



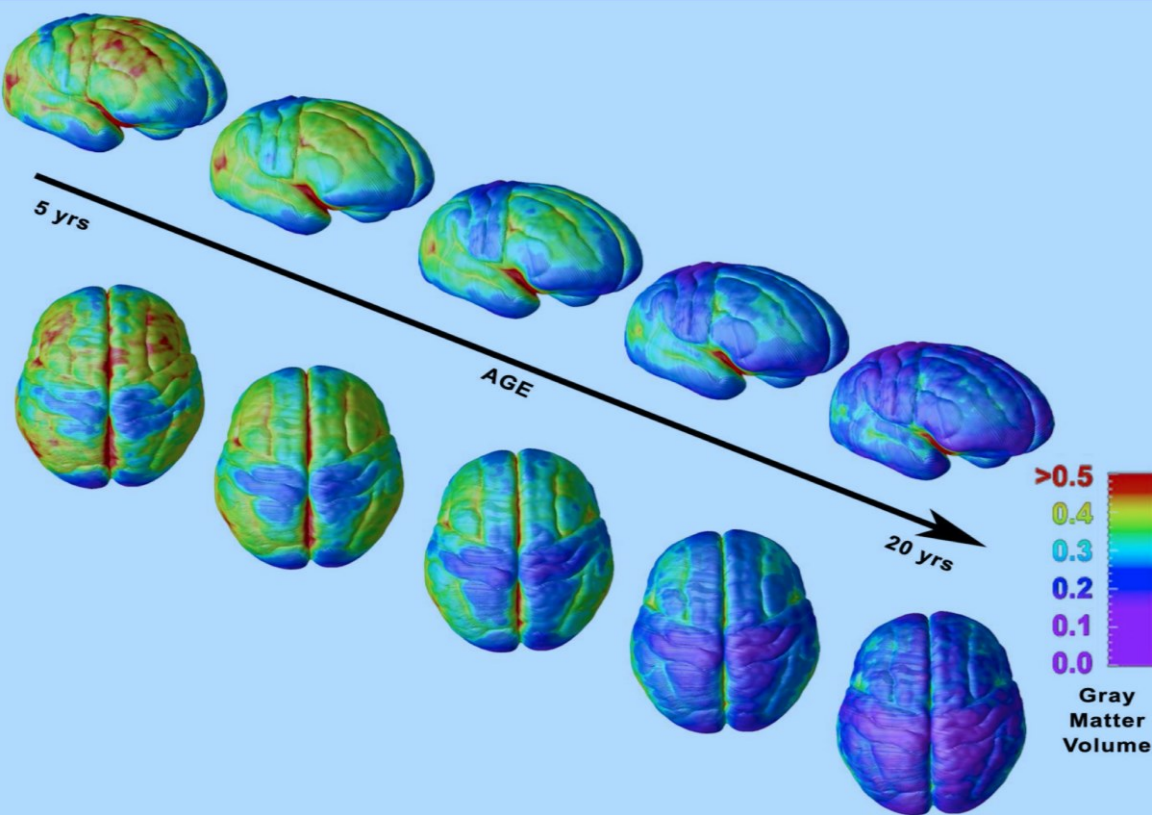
Impacto en la adversidad temprana y el estrés en el neurodesarrollo

Nathalia Garrido Torres MD. PhD

Psiquiatra Unidad de Salud Mental Infantil y del Adolescente

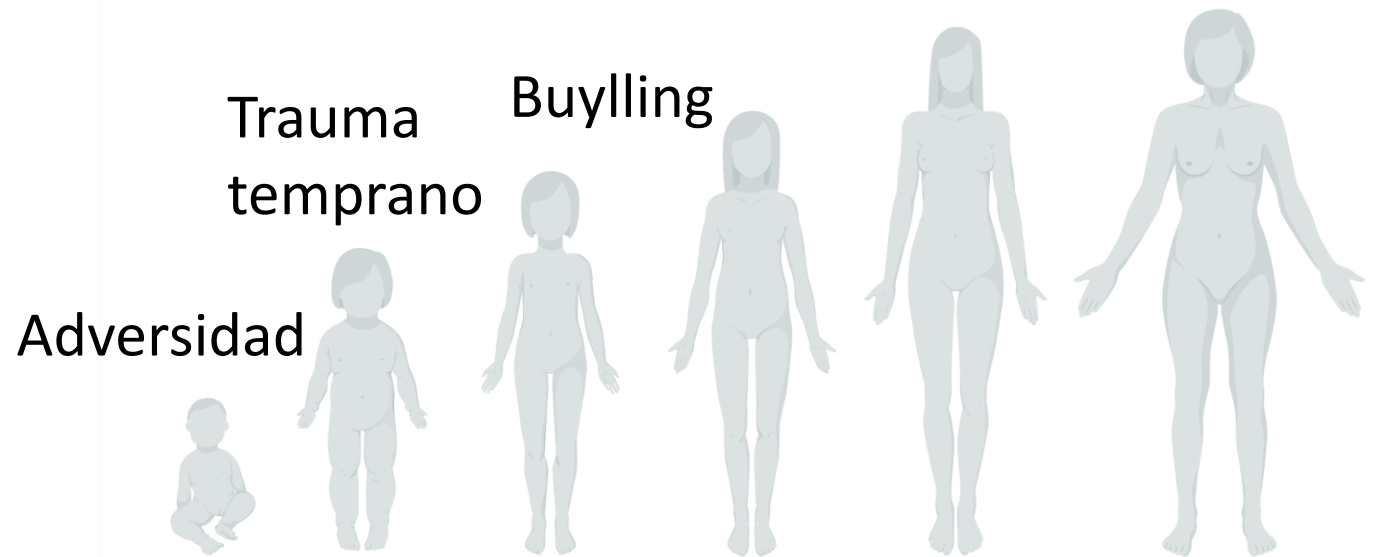
Hospital Universitario Virgen del Rocío Sevilla



