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**8 May 2019**

**Original: Español**

**EVIDENCE ABOUT THE THERAPEUTIC USE OF CANNABIS, CANNABIS-DERIVED PRODUCTS AND SYNTHETIC CANNABINOIDS**

# Evidence about the therapeutic use of *cannabis*, cannabis-derived products and synthetic cannabinoids



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Santiago, Chile

Epistemonikos is a non-profit entity based in Santiago, Chile.  
It is integrated by over 1000 contributors worldwide and works with multiple international organizations related with evidence-based healthcare



...entre muchas otras

**Our mission:**

***Bring scientific evidence  
closer to those making  
health decisions***

**Our values:**

***Transparency,  
independence and quality***



<https://www.epistemonikos.org>



<https://es.epistemonikos.cl/>  
<https://www.epistemonikos.cl/>

Information regarding who we are and what we do, and our statement of transparency and editorial independence.



<http://love.epistemonikos.org>

Access to the world-largest compilation about the therapeutic use of *cannabis* (among many other topics). Continuously updated.

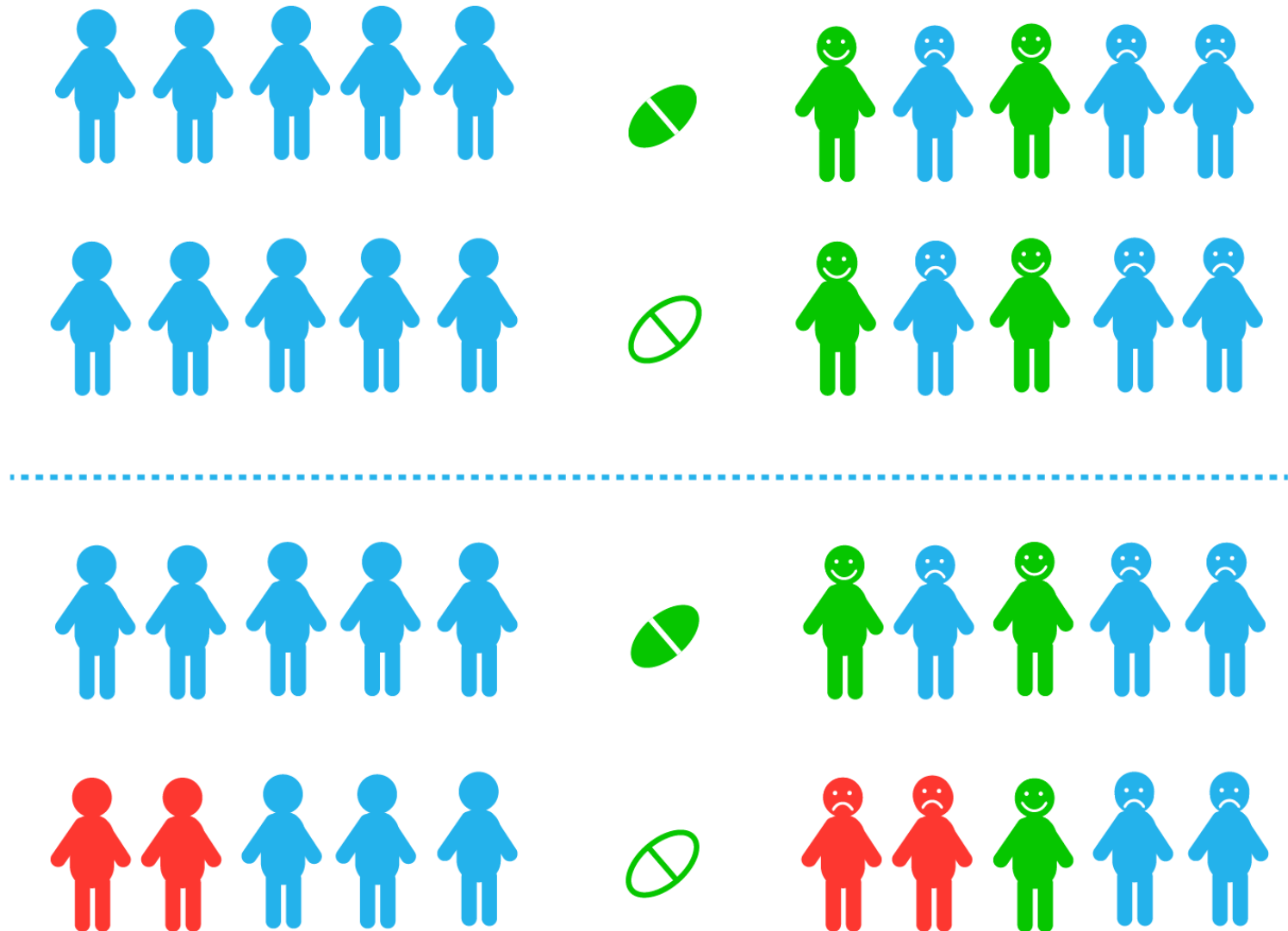
# Hierarchy of the evidence

## Hierarchy of evidence

i.e. some studies are more reliable than others



# Randomized trial and placebo effect



# The problem: too much information


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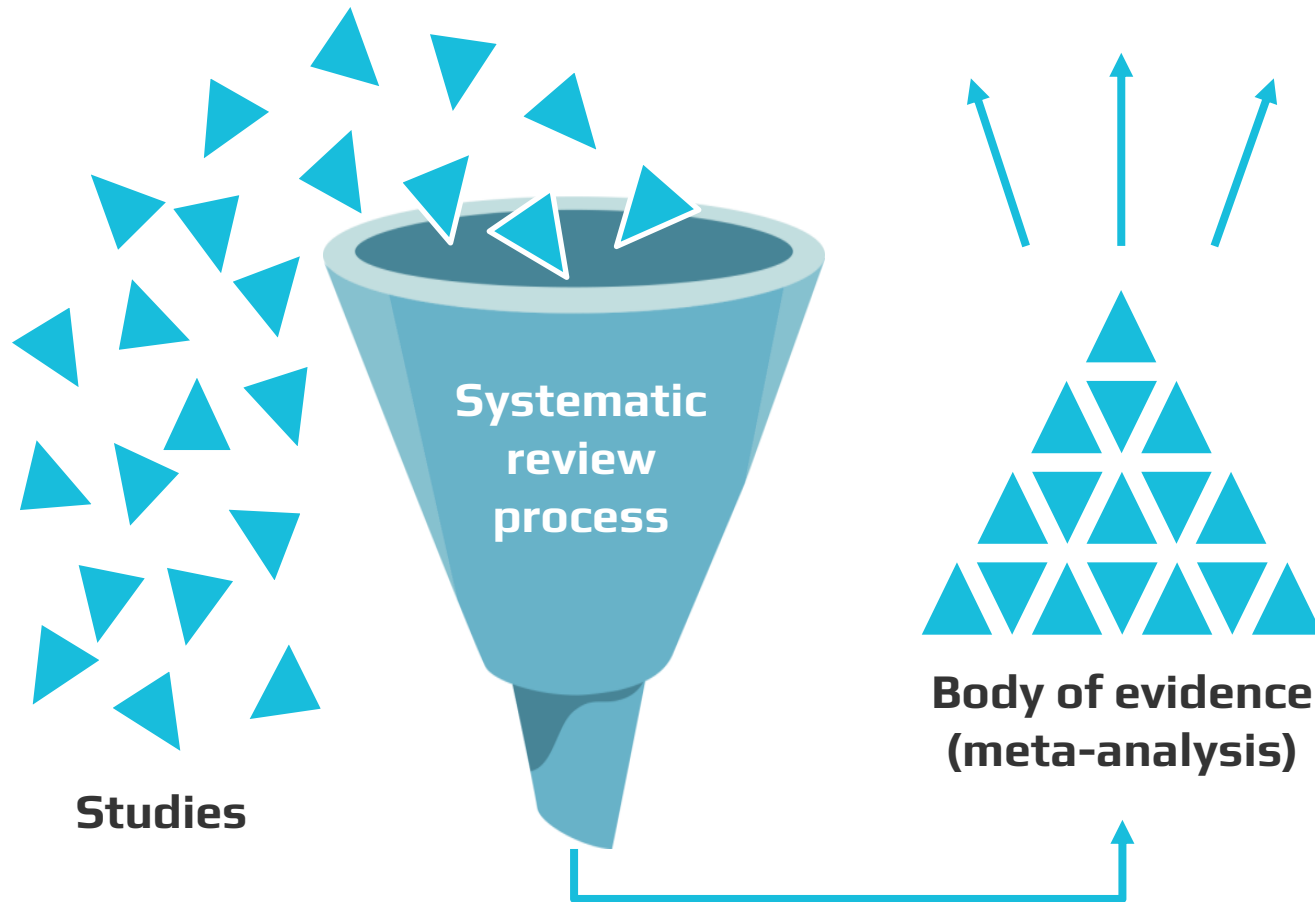






