

Brain Awareness Week

**11:30 Віктор Досенко «Канабіс:
за/проти. Погляд вченого»**

Найновітніші наукові данні про наслідки (користь або шкода?) від вживання канабіноїдів. Терапевтичне застосування марихуани.



Організатори:



M-GATE



**Brain Awareness Week
UKRAINE**
«Нервові» Дні науки 2017

18 березня (субота)

Інститут фізіології
ім. О.О. Богомольця НАН України
(вул. Богомольця, 4)

За підтримки:



FENS

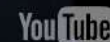
Federation of
European
Neuroscience
Societies





«Маріхуана – наркотик чи ліки?»

03.11.2016



НАРКОТИКИ - психоактивні речовини (стимулюючі або седативні), що активують специфічні рецептори та викликають відчуття задоволення

НАРКОМАНІЇ

(від грец. narke - заціпеніння, сон, і mania — божевілля, пристрасть, потяг) - група хвороб, що виникають внаслідок систематичного, у наростаючій кількості вживання певних психоактивних речовин (наркотиків).

Проявами наркоманії є психічна і фізична залежність від цих речовин, а також розвиток абстиненції внаслідок припинення їх прийому.

**Найбільш поширені наркоманії:
АЛКОГОЛІЗМ, ТЮТЮНОПАЛІННЯ, ВЖИВАННЯ
МАРІХУАНИ, ОПОЇДІВ, КОКАЇНУ ТА ІН.**

Наркотичні речовини

ПСИХОСТИМУЛЯТОРИ :

- Amphetamine and methamphetamine
- Cocaine
- Caffeine
- Nicotine

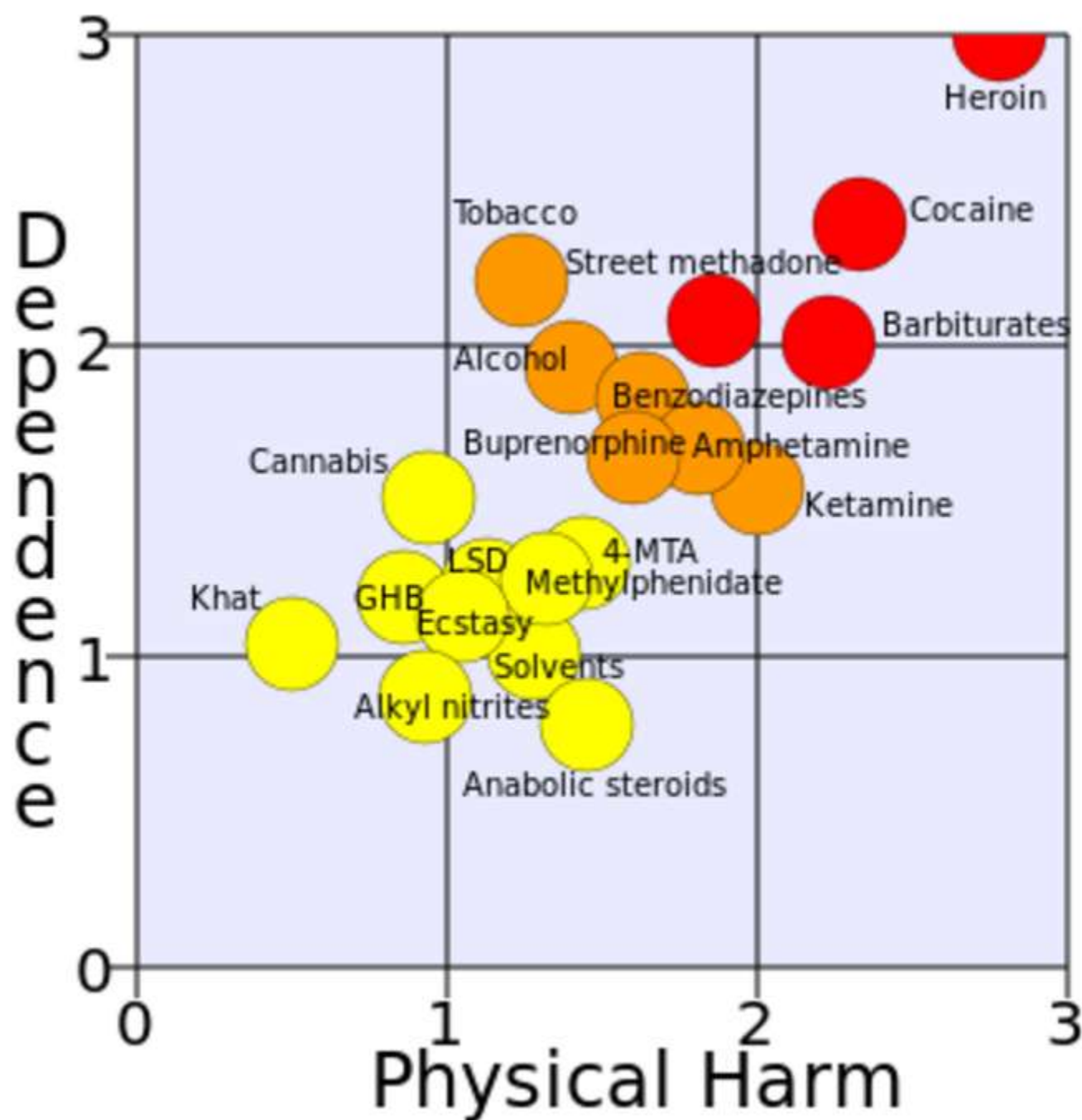
СЕДАТИВНІ ТА СНОДІЙНІ:

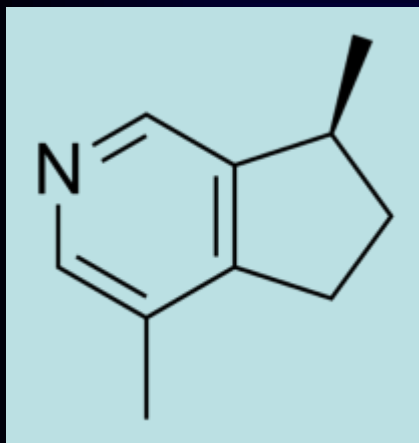
- Alcohol
- Barbiturates
- Benzodiazepines
- Methaqualone

ОПІАТИ ТА ОПІОЇДНІ АНАЛГЕТИКИ:

- Morphine and codeine
- Semi-synthetic opiates, such as heroin (diacetylmorphine; morphine diacetate), oxycodone, buprenorphine, and hydromorphone
- Fully synthetic opioids (fentanyl, meperidine/pethidine, methadone)