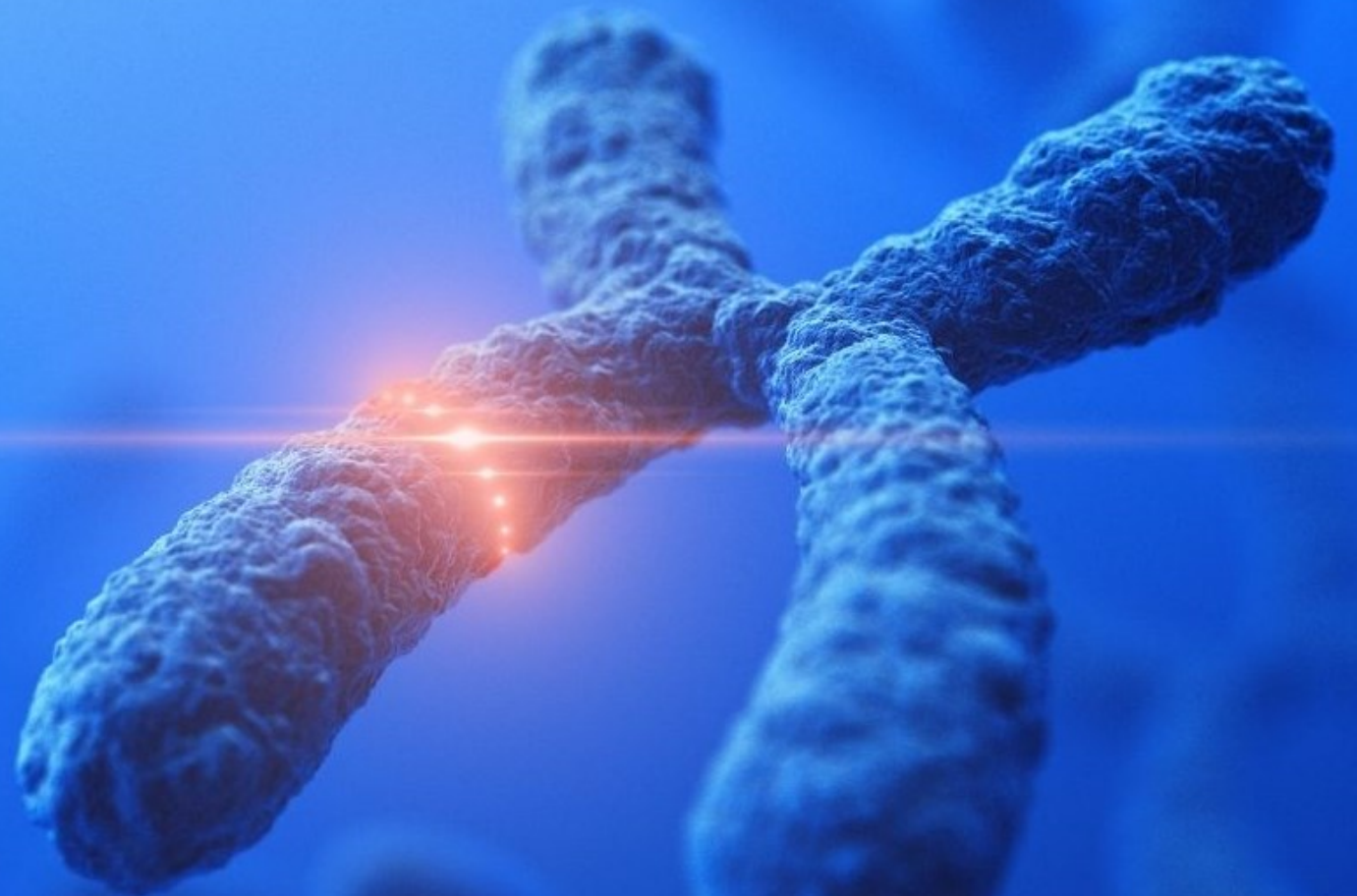


Neurodesarrollo

Abuso de Sustancias



Hasta
81%

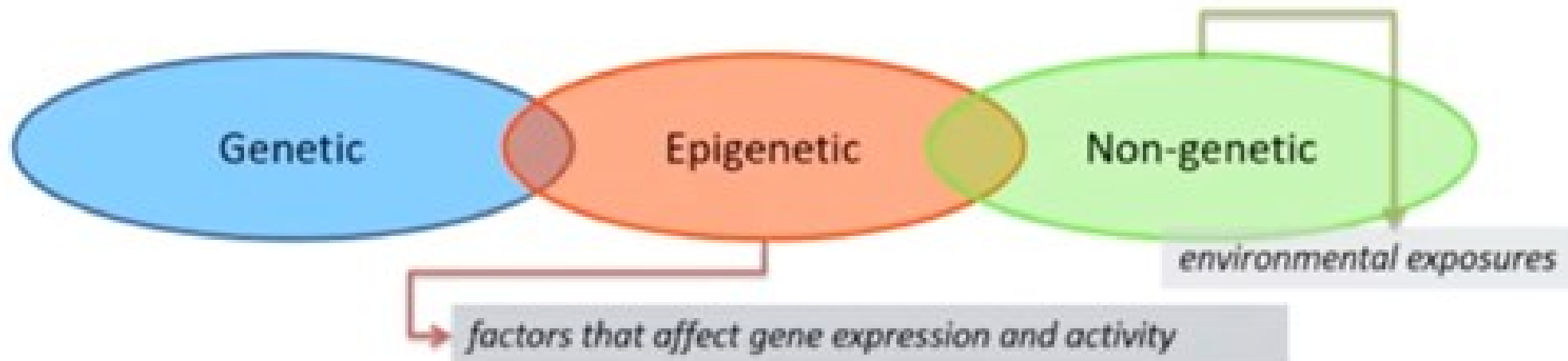


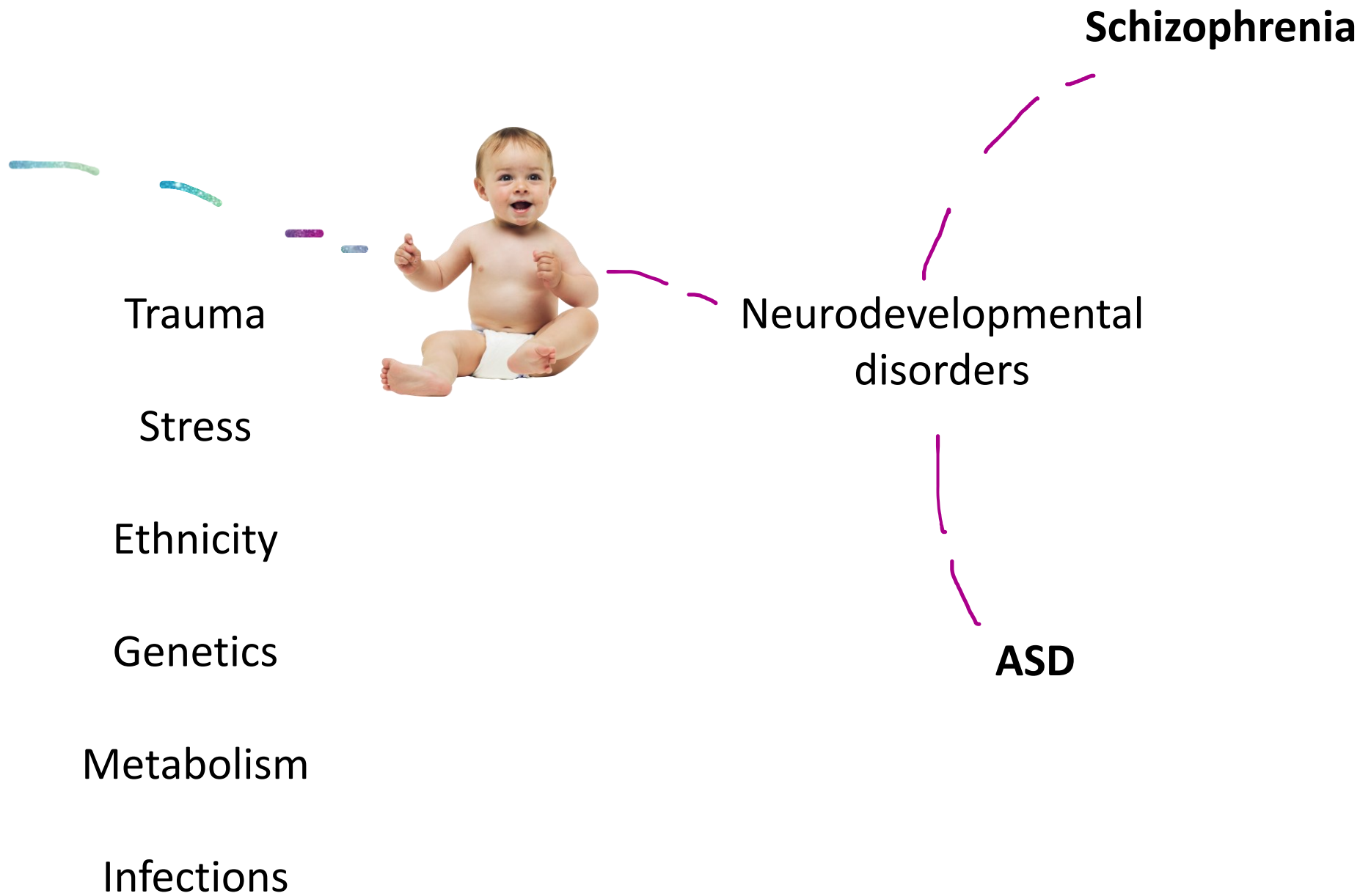
La etiología del trastorno del espectro autista se atribuye principalmente a causas genéticas

Is Autism Spectrum Disorder genetic?



Genetically influenced disorder, caused by factors including:





Estado proinflamatorio en trastornos mentales

Schizophrenia Research 202 (2018) 226–233

Contents lists available at ScienceDirect

Schizophrenia Research

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

ELSEVIER

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Comparison of the anti-inflammatory effect of aripiprazole and risperidone in 75 drug-naïve first episode psychosis individuals: A 3 months randomized study

María Juncal-Ruiz^{a,*}, Laura Riesco-Dávila^c, Víctor Ortiz-García de la Foz^b, Obdulia Martínez-García^b, Mariluz Ramírez-Bonilla^b, Javier Gonzalo Ocejo-Viñals^c, Juan Carlos Leza^{e,f,g}, Marcos López-Hoyos^c, Benedicto Crespo-Facorro^{b,d,**}



Interleukin-12 plasma levels in drug-naïve patients with a first episode of psychosis: Effects of antipsychotic drugs