# Systematic reviews

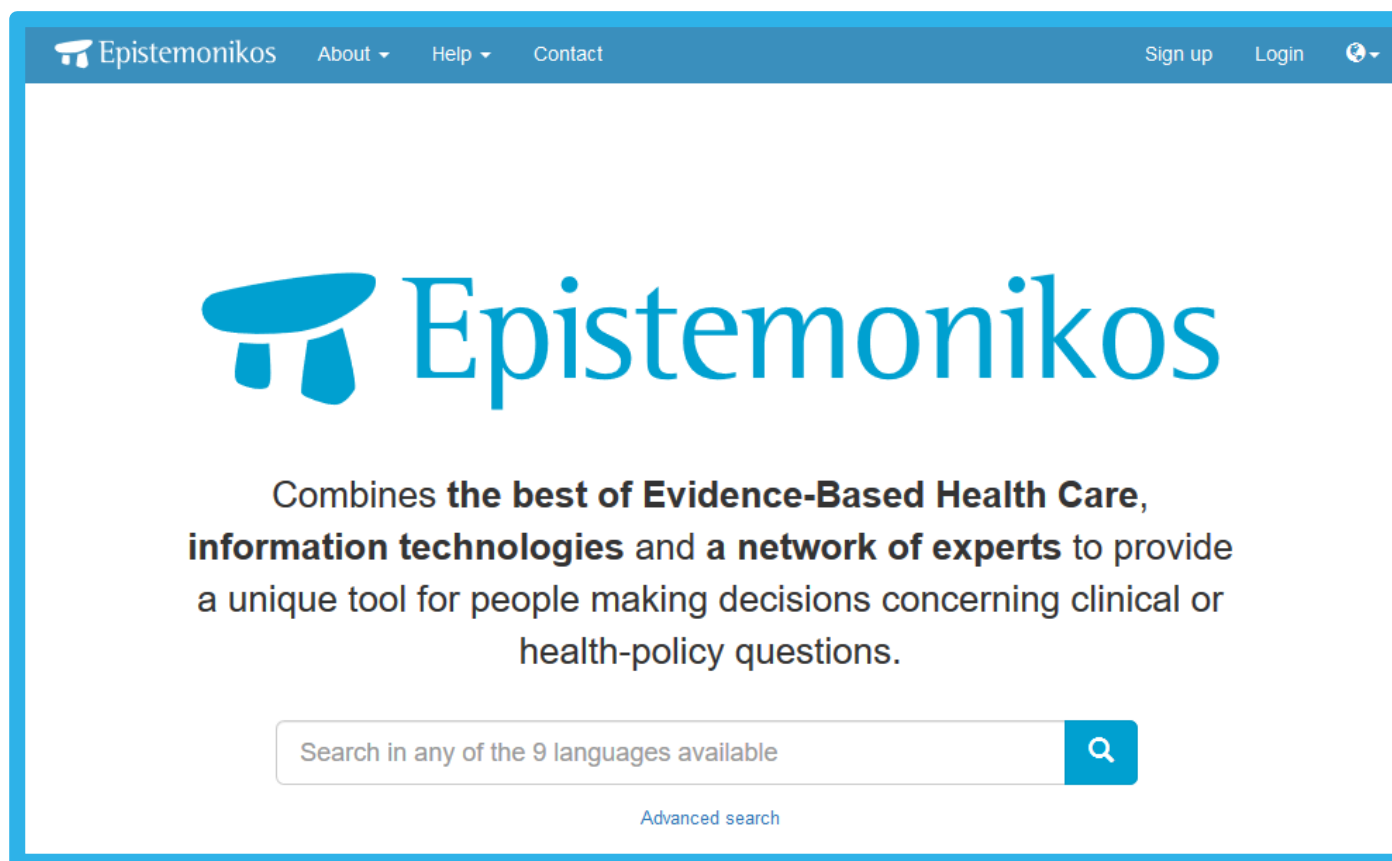
The concept of a systematic review



# Cannabis, cannabis-derived products and synthetic cannabinoids



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100% free.





Trusted evidence.  
Informed decisions.  
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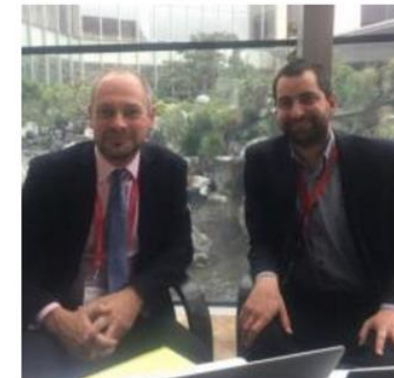
## Cochrane and Epistemonikos announce partnership

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Cochrane and the [Epistemonikos Foundation](#) are delighted to announce the launch of our official partnership aimed at improving the knowledge base for making decisions in health care and global health policy.

The close alignment of objectives, values, products, and services between Cochrane and Epistemonikos has existed for some years. Both organizations believe that systematic and rigorous approaches to research synthesis lead to better-informed choices by policymakers, practitioners, and the public, and thus to better health outcomes for people throughout the world.

The Epistemonikos Foundation is a non-profit organization whose core objectives are to bring evidence closer to those making health decisions through technology and innovation, primarily via the Epistemonikos database. The database was established in 2009 and by the end of 2016 is expected to include close to 100.000 systematic reviews.



# Systematic methods + cutting-edge technology and a broad network of collaborators and experts.



Largest  
database of  
health  
evidence



Artificial  
intelligence  
identifying  
potentially  
relevant  
evidence

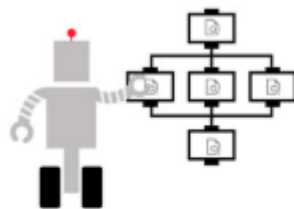


Experts  
validating ALL  
the  
information  
detected by AI



Information ,  
continuously  
organized and  
updated

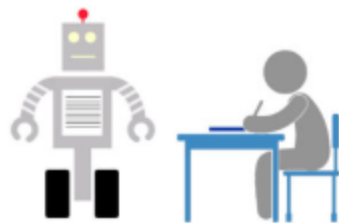
# Epistemonikos database methods



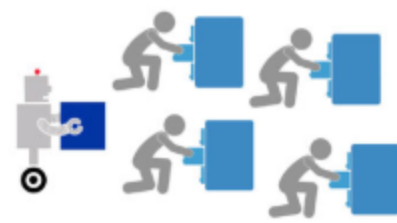
1. We go to multiple databases to identify potentially eligible systematic reviews



