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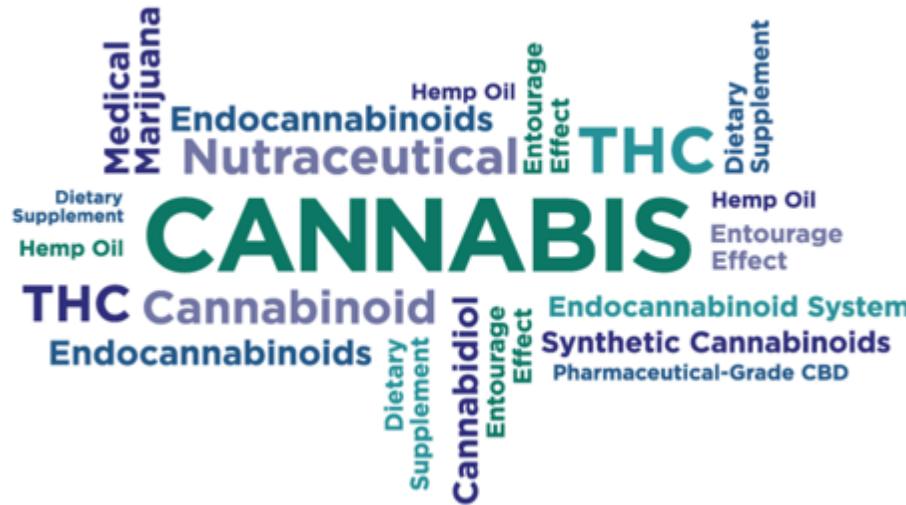
# **IMPIEGO DEI CANNABINOIDI IN MEDICINA UMANA**

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- ✓ IBUPROFEN ..... 12.578
  - ✓ PARACETAMOLO ..... 24.140
  - ✓ OXICODONE ..... 2.970
    - Addiction ..... 199
  - ✓ TRAMADOL ..... 4.256
    - Addiction ..... 95
  - ✓ TAPENTADOL ..... 353
    - Addiction ..... 16
    - NP ..... 79
  - ✓ RITUXIMAB (Pain) ..... 357
  - ✓ ADALIMUMAB (Arthritis) ..... 297
- 
- ✓ MARIJUANA ..... 25.420
  - ✓ CANNABIS ..... 18.188
  - ✓ MARIJUANA
    - Pain ..... 1.215
    - Neuropathic pain ..... 131
    - Addiction ..... 1.849

# Glossary of Cannabinoid Term

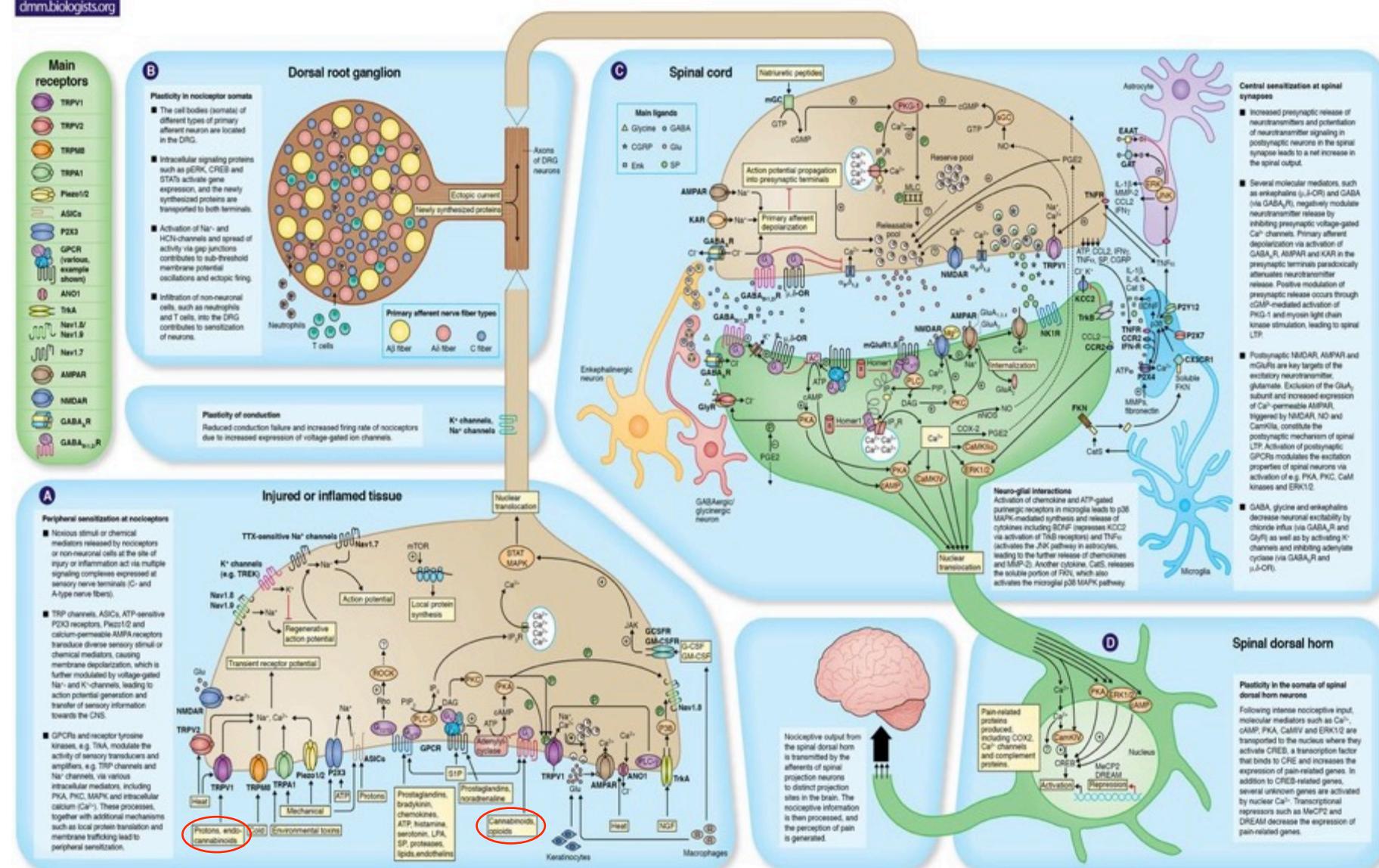


A **cannabinoid** is one of a class of diverse chemical compounds that *acts on cannabinoid receptors in cells* that alter neurotransmitter release