Benedicto Crespo-Facorro^{a,*}, Eugenio Carrasco-Marín^b, Rocío Pérez-Iglesias^a, José María Pelayo-Terán^a, Lorena Fernandez-Prieto^b, Francisco Leyva-Cobián^b, José Luis Vázquez-Barquero^a

^a University Hospital Marqués de Valdecilla, Department of Psychiatry, School of Medicine, University of Cantabria, Santander, Spain
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Received 8 January 2006; received in revised form 31 May 2006; accepted 8 August 2006

Juncal-Ruiz et al. *Journal of Neuroinflammation* (2018) 15:63
<https://doi.org/10.1186/s12974-018-1096-6>

Journal of Neuroinflammation

RESEARCH

Open Access

The effect of excess weight on circulating inflammatory cytokines in drug-naïve first-episode psychosis individuals



María Juncal-Ruiz^{1,*}, Laura Riesco-Dávila³, Víctor Ortiz-García de la Foz², Mariluz Ramírez-Bonilla², Obdulia Martínez-García², Juan Irure-Ventura³, Juan Carlos Leza^{5,6,7}, Marcos López-Hoyos^{3†} and Benedicto Crespo-Facorro^{2,4††}

frontiers
in Pharmacology

ORIGINAL RESEARCH
published: 02 March 2021
doi: 10.3389/fphar.2021.646701



Aripiprazole as a Candidate Treatment of COVID-19 Identified Through Genomic Analysis

