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1º Curso de Actualización en EPILEPSIAS GENÉTICAS y MEDICINA de PRECISIÓN *en español*

LA IMPORTANCIA DEL MOVIMIENTO ASOCIATIVO

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Loulou Foundation, UK
Dracaena Consulting, Madrid

FUNDACIÓN INCE

Ruber

HOSPITAL RUBER INTERNACIONAL

Foco en:

Organizaciones de pacientes
de síndromes genéticos con epilepsia
(experiencia propia)





Síndromes genéticos con epilepsia



El gran reto de las enfermedades raras

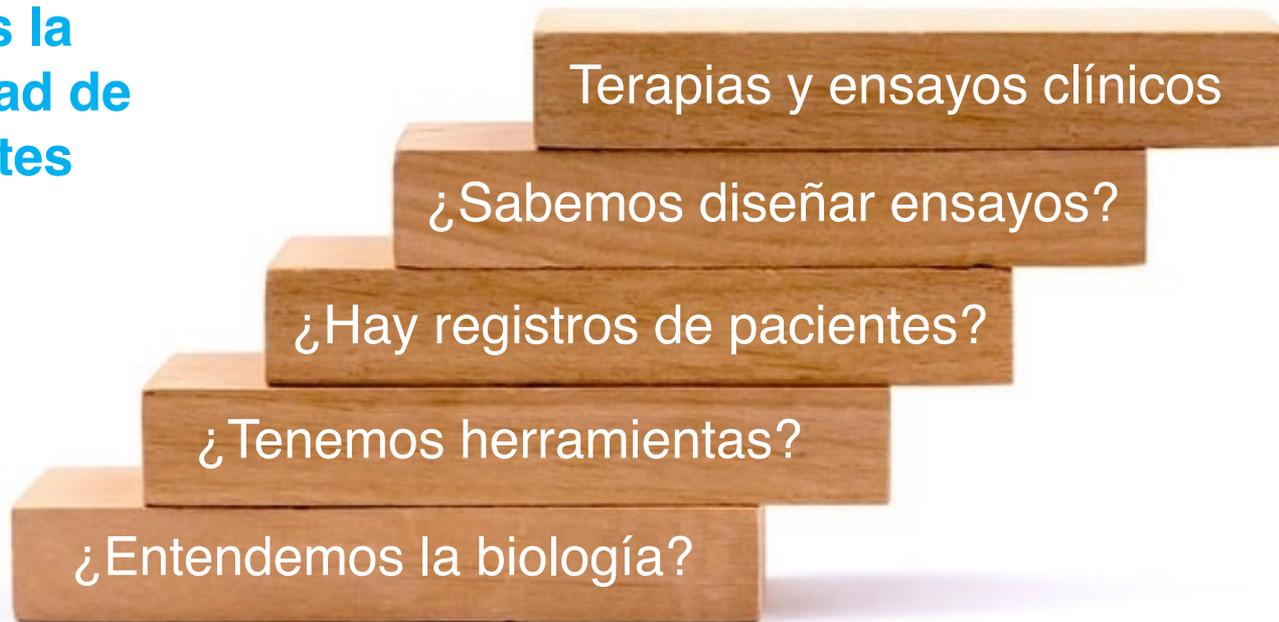


- Hay pocos pacientes
- Las empresas no conocen la enfermedad
- Faltan modelos animales y herramientas preclínicas
- Faltan objetivos (endpoints) y escalas clínicas
- Para la mayoría no existen terapias aprobadas
-

La necesidad de construir bloques



**Esta es la
comunidad de
pacientes**





7.000

enfermedades raras



El papel de los grupos de pacientes



- Visión global: el mapa
- Construir bloques
- Eliminar barreras: científicas, clínicas, conocimiento
- Conectar: redes, industria



1) **Ejemplos:** papel de grupos de pacientes (con los que he trabajado) en avanzar desarrollo de tratamientos para su enfermedad

2) **Propuestas:** para que esté al alcance de más grupos de pacientes



Financiación

Colaboración

Conexión



The ODC, in partnership with the Loulou Foundation, is pleased to announce the **2021 CDKL5 Program of Excellence Pilot Grant Program**, offering a one-year grant of **\$150,000**. This funding opportunity is open to the international community! [Apply today!](#)