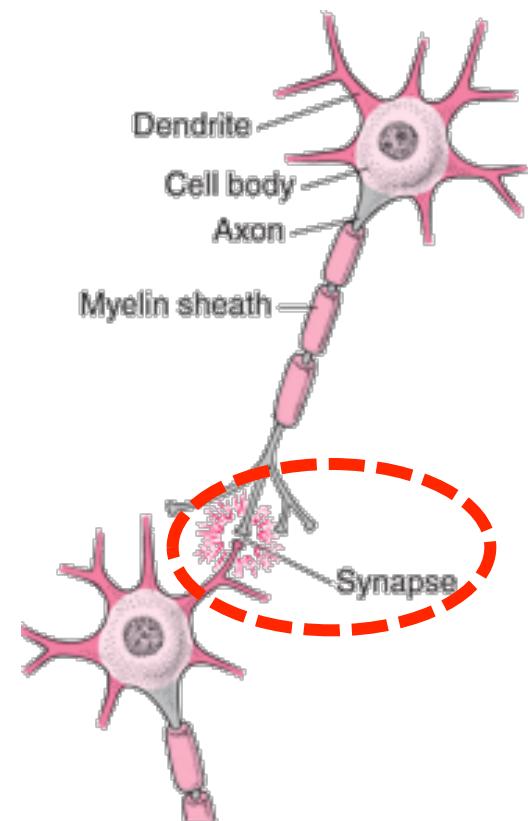
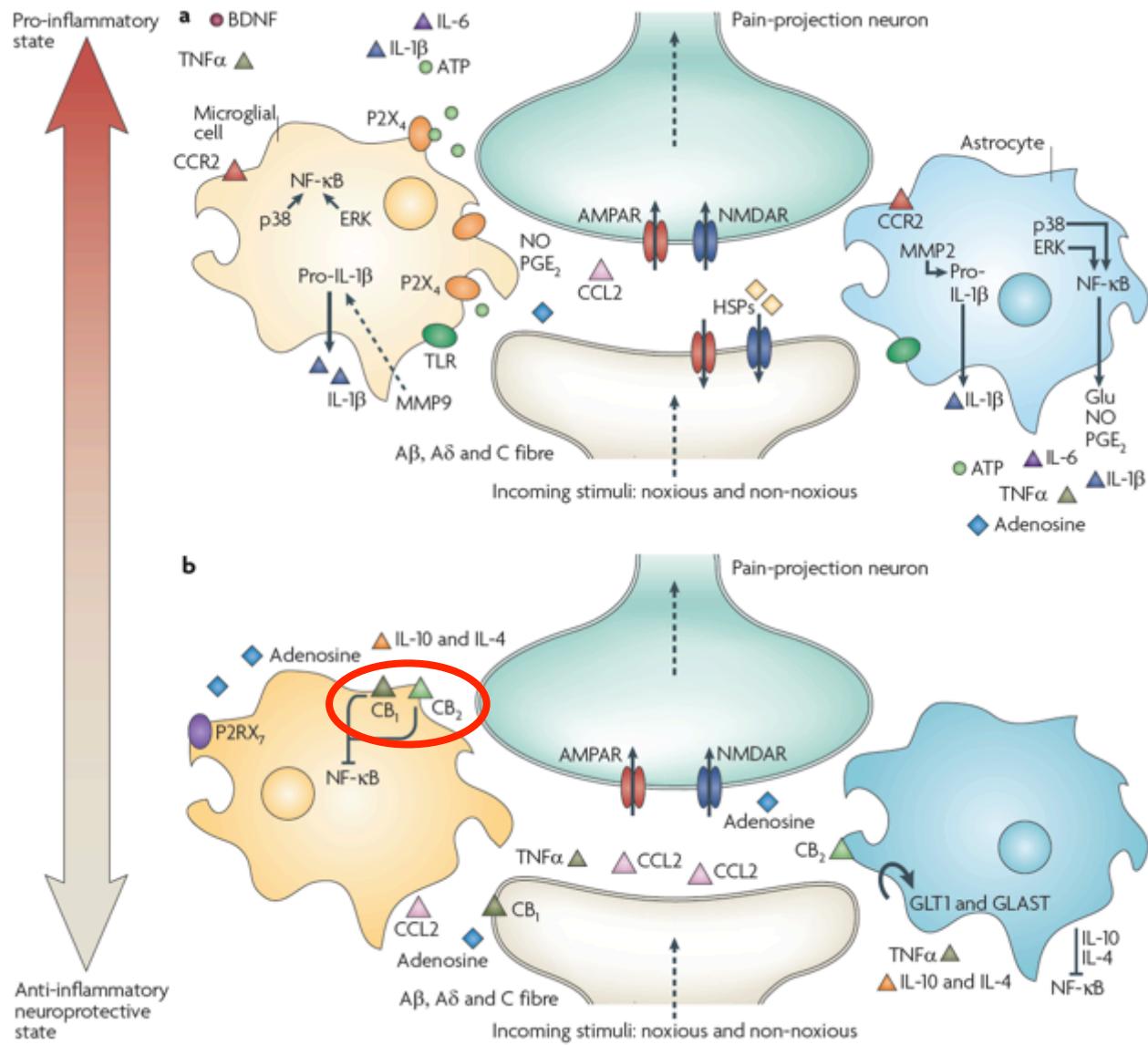
- **endocannabinoids** (*produced naturally in the body by animals*)
- **phytocannabinoids** (*found in cannabis and some other plants*)
- **synthetic cannabinoids** (*manufactured artificially*)