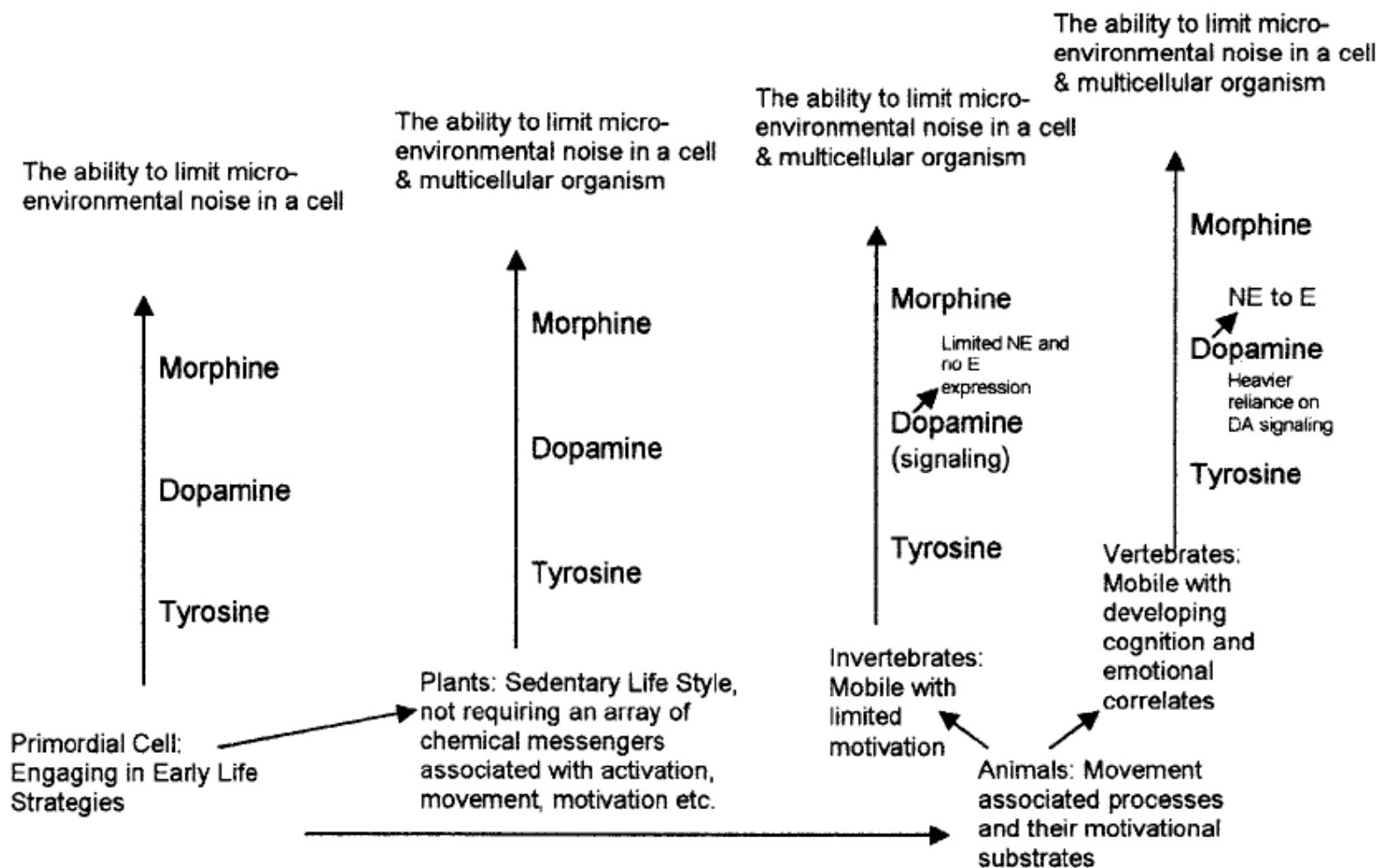
КАНАБІНОЇДИ





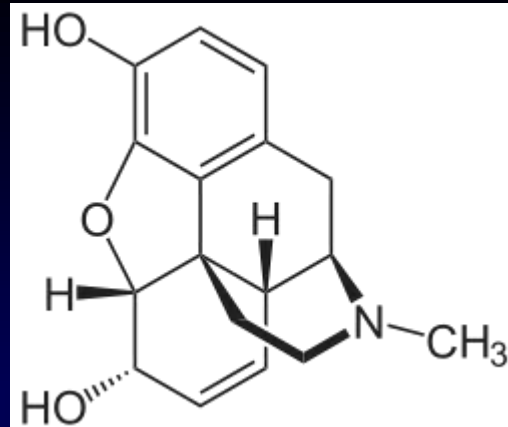
Endogenous morphine synthetic pathway preceded and gave rise to catecholamine synthesis in evolution (Review)

GEORGE B. STEFANO¹ and RICHARD M. KREAM²

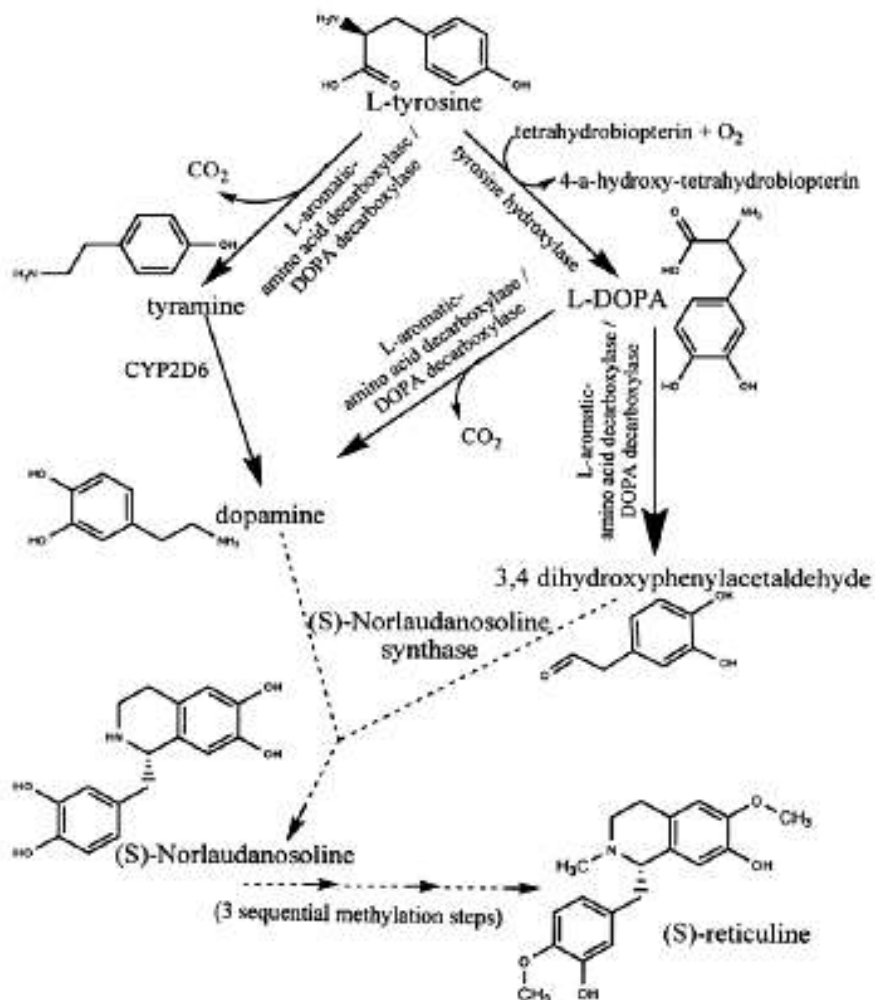


Dopamine, Morphine, and Nitric Oxide: An Evolutionary Signaling Triad

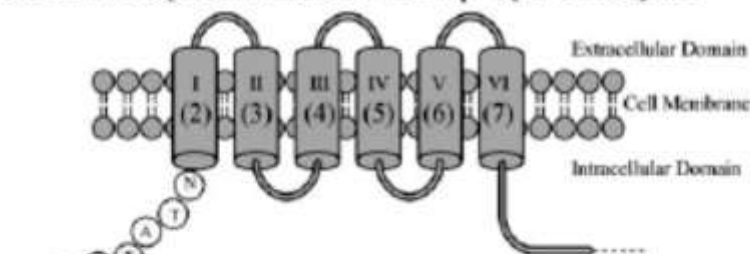
George B. Stefano & Richard M. Kream



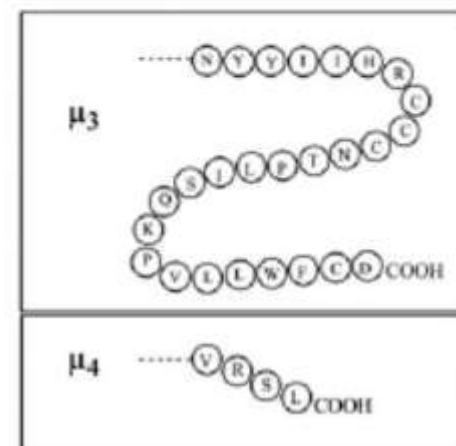
Морфін



Schematic Representation of 6 TMH μ Opiate Receptors



**Морфіновий
рецептор**



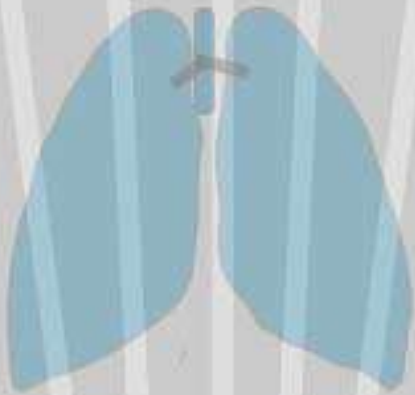
**Усі бажають отримати
задоволення не після стресу,
а замість стресу!**

**Непотрібно експортувати
задоволення, якщо розроблено
ендогенне родовище опіатів,
канабіоїдів, нікотину та інших
корисних речовин**

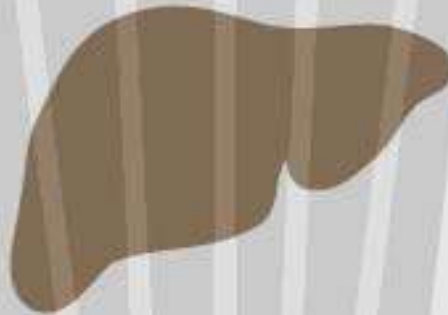
**Не просте завдання знайти
внутрішнє джерело задоволення...**

