





# Creative and arts intervention network: A regional hub to connects arts and brain health

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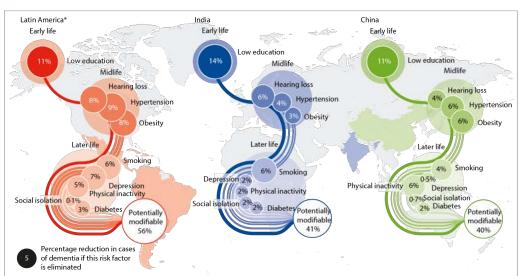




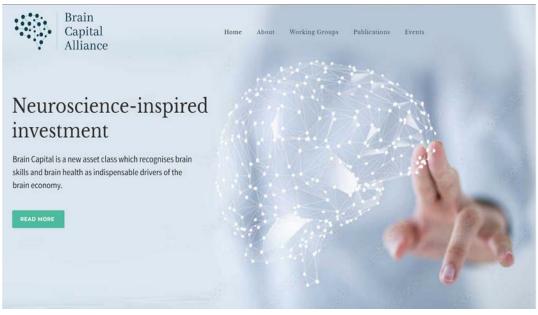


#### Defining Brain Health





SOCIAL **DETERMINANTS OF HEALTH HEALTH NEUROSCIENCE POLICY DEMENTIA &** LEADERSHIP **NEURODEGEN-DEVELOPMENT ERATION THEORY GLOBAL** HEALTH