# Pain hypersensitivity mechanisms at a glance

Vijayan Gangadharan and Rohini Kuner *Dis. Model. Mech.* 2013;6:889-895

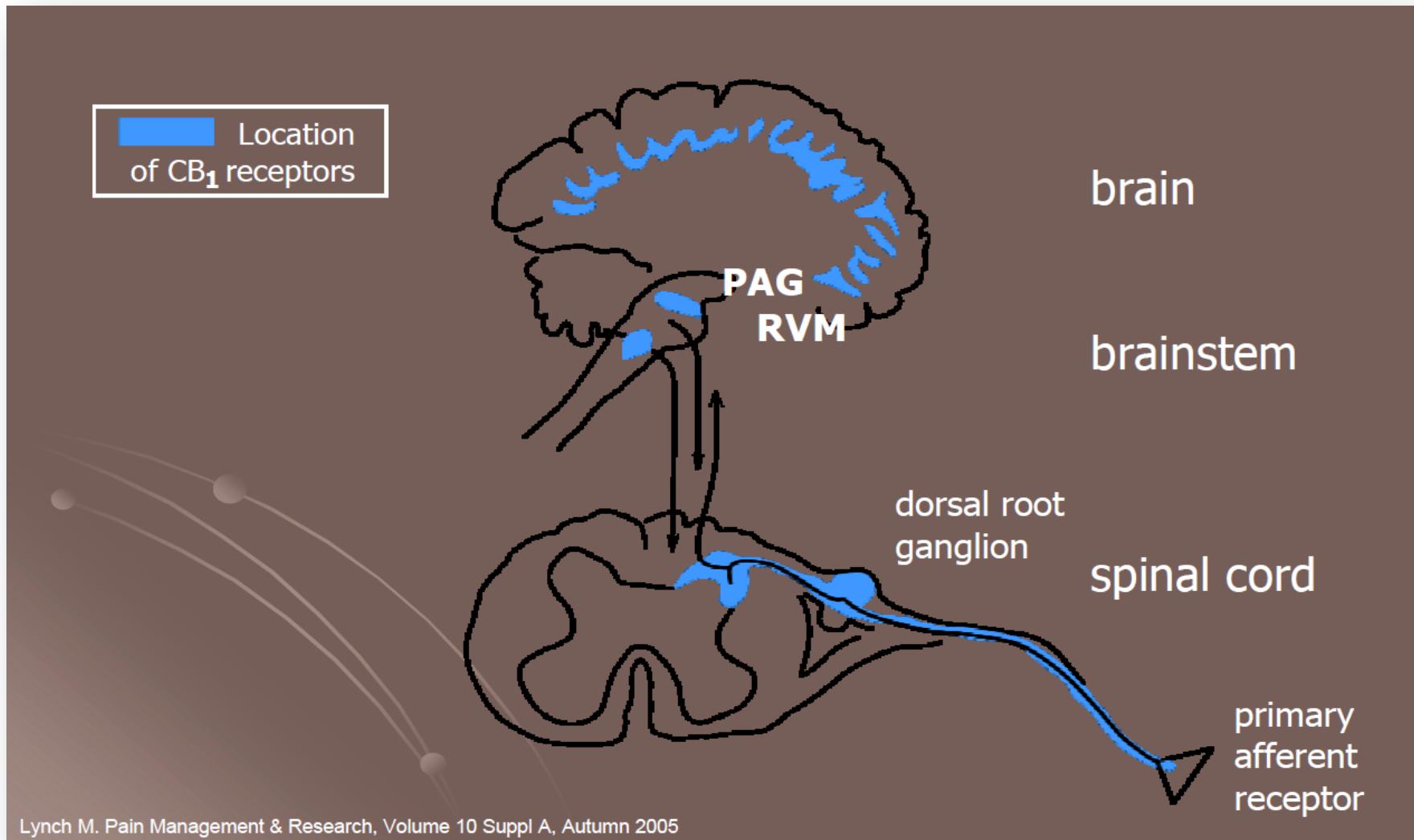


**Abbreviations:** AC, adenylyl cyclase; AMPAR, 2-amino-3-(4-hydroxy-5-methyl-isoxazol-4-yl)-propanoic acid (NMDA); receptor; AVIL, avelin; C, A<sub>δ</sub>-type nerve fiber; cGMP, cyclic guanosine monophosphate; cGMP-CSPF, granulocyte-macrophage colony-stimulating factor; GM-CSF, granulocyte-macrophage colony-stimulating factor; GM-CSFR, granulocyte-macrophage colony-stimulating factor receptor; GPCFR, G-protein-coupled receptor; HCN, hyperpolarization-activated cyclic nucleotide-gated; IP<sub>3</sub>R, inositol-1,4,5-trisphosphate receptor; I<sub>h</sub>, h-current; IP<sub>3</sub>, IP<sub>3</sub> receptor; AVIL, avelin; K<sub>ATP</sub>, K<sub>ATP</sub> channel; LPA, lysophosphatidic acid; LTP, long-term potentiation; M, macrophage; mGluR, mGlu receptor; mGluR5, mGlu receptor 5; mGluR7, mGlu receptor 7; mGluR8, mGlu receptor 8; mGluR10, mGlu receptor 10; mGluR12, mGlu receptor 12; mGluR14, mGlu receptor 14; mGluR15, mGlu receptor 15; mGluR16, mGlu receptor 16; mGluR17, mGlu receptor 17; 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Milligan ED, Watkins LR.  
Nat Rev Neurosci. 2009 Jan;10(1):23-36. Review.

# Localizzazione dei CB<sub>1</sub>Rs in aree correlate alla modulazione del dolore: rilevanza nella regolazione delle vie discendenti di controllo del dolore, del processamento «spinale» del dolore e nella percezione periferica del dolore





## Allodynia Lowering Induced by Cannabinoids and Endocannabinoids (ALICE)

Livio Luongo, Katarzyna Starowicz, Sabatino Maione, Vincenzo Di Marzo,

[Pharmacological Research](#) - [Volume 119](#), May 2017, Pages 272–277

### Conclusions

The pharmacological manipulation of the endocannabinoid system could represent a new target in the management of those types of neuropathic pain that remain untreatable with the commercially available pain killers.

***The advantage of cannabinoid-based therapies would consist of the targeting not only neurons but also astroglia and microglia*** that are the early players in the establishment of tactile allodynia. Intriguingly, the cannabinoid-based therapy is also available for human diseases associated with abnormal pain such as fibromyalgia and multiple sclerosis.

[Pain](#). 2017 Mar 21. doi: 10.1097/j.pain.0000000000000899.

# Chronic Pain Patients' Perspectives of Medical Cannabis.

Piper BJ<sup>1</sup>, Beals ML, Abess AT, Nichols SD, Martin M, Cobb CM, DeKeuster RM.

Medical cannabis (MC) is employed for a variety of conditions including chronic pain.

The goal of this report was to provide an in-depth qualitative exploration of patient perspectives on the strengths and limitations of MC.

Members of MC dispensaries (N = 984) in New England including two-thirds with a history of chronic pain completed an online survey.

***In response to "How effective is medical cannabis in treating your symptoms or conditions?", with options of 0% "no relief" to 100% "complete relief", the average was 74.6% ± 0.6.***

***The average amount spent on MC each year was \$3,064.47 + 117.60***

***These findings provide a patient-centered view on the advantages (e.g. efficacy in pain treatment, reduced use of other medications) and disadvantages (e.g. economic and stigma) of MC.***

**There is conclusive or substantial evidence that cannabis or cannabinoids are effective:**

- *for the treatment of chronic pain in adults (cannabis)*
- *as anti-emetics in the treatment of chemotherapy-induced nausea and vomiting (oral cannabinoids)*
- *for improving patient-reported multiple sclerosis spasticity symptoms (oral cannabinoids)*

**There is moderate evidence that cannabis or cannabinoids are effective for:**

- *improving short-term sleep outcomes in individuals with sleep disturbance associated with obstructive sleep apnea syndrome, fibromyalgia, chronic pain, and multiple sclerosis (cannabinoids, primarily nabiximols)*

**There is limited evidence that cannabis or cannabinoids are effective for:**

- increasing appetite and decreasing weight loss associated with HIV/AIDS (cannabis and oral cannabinoids)
- improving clinician-measured multiple sclerosis spasticity symptoms (oral cannabinoids)
- improving symptoms of Tourette syndrome (THC capsules)
- improving anxiety symptoms, as assessed by a public speaking test, in individuals with social anxiety disorders (cannabidiol)
- improving symptoms of posttraumatic stress disorder (nabilone)

**There is limited evidence of a statistical association between cannabinoids and:**

- better outcomes (i.e., mortality, disability) after a traumatic brain injury or intracranial hemorrhage

**There is limited evidence that cannabis or cannabinoids are *ineffective* for:**

- improving symptoms associated with dementia (cannabinoids)
- improving intraocular pressure associated with glaucoma (cannabinoids)
- reducing depressive symptoms in individuals with chronic pain or multiple sclerosis (nabiximols, dronabinol, and nabilone)

# Medical Cannabis Use Is Associated With Decreased Opiate Medication Use in a Retrospective Cross-Sectional Survey of Patients With Chronic Pain



RESEARCH  
EDUCATION  
TREATMENT  
ADVOCACY



2016 by the American Pain Society

Kevin F. Boehnke,\* Evangelos Litinas,† and Daniel J. Clauw<sup>‡§</sup>

\*Department of Environmental Health Sciences, School of Public Health, University of Michigan, Ann Arbor, Michigan.

†Oncology, Ann Arbor, Michigan.

‡Departments of Anesthesiology, Medicine (Rheumatology), and Psychiatry, Medical School, University of Michigan, Ann Arbor, Michigan.

§Chronic Pain and Fatigue Research Center, Medical School, University of Michigan, Ann Arbor, Michigan.

**Abstract:** Opioids are commonly used to treat patients with chronic pain (CP), though there is little evidence that they are effective for long term CP treatment. Previous studies reported strong associations between passage of medical cannabis laws and decrease in opioid overdose statewide. Our aim was to examine whether using medical cannabis for CP changed individual patterns of opioid use. Using an online questionnaire, ***we conducted a cross-sectional retrospective survey of 244 medical cannabis patients with CP who patronized a medical cannabis dispensary in Michigan between November 2013 and February 2015.*** Data collected included demographic information, changes in opioid use, quality of life, medication classes used, and medication side effects before and after initiation of cannabis usage. Among study participants, ***medical cannabis use was associated with a 64% decrease in opioid use (n = 118), decreased number and side effects of medications, and an improved quality of life (45%).*** .....

**Perspective:** This article suggests that using medical cannabis for CP treatment may benefit some CP patients. The reported improvement in quality of life, better side effect profile, and decreased opioid use should be confirmed by rigorous, longitudinal studies that also assess how CP patients use medical cannabis for pain management.

# SAFETY



RESEARCH  
EDUCATION  
TREATMENT  
ADVOCACY

## Cannabis for the Management of Pain: Assessment of Safety Study

Mark A. Ware, Tongtong Wang, Stan Shapiro, and Jean-Paul Collet

*The Journal of Pain, Vol 16, No 12 (December), 2015: pp 1233-1242*

**Primary Safety Outcome .....**serious and non serious Adverse Events (AEs)

**Secondary Safety Outcomes .....**Neurocognitive function. Pulmonary function, and standrad hematology, biochemistry, renal, liver, and endocrine function

**Efficacy measures.** Pain intensity (VAS). Pain quality was assessed using the McGill Pain Questionnaire, which measures sensory, affective, and evaluative dimensions of pain. Other symptoms were measured using the modi- fied Edmonton Symptom Assessment Scale. Mood was measured using the Profile of Mood States. Quality of life was measured using the SF-36

## CONCLUSION

Using a standardized, quality-controlled herbal cannabis product with a reliable **THC potency of 12.5%**. ....this study suggested that the **AEs of medical cannabis are modest and comparable quantitatively and qualitatively with prescription cannabinoids.....cannabis at average doses of 2.5 g/d** in current cannabis users **may be safe** as part of a carefully monitored pain management program when conventional treatments have been considered medically inappropriate or inadequate.