How to Trash Your Health And Ruin Your Life

Smoking



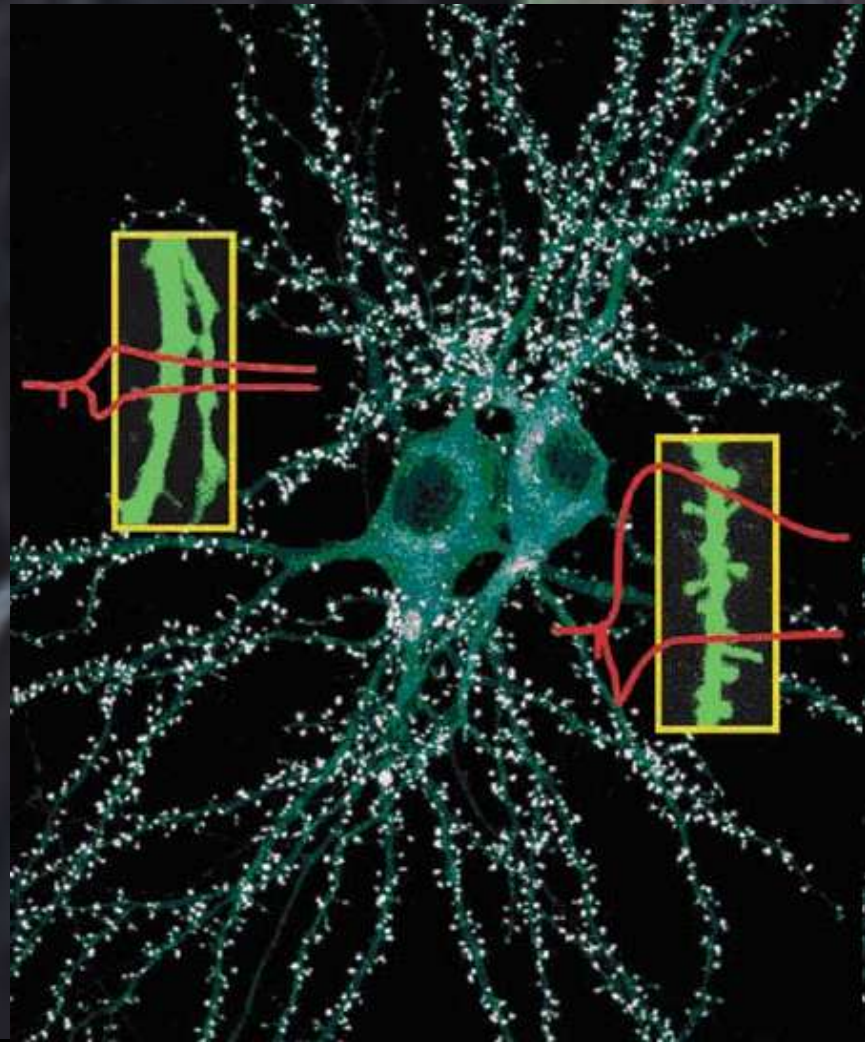
Alcohol

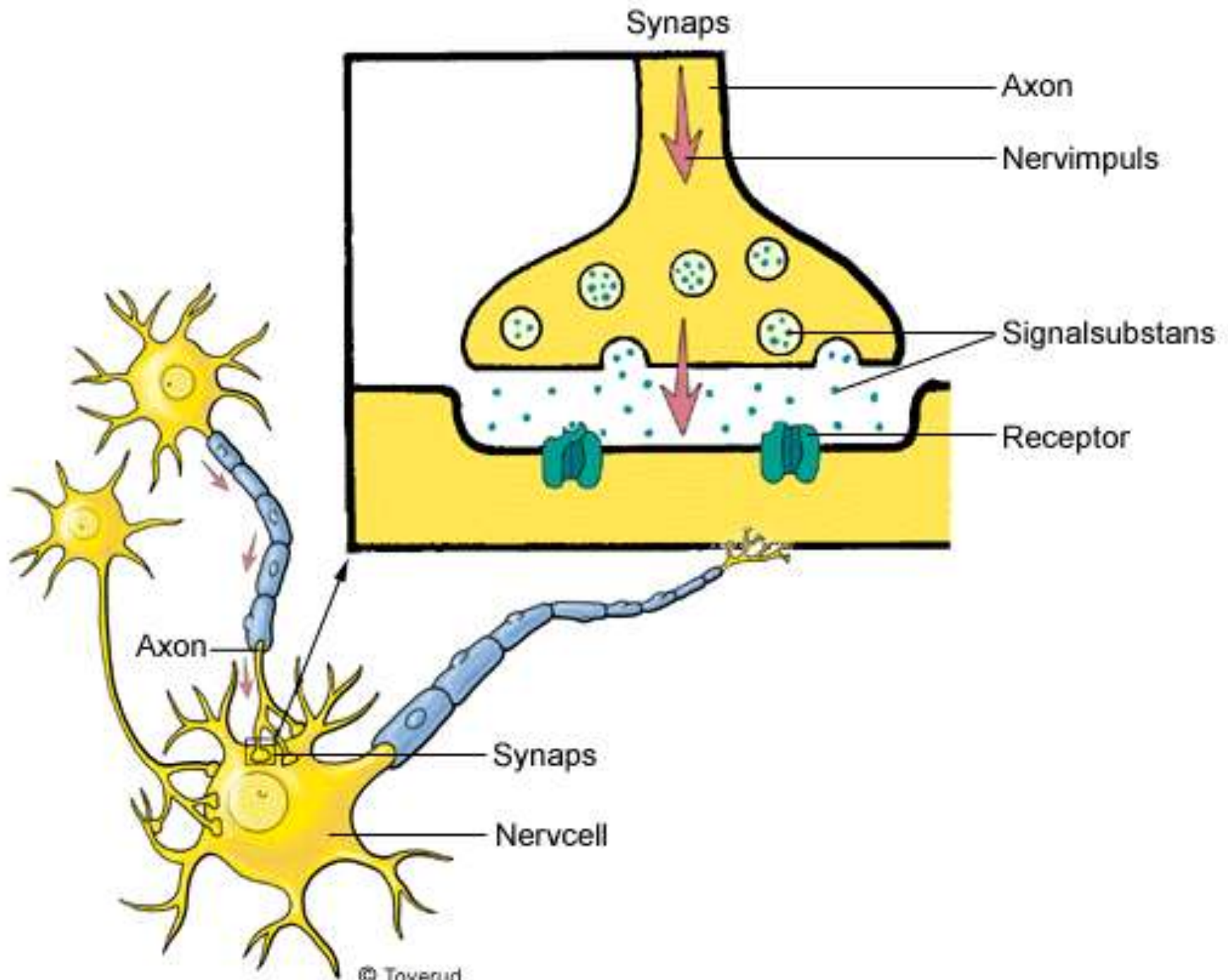


Drugs

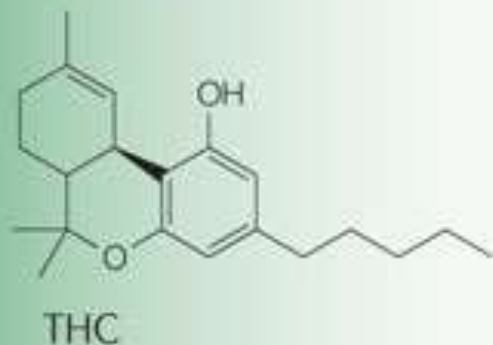


**Синаптеїн (дав-грец. *syn* - разом та
haptein - обхоплюю,
викривлене англ. - *synaps*)**

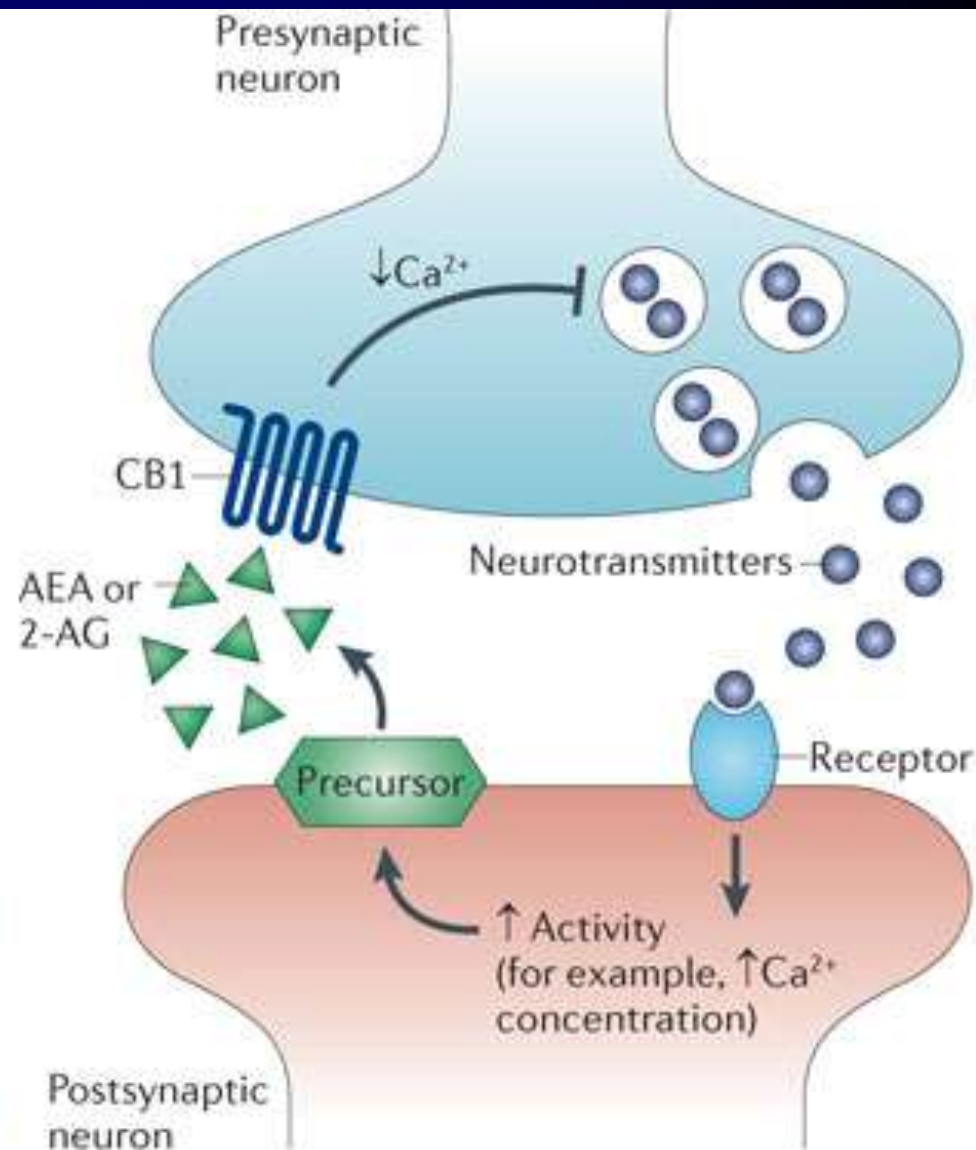
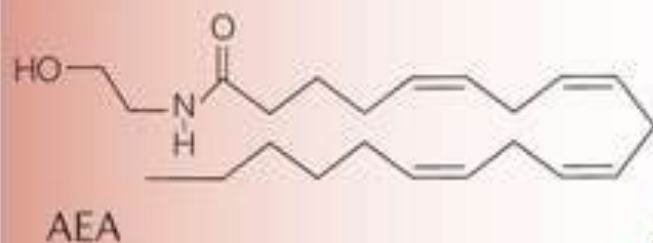