2. Humans and robots select systematic reviews, following explicit inclusion criteria

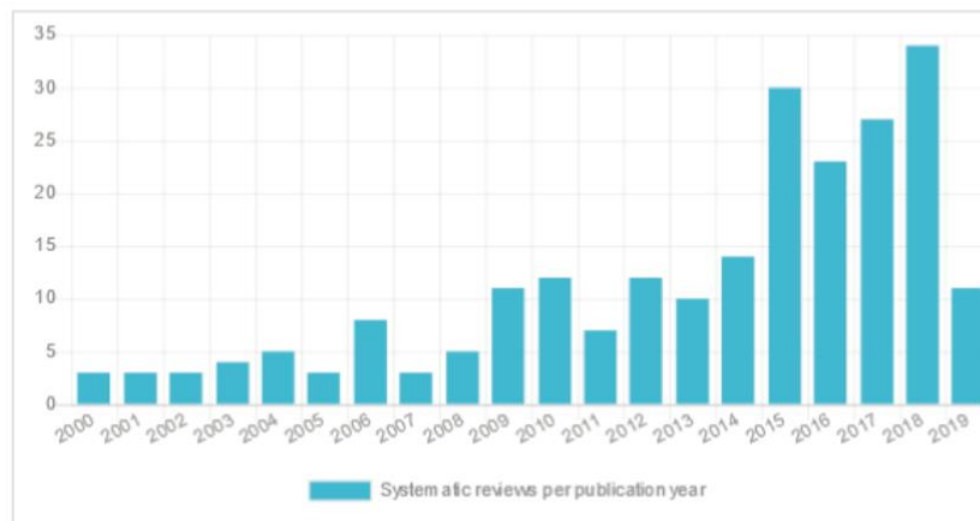


3. A wide network of humans (supported by robots) review the full text of included reviews in order to identify their included studies



4. Humans and robots put together all of the systematic reviews answering the same PICO questions (matrix of evidence)

## THERAPEUTIC USE OF CANNABIS AND CANNABINOIDS



We have identified **234 systematic reviews**, the most recent published in 2019, and 2679 primary studies (614 randomised trials) relevant for this topic [+ More info](#)





# Cherry picking for cannabis



- 1. We identified ALL the conditions for which Cannabis has been claimed as potentially therapeutic (92)**