*We have just  
scratched the surface,  
and I greatly regret  
that I do not have  
another lifetime to  
devote to this field, for  
we might well discover  
that **cannabinoids** are  
involved in some way  
in all human diseases.*



Raphael Mechoulam



# Endocannabinoidi e dolore cronico

PHILOSOPHICAL  
TRANSACTIONS  
OF  
THE ROYAL  
SOCIETY B



Phil. Trans. R. Soc. B (2012) 367, 3300–3311  
doi:10.1098/rstb.2011.0390

Review

## Dynamic changes to the endocannabinoid system in models of chronic pain

Devi Rani Sagar<sup>1</sup>, James J. Burston<sup>1</sup>, Stephen G. Woodhams<sup>2</sup>  
and Victoria Chapman<sup>1,\*</sup>

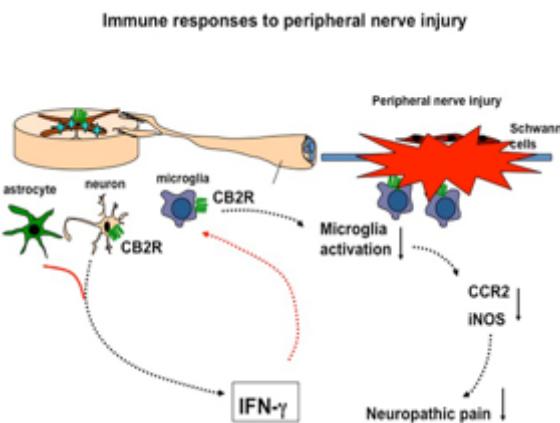
Aumentati livelli di recettori  $CB_1$  e  $CB_2$



Aumentati livelli di AEA e 2-AG

Aumentati livelli di FAAH e MAGL

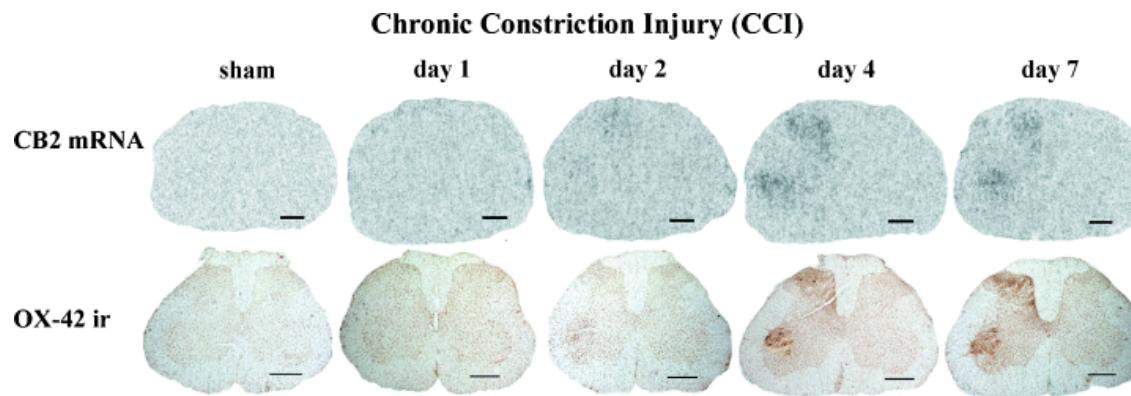
Nelle aree interessate



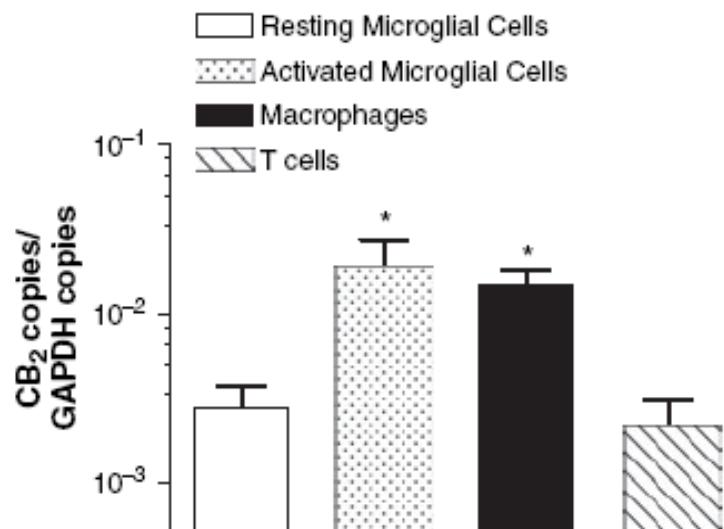
Endocannabinoids have been shown to be involved in the control of pain both at the level of ascending pathways, from the sensory nerves to the brain, and of the descending pain inhibitory pathways that provide negative feedback control of nociceptive signals at the brainstem and spinal cord level. Thus endocannabinoids inhibit pain at the peripheral, spinal and supraspinal levels

# Endocannabinoid System and Pain

*CB2 is upregulated in neuropathic pain*

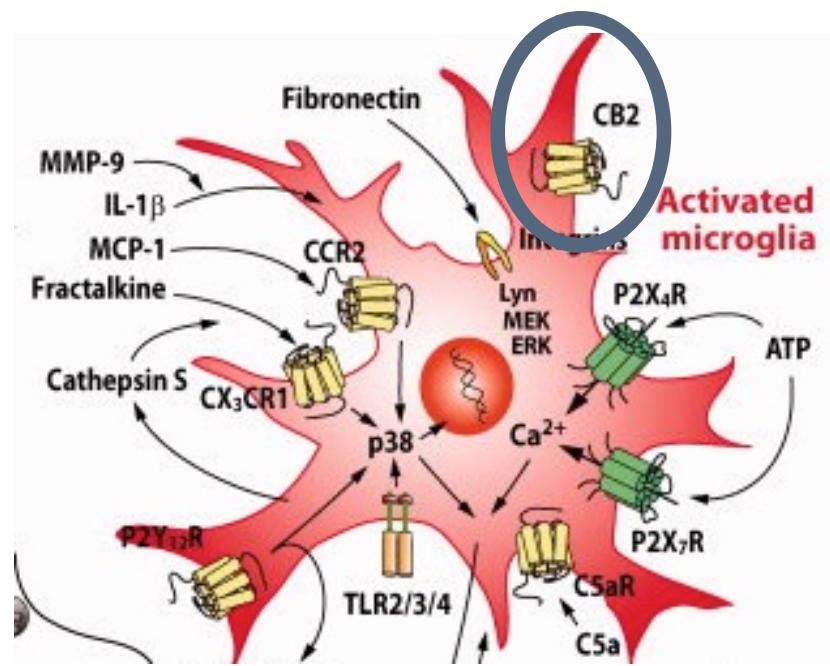
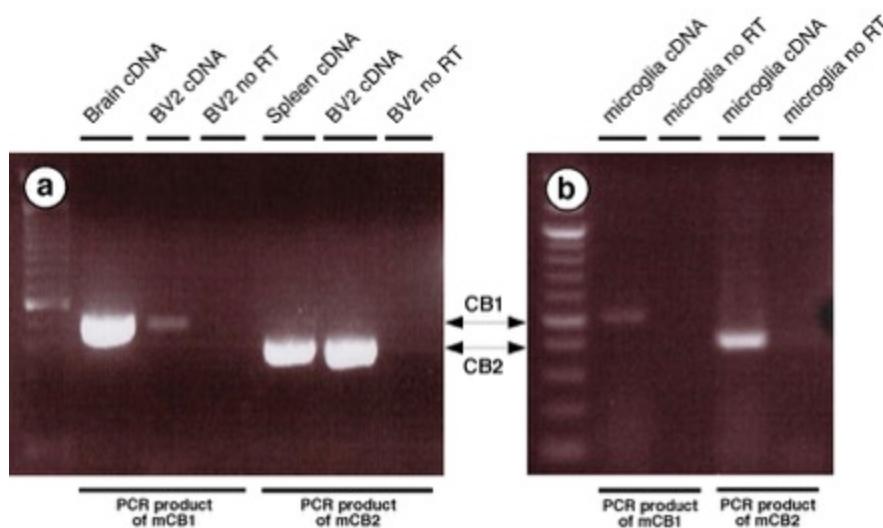