Plant-derived cannabinoid



Endogenous cannabinoids

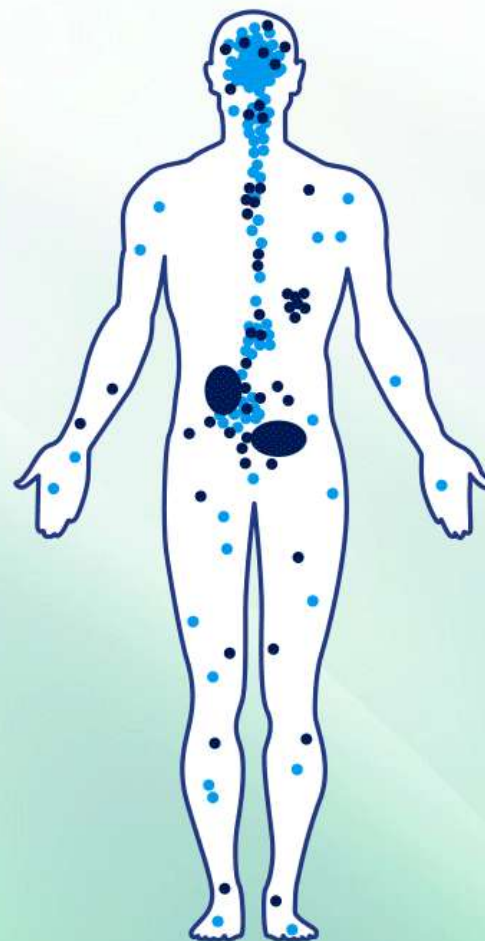


The Human Endocannabinoid System

CBD, CBN and THC fit like a lock and key into existing human receptors. These receptors are part of the endocannabinoid system which impact physiological processes affecting pain modulation, memory, and appetite plus anti-inflammatory effects and other immune system responses. The endocannabinoid system comprises two types of receptors, CB1 and CB2, which serve distinct functions in human health and well-being.

CB1 receptors are primarily found in the brain and central nervous system, and to a lesser extent in other tissues.

Receptors are found on cell surfaces



Tetrahydrocannabinol



Cannabidiol



Cannabinol

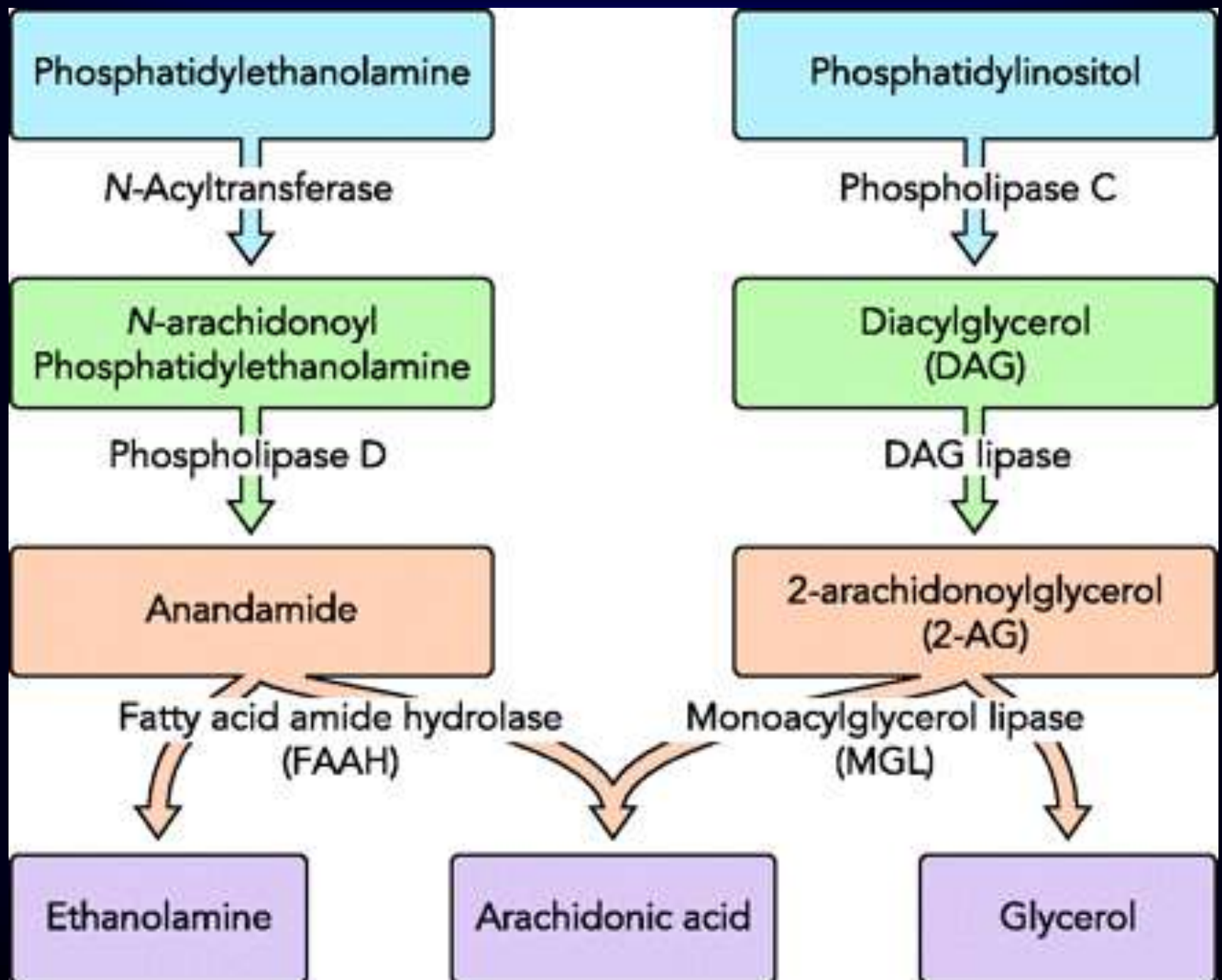
CB1

CBD does not directly "fit" CB1 or CB2 receptors but has powerful indirect effects still being studied.