Photo on freepress



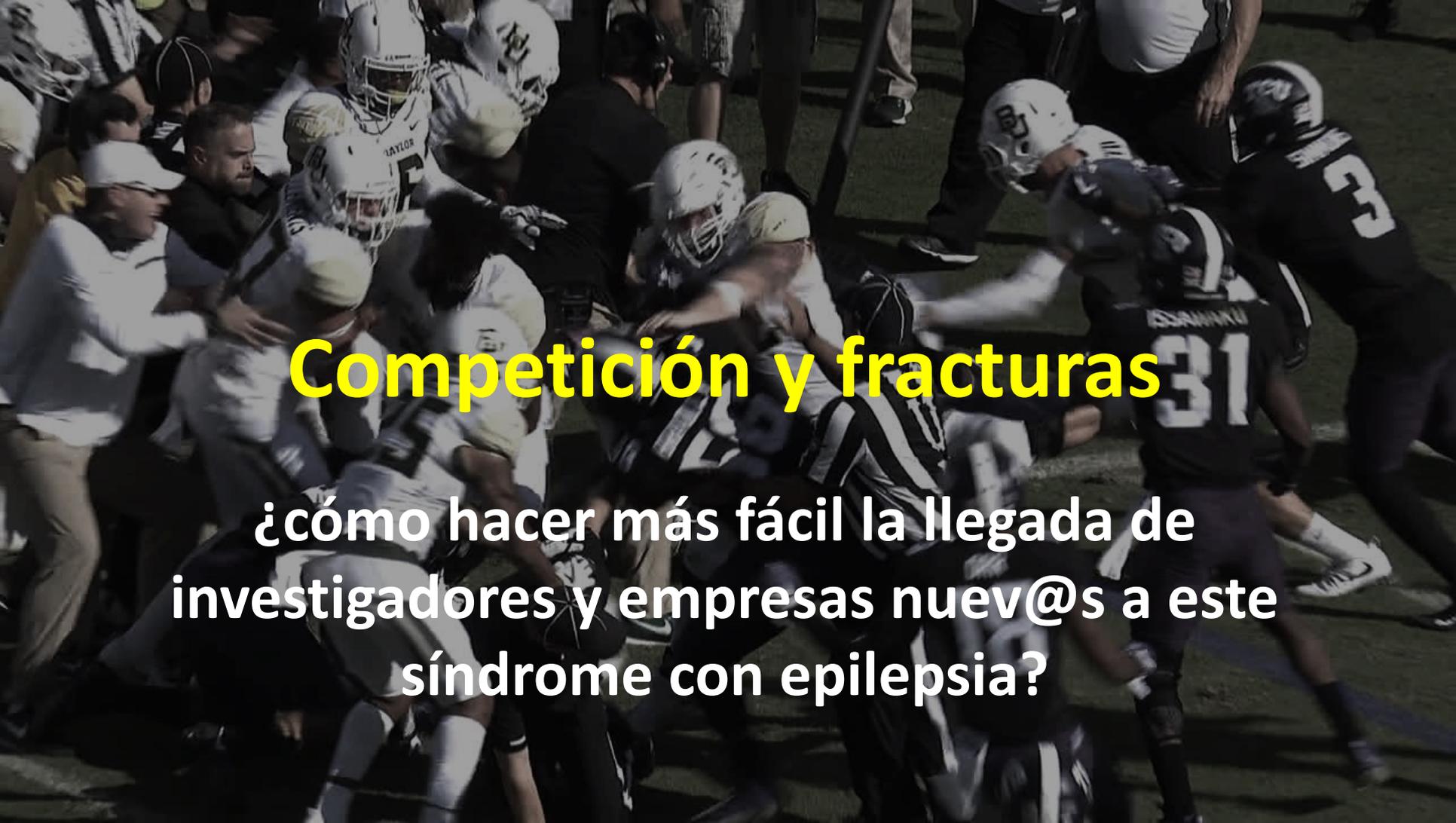
RNA therapy

Búsqueda de tratamientos para el síndrome por deficiencia de CDKL5



A new research which has just been funded by the Italian charity Gruppo Famiglie Dravet Onlus, supported by five other European associations dedicated to Dravet Syndrome: Associação Síndrome de Dravet Portugal, Dravet-Syndrom e.V Germany, Dravet Syndrome Sweden Association, Stichting Dravetsyndroom Netherlands/Flanders, Swiss Dravet Syndrome Association, coordinated by the Dravet Syndrome European Federation (DSEF).





Competición y fracturas

¿cómo hacer más fácil la llegada de investigadores y empresas nuev@s a este síndrome con epilepsia?