From Zhang et al., 2003



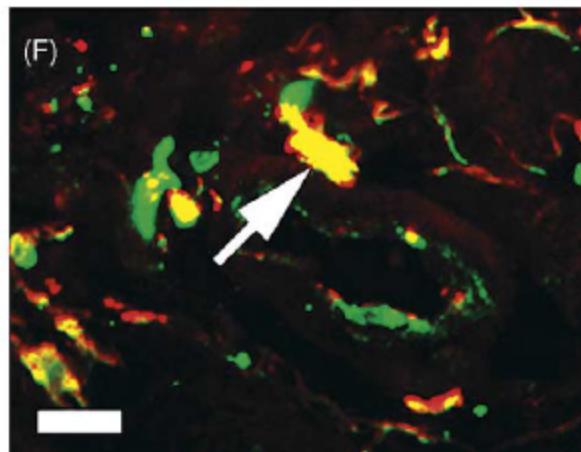
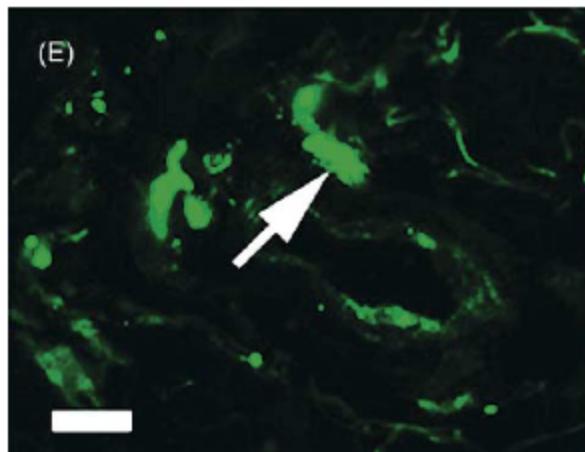
From Maresz et al., 2005

# Endocannabinoid System and Pain



# Endocannabinoid System and Pain

*CB2 is expressed on mast cells in human skin*



# **DECRETO 9 novembre 2015**

**Funzioni di Organismo statale per la *cannabis* previsto dagli articoli 23 e 28 della convenzione unica sugli stupefacenti del 1961, come modificata nel 1972.**

ALLEGATO TECNICO PER LA PRODUZIONE NAZIONALE DI SOSTANZE E PREPARAZIONI DI ORIGINE VEGETALE A BASE DI CANNABIS

## **Gli impieghi di *cannabis* ad uso medico riguardano:**

- l'analgesia in patologie che implicano **spasticità associata a dolore** (**sclerosi multipla, lesioni del midollo spinale**) resistente alle terapie convenzionali
- l'analgesia nel **dolore cronico** (con particolare riferimento al **dolore neurogeno**) in cui il trattamento con antinfiammatori non steroidei o con farmaci cortisonici o oppioidi si sia rivelato inefficace
- **L'effetto anticotonic ed antiemetico** nella **nausea e vomito**, causati da chemioterapia, radioterapia, terapie per HIV, che non può essere ottenuto con trattamenti tradizionali
- **L'effetto stimolante dell'appetito** nella **cachessia, anoressia, perdita dell'appetito** in pazienti oncologici o affetti da AIDS e nell'anoressia nervosa, che non può essere ottenuto con trattamenti standard
- **L'effetto ipotensivo nel glaucoma** resistente alle terapie convenzionali
- la riduzione dei movimenti involontari del corpo e facciali nella **sindrome di Gilles de la Tourette** che non può essere ottenuta con trattamenti standard



# Targeting the endogenous cannabinoid system to treat neuropathic pain

Benjamin K. Lau <sup>a\*</sup> and Christopher W. Vaughan<sup>b</sup>

REVIEW  
ARTICLE

#FEBS  
Journal  
MINIREVIEW



## Modulating the endocannabinoid system in human health and disease – successes and failures

Pál Pacher and George Kunos

Laboratory of Physiologic Studies, National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health, Bethesda, MD, USA



PAIN® 154 (2013) S87–S93

PAIN®

[www.elsevier.com/locate/pain](http://www.elsevier.com/locate/pain)

Review

Endocannabinoids: A unique opportunity to develop multitarget analgesics

Sabatino Maione<sup>a</sup>, Barbara Costa<sup>b</sup>, Vincenzo Di Marzo<sup>c,\*</sup>



CrossMark



European Journal of Pharmacology 716 (2013) 41–53

Contents lists available at ScienceDirect

European Journal of Pharmacology

journal homepage: [www.elsevier.com/locate/ejphar](http://www.elsevier.com/locate/ejphar)



Review

Non-psychotropic analgesic drugs from the endocannabinoid system: "Magic bullet" or "multiple-target" strategies?

Katarzyna Starowicz<sup>a,\*</sup>, Vincenzo Di Marzo<sup>b</sup>



CrossMark

## The role of endocannabinoids in pain modulation

Panagiotis Zogopoulos, Ioanna Vasileiou, Efstratios Patsouris, Stamatios E. Theocharis\*

First Department of Pathology, Medical School, University of Athens, 75 Mikras Asia Street, Goudi, 11527 Athens, Greece

EJN



EUROPEAN JOURNAL OF NEUROSCIENCE

*European Journal of Neuroscience*, Vol. 39, pp. 401–408, 2014

doi:10.1111/ejn.12440

## Endocannabinoids and neuropathic pain: focus on neuron–glia and endocannabinoid–neurotrophin interactions

Livio Luongo,<sup>1</sup> Sabatino Maione<sup>1</sup> and Vincenzo Di Marzo<sup>2</sup>

PHILOSOPHICAL  
TRANSACTIONS  
OF

THE ROYAL B | BIOLOGICAL  
SOCIETY

SCIENCES

## Modulation of neuropathic-pain-related behaviour by the spinal endocannabinoid/endovanilloid system

Katarzyna Starowicz and Barbara Przewlocka

*Phil. Trans. R. Soc. B* 2012 **367**, doi: 10.1098/rstb.2011.0392, published 29 October 2012

**Original Article**

# Cannabis Use in HIV for Pain and Other Medical Symptoms

Emily Woolridge, MB BS, BSc, Simon Barton, MB BS (Distinction), BSc, FRCP (Ed), FRCP (London), Jonathon Samuel, BSc, Jess Osorio, BSc, Andrew Dougherty, BSc, and Anita Holdcroft, MB ChB, MD, FRCA

*Magill Department of Anesthesia, Imperial College London (E.W., A.H.), and HIV/GUM Services (S.B., J.S., J.O., A.D.), Chelsea and Westminster Hospital, London, United Kingdom*

Table 2

**Demographic Data, Disability Scores, and the Number of Patients Using Cannabis to Treat Symptoms**

	Females n = 43 (8%)	Males n = 480 (92%)	All Subjects n = 523
Age (years) <sup>a</sup>	38 [32–43] (20–65)	39 [35–44] (20–69)	39 [35–44] (20–69)
Years with HIV <sup>a</sup>	6 [2–9] (0–18)	9 [4–13] (0–25)	8 [4–13] (0–25)
Disability <sup>b</sup>			
0	12 (28%)	164 (34%)	176 (34%)
1	14 (33%)	136 (28%)	150 (29%)
2	10 (23%)	100 (21%)	110 (21%)
3	4 (9%)	74 (15%)	78 (15%)
4	3 (7%)	5 (1%)	8 (2%)
5	0	1 (0.2%)	1 (0.2%)
Number that used cannabis to treat symptoms	4/43 (9%)	139/480 (29%)	143/523 (27%)

<sup>a</sup>Median [IQR] (range).