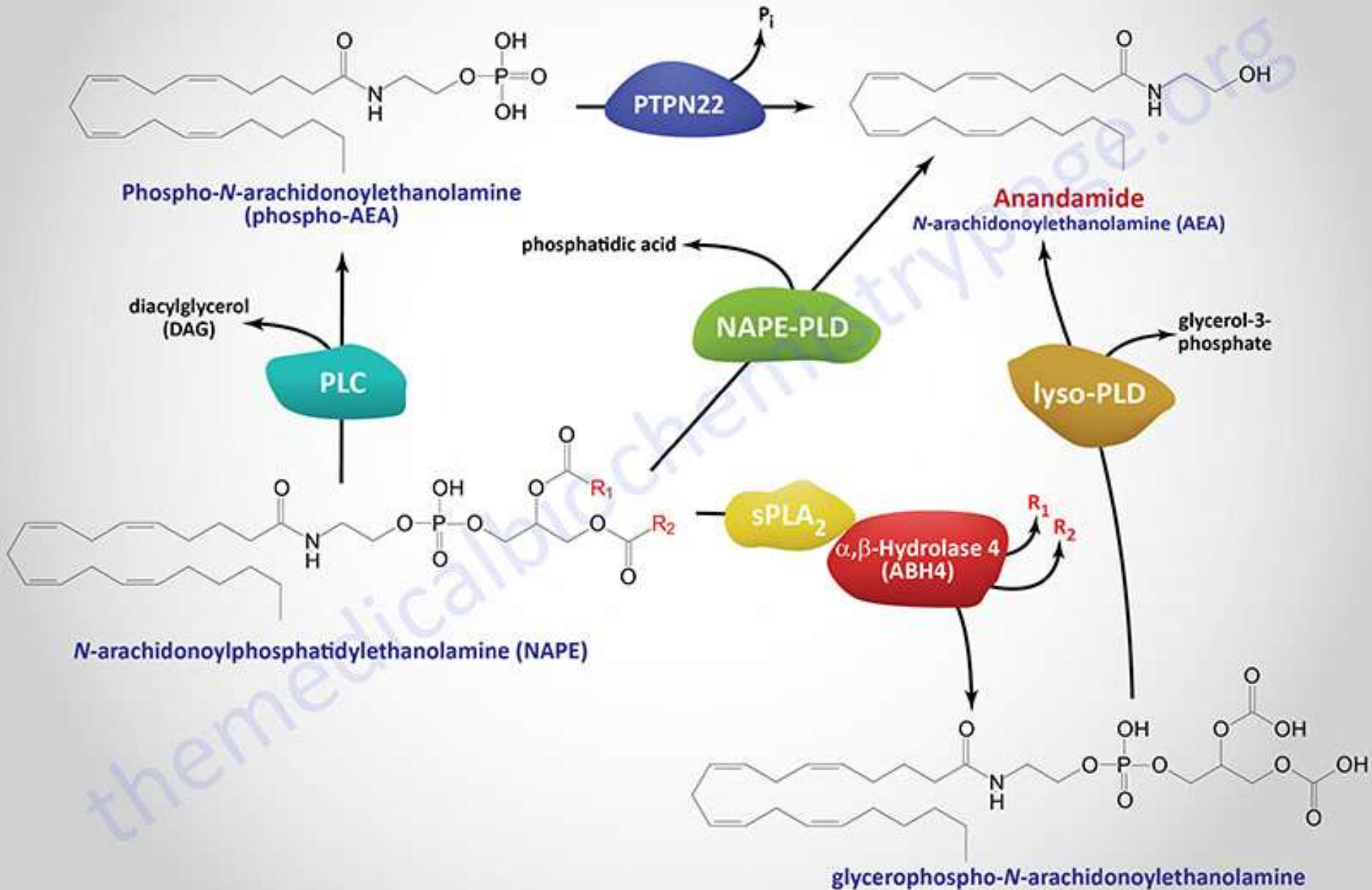
CB2

CB2 receptors are mostly in the peripheral organs especially cells associated with the immune system.