Benedicto Crespo-Facorro^{1,2*†}, Miguel Ruiz-Veguilla^{1,2†}, Javier Vázquez-Bourgon^{2,3,4}, Ana C. Sánchez-Hidalgo^{2,5}, Nathalia Garrido-Torres¹, Jose M. Cisneros^{6,7}, Carlos Prieto^{8†} and Jesus Sainz^{9†}



ORIGINAL ARTICLE

Cytokine aberrations in autism spectrum disorder: a systematic review and meta-analysis

A Masi¹, DS Quintana¹, N Glozier¹, AR Lloyd², IB Hickie¹ and AJ Guastella¹



RESEARCH ARTICLE

Prenatal maternal infection and risk for autism in offspring: A meta-analysis

Nina Tioleco, Anna E. Silberman, Katharine Stratigos, Sharmila Banerjee-Basu, Marisa N. Spann, Agnes H. Whitaker, J. Blake Turner ✉

First published: 15 March 2021 | <https://doi.org/10.1002/aur.2499>

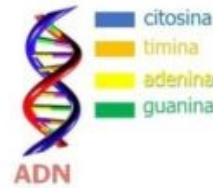
Nina Tioleco and Anna E. Silberman should be considered joint first author.

Funding information: MJS Foundation through support for the Whitaker Scholar Program in Developmental Neuropsychiatry at Columbia University/New York State Psychiatric Institute.

GENÉTICA

La huella epigenética, así heredamos de las abuelas cómo sus genes actuaron frente al entorno

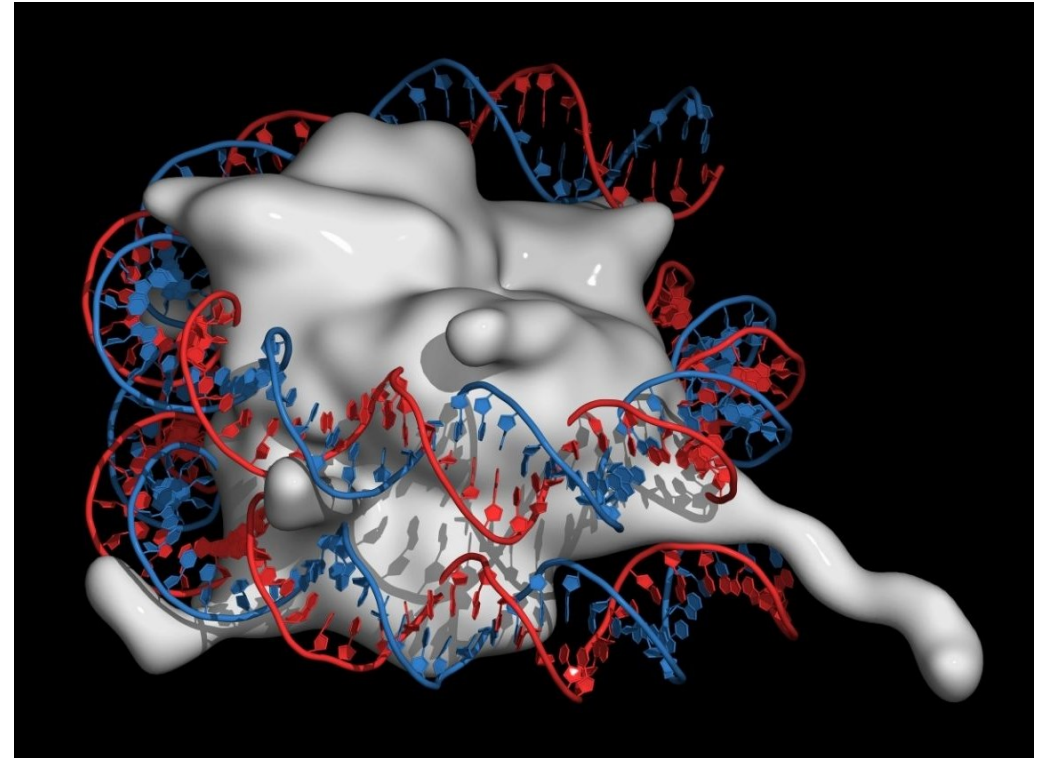
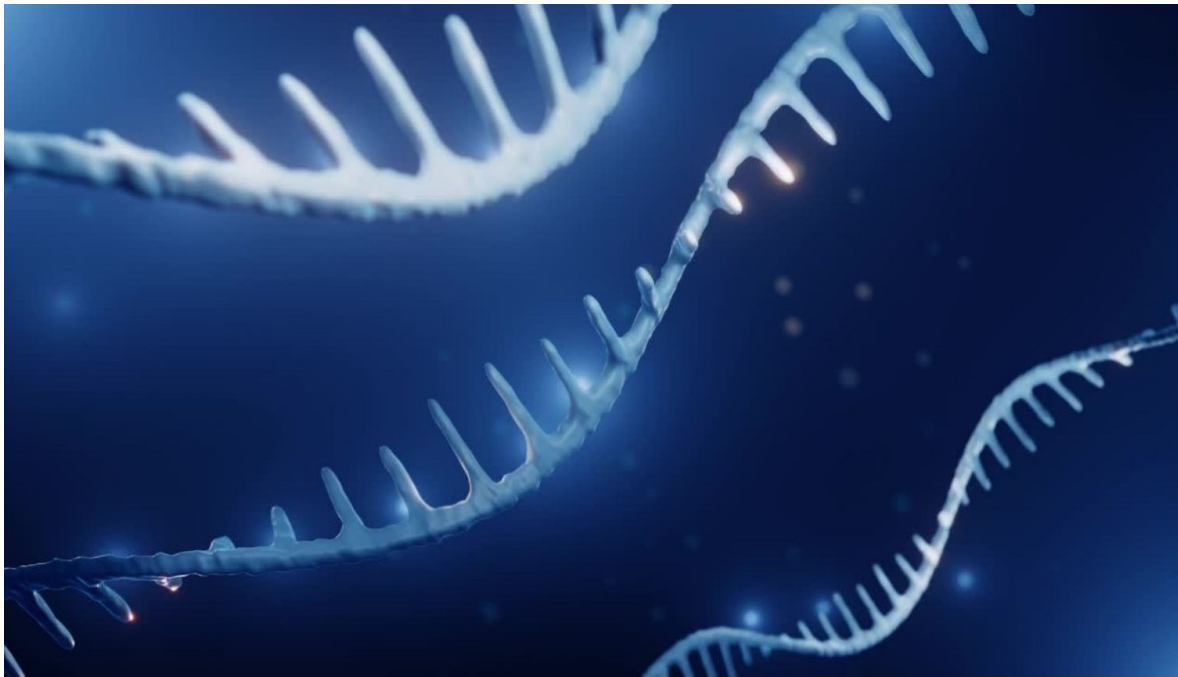
Un estudio del científico español Juan Carlos Izpisua postula que los cambios epigenéticos, que se pueden adquirir como una adaptación al entorno, se transmiten entre mamíferos a la descendencia de forma estable