CDKL5: iPSCs sin fronteras



Generar y caracterizar
iPSCs de pacientes

Disponibles en repositorio
internacional

Papel importante en
terapias génicas

Stem Cell Research 33 (2013) 142275

Contents lists available at ScienceDirect

Stem Cell Research

ELSEVIER

Journal homepage: www.elsevier.com/locate/scr

Lab Resource: Multiple Cell Lines

Generation and characterization of human induced pluripotent stem cells (iPSCs) from three male and three female patients with CDKL5 Deficiency Disorder (CDD)

Pin-Fang Chen^{a,1}, Teresa Chen^{a,2}, Taylor E. Forman^a, Amanda C. Swanson^a, Benjamin O'Kelly^a, Sean A. Dwyer^a, Elizabeth D. Buttermore^a, Robin Kleiman^{a,3}, Sheridan JS Carrington^{a,4}, Daniel J. Lavery^a, Lindsay C. Swanson^a, Heather E. Olson^a, Mustafa Sahin^{a,5}

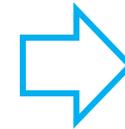
- Multiples pacientes
- Controles isogénicos



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OR00010	DEVELOPMENTAL AND EPILEPTIC ENC...	Yes	IPSC
OR00008	DEVELOPMENTAL AND EPILEPTIC ENC...	Yes	IPSC
OR00006	DEVELOPMENTAL AND EPILEPTIC ENC...	Yes	IPSC
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OR00002	DEVELOPMENTAL AND EPILEPTIC ENC...	Yes	IPSC



ultragenyx

Síndrome de Dravet: ratones sin fronteras



Modelo genético en repositorio internacional

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Novel open-access mouse model of Dravet Syndrome

One of the objectives of the Dravet Syndrome European Federation is to make it easier for researchers to understand Dravet Syndrome and to look for better treatments and a cure.

B6(Cg)-Scn1a^{tm1.1Dsf/J}

Stock No: 026133 | Common Name: floxed stop Scn1a*A1783V



Papel Importante en terapias génicas

Encoded THERAPEUTICS



cima

CENTRO DE INVESTIGACIÓN MÉDICA APLICADA UNIVERSIDAD DE NAVARRA

Adoptado por el NIH como servicio

FULL-LENGTH ORIGINAL RESEARCH Epilepsia

Development of an antiseizure drug screening platform for Dravet syndrome at the NINDS contract site for the Epilepsy Therapy Screening Program

Chelsea D. Pernici^{1,2} | Jeffrey A. Mensah² | E. Jill Dahle^{1,2} | Kristina J. Johnson¹ | Laura Handy¹ | Lauren Buxton^{1,2} | Misty D. Smith^{1,2} | Peter J. West^{1,2} | Cameron S. Metcalf^{1,2} | Karen S. Wilcox^{1,2}

These conditional *Scn1a*-A1783V mice express the Dravet Syndrome/SMEI-associated mutation A1783V in the presence of Cre recombinase, and exhibit Dravet-like phenotypes including spontaneous seizures.



Agencias regulatoras

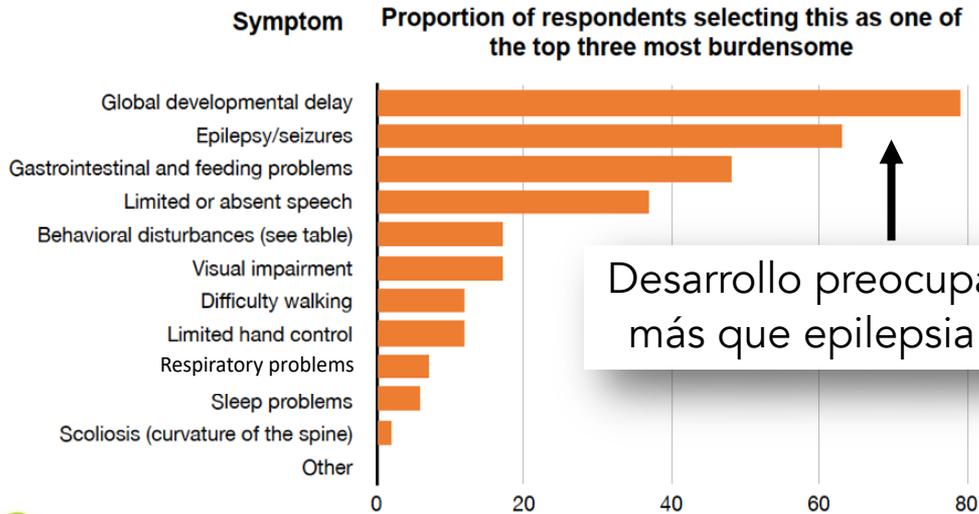
¿Cómo ayudarles a
entender qué habría que
medir en ensayos y cómo
interpretarlo?