- 1. We compiled all the scientific evidence**  
(>1000 articles finally included)
- 1. We generated a summary for each condition**  
(oriented to health professionals)
- 1. We conducted a systematic review for each condition**  
(oriented to researchers, to be published in international journals)


**We generate a summary of the evidence for each condition**  
(and the information needed to put the evidence in context)


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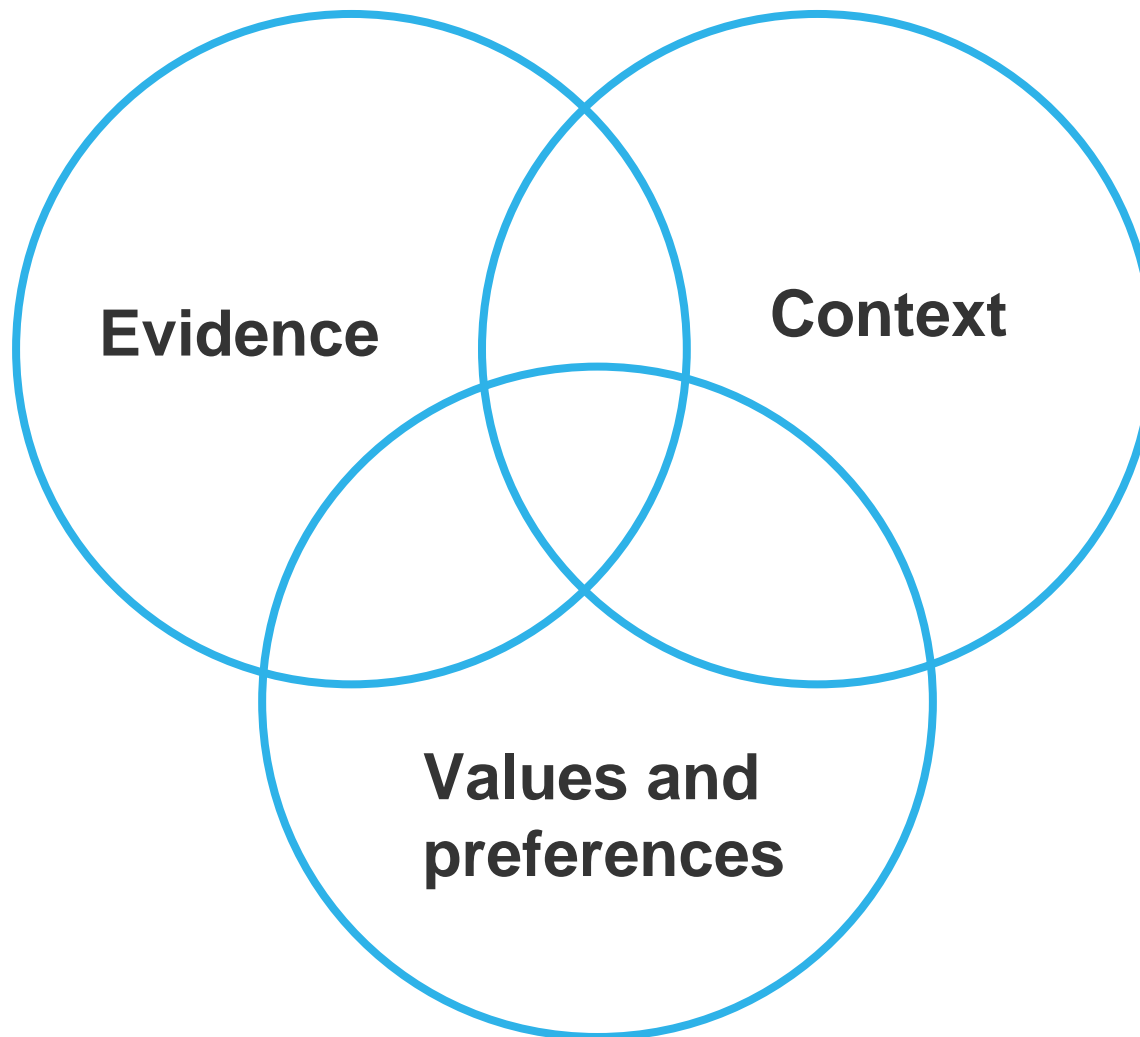
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Epistemonikos: Is cannabidiol an effective treatment for schizophrenia?



