Savant HWP Inc. is aiming high to knock out addiction.

Thanks to a recent $6.5 million grant from the National Institute on Drug Abuse, the San Carlos company plans to take its molecule into early human studies in Brazil in March. But, ultimately, leaders of the seven-employee company say their drug could undercut a broad range of substance addictions, like cocaine, methamphetamine, nicotine, alcohol and food.

Clinical trials in the United States could begin next year.

The key rests in a molecule called 18-methoxycoronaridine, or 18-MC, which is a chemical congener of ibogaine, a drug derived from the bark of a Central West African shrub.

It is there that the paths of 18-MC and ibogaine diverge, said Savant Chairman and CEO Stephen Hurst. For one, ibogaine is a hallucinogen considered by the U.S. government as a dangerous Schedule I drug, but it is used outside the United States as a kind of a shock treatment for addiction.

While 18-MC has a similar chemical skeleton as ibogaine, Hurst said, it isn’t a synthetic version of the hallucinogen, and it isn’t addictive. It resets the pleasure centers in the brain, restoring dopamine levels back to a baseline.

The company — whose “HWP” stands for “health, wellness and prevention” — was formed out of work by Dr. Stanley Glick at Albany Medical College in New York.

The clinical trial in Brazil will test 18-MC as a treatment for leishmaniasis, a disease caused by the bite of a sand fly.

“It’s an opportunity for us to get what I call ‘drugability data,’” Hurst said. “Is 18-MC something that can be made into a drug? Do humans still have hallucinations and cardiac fibrillations?

“We don’t see that in the rat models, but we won’t know until we test it in humans.”

Hurst: Molecule 18-MC resets pleasure centers in the brain.