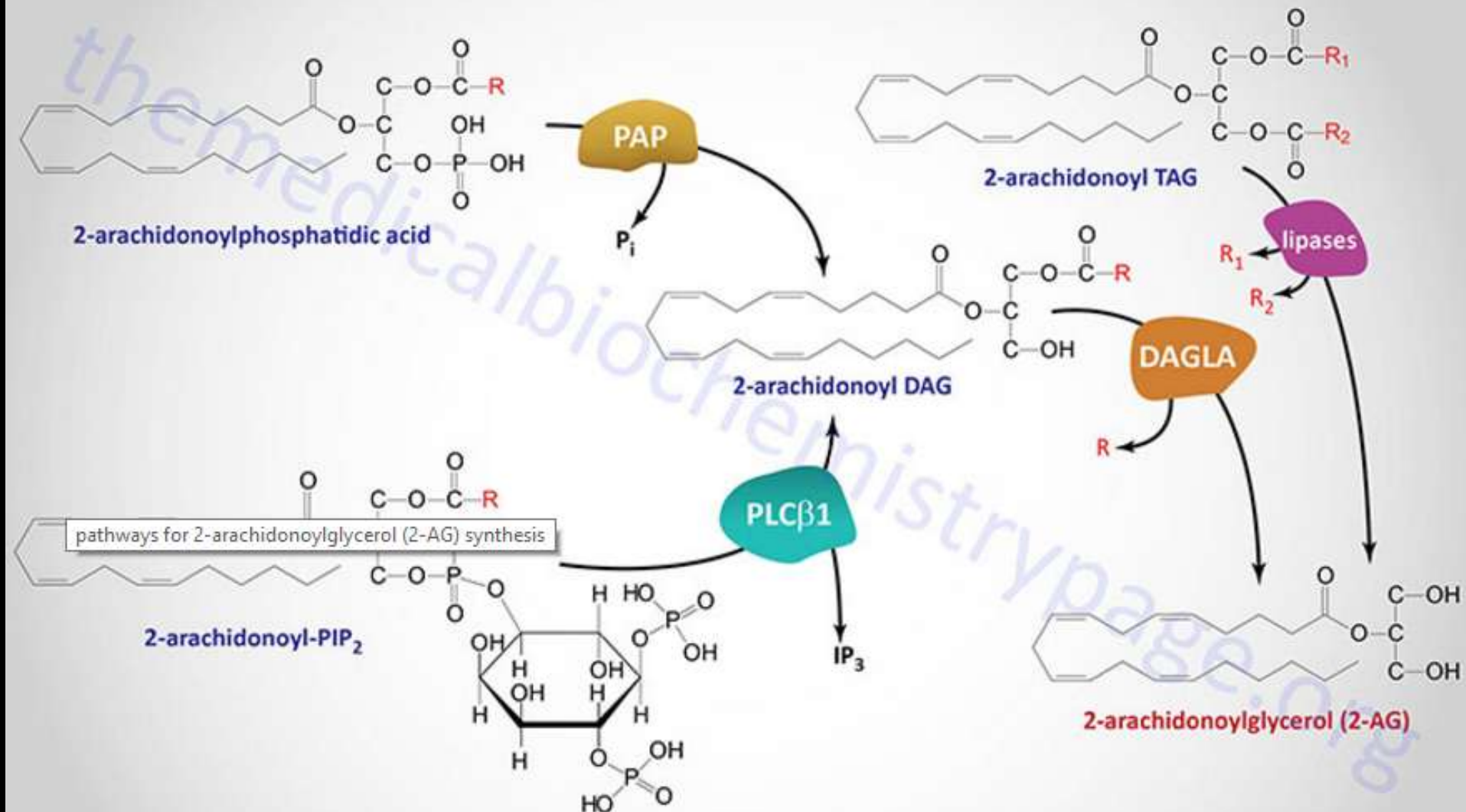


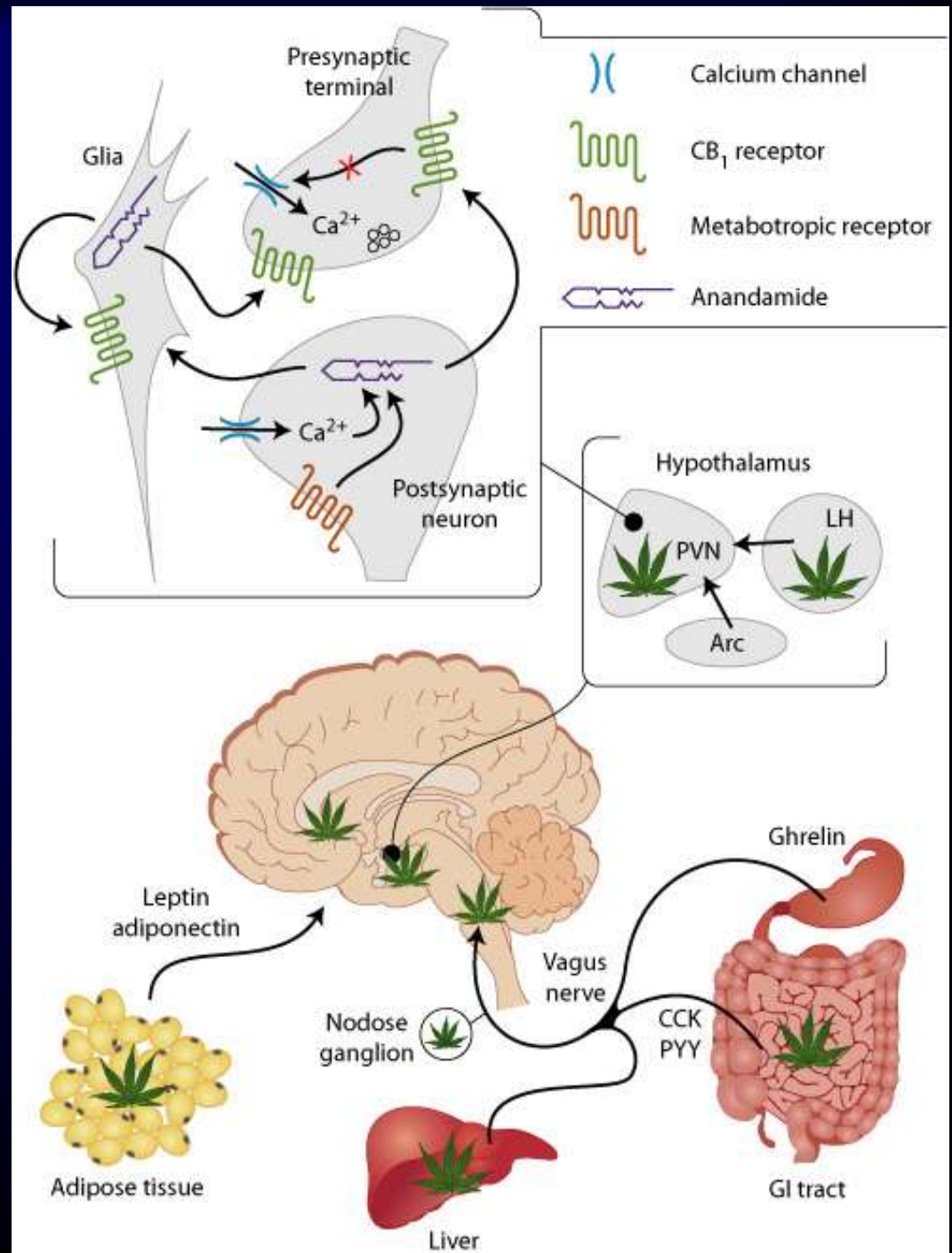


Біосинтез анандаміду



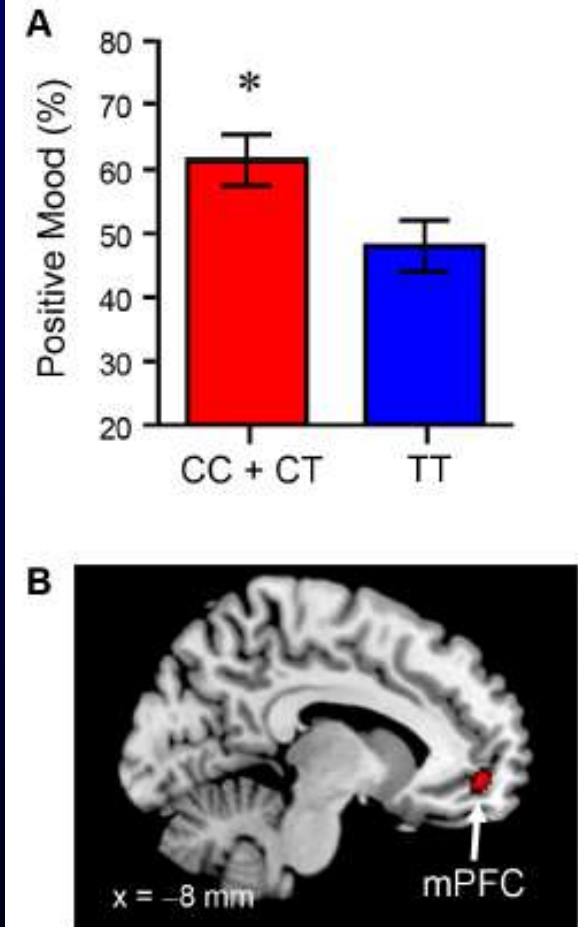
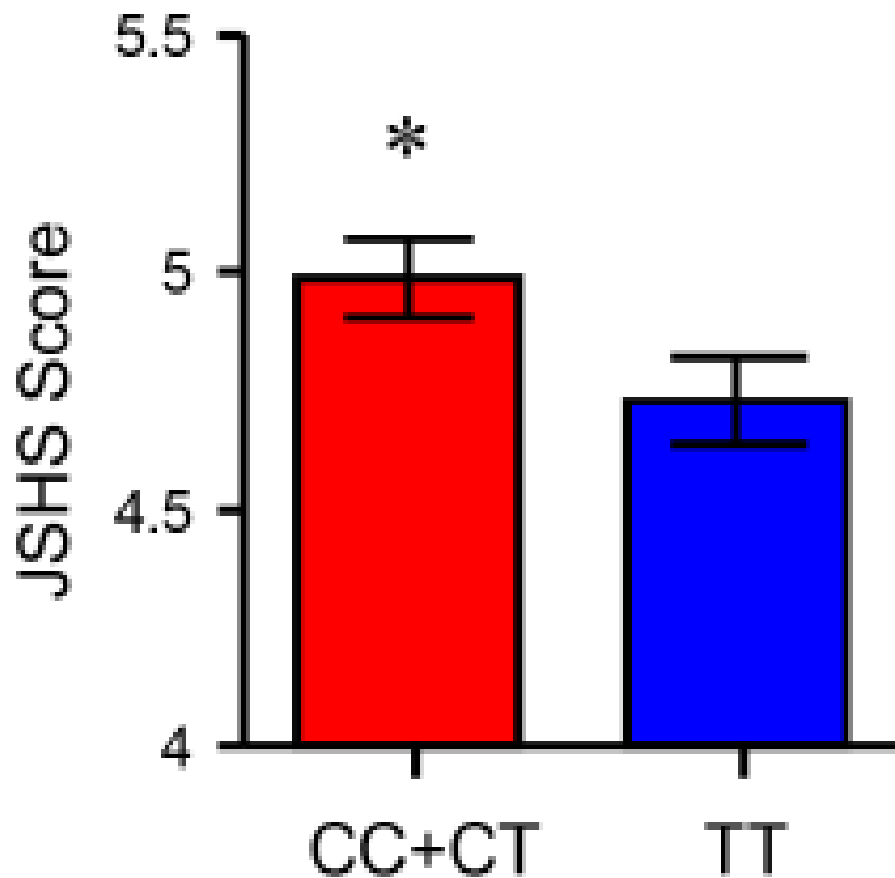
Біосинтез 2-арахідоноїлгліцеролу





Genetic Variations in the Human Cannabinoid Receptor Gene Are Associated with Happiness

Masahiro Matsunaga^{1*}, Tokiko Isowa², Kaori Yamakawa³, Seisuke Fukuyama⁴, Jun Shinoda⁴, Jitsuhiro Yamada⁴, Hideki Ohira³



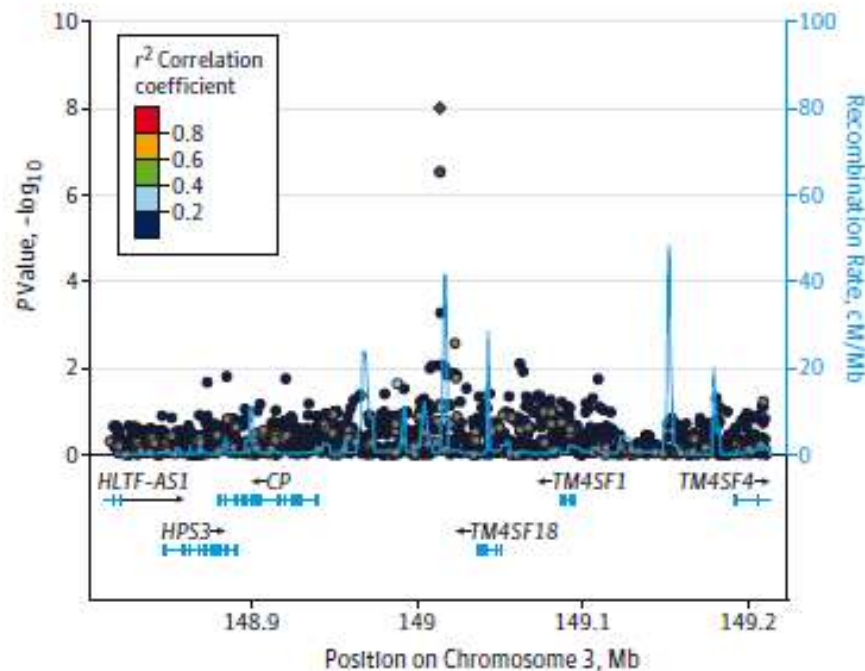
Genome-wide Association Study of Cannabis Dependence Severity, Novel Risk Variants, and Shared Genetic Risks

Richard Sherva, PhD; Qian Wang, MS; Henry Kranzler, MD; Hongyu Zhao, PhD; Ryan Koesterer, MS;

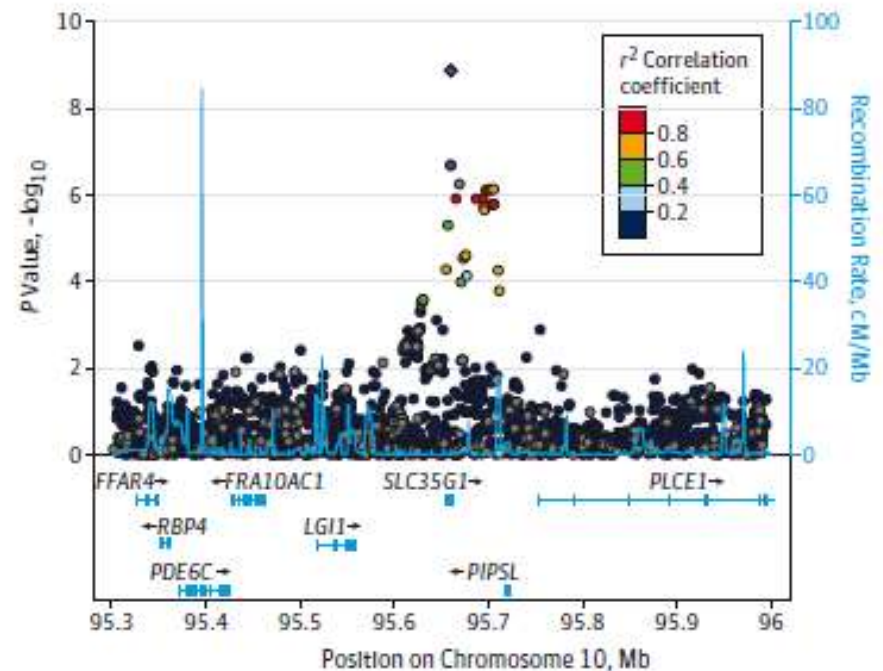
Aryeh Herman, PsyD; Lindsay A. Farrer, PhD; Joel Gelernter, MD

JAMA Psychiatry Published online March 30, 2016

A rs143244591



B rs146091982

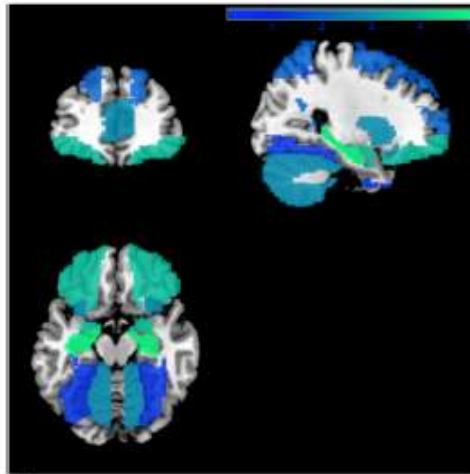


CONCLUSIONS AND RELEVANCE These results are the first, to our knowledge, to identify specific CAD risk alleles and potential genetic factors contributing to the comorbidity of CAD with major depression and schizophrenia.