<sup>b</sup>0 = none; 1 = mild; 2 = moderate not requiring help from others; 3 = moderate requiring help from others; 4 = severe with almost total loss of function; and 5 = total loss of function.

# Summary of evidence-based guideline: Complementary and alternative medicine in multiple sclerosis

## Report of the Guideline Development Subcommittee of the American Academy of Neurology

*Neurology® 2014;82:1083-1092*

Vijayshree Yadav, MD,  
MCR

Christopher Bever, Jr.,  
MD, MBA, FAAN

James Bowen, MD

Allen Bowling, MD, PhD

Bianca Weinstock-  
Guttman, MD

Michelle Cameron, MD,  
PT

Dennis Bourdette, MD,  
FAAN

Gary S. Gronseth, MD,  
FAAN

Pushpa Narayanaswami,  
MBBS, DM, FAAN

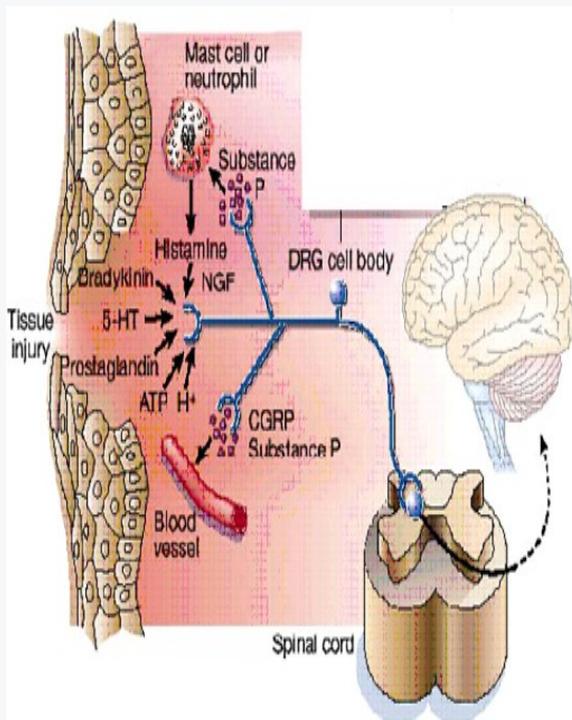
CAM intervention	MS types studied	Outcome	Recommendation level
<b>Cannabinoids</b>			
OCE	RRMS, SPMS, PPMS, MSU	Symptoms of spasticity, pain	A Effective
	RRMS, SPMS, PPMS	Signs of spasticity (short-term), tremor (short-term)	B Ineffective
	MSU	Signs and symptoms of spasticity (long-term)	C Effective
	RRMS, SPMS, PPMS, MSU	Bladder symptoms, urge incontinence	U
<b>Synthetic THC</b>			
	RRMS, SPMS, PPMS	Symptoms of spasticity, pain	B Effective
	RRMS, SPMS, PPMS	Signs of spasticity (short-term), tremor (short-term)	B Ineffective
	MSU	Signs and symptoms of spasticity (long-term)	C Effective
	RRMS, SPMS, PPMS, MSU	Bladder symptoms, urge incontinence, central neuropathic pain	U
<b>Sativex oromucosal spray</b>			
	MSU	Symptoms of spasticity, pain, urinary frequency	B Effective

Abbreviations: CAM = complementary and alternative medicine; HRQOL = health-related QOL; MS = multiple sclerosis; MSU = MS type unspecified; OCE = oral cannabis extract; PPMS = primary progressive MS; QOL = quality of life; RRMS = relapsing-remitting MS; SPMS = secondary progressive MS; THC = tetrahydrocannabinol. A = established as effective or ineffective; B = probably effective or ineffective; C = possibly effective or ineffective; U = insufficient evidence to determine effectiveness or ineffectiveness.

Studies cited using reference list in summary guideline article (appearing in print) and e-references for print article (online data supplement).

# I cannabinoidi nel trattamento della Sindrome Fibromialgica

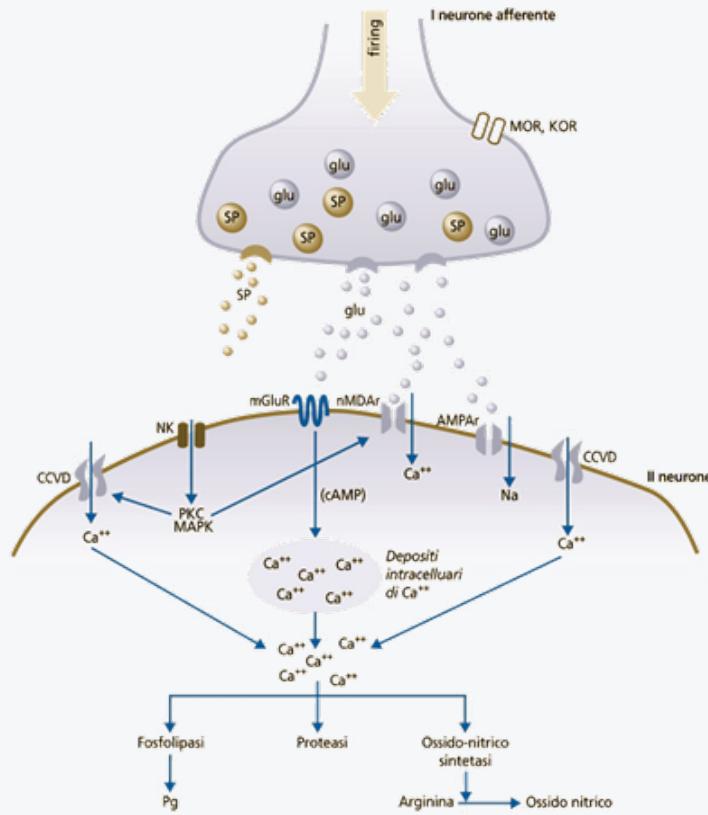
# Sensibilizzazione periferica



I principali mediatori della sensibilizzazione periferica sono:

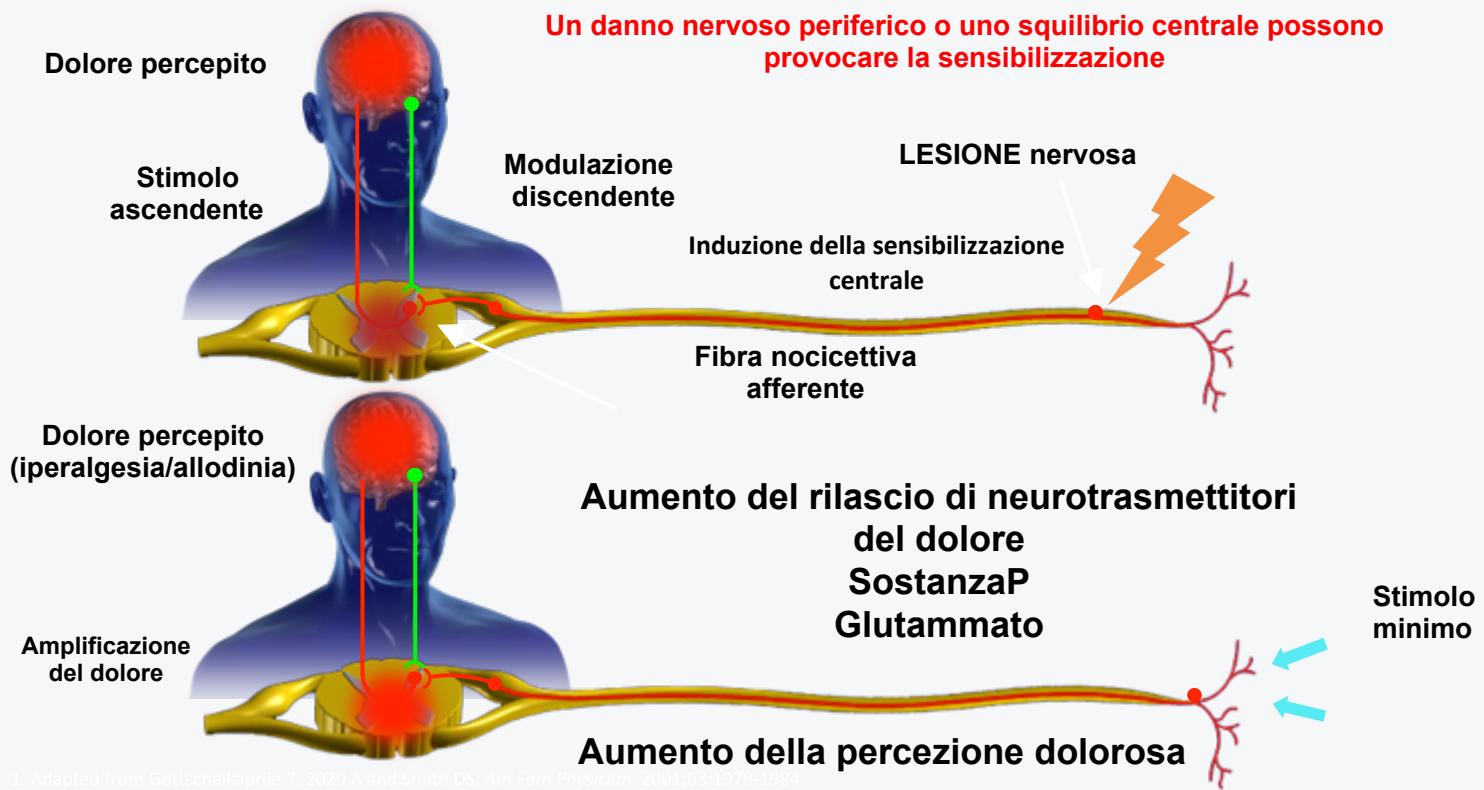
- prostaglandine
- istamina
- TNF
- interleuchina 1
- SP
- CGRP

# Sensibilizzazione centrale



- Riduzione della soglia di attivazione neuronale che facilita l'attivazione del 2° neurone attraverso efferenze non nocicettive a bassa soglia
- L'aumentata risposta del NS a stimoli periferici innocui porta ad un progressivo aumento dell'attività dei neuroni delle corna dorsali midollari (*fenomeno dipendente da NMDA*)
- **Implicazioni cliniche:** allodinia, spasmi muscolari, alterazioni tono simpatico e perfusione regionale

# LA SENSIBILIZZAZIONE CENTRALE PRODUCE UN ALTERATO SEGNALE DOLOROSO NELLA FIBROMIALGIA



1. Adapted from Gottschallpege J. 2020; And Smith DS. Am Fam Physician. 2001;63:1370-1384.

2. Woolf CJ. Ann Intern Med. 2004;140:441-451.

# LOCALIZZAZIONE DEI RECETTORI CANNABINOIDI

NECESSITA' DI MODULARE LA TERAPIA E STIMOLARE RECETTORI DIVERSI CON DIVERSE TIPOLOGIE DI CANNABIS TERAPEUTICA

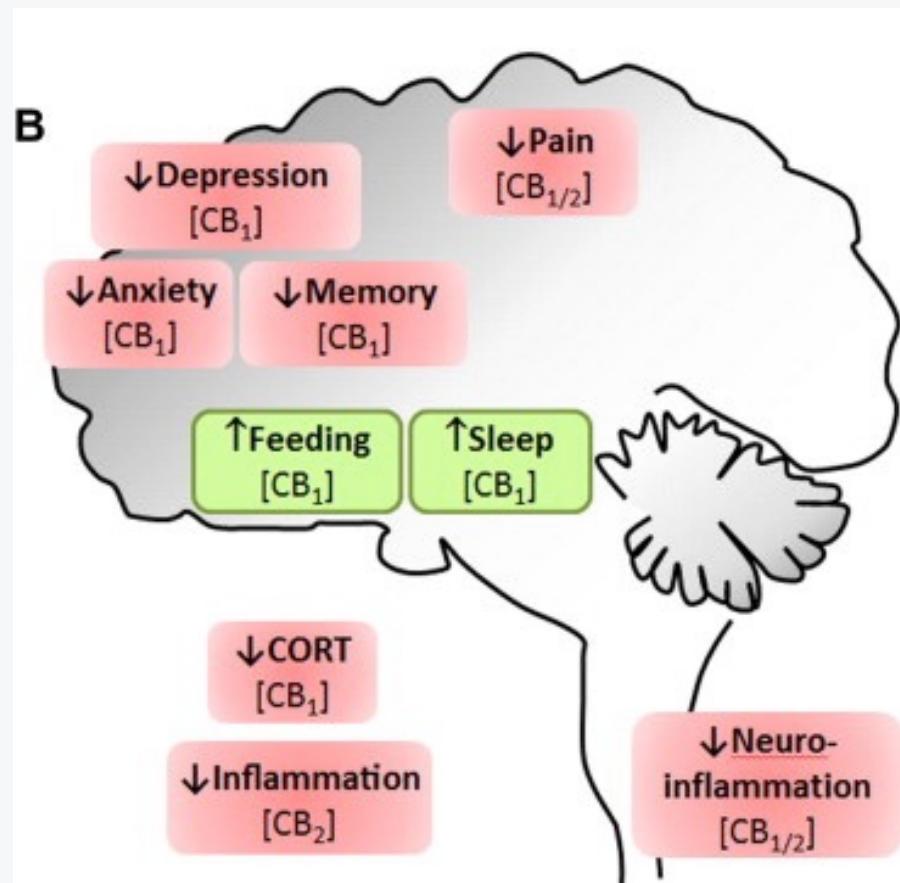


Image source: ©

Crowe S, et al. Brain Behav Immun. 2014;42:1-5.

# TIPOLOGIE DI CANNABIS IN COMMERCIO IN ITALIA

VARIETÀ	THC	CBD	PROFILO TERPENICO	PROVENIENZA
BEDROCAN®	≥ 22* %	< 1 %	SATIVA	OLANDA
BEDROBINOL®	≥ 12 %	< 1 %	SATIVA	OLANDA
BEDIOL®	≥ 6,5 %	≥ 8 %	SATIVA	OLANDA
BEDICA®	≥ 14 %	< 1 %	INDICA	OLANDA
BEDROLITE®	< 1%	≥ 9 %	SATIVA	OLANDA
FM2	5-8%	7,5-12%	SATIVA	ITALIA

# PRINCIPALI EFFETTI DEI DIVERSI CANNABINOIDI

Sostanze terapeuticamente attive in Cannabis sativa (indica)		ansiolitico	antianoressico	anticinetico intest.	antidepressivo	antidiabetico	antidolorifico	antiemetico	antiepilettico	antiischemico	antinfiammatorio	antitumorale	antipsicotico	antipsoriatrico	antiriflusso esofag.	appetitostimolante	battericide	fungicide	immunostimolante	immunosuppressivo	neuroprotettivo	proliferazione ossea	sonnifero	spasmolitico	vasodilatante
<u>Cannabinoidi</u>																									
<u>CBC</u>							x				x	x										x			
<u>CBCA</u>											x														
<u>CBD</u>		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
<u>CBDA</u>											x	x													
<u>CBG</u>											x							x			x	x			
<u>CBGA</u>						x					x							x							
<u>CBLA</u>						x												x							
<u>CBNA</u>						x																			
<u>THC</u>							x	x									x							x	
<u>D9-THC</u>							x																		
<u>D8-THC</u>							x																		
<u>THCA-C4</u>						x					x												x	x	
<u>THCV</u>		x						x														x			
<u>THCVA</u>							x																		
<u>Terpenoidi</u>		x		x							x		x		x	x	x	x	x	x	x	x			
<u>limonene</u>		x		x							x		x		x	x	x	x	x	x	x				
<u>linaloola</u>		x			x	x					x		x		x									x	
<u>mircene</u>				x				x			x		x		x										
<u>caryo-fillene oss.</u>											x								x						
<u>trans-caryo-fillene</u>																									
<u>alfa-pinene</u>											x				x										

# da: EULAR 2018 Amsterdam 7-9 giugno

**Pazienti n.54**  
**DN      42.6 %**  
**FM      27.8 %**  
**DMS    14.8 %**  
**DO      11.1 %**  
**SM      3.7 %**

## Introduzione

Recentemente i Cannabinoidi stanno trovando ampia indicazione in quadri patologici che incidono sulla qualità della vita e nel trattamento del dolore cronico non sufficientemente risponditore alla terapia antidolorifica di prima linea. Nonostante i benefici di questo fitocomplesso terapeutico, la scelta del farmaco e della formulazione più adatti al paziente è spesso una sfida per il clinico. Numerosi fattori possono infatti condizionarne l'efficacia e l'aderenza terapeutica.