Documentar lo que importa a los pacientes



CDKL5: Patient-Focused Drug Development meeting con la agencia americana del medicamento (FDA)



Desarrollo preocupa
más que epilepsia



“Beneficio clínico” desde la voz del paciente



La EMA necesitaba más datos de fenfluramina en adultos: capturar la voz de los pacientes

Patient perspective on the significant benefit of fenfluramine for the treatment of Dravet syndrome

A project of the Dravet Syndrome European Federation

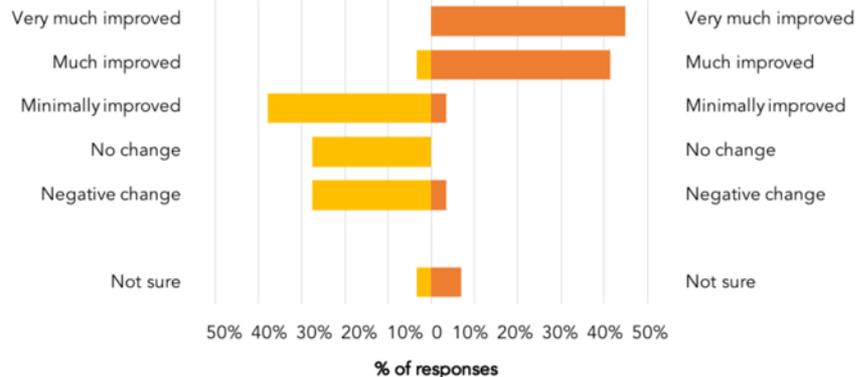
Age group analysis.

Age break-down of the results from a survey to caregivers of patients with Dravet syndrome about their experience with fenfluramine:

- 88 patients with Dravet syndrome ages 1 to 17
- 29 adult patients with Dravet syndrome ages 18 to 40

Patients 18 and older
(n=29, ages 18-40)

All previous treatments Fenfluramine



draveteurope

Dravet Syndrome European Federation



Saber qué medir vs saber cómo medirlo

La importancia de la Historia Natural para el diseño de ensayos clínicos

Crterios de inclusi3n realistas

Un trabajo pionero

Epilepsy & Behavior 44 (2015) 104–109

Contents lists available at ScienceDirect

Epilepsy & Behavior

journal homepage: www.elsevier.com/locate/yebeh

ELSEVIER



The European patient with Dravet syndrome: Results from a parent-reported survey on antiepileptic drug use in the European population with Dravet syndrome

Luis Miguel Aras, Juli3n Isla, Ana Mingorance-Le Meur*

Dravet Syndrome Foundation, Spain, Madrid, Spain

2015

Datos de casi 300 familias
4 crisis al mes: la mitad
51% toma estiripentol

2.434

ZX008 (Fenfluramine HCl Oral Solution) in Dravet Syndrome: Results of a Phase 3, Randomized, Double-Blind, Placebo-Controlled Trial

INTRODUCTION: Fenfluramine HCl oral solution (ZX008) is a novel antiepileptic drug (AED) for the treatment of Dravet syndrome (DS). This study was designed to evaluate the efficacy and safety of ZX008 in DS patients.

RESULTS: The study included 100 patients. The primary endpoint was the percentage of patients achieving a seizure-free period of at least 6 months. The results showed that ZX008 was significantly more effective than placebo in achieving seizure freedom.

CONCLUSIONS: ZX008 is a promising treatment for DS patients, showing superior efficacy and safety compared to placebo.

REFERENCES

1. Aras LM, et al. *Epilepsy Behav.* 2015;44:104-9.
2. Schoonjans A-S, et al. *Ther Adv Neurol Disord.* 2015;8:328-38.
3. Ceulemans B, et al. *Epilepsia.* 2012;53:1131-9.
4. Ceulemans B, et al. *Epilepsia.* 2016;57:e129-34.
5. Schoonjans A-S, et al. *Eur J Neurol.* 2017;24:309-14.
6. Zoghbi WA, et al. *J Am Soc Echocardiogr.* 2017;30:303-71.

