## Josh Stanley Written Testimony 1/27/2014 BEFORE THE PENNSYLVANIA SENATE COMMITTEE ON LAW AND JUSTICE ON SB 1182 THE GOVERNOR RAYMOND SHAFER COMPASSIONATE USE OF MEDICAL CANNABIS ACT

Good morning Chairman McIlhinney and Ferlo and members of the Committee.

Cannabis is one of the first domesticated plants dating back over 12,000 years. It has been well documented throughout history for its various healing benefits. These benefits are really not surprising to date as the endo-cannabinoid system, (the most prevalent receptor system found in mammals) was discovered in 1991. The cannabis plant has over 120 compounds called cannabinoids. These cannabinoids match our very own cannabinoids produced by the human body and serve to replenish these compounds when they are lacking in our system. Modern science is just beginning to delve into the vast array of cannabinoid deficiencies in the human body. Currently through observational research study approaches, we are finding that use of the cannabis plant is providing dramatic impacts in the areas of certain types of cancers, epilepsy, Alsheimers, Parkinsons, MS, MD, Lupus, Diabetes, Arthritis, AIDS/HIV, chronic pain among many others illnesses and disease states which directly relate to the endo-cannabinoid system. In fact, as shown in our recent results from ongoing pediatric epilepsy studies, the cannabis treatment is showing that the interaction with the endo-cannabinoid system and this plant's own cannabinoids are essentially filling the gap of deficiencies and stopping seizures at a degree of alarming success. In fact, a 96% responder rate and an average of 88% reduction in seizure activity. In short, the interaction between the cannabinoids and the endo-cannabinoid system appears to be an interaction that attacks causation as opposed to alleviation of simply symptoms. This is blaringly obvious, as the hundreds of children taking this natural treatment do not have to keep upping their doses. They find that their appropriate dose which is milligrams per pound of body weight that is just right for them is bridging the gaps in deficiencies in their system without having to "up" their doses. This is not the case in pharmaceutical treatment whereas a patient will tend towards a higher and higher dose as their system builds up immunity to the drug until the "plateau" occurs when the patient will begin a new molecularly similar medication and begin the process again. These findings are quite exciting in the world of natural remedy not to mention the correlations to be found in future pharmaceutical practice. This is the first time that we are witnessing a whole plant, organic compound surpassing the efficacy of FDA approved pharmaceutical medicines designed to treat specific conditions.

To add to these new-found benefits, the safety profile of cannabis is one that is hard to measure. For example, the safety ratio of commonly used opiates, (meaning a dose that one can take before possible overdose) can be as low as 1:6 in Morphine, 1:10 in percoset, whereas cannabis is 1:10,000 meaning that there is virtually no potential for overdose. The side effects of cannabis treatment are proving to be positive as well. Particularly for epilepsy and cancer patients, side effects range from improved appetite and sleep to reduction of nausea.

It is important to note that we are discussing the use of a whole plant compound without synthesizing, or isolating these compounds and therefore speaking of a natural or herbal supplement that would fall into the category of neutraceutical as opposed to pharmaceutical. I suspect that many pharmaceutical companies will begin to fall in line to study and make us of this plant. However the FDA approves largely single compound medications for prescription use and not whole plant uses. Patients should surely have the benefit of choice of whether or not they wish to be able to try this type of natural, safe treatment the same as they have the options to try pharmaceuticals.

There is much that we have learned about this plant and much more to come as science catches up to the past 85 years of misinformation surrounding this plant. Virtually all of what has been said about this plant was intended to subvert a thriving paper and cotton industry and had nothing to do with the potential medical remedies that this plant affords. Twenty-one states thus far have medicinal cannabis and many more to follow. I applaud Pennsylvania on its meticulous approach to make this natural option available. I have helped to write several medicinal cannabis bills in various states. Pennsylvania is the first state that I have seen to put the time and effort into creating a piece of legislation that will surely provide an impactful, safe and successful model for the production, sale and distribution of this often misunderstood plant. I have helped to implement safe access programs in CA, CO, WA, and Canada. These programs have become quite successful in treating the above-mentioned illnesses and have had no fiscal impact on their respective state or country. (in fact quite the opposite) Crime and teen use has gone down and the tax revenues and license fees have shown positively for each region.

I am happy to answer further questions you may have surrounding this issue.

Respectfully,

Josh Stanley Strains of Hope Foundation josh@strainsofhope.org