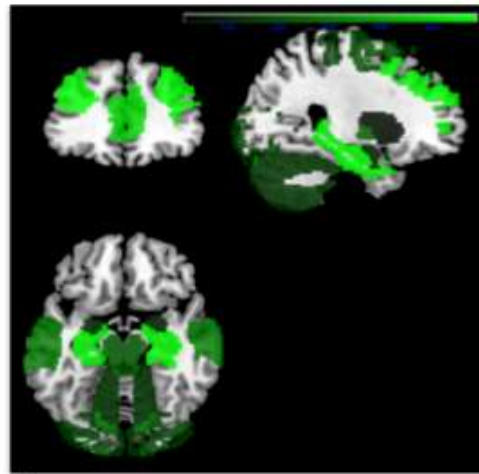
The Role of Cannabinoids in Neuroanatomic Alterations in Cannabis Users

Biological Psychiatry April 1, 2016; 79:e17–e31

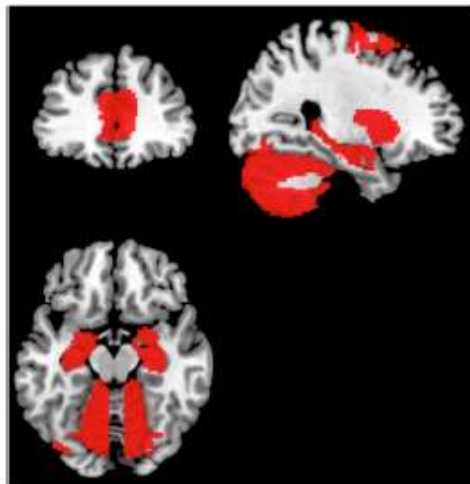
Valentina Lorenzetti, Nadia Solowij, and Murat Yücel



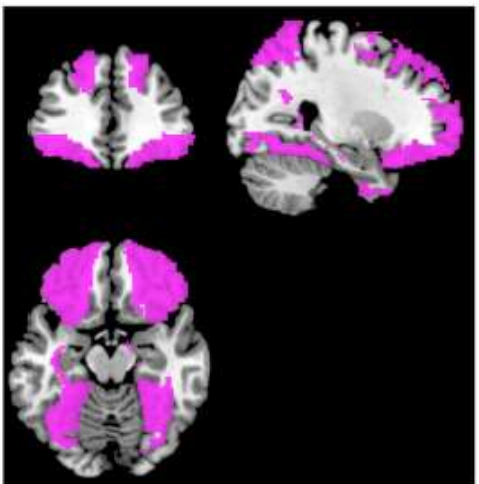
(A)



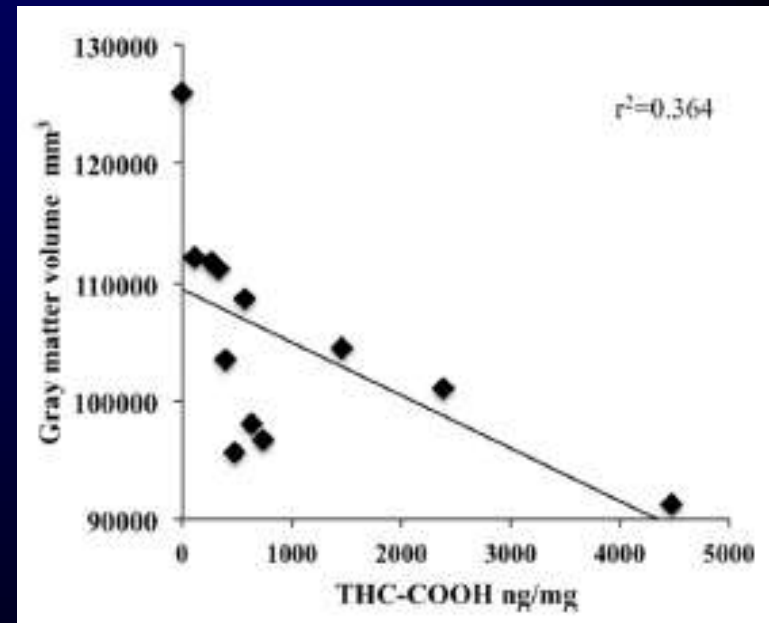
(B)



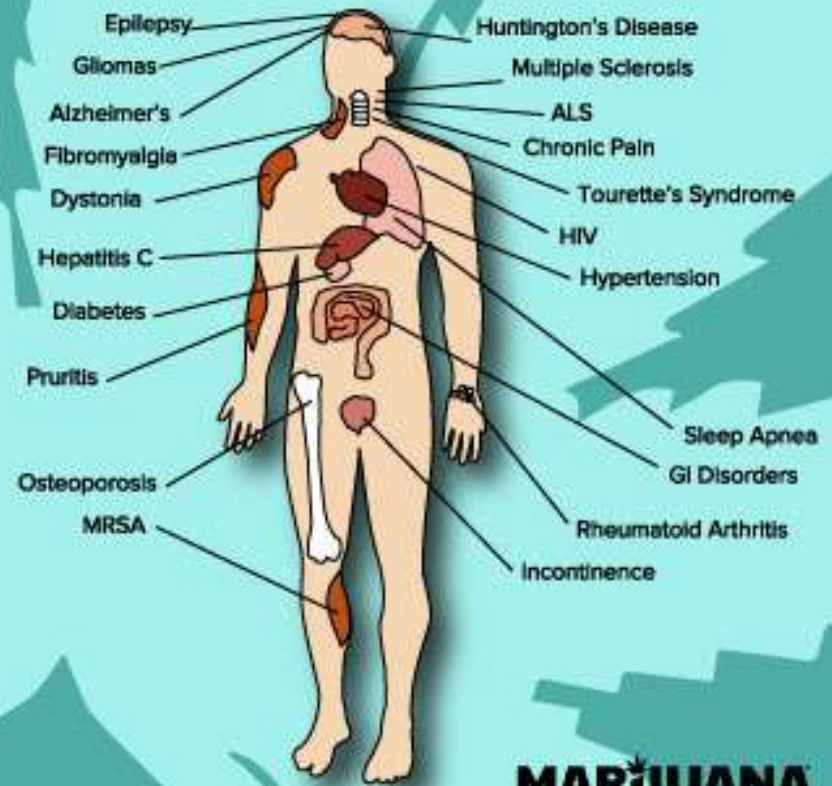
(C)



