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written testimony
Joint Committee on Implementation of Measure 91
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Cannabis Research

The medicinal benefits of Cannabis have been recognized with enough clarity in the last few years to drive a wave of legalization across the United States. Nonetheless, after 75 years of prohibition this plant is among the least studied of all the species with which humans interact. Colorado has recognized this recently, and approved \$8 million in funding for Cannabis research.

The Cannabis plant produces a series of small molecules (phyto-cannabinoids) that interact with the endocannabinoid receptors in the human metabolic, immune, and nervous systems. These receptors are poorly understood, as are most of the phytocannabinoids (of which there are at least 108). A basic scientific understanding of the medicinal properties of Cannabis will require concerted research programs in both plant biology and clinical pharmacology.

Because Cannabis remains federally illegal, it is extraordinarily difficult to conduct this research. If this were not the case, land-grant universities would provide extension work to aid agricultural producers. State and federal agriculture departments would study relevant pesticides and issue guidelines. Clinical researchers at medical schools would perform pharmacological studies on human subjects. Plant biologists at research universities would study the genetics, development, and pathogens of the plant. Microbiologists would investigate the dangers associated with plant-born human pathogens. Together these lines of research would lead to optimal medical care for patients and a healthy agricultural industry.

None of these institutions, in any state, have been able or willing to participate in Cannabis research. Universities are almost entirely reliant on federal funding, and they fear that involvement in Cannabis research would put that funding at risk. If academic researchers are going to engage in Cannabis research they will need to sever ties with universities. Colorado recently approved \$9M for Cannabis research under a Medical Marijuana Research Grant Program run by the Colorado Department of Public Health and Environment. These funds are still not accessible to university-appointed investigators.

Research can also be performed by commercial entities that will not have this same set of concerns. If such companies were able to operate in a manner that was consistent with state law, they would be likely to move important Cannabis research forward. However, commercial research is usually proprietary, and it is not the proper setting for public health research that needs to be widely disseminated.

Research that is largely for the public good needs to be financed and structured publicly. For this reason, the vast majority of all research in the U.S. is financed by the NIH. Without NIH support, if Oregon wants this critical work done it will have to structure and fund it at the state level. One way to do this would be to create a public Cannabis Research Institute that could receive state funds for Cannabis research without endangering federal funding for Universities. Researchers would potentially have to leave their university appointments altogether in order to participate.

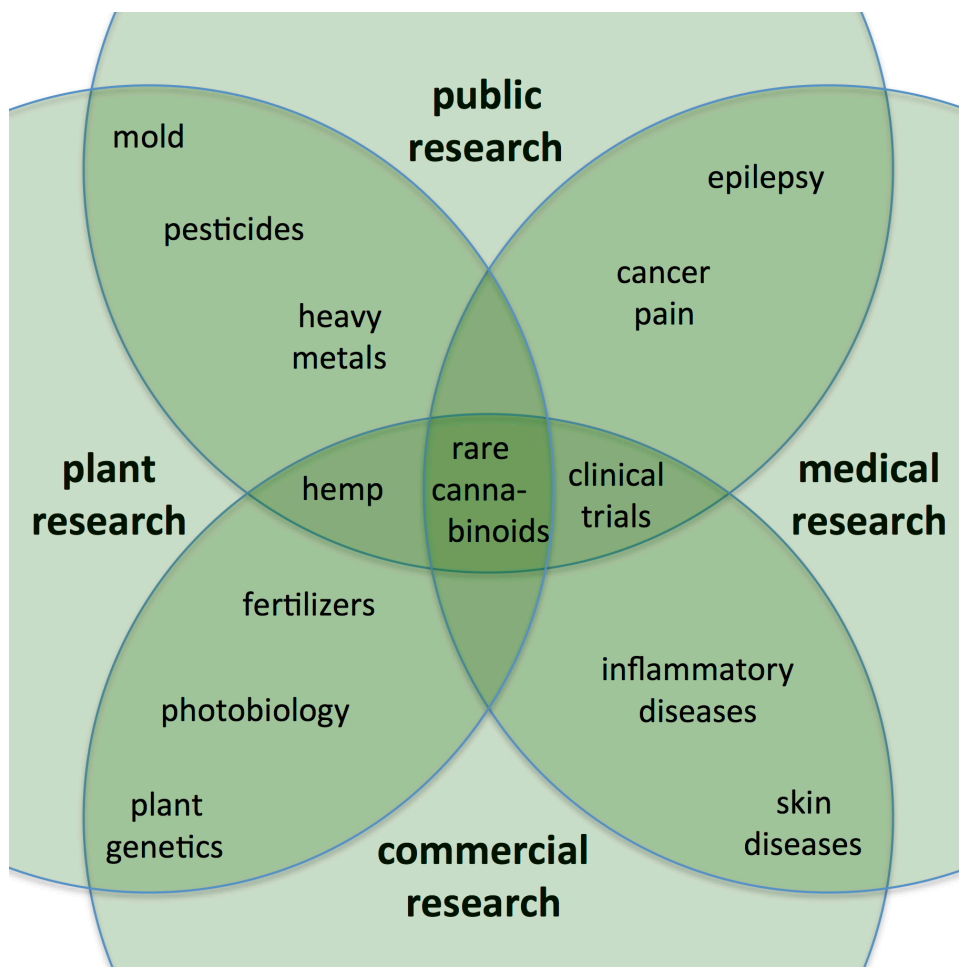
Another way to facilitate such research, especially the crucial studies that need to be performed on contaminants of Cannabis, would be to house it in an already existing state body, such as the OHA. Because of its resources and expertise, OHA is uniquely positioned to engage in the critical public health research programs necessary to guide Cannabis testing programs and the Cannabis industry itself. Allowing – and funding – the OHA to engage in Cannabis research would solve several problems simultaneously and put Oregon at the forefront of the now nationwide struggle to regulate Cannabis appropriately.

It is quite possible that there could be fruitful cooperation between the public and commercial entities on research projects. But if Cannabis research is done in a commercial setting or in the setting of a state-sponsored Institute, it will require the use and possession of Cannabis plants and products in a way that does not fit easily into the license types created by Measure 91 to apply to commercial flower producers. It will therefore require separate licensing, and should also be subject to separate oversight, ideally by the OHA itself.

Safety testing on Cannabis is necessary because of health threats for which we do not presently have adequate information to guide more than the most basic regulations. Clinical research on Cannabis lags even further behind. If Cannabis research is not enabled in Oregon with both public programs and a private license structure, it will not be possible for either academic or commercial research to move forward.

The medical properties of Cannabis will remain inadequately explored, and the agricultural Cannabis industry will not be able to operate efficiently or safely.

The intersections between public and commercial research, and between plant and medical research, are complex (as illustrated below). This figure lists only a handful of the pressing research goals related to Cannabis, and it does not describe the way that each individual project depends on others. All of this research can be done with a combination of state and commercial support. It is likely that none of it can be done in a federally-funded university setting.



Recommendations:

- A bill creating A Cannabis Research License to promote commercial research projects involving both medical and agricultural subjects.
- A bill instructing The OHA to create a Cannabis Research Program. This program should empower the OHA to structure and fund external research in the form of an Institute capable of performing public health research. It should additionally empower the OHA to structure and fund internal Cannabis research projects.
- Funding should be allocated for both internal and external OHA Cannabis research programs, and structured so as to encourage the participation of qualified scientists and the engagement of industry partners.