



## CANNABIS AS MEDICINE 101: by NuvoPharms Physician Head of Cultivation

As our experience with this unique plant grows, one thing becomes increasingly clear - cannabis truly is medicine, and it's here to stay! The introduction of cannabis use in modern medicine is an ongoing process. Because the practice of medicine is evidence-based (and rightly so), cannabis utilization has lagged behind due to the unfortunate fact that it has historically been vilified and made illegal for a plethora of reasons, none of which were based on actual science. As these barriers are removed, research, discussion, and experience have been ramping up and things are looking positive!

The medical potential of the many compounds coded in the cannabis genome is vast, and we really have only glimpsed the tip of the iceberg with regard to the benefits cannabis has to offer. Based on my experience practicing as a physician in Canada, it is apparent to me that the current medical cannabis scene is seriously lacking in some very crucial ways. Our vision with NuvoPharms is clear: We are establishing a framework to ensure that cannabis can be utilized consistently in a **MEDICALLY EFFECTIVE** way. There are some essential factors at the heart of our vision and practice that I consider indispensable:

- 1) **QUALITY.** I don't throw this word around lightly. Everyone says it, but few can actually show it in their final products. I have seen samples from many different LPs that I wouldn't touch with a 10-foot pole. This is a continual point of frustration for me because it limits my ability to adequately treat those of my patients who are taking medical cannabis. Quality is about so much more than cleanliness.
- 2) **ORGANIC GROWN.** I mean **REALLY** organic. It is essential that medically-purposed cannabis be grown only with inputs that are congruent with those in nature. Cannabis is an accumulator, meaning that any substance the plant takes in through leaves, roots, etc. can end up in the harvested product. Let me be clear - synthetic fertilizers and pesticides have no place in medical cannabis. The most forward-thinking growers in the world understand this and the entire industry will head in this direction (eventually).
- 3) **GENETIC DIVERSITY.** Cannabis has the capacity to produce hundreds of different compounds, many of which are potentially beneficial from a medical standpoint. The current market for all cannabis has become quite homogenous. Ongoing interbreeding of different strains means that many of the hybrids commonly seen now are very similar to each other. Since the earliest traceable origins of the cannabis plant, it has evolved in many very differing environments (cultivated and wild/landrace) across the world. There is so much diversity to be found in the expression of medically-relevant traits, but without a mindfully selected collection of genetics, any given producer of medical cannabis is

unlikely to be able to provide treatment for as wide a variety of issues as can be possible!

- 4) FOLLOW THE SCIENCE. I, and our team at NuvoPharms, follow the latest cannabis research continually. We adjust our collection of genetics, our growing practices, and our plans for various versions of final cannabis products on an ongoing basis to reflect the most current scientific evidence. This will give rise to the most successful medical treatments.
- 5) WHOLE PLANT MEDICINE. Cannabis is complex. With hundreds of cannabinoids, terpenes, flavonoids, etc. all potentially providing medical benefits, there is an astronomical number of combinations in any given strain/cultivar of cannabis. These components can work together, against each other, or provide extra benefits simply from the combination. This has been termed “The Entourage Effect” and it is consistently supported by scientific evidence. In other words, utilizing the full spectrum of a given plant’s compounds is much more likely to result in the desired medical benefit than using a single “isolate” or compound by itself. We of course understand that higher levels of certain compounds can be beneficial for specific symptoms or conditions (e.g. CBD for inflammation, CBN for sleep, limonene to boost mood, etc.) - the point is that, in most cases, these adjustments to treatment can be made while still utilizing the rest of what the plant has to offer.