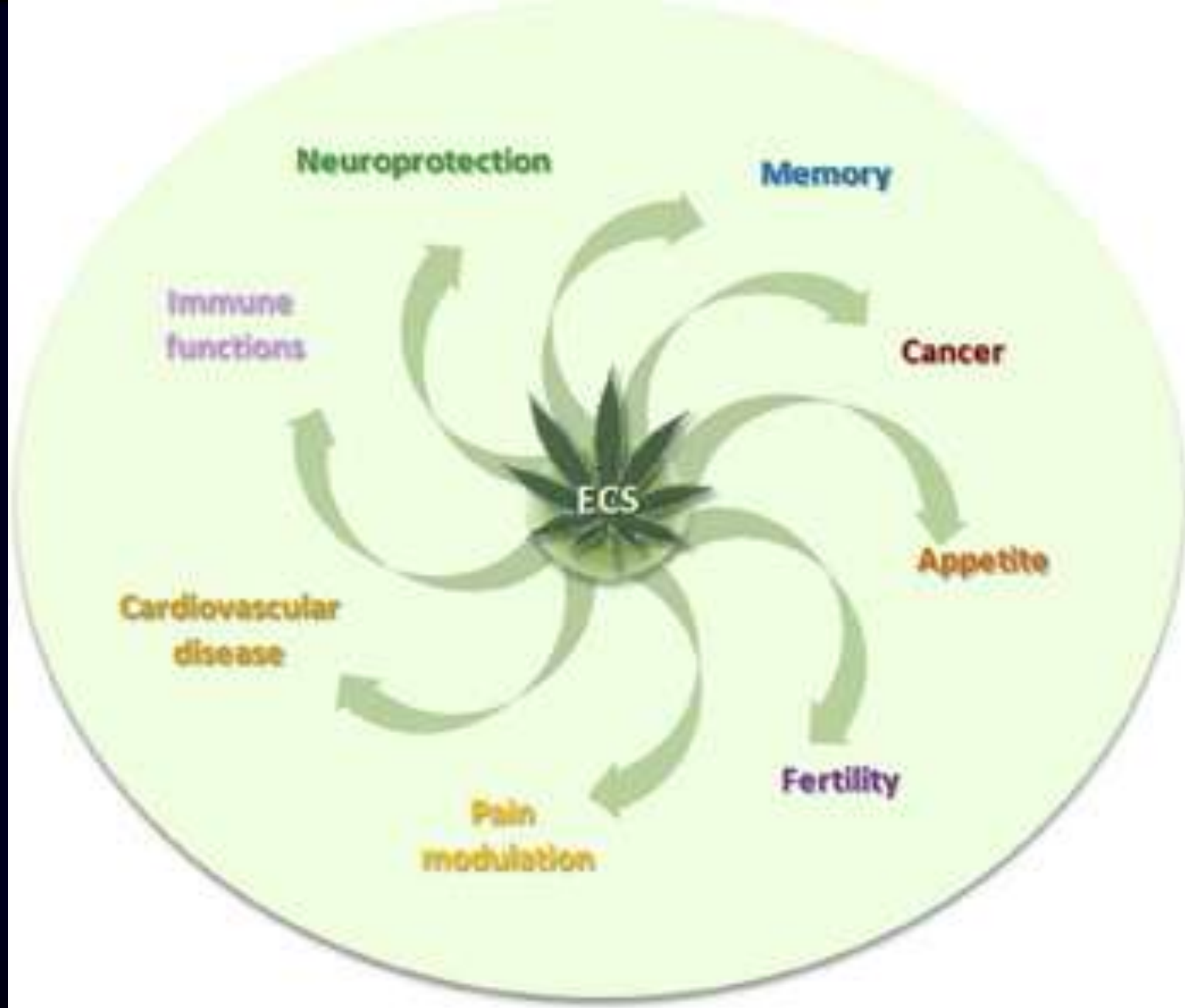
(D)



THERAPEUTIC USES OF MARIJUANA

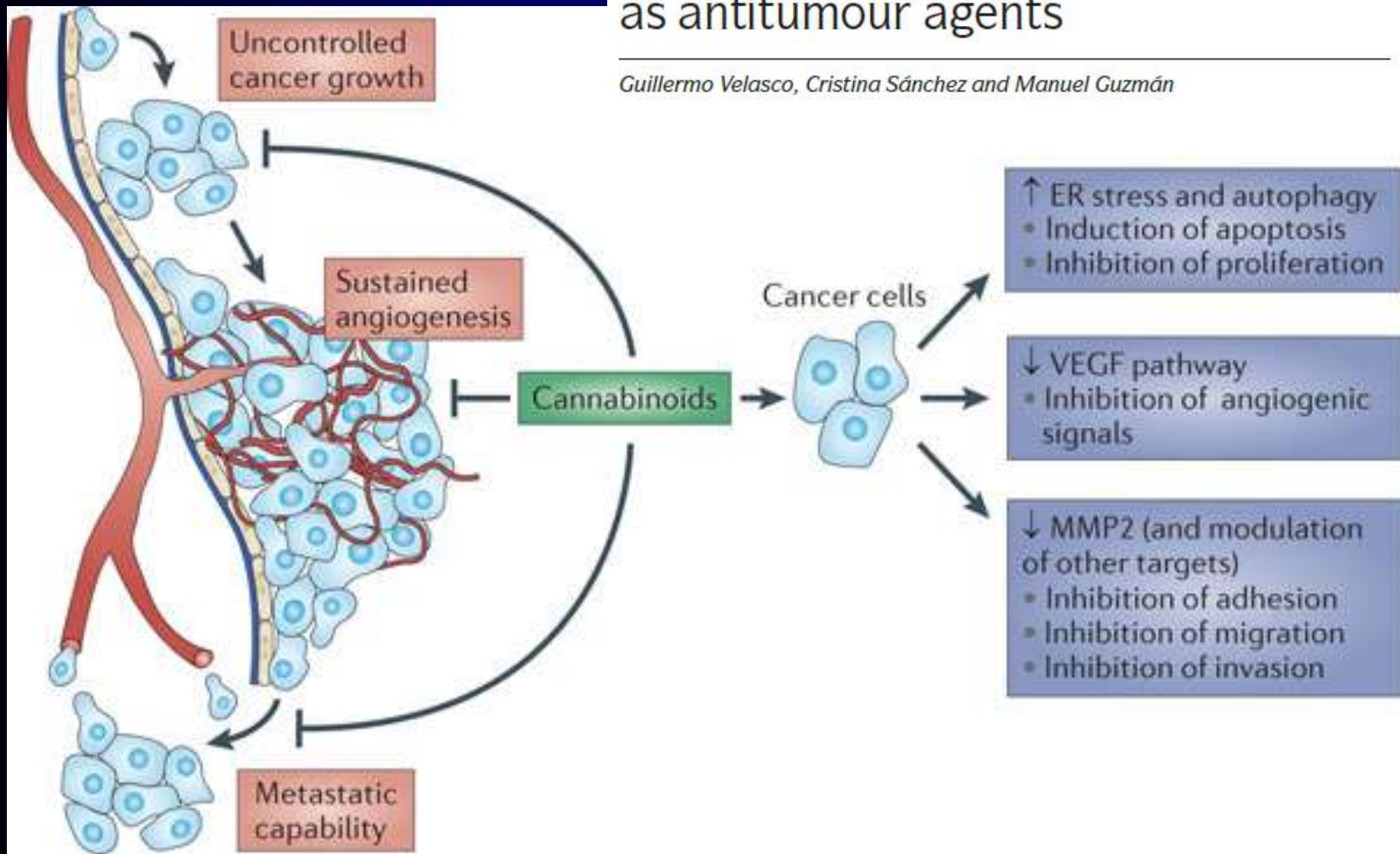


MARIJUANA



Towards the use of cannabinoids as antitumour agents

Guillermo Velasco, Cristina Sánchez and Manuel Guzmán



Nature Reviews | Cancer



CANNABIS VS CANCER

Table 1 | Cannabinoids activate a similar pro-apoptotic mechanism in different types of cancer cells*

Cancer cell	CB receptor involved	Ceramide synthesis	ER stress	p8-TRIB3 induction	AKT inhibition	Autophagy	Apoptosis	Refs
Glioma	CB1 and CB2	✓	✓	✓	✓	✓	✓	39
Pancreatic cancer	CB2	✓	✓	✓	✓	✓	✓	39,41
Hepatocellular carcinoma	CB2	✓	✓	✓	✓	✓	✓	40
Breast cancer	CB2	ND	ND	✓	✓	✓ (UO) [‡]	✓	94
Rhabdomyosarcoma	CB1	ND	✓	✓	✓	ND	✓	95
Mantle cell lymphoma	CB1 and CB2	✓	✓	ND	ND	✓ (WIN 55,212-2) [§]	✓ (WIN 55,212-2) [§]	96
Leukaemia	CB2	✓	ND	ND	✓	ND	✓	86,97,98
Prostate cancer	CB2	✓	ND	ND	✓	ND	✓	99,100
Melanoma	CB2	ND	ND	✓	✓	✓ (UO) [‡]	✓	42
Lung carcinoma	ND	ND	ND	ND	✓	ND	✓	56

CB, cannabinoid; ER, endoplasmic reticulum; ND, not determined; TRIB3, tribbles-homologue 3; UO, unpublished observations. *The existence of experimental evidence for the participation of CB receptors, *de novo*-synthesized ceramide, ER stress induction, upregulation of p8 and/or of TRIB3, autophagy induction or apoptosis in cannabinoid-induced death for each type of cancer cell is indicated by a tick. [‡]G.V., C.S. and M.G., unpublished observations. [§]WIN 55,212-2 produces a cytoplasmic vacuolization (autophagic-like) phenotype in mantle cell lymphoma, an effect that seems to be CB receptor-independent.

Endocannabinoids and the Cardiovascular System in Health and Disease

Saoirse Elizabeth O'Sullivan

Endocannabinoids and Hypertension

Endocannabinoids and Atherosclerosis

Endocannabinoids in Shock

Endocannabinoids and the Vasculature

Endocannabinoids and Arrhythmias

Cardioprotective Effects of Endocannabinoids

Endocannabinoids and Cardiac Function

Endocannabinoids and Cerebral Ischaemia/Stroke



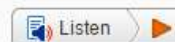


The Hon Sussan Ley MP

Minister for Health and Aged Care
Minister for Sport

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Medicinal cannabis scheme licence applications open

Businesses can now apply for a licence to cultivate cannabis for medicinal purposes, to manufacture medicinal cannabis products or to conduct medicinal cannabis related research under the Medicinal Cannabis Scheme.

Page last updated: 31 October 2016

[PDF printable version of Medicinal cannabis scheme licence applications open](#) - PDF 237 KB

30 October 2016

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МОЯ НАУКА ЗА ЧЕСНІ ЗАДОВОЛЕННЯ!