# Evidence-based Medicine



## An example



## ■ RESÚMENES EPISTEMONIKOS

Medwave 2016; 16(Suppl2):e6972 doi: 10.5867/medwave.2017.6972

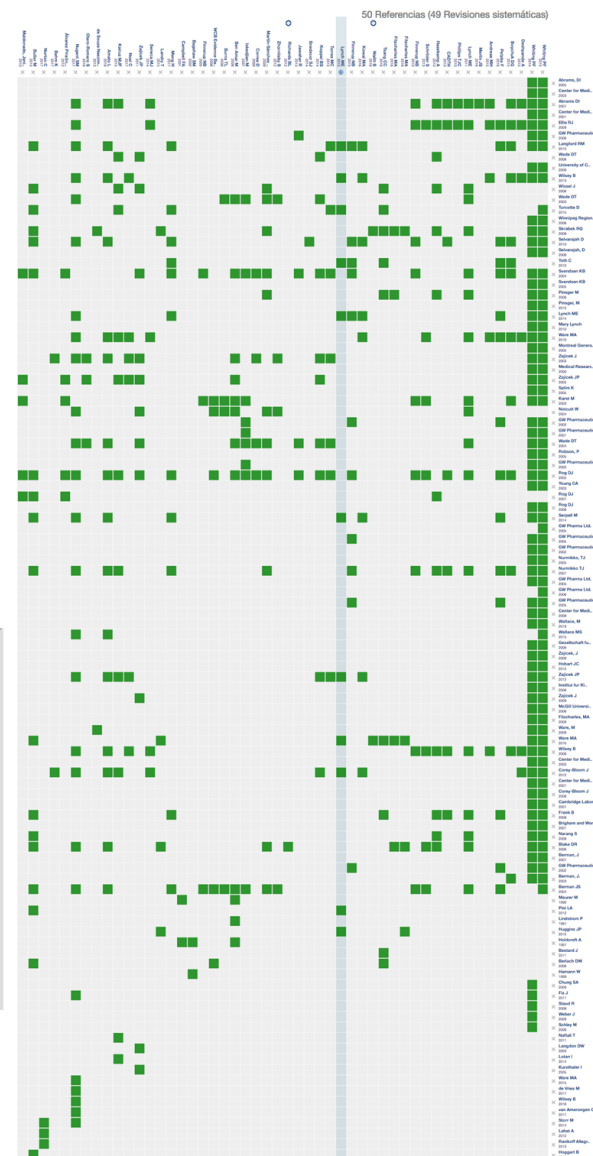
¿Son los cannabinoides un tratamiento efectivo para el dolor crónico no asociado a cáncer?