Metilación del ADN












Mecanismos epigenéticos





miRNAs as biomarkers of autism spectrum disorder: a systematic review and meta-analysis

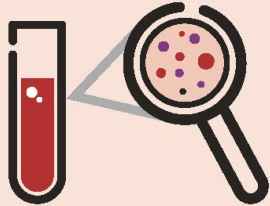
Nathalia Garrido-Torres^{1,2}  · Karem Guzmán-Torres³  · Susana García-Cerro^{1,2}  · Gladys Pinilla Bermúdez³  ·
Claudia Cruz-Baquero³  · Hansel Ochoa⁴  · Diego García-González¹  · Manuel Canal-Rivero^{1,2}  ·
Benedicto Crespo-Facorro^{1,2}  · Miguel Ruiz-Veguilla^{1,2} 

Received: 30 November 2021 / Accepted: 5 January 2023
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ASD

Cell Lines Lymphoblastoids



miR-16-2 ↓ miR-10a ↑
 miR-495 ↓ miR-148b ↓
 miR-326 ↓ miR-199b ↓
 miR-139 ↓ miR-146a-5p ↓
miR-106b ↑ **miR-23b ↑**
 miR92a_5p ↓ miR96-5p ↓
 miR-320a ↓ miR 150-5p ↓
 miR-146 ↑

Post-mortem brain



miR-19a-3p ↑
 miR-494 ↑
 miR-142-3p ↑
 miR-3687 ↓
miR-144-3p ↓
miR-451a ↑
 miR-146 ↑

Serum



miR-19a-3p ↑ miR-16-2 ↓ miR-495 ↓
 miR-148b ↓ miR-326 ↓ miR-27a-3p ↓
 miR-494 ↑ miR-199b ↓ miR-3687 ↓ miR-451a ↑
 miR-16-5p ↑ miR-139 ↓ miR-142-3p ↑ miR-151-3p ↓
miR-106 ↓ **miR-144-3p ↓** **miR-451a ↓** **miR-23b ↓**

Saliva



miR-146a-5p ↓
 miR-10a ↑
 miR-16-5p ↑
 miR-27a-3p ↓
miR-451a ↓
 miR-151-3p ↓
 miR-27a-3p ↓

Memory and learning

miR-140-3p
 ↓
 CD38

Neuronal maturation

miR-34c-5p → MAPT
 miR-486-3p → ARID1
 miR-199a-5p → SIRT1
 miR-146a-5p → lin28B

Intelligence

miR-486-3p
 ↓
 c-Fos
 and
 Arc

Language

Forkhead P2
 (FOXP2)

Social behavior

miR-21-5p
 miR-6126
miR-451a
 ↓
 OXRT

Repetitive behavior

MAPK1
 ↑ SEMASA
 miR-106a-5p
 ↓
 NTGNG1
 SRGAP3

Hormones

miR-142-5p
 ↓
 Serotonin and
 dopamine
 miR-142-3p
 ↓
 Dopamine D1
 receptors

Immunity

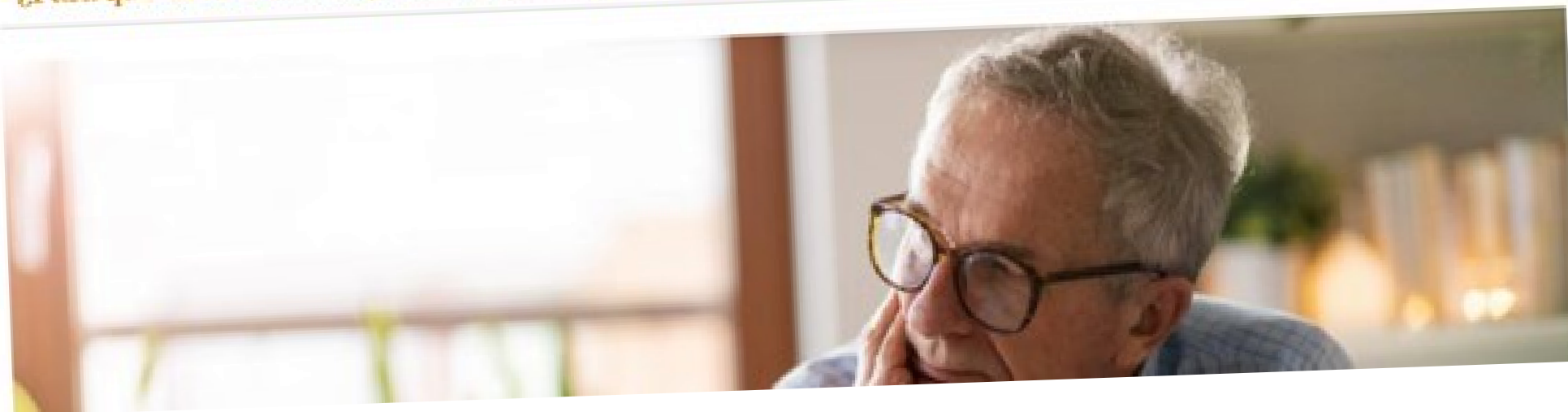
miR-34c-5p
 ↓
 ZAP70
 miR-181a
 ↓
 PTEN

Circadian cycle

miR-29b
 ↓
 ID3 ATF2
 VIP PER3
 PER1 ARNTL
 DUSP2

¿Podemos heredar los miedos y traumas de nuestros antepasados?