## Metodi

Tutti i pazienti afferenti alla Terapia Antalgica di Verona a cui è stata prescritta terapia con cannabinoidi sono stati suddivisi in sottogruppi in base alla patologia trattata: dolore neuropatico, fibromialgia, dolore muscolo-scheletrico, dolore oncologico, e sclerosi multipla. Ad ogni sottogruppo è stata proposta la compilazione di un insieme di questionari nel periodo compreso tra marzo 2017 a gennaio 2018. I questionari utilizzati sono stati i seguenti: CanQ (anagrafica, farmaco, posologia, effetti collaterali, eventuale sospensione terapia, scala di Likert per dolore, sonno e qualità della vita), McGill (dolore) e PSQI (qualità del sonno) e per specifici sottogruppi i test FIQ (Fibromyalgia Impact Questionnaire), NPS (Neuropathic Pain Scale) e test spasticità nella sclerosi multipla.

In base alla durata dell'assunzione, i pazienti venivano suddivisi in un gruppo di RESPONDERS, cioè coloro che avevano iniziato e proseguito la terapia con cannabinoidi con beneficio, e in un gruppo di NON RESPONDERS, che includeva i pazienti che avevano sospeso la terapia con cannabinoidi dopo meno di 20 giorni dall'inizio (DROPOUT precoce), dopo 20 giorni dall'inizio (DROPOUT tardivo), oppure che non hanno mai assunto la terapia nonostante l'avvenuta prescrizione.

## Risultati

Il nostro studio include 54 pazienti di età media 55 anni, prevalentemente di sesso femminile (67.5%). Tra questi il 42.6% assumeva cannabinoidi per dolore neuropatico, il 27.8% per fibromialgia, il 14.8% per dolore muscoloscheletrico cronico, l'11.1% per dolore oncologico, il 3.7% per dolore associato a spasticità in sclerosi multipla.

I farmaci utilizzati erano, in ordine di frequenza: Bediol (40%), FM2 (26%), Bedrocan (24%), Bedrolite (7.4%), Bedica (1.8%).

## La Cannabis medicale: luci ed ombre. Esperienza clinica presso la Terapia Antalgica di Verona

E. Arrigoni, F. Bianco, L. Bonometti, A. Martini, I. Menegoni, E. Polati, V. Schweiger

## Conclusioni

Il nostro campione è simile a quelli presenti negli studi pubblicati in letteratura<sup>1,2</sup>. I dati elaborati dai questionari hanno mostrato globalmente una buona percentuale di responders con una globale riduzione del dolore, un miglioramento del sonno e della qualità di vita, a fronte di lievi effetti collaterali. Ciò conferma i dati presentati dalle ultime review e riguardanti le medesime categorie di pazienti<sup>2,3,4</sup>. Nello specifico si è riscontrata la migliore risposta nei pazienti con dolore neuropatico, seguiti da quelli con patologie muscolo-scheletriche. Si è riscontrata invece una scarsa risposta nei soggetti con fibromialgia, eccetto che per un miglioramento modesto ma significativo del sonno.

I limiti della nostra raccolta dati sono dati dall'esiguità del campione per le singole patologie e dalla necessità di una valutazione più completa del trend sia pre- che post-inizio dell'assunzione di cannabinoidi per quanto riguarda gli effetti su dolore, sonno e qualità di vita. È importante sottolineare l'esistenza di un drop-out precoce (pazienti con interruzione della terapia a <20 giorni), spesso motivata dai pazienti con la iniziale inefficacia del trattamento farmacologico (40% dei casi di drop-out precoce). È rilevante nel nostro campione anche il drop-out motivato da problemi organizzativi, che solleva interrogativi circa la reperibilità della cannabis medicale sul territorio la quale, secondo i nostri dati, può risultare inadeguata per una percentuale piuttosto elevata di pazienti spiegando circa il 28% del drop-out a più di 20 giorni.

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- 3-Wallitt, B., Klose, P., Fitzcharles, M. A., Phillips, T., & Häuser, W. (2016). Cannabinoids for fibromyalgia. *Cochrane Database of Systematic Reviews*, 2016 (7).
- 4-Pessoa, B. L., Escudero, G., & Nascento, O. J. M. (2015). Emerging Treatments for Neuropathic Pain. *Current Pain and Headache Reports*, 19(12), 56.

da:  
**EULAR 2018**  
**Amsterdam**  
**7-9 giugno**

SOTTOGRUPPO	ETA' MEDIA (ANNI)	DURATA MEDIA (MESI)	RESPONDER (%)
FIBROMIALGIA	48	6	40
NEUROPATHICO	63	6	43
ONCOLOGICO	61	2	50
MUSCOLOSCHEMICO	68	4	25
Bediol	40 %		
FM2	26 %		
Bedrocan	24 %		
Bedrolite	7.4 %	SCLEROSI MULTIPLA	100
Bedica	1.8 %		

da:  
**EULAR 2018**  
**Amsterdam**  
**7-9 giugno**

Conclusioni

Il nostro campione è simile a quelli presenti negli studi pubblicati in letteratura<sup>[1]</sup>. I dati elaborati dai questionari hanno mostrato globalmente una buona percentuale di responders con una globale riduzione del dolore, un miglioramento del sonno e della qualità di vita, a fronte di lievi effetti collaterali. Ciò conferma i dati presentati dalle ultime review e riguardanti le medesime categorie di pazienti<sup>[2;3;4]</sup>. Nello specifico si è riscontrata la migliore risposta nei pazienti con dolore neuropatico, seguiti da quelli con patologie muscolo-scheletriche. Si è riscontrata invece una scarsa risposta nei soggetti con fibromialgia, eccetto che per un miglioramento modesto ma significativo del sonno.

I limiti della nostra raccolta dati sono dati dall'esiguità del campione per le singole patologie e dalla necessità di una valutazione più completa del trend sia pre- che post-inizio dell'assunzione di cannabinoidi per quanto riguarda gli effetti su dolore, sonno e qualità di vita. È importante sottolineare l'esistenza di un drop-out precoce (pazienti con interruzione della terapia a <20 giorni), spesso motivata dai pazienti con la iniziale inefficacia del trattamento farmacologico (40% dei casi di dropout precoce). È rilevante nel nostro campione anche il dropout motivato da problemi organizzativi, che solleva interrogativi circa la reperibilità della cannabis medicale sul territorio la quale, secondo i nostri dati, può risultare inadeguata per una percentuale piuttosto elevata di pazienti spiegando circa il 28% del dropout a più di 20 giorni.

# TAKE-HOME MESSAGES

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## Conclusive Evidence

- *chronic systemic pain as a whole*
- *anti-emetics and increaser of appetite*
- *spasticity symptoms (Multiple Sclerosis)*

## Moderate Evidence (*and need for further studies*)

- *Fibromyalgia Syndrome*
  - *neuropathic chronic pain*
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