Presented at the 71st Annual Meeting of the American Epilepsy Society, December 1-5, 2017, Washington, DC

EPNS 2019

13th European Paediatric Neurology Society (EPNS) Congress

The European patient with Dravet syndrome: Results from a parent-reported survey on antiepileptic drug use in the European population with Dravet syndrome

Epilepsy & Behavior 44 (2015) 104–109

Mutated SCN1A

- Is 4-8 years old
- Has less than 1% year-month
- Takes 3 or more AEDs
- Has several co-morbidities
- Probably FN/CSE/CTP
- Abnormal socialization
- Motor impairment
- Deep seizures

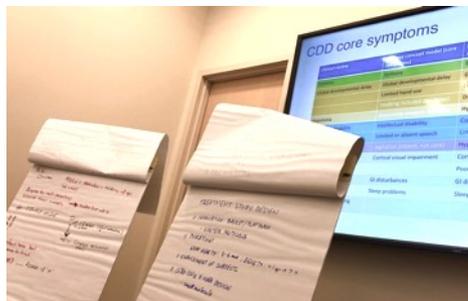
www.epns2019.org

Qué medir en ensayos clínicos con terapias génicas

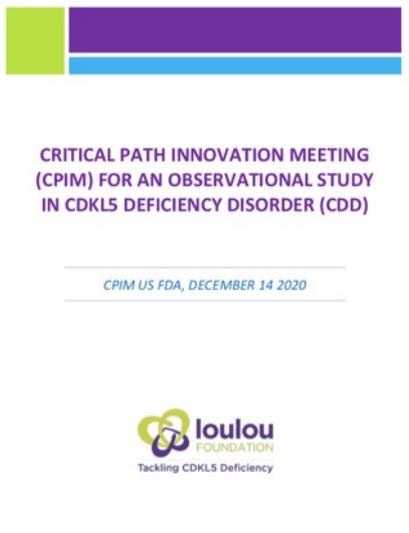


Consenso de
outcome measures
con expertos

Revisión estudio
observational por la
FDA



- Empresas
- Médicos
- Especialistas
- Pacientes



CANDID
study

Todas las empresas
trabajando juntas
para validar escalas

CANDID study: un estudio clínico sin precedentes



E L A A J B I O



ZOGENIX



100 pacientes

3 años

Escalas validadas

Informar diseño de ensayos

Minimizar grupo placebo

Redefinir la línea de qué es pre-competitivo

Resumen: importancia movimiento asociativo



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Novel open-access mouse model of Dravet Syndrome



...the Dravet Syndrome
...to make it easier for
...and Dravet Syndrome
...patients and a cure.
...the right protocols
...in the Scn1a gene.

Preparar la comunidad

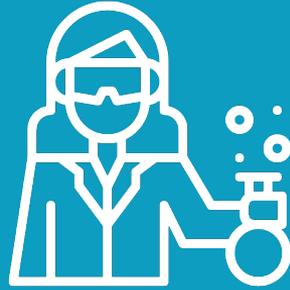
Historia Natural / endpoints

Educar reguladores / aclarar

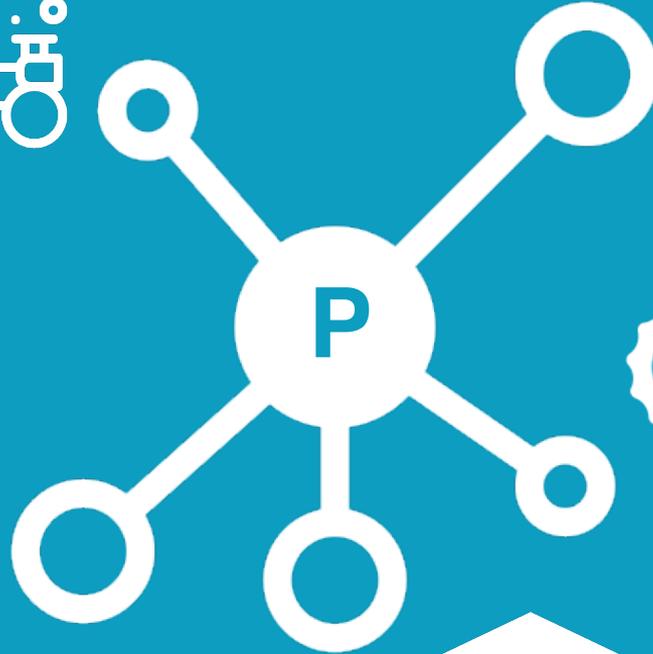
Quitar barreras y organizar

Atraer investigadores

No es fácil



**No al alcance
de todos**



**Implica a
muchos otros**



Propuesta:



**MOVIMIENTO
ASOCIATIVO
PROFESIONALIZADO**



**EMPUJAR LA LÍNEA
DE LO QUE ES
PRE-COMPETITIVO**



**COLABORACIÓN
BI-DIRECCIONAL
REGULADORES**

Propuesta:

Participación activa



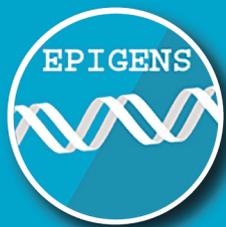
Nuevo
síndrome



Tratamientos



Visión, dirección, conexión



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Muchas gracias

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