- Las experiencias gravemente negativas de los padres pueden llegar hasta los hijos por medio de su ADN, según la epigenética
- *¿Para qué sirve el miedo y cómo podemos tratar de controlarlo?*





[Published: 25 June 2009](#)

Hurricane Katrina-Related Maternal Stress, Maternal Mental Health, and Early Infant Temperament

[Michael T. Tees](#), [Emily W. Harville](#) , [Xu Xiong](#), [Pierre Buekens](#), [Gabriella Pridjian](#) & [Karen Elkind-Hirsch](#)

[Maternal and Child Health Journal](#) **14**, 511–518 (2010) | [Cite this article](#)

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Situación ideal para el estudio

Biological Psychiatry
A Journal of Psychiatric Neuroscience and Therapeutics


Submit Article

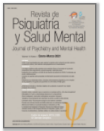
CORRESPONDENCE | VOLUME 89, ISSUE 5, E29-E30, MARCH 01, 2021

COVID-19 Infection During Pregnancy and Risk of Neurodevelopmental Disorders in Offspring: Time for Collaborative Research

Álvaro López-Díaz • Rosa Ayesa-Arriola • Benedicto Crespo-Facorro • Miguel Ruiz-Veguilla

Published: October 29, 2020 • DOI: <https://doi.org/10.1016/j.biopsych.2020.09.011>

 Revista de Psiquiatría y Salud Mental
Volume 14, Issue 1, January–March 2021, Pages 1-3