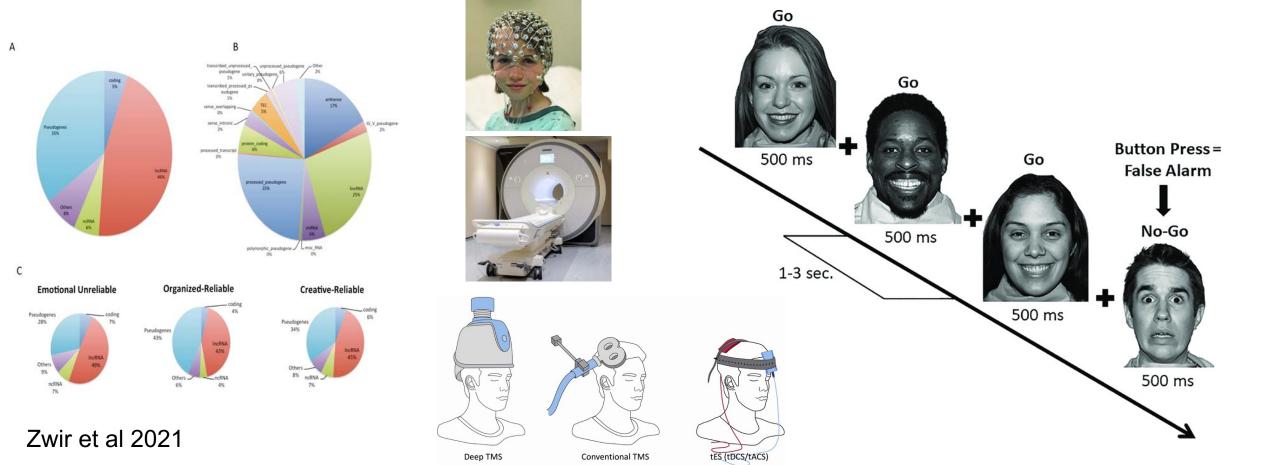


Mukadam, The Lancet Global Health 2019

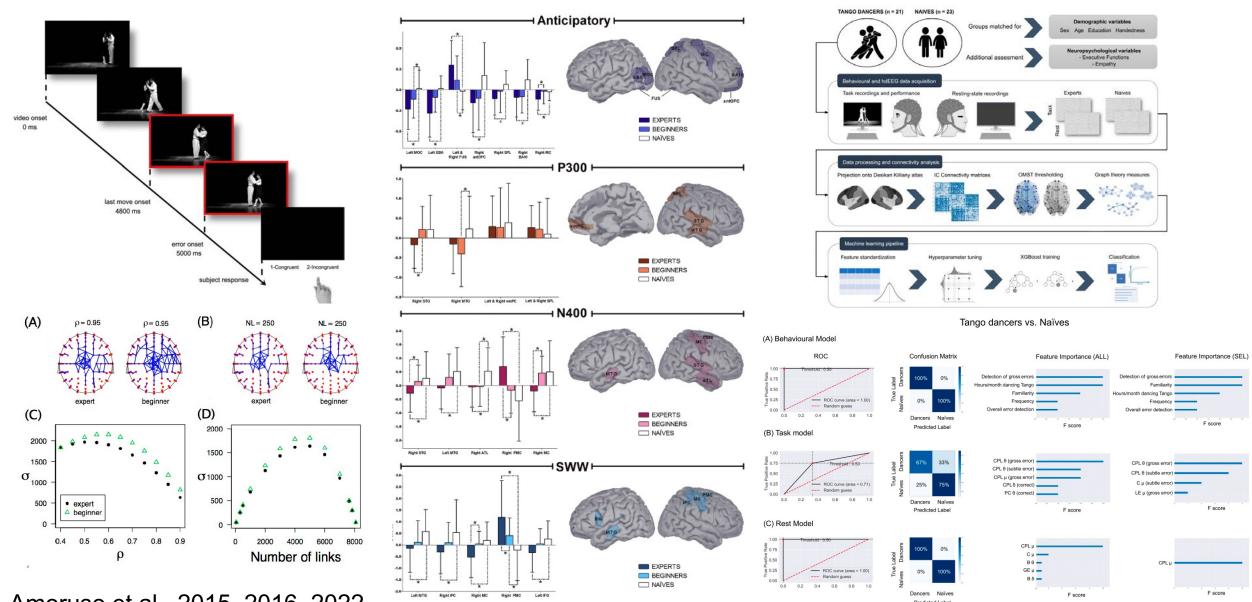
# Neuroscience and arts

# Basic approaches

## Genetics – Animal research – Cognitive neuroscience



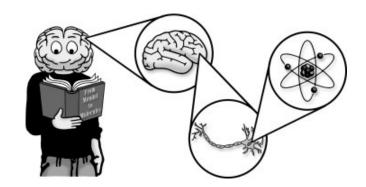
### One example: Tango Dancer Experts

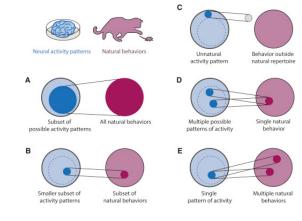


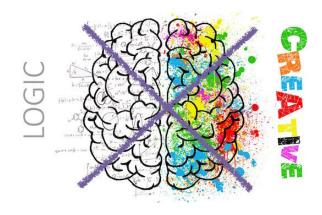
Amoruso et al., 2015, 2016, 2022

# Myths and limitations

- Single associations with brain regions
- Creativity as a thing, not a process
  - "creativity brain", "creativity area"
- Left-right association
- Soft reductionism
- Idealistic assumptions of mental health
- When people are engaged in creative tasks, the same brain areas are active that are active in many everyday tasks
- Importance of domain specific expertise



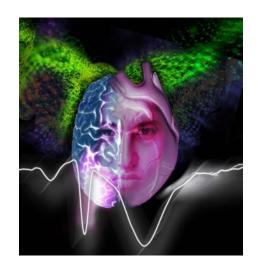


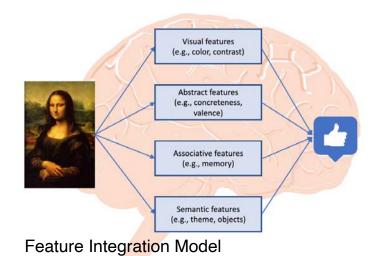


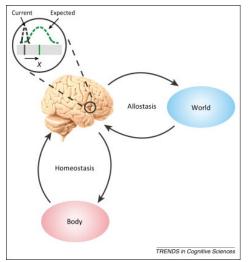


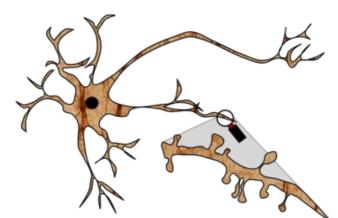
# **Opportunities**

- No single brain region that drives creativity. The entire brain contributes to creative cognition.
- Plasticity, exercise and allostasis
- Blending of the socio-cognitiveembodied frameworks
- Beyond reductionism in neuroscience and multidisciplinary insights

