



# Center for Medicinal Cannabis Research UC SAN DIEGO



Established in **2000**, the Center for Medicinal Cannabis Research (CMCR) has been at the forefront of advancing **science** and **policy** relating to the potential clinical benefits, and limitations, of **cannabis and cannabinoids as medicine**

**Director:** Igor Grant, MD

**Co-Directors:** J. Hampton Atkinson, MD;  
Thomas Marcotte, PhD

## A Cornerstone of Cannabis Research

- **Longest-running** clinical cannabis research center in the United States (Est. in 2000 via California Senate Bill 847)
- Extensive **cannabis research portfolio**
- Rich **biospecimen and data repository** enabling cross-study and future scientific investigations
- Investigators with **cannabis/cannabinoid research expertise**, and integration with the larger **UC San Diego** research and clinical resource

## Funding

CMCR funding comes from a variety of sources (National Institutes of Health, State of California, California Highway Patrol, Foundation support)

## Policy Involvement

Advice to policy-makers at all levels:

- **International** (e.g., Canada, Mexico, Thailand)
- **Federal/National** (e.g., FDA hearing on CBD, House Veterans Affairs Committee, advising legislators, consultation with other States)
- **State** (e.g., Blue Ribbon Commission on Marijuana Policy, Medical Board of California, Veterinary Board, California Highway Patrol, Office on Traffic Safety, Bureau of Cannabis Control, various Legislative offices)
- **Local** (e.g., county supervisors, mayors, councils, law enforcement)

## Key Findings

THC improves spasticity in multiple sclerosis and neuropathic pain

High doses of THC aren't needed to see a benefit; in fact, high doses may exacerbate pain

Users self-titrate when inhaling, which may offset the effects of plant material with higher amounts of THC

## Education

**CMCR Symposia Series:** Provides timely evidenced-based information regarding cannabis and cannabinoids

**CMCR Graduate Scholars Program:** Supports graduate students and postdoctoral scholars with an interest in cannabinoid science, and facilitates their work with CMCR investigators



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## Studies

Randomized-controlled trials, observational and mechanistic studies in the following areas:

- **Completed:** Multiple sclerosis\*, neuropathic and experimental pain (7 studies)\*, essential tremor, driving impairment
- **Current:** Examples include: Severe autism, early psychosis\*, alcohol dependence\*, opioid abuse\*, rheumatoid arthritis\*, anorexia nervosa\*, sleep disorders\*, effects of CBG\*, metabolic syndromes\*, diabetes\*, migraine, bipolar disorder, alexithymia, inflammation, neuropathic pain, pharmacokinetics, cognition, driving safety

*\*Funded by CMCR Grants Program*

## CMCR Grants Program

- ✓ Using funds provided by California Proposition 64, CMCR issues funds *annually* for studies in California to evaluate the efficacy and adverse effects of cannabis and cannabinoids
- ✓ Committed \$5.6 million in funding to 10 studies since 2019

## CMCR Reference Lab

Established in 2021, serves as an independent reference laboratory for validation of results from licensed cannabis testing laboratories

## CMCR Resources

**Regulatory Expertise:** Federal, State, institutional IRB (human subjects)

**Clinical Research Expertise:** Study design, statistical analysis, outcome selection, specimen collection, cross-study standardization enabling data aggregation

**Study Participant Registry:** A registry of individuals who are interested in participating in cannabis research, including healthy controls and individuals with a variety of health conditions

**Data Management and Information Systems:** Web-based data management and reporting, hardware/software resources, enabling of big data analysis

**Specimen Collection, Processing and Storage:** Blood, oral fluid, breath, spinal fluid, urine, stool; specimen repository (24-hour temperature monitoring), custom web-based inventory system

**Toxicology Services:** Mass-spectrometry to evaluate cannabis metabolites in human samples and tissues; plans to develop capability to evaluate plant and other products

**Facilities and Equipment:** Negative pressure rooms (inhaled cannabis), driving simulation rooms, clinical exam rooms, cognitive testing equipment

## In-House Investigative Expertise

- ✓ Psychiatry
- ✓ Pain medicine
- ✓ Neurosciences
- ✓ Neurology
- ✓ Toxicology
- ✓ Neuropsychology
- ✓ Pharmacology
- ✓ Translational science
- ✓ Public health and safety (e.g. driving)



## UC San Diego

### Extended Resources

*Nested within UC San Diego, one of the top research institutions in the country, CMCR has access to **additional experts and patient populations** across a broad range of disciplines*

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