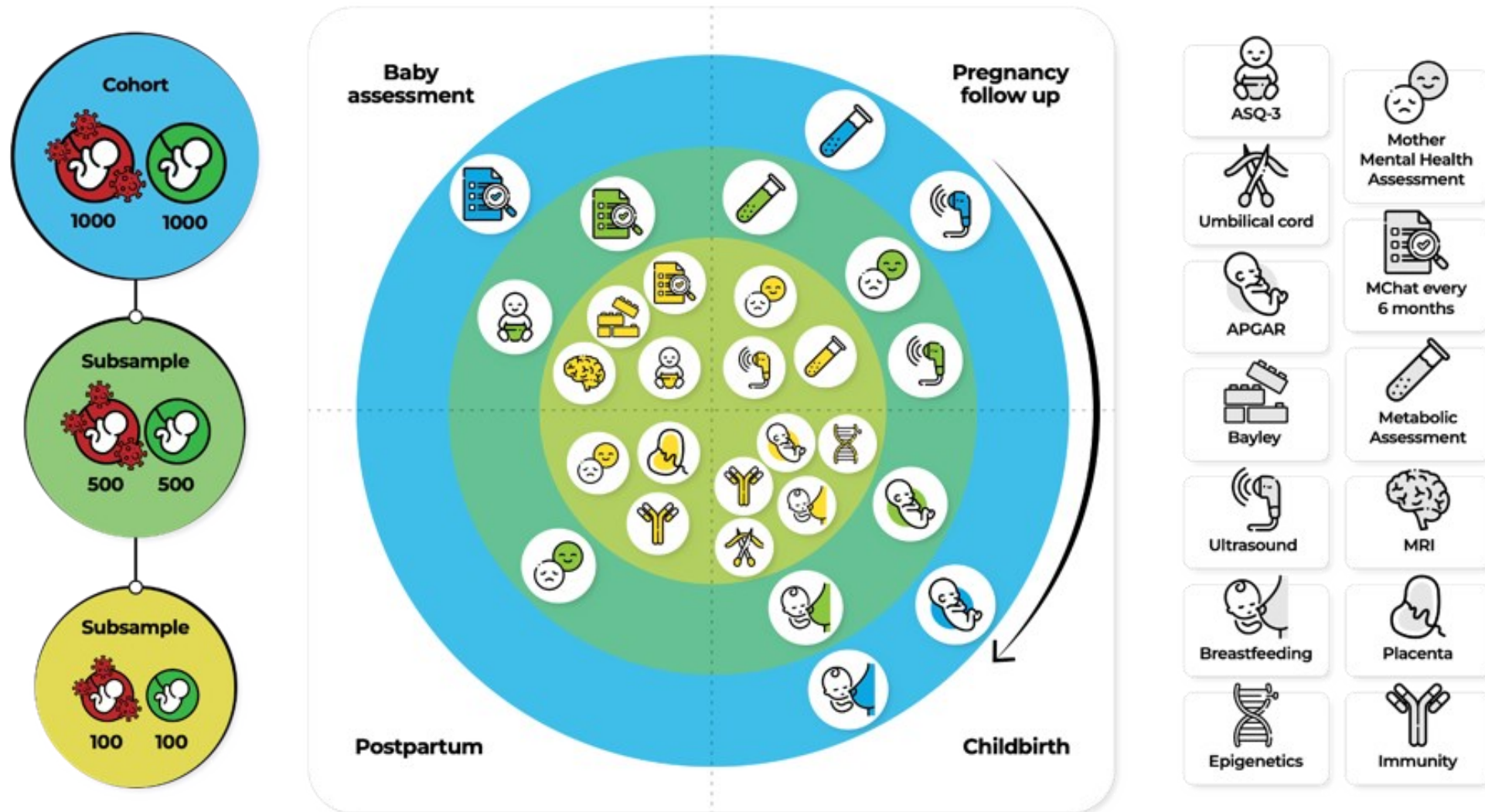
Editorial

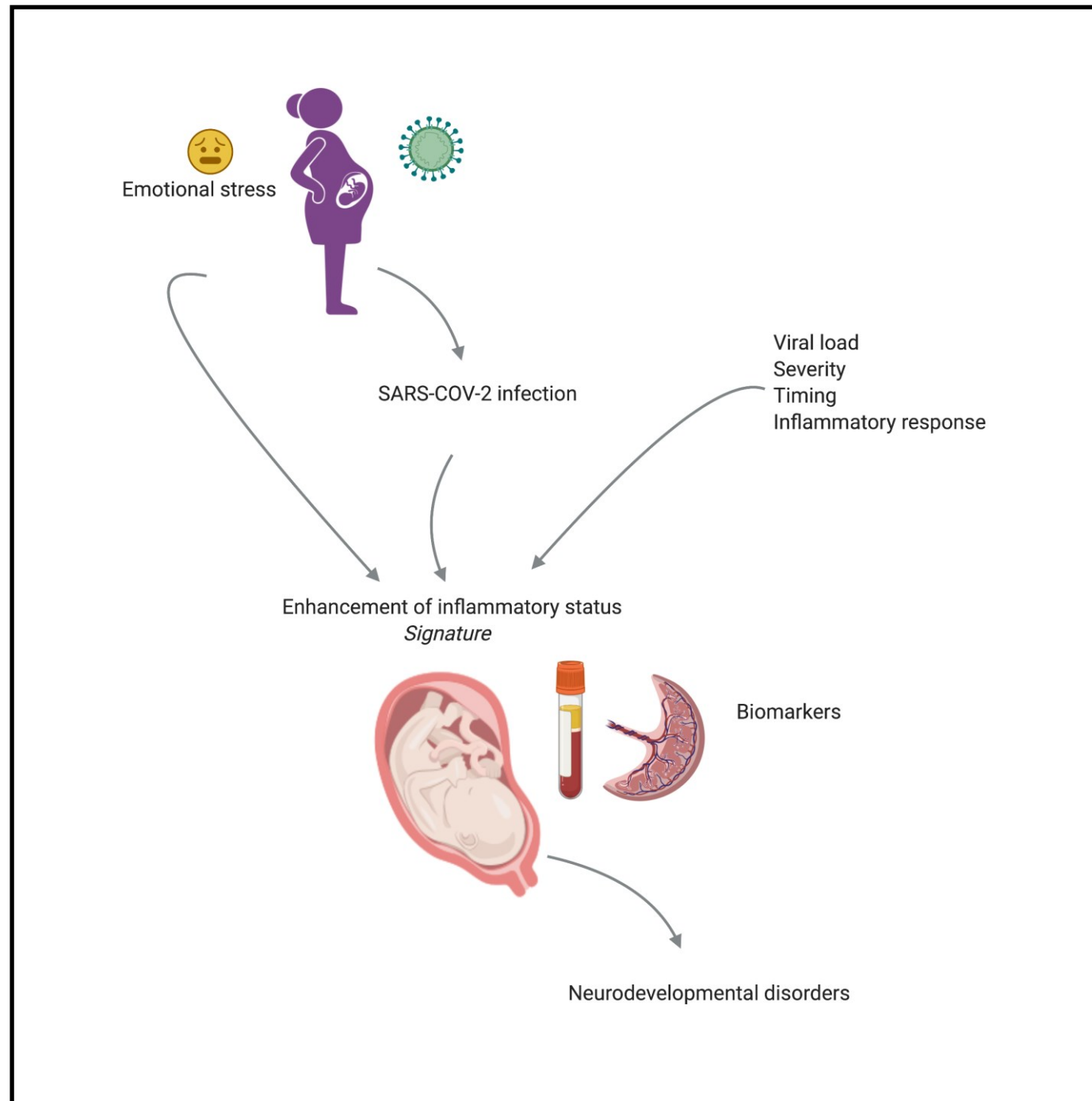
COVID-19 una oportunidad única para explorar la relación entre la infección prenatal materna, el desarrollo cerebral y los trastornos neuropsiquiátricos en la descendencia

COVID-19 as a unique opportunity to unravel the link between prenatal maternal infection, brain development and neuropsychiatric disorders in offspring

Rosa Ayesa-Arriola M.S., Ph.D. ^{a, b, 1} ✉, Álvaro López-Díaz M.D., Ph.D. ^{b, c, d, 1}, Miguel Ruiz-Veguilla M.D., Ph.D. ^{b, d, e}, Juan Carlos Leza M.D., Ph.D. ^{b, f}, Lourdes Fañanas Saura M.D., Ph.D. ^{b, g}, Benedicto Crespo-Facorro M.D., Ph.D. ^{b, d, e}

Factores epigenéticos, factores infecciosos, factores ambientales como causa de los Trastornos del neurodesarrollo





Estrés en el embarazo durante la pandemia, inflamación y neurodesarrollo: Resultados del proyecto *signature*



Table 1					
	SARS-COV-2 infected	non-infected	All	statistic al	p
	543	342	885		
Age (mean, SD)	34.25, 5.2	34.38, 6.0	34.31	4.134	0.201
Prematurity	35	26	61	0.437	0.508
Previous mental health disease	196	85	281	12.238	0.001
Perceived stress (mean, SD)	23.28, 7.818	22.98, 7.697	23.17, 7.76	0.458	0.673
Trimester of pregnancy SARS-COV-2					
First trimester	104				
Secund trimester	254				
Third trimester	184				
Level of education				3.602	0.308
Low	8	1			
Medium	56	35			
High	210	125			
Very high	269	181			

Table 4a. Association between stress and prematurity adjusted by SARS-COV-2 infection and mother`s age

	B	standard error	Wald	gl	Sig.	OR	95% C.I.	
							Lower	Upper
Perceived stress	.046	.020	5.513	1	.019	1.047	1.008	1.089
SARS-COV-2 infected	-.159	.273	.336	1	.562	.853	.499	1.458

Table 4b. Association between stress and prematurity adjusted by other variables

	B	standard error	Wald	df	Sig.	OR	95% C.I.	
							Lower	Upper
Perceived stress	.044	.020	4.811	1	.028	1.045	1.005	1,087
SARS-COV-2 infected	-.186	.275	.459	1	.498	.830	.484	1.423
Mother`s age	.077	.025	9.181	1	.002	1.080	1,028	1.135
Previous mental health disease	.288	.335	.739	1	.390	1.334	.692	2.571