Are cannabinoids an effective treatment for chronic non-cancer pain?

Rubén F Allende-Salazar, Gabriel Rada

### Key messages

- It is not clear whether cannabinoids decrease pain in patients with chronic non-cancer pain because the certainty of the available evidence is very low.
- The use of cannabinoids is associated with a high rate of adverse events in patients with chronic non-cancer pain.
- Multiple ongoing studies or high-quality systematic reviews reanalyzing existing data could provide more certainty about these findings.





▶  Epistemonikos

⚡ June 2017

## Are cannabinoids an effective treatment for chronic non-cancer pain?






 **Table**
 **Bottom line**

 Plain language statements ☒ ON

 Absolute effect ☒ ON

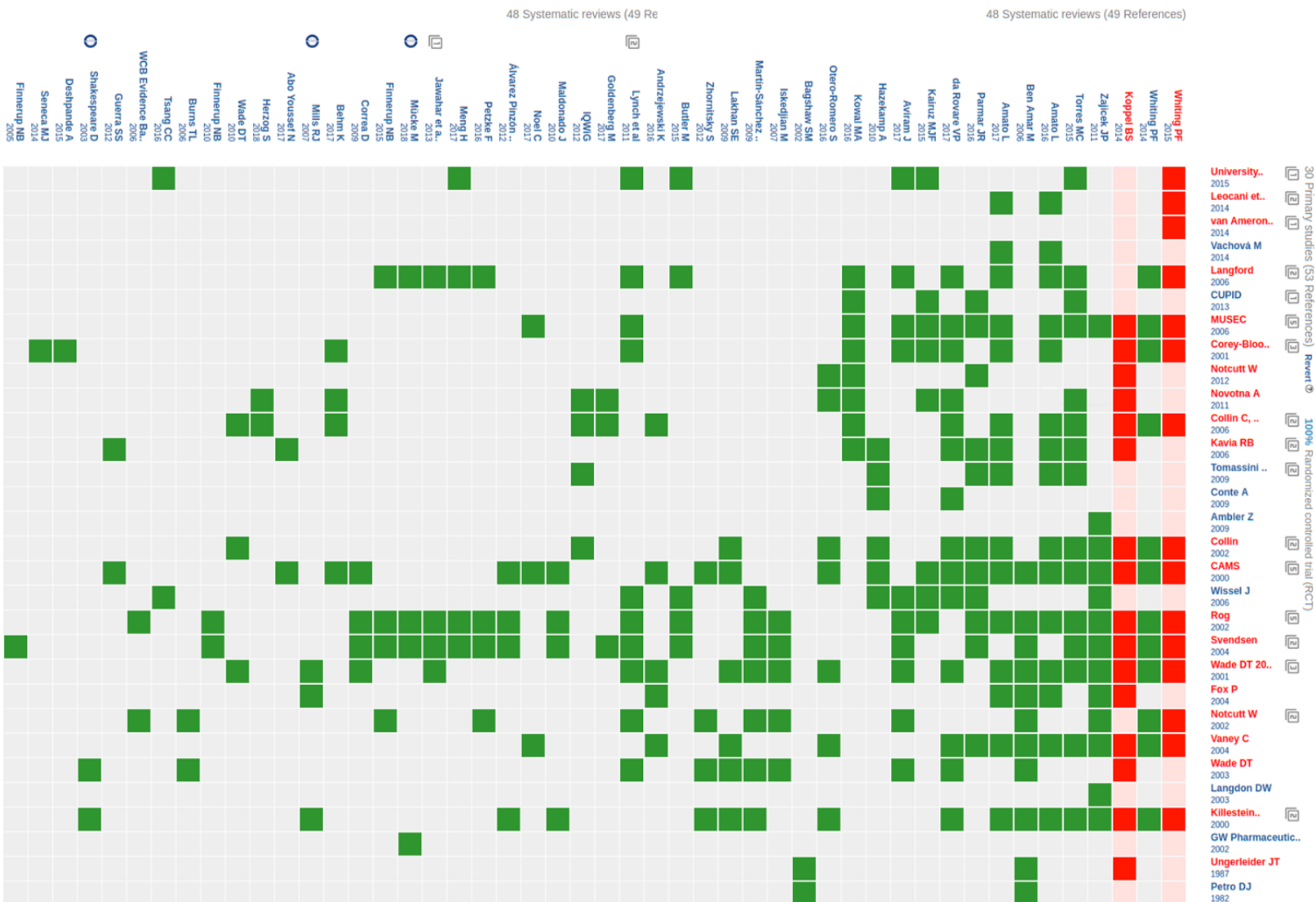
 Relative effect ☒ ON

 Visual overview ☐ OFF

 <b>Outcomes</b>	<b>Plain language statements</b>	<b>Absolute Effect</b> Without cannabinoids      With cannabinoids		<b>Relative effect</b> (95% CI) N° of participants & studies	<b>Certainty of the evidence</b> GRADE
▼ <b>Pain reduction <math>\geq</math> 30%</b>	<i>It is not clear whether cannabinoids decrease pain in patients with chronic non-cancer pain because the certainty of available evidence is very low.</i>	<div> <div>302 per 1000</div> <div>384 per 1000</div> <div>   </div> </div> Difference: 82 more patients per 1000 (95% CI: 36 to 133 more patients)		<b>RR 1.27</b> (1.12 to 1.44) Based on data from 1788 patients in 15 studies	+○○○ Very low ⓘ
▼ <b>Adverse effects</b>	<i>The use of cannabinoids is associated with a high rate of adverse events. The certainty of the evidence is high.</i>	<div> <div>619 per 1000</div> <div>831 per 1000</div> <div>   </div> </div> Difference: 212 more patients per 1000 (95% CI: 178 to 242 more patients)		<b>OR 3.03</b> (2.42 to 3.80) Based on data from 3489 patients in 29 studies	++++ High

<https://isof.epistemonikos.org/#/finding/593584b2e3089d0fec24dc01>

# Is our research synthesis really the largest ever conducted?





Epistemonikos Foundation and Adherent Organisations Inform:

## The Use of Cannabis in People with Medical Conditions Does Not Produce Improvements and Causes Damage to Health



Based on the existing scientific research, we conclude that there is no medical condition in which the benefits derived from the use of cannabis or cannabis-derived products are superior to its adverse effects and risks.

1

Cannabis or its derivatives are not effective and are associated with frequent adverse effects.



2

Cannabis or its derivatives may produce a low benefit, but also produce frequent adverse effects that exceed the benefits.



3

It is not clear whether cannabis or its derivatives are effective or not, because the certainty of the evidence is very low, and they are associated with frequent adverse effects.





### How much do we know:

- We know it is not a therapeutic alternative for many conditions
- For some conditions we know it might work, but we don't know if the benefits outweigh the risks (or if it is better than other therapeutic options)
- There are a few promising areas (in an early stage of research) and many unproven theories that might be tested.



In order to advance knowledge/research a *sine qua non* is to rely on a standardized substance.

### WE NEED:

- High-quality standardized product (good manufacturing practices)
- Independent and rigorous evaluation

## We also have a moral duty with the people currently on Cannabis

- To test if the benefit is real
- If the benefit proves real, to maximize benefits and to minimize risks.

To be certain Cannabis is the best available choice:

- 'Better than placebo'  $\neq$  'Best option'



## Moral imperative with patients considering its use

- **ETHICAL DUTY** of offering a reasonable level of certainty that we are in front of a case where we expect benefit instead of harm.

## At the populational level

- **ETHICAL DUTY** of maximizing benefits, minimizing risks, promoting efficiency and decreasing equity gaps:





**Many thanks**



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[foundation.epistemonikos.org](http://foundation.epistemonikos.org)



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