings on several different levels. It usually starts in the physician's office when they write the prescription, but then there is generally a second level of education from the dispensing pharmacist, and then yet a third level warning right there on the label of the bottle! Stamped on a bright yellow sticker in all capital letters, "DO NOT DRINK ALCOHOL WITH THIS MEDICATION."

So from an education and awareness standpoint, the system has several measures in place to educate and warn patients about the danger. But what the data suggest is they don't really work; studies show that the prevalence of alcohol-opioid co-consumption is between 36 and 81% in patients on long term opioid therapy. So it is clear that more effective prevention measures are needed, because another person dies about every 2 ½ hours in this country from making this all-too-common mistake of drinking with their medication.

CEOCFO: ***Do you think that the fact that some people like alcohol and the feeling provide and also that there are so many warnings surrounding every medication you almost have to block them out to take the medication, have an effect on decisions about following the correct protocol?***
Dr. Presti: That is a fantastic point! I think that we all become inured to many of these warnings, frankly because many of them are so obvious and clearly only included because some attorney on the marketing team said, "Well, we also need to say, 'do not take Emgality® if you are allergic to Emgality." So yes, you are absolutely right, with all the warnings we get bombarded with every day- especially given the ongoing COVID emergency- people are bound to show some "advisory fatigue", and no doubt that can also apply to medication warnings. But our doctors are usually very much involved in ensuring those mistakes we're warned about in the commercial fine print don't happen, right? Our doctors don't make the mistake of prescribing drugs that we're allergic to, nor drugs that are going to interact in a hazardous way with one of our other medications. But prescribers currently have no way of protecting their patients from this particular hazard of combining alcohol with their opioid- all they can do is warn of the dangers. And as you say, patients will often just "block out" these warnings, which is exactly why we need better prevention options.

CEOCFO: ***Would you tell us about the alcohol resistant opiates you have developed?***
Dr. Presti: Our Alcohol-Resistant Opioid (ARO) platform of products represent 2-in-1 pills, referred to as "fixed dose combinations" that contain, in addition to one of four prescription opioids of choice, a medication called disulfiram- an enzyme blocker that interferes with alcohol metabolism but generally has no other perceptible effects in the body. So if the medication is taken as directed without alcohol, the opioid component exerts its typical analgesic profile and the disulfiram component remains effectively inactive. But is alcohol is consumed with the medication, the disulfiram component interferes with the breakdown

of an intermediate in the alcohol metabolism process, causing a rapid accumulation of this toxic intermediate called acetaldehyde.

CEOCFO: ***Would there not be an effect from the alcohol?***
Dr. Presti: No. What happens is that since that acetaldehyde- which is basically the stuff that hangovers are made of- can no longer be processed in the normal way with the enzyme blocker on board, it accumulates very quickly, and within minutes induces a very noxious constellation of effects. This is referred to as the disulfiram alcohol reaction, which is characterized by flushing, sweating, dizziness, throbbing headache, and nausea and vomiting. And at that point, it becomes pretty hard to keep drinking! So in a nutshell these ARO products will give patients a very straightforward choice: take the medication without alcohol as directed by your doctor, or drink; you can no longer do both.

CEOCFO: ***With the medication, if for example, someone is an alcoholic and used to drinking a lot, would they be getting the same effect as someone who rarely drinks?***
Dr. Presti: The magnitude of the disulfiram-alcohol reaction is dependent on the concentration of both the disulfiram in the body and the concentration of alcohol in the body. Therefore, it will be more pronounced when either one of those levels is high. I am not sure if that answered your question, but yes, whether or not you are a long-term drinker or you are an occasional drinker, disulfiram will induce this same reaction if you drink with it in your system. That being said, you mentioned alcoholic patients, and just to be clear there is actually a contraindication to using disulfiram in patients who are still physiologically dependent on alcohol, because you cannot start the medication in someone unless their blood alcohol concentration is 0 point 0, or you will induce the reaction right away.

CEOCFO: ***Where are you in the development process?***
Dr. Presti: We have initiated our correspondence with the FDA and brought in industry consultants to help finalize our regulatory strategy. There is a pathway and a legislative policy that we intend to leverage in order to get these drugs FDA approved and on the market on a much more expedited timeline than would be typical for a new chemical entity. And there are a couple of reasons behind that. First, because all the active pharmaceutical ingredients included in these products are already individually approved by the FDA for their intended functions, by pursuing an FDA new drug application pathway called a 505(b)(2), we can pull forth those prior agency findings of safety and efficacy. This markedly narrows the scope of new studies that we need to perform to gain FDA approval for these new combination products.

The only additional human studies we will need to perform are referred to as pharmacokinetic studies. These are basically experiments to show that when our ARO combination pills are administered, the blood levels achieved for each of the pharmaceutical ingredients are equivalent over time to the blood level profiles of the reference FDA-approved drugs when administered individually. And there are several reasons we anticipate a lack of any significant differences between those pharmacokinetic profiles. First, there are no shared receptor targets

between disulfiram and the opioids that we are using. Next, they do not share any metabolic pathways, meaning they neither speed up nor slow down each other's breakdown or clearance from the body. And finally, they act on completely different organ systems- the opioids act primarily at mu opioid receptors in the central nervous system within the nociceptive pathways in the brain and the spinal cord, whereas the disulfiram acts on the aldehyde dehydrogenase enzyme in the liver where the alcohol is being broken down.

CEOCFO: *Are you funded for your next steps at SafeRX?*
Dr. Presti: Thank you for asking! As CEO, fundraising is always top-of-mind. We raised a few hundred thousand dollars of seed capital from family and friends- mostly old med school buddies- to get things rolling last year. And we recently opened an equity crowdfunding campaign aiming to raise another $5 million with which, by leveraging those accelerated regulatory pathways just described, within 2 ½ years we believe we can achieve FDA approval of our first ARO product, MethARO™. And although this crowdfunding strategy is atypical within the pharmaceutical sector, we felt that because the opioid epidemic has become such a scourge throughout the country, this opportunity would resonate broadly within those injured communities as a bridge to becoming part of a solution to the crisis. And, given our modest anticipated capital requirements, we think we can get there without institutional money, which will help to preserve operational autonomy and commitment to our mission. So we're really excited to be one of the first pharmaceutical companies to pursue this form of fundraising. And because SEC regulations limit the scope of public statements I can make pertaining to that online offering, I can't get into the details here. But I encourage all of your readers to check us out at https://www.investinsaferx.com/, and to consider a financial investment. Because together Lynn, we can win this fight!