El estrés durante el embarazo en periodo de pandemia se asocia a prematuridad y alteraciones en el peso del recién nacido, independientemente de haber presentado o no infección por SARS-COV2

Research | [Open Access](#) | [Published: 21 September 2021](#)

The prevalence and profile of autism in individuals born preterm: a systematic review and meta-analysis

[Catherine Lavery](#) , [Andrew Surtees](#), [Rory O'Sullivan](#), [Daniel Sutherland](#), [Christopher Jones](#) & [Caroline Richards](#)

[Journal of Neurodevelopmental Disorders](#) **13**, Article number: 41 (2021) | [Cite this article](#)

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Los prematuros tienen 3.3 veces más riesgo que los no prematuros de presentar TEA

Review > [Pediatrics](#). 2018 Jan;141(1):e20171645. doi: 10.1542/peds.2017-1645.

Epub 2017 Dec 18.

Attention-Deficit/Hyperactivity Disorder and Very Preterm/Very Low Birth Weight: A Meta-analysis

[Adelar Pedro Franz](#)¹, [Gul Unsel Bolat](#)², [Hilmi Bolat](#)³, [Alicia Matijasevich](#)⁴, [Iná Silva Santos](#)⁵,
[Rita C Silveira](#)⁶, [Renato Soibelman Procianoy](#)⁶, [Luis Augusto Rohde](#)^{7 8},
[Carlos Renato Moreira-Maia](#)⁹

Affiliations + expand

PMID: 29255083 DOI: [10.1542/peds.2017-1645](#)

Los prematuros tienen 3.6 veces más riesgo de presentar TDAH

ARTICLES | [VOLUME 7, ISSUE 5, P399-410, MAY 2020](#)

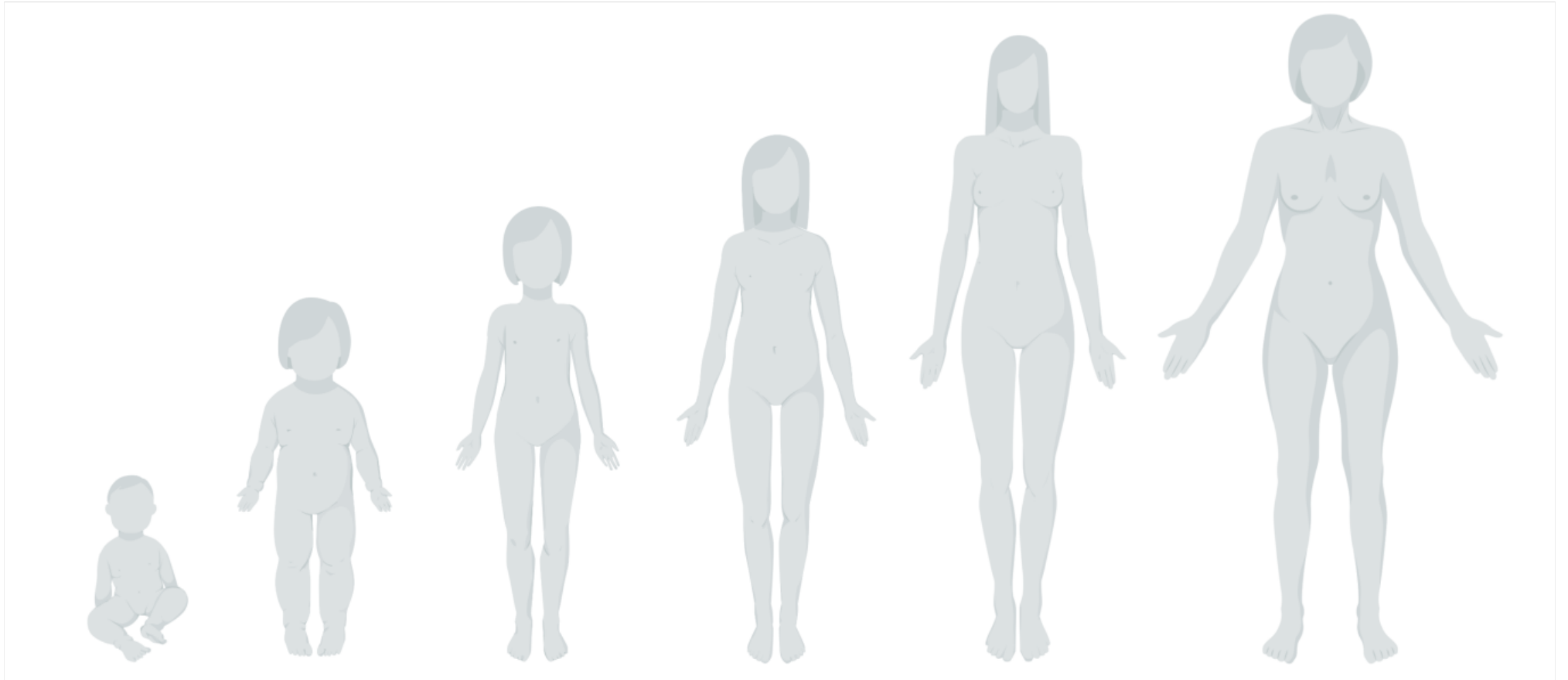
Prenatal and perinatal risk and protective factors for psychosis: a systematic review and meta-analysis

[Cathy Davies, PhD](#) [†] • [Giulia Segre, MSc](#) [†] • [Andrés Estradé, MSc](#) [†] • [Joaquim Radua, PhD](#) • [Andrea De Micheli, MD](#) • [Umberto Provenzani, MD](#) • et al. [Show all authors](#) • [Show footnotes](#)

Published: March 24, 2020 • DOI: [https://doi.org/10.1016/S2215-0366\(20\)30057-2](https://doi.org/10.1016/S2215-0366(20)30057-2) •



Los prematuros tienen más riesgo de presentar psicosis en adolescencia



¿Dudas, colaboraciones, manifestaciones de interés en este proyecto?

nagatorr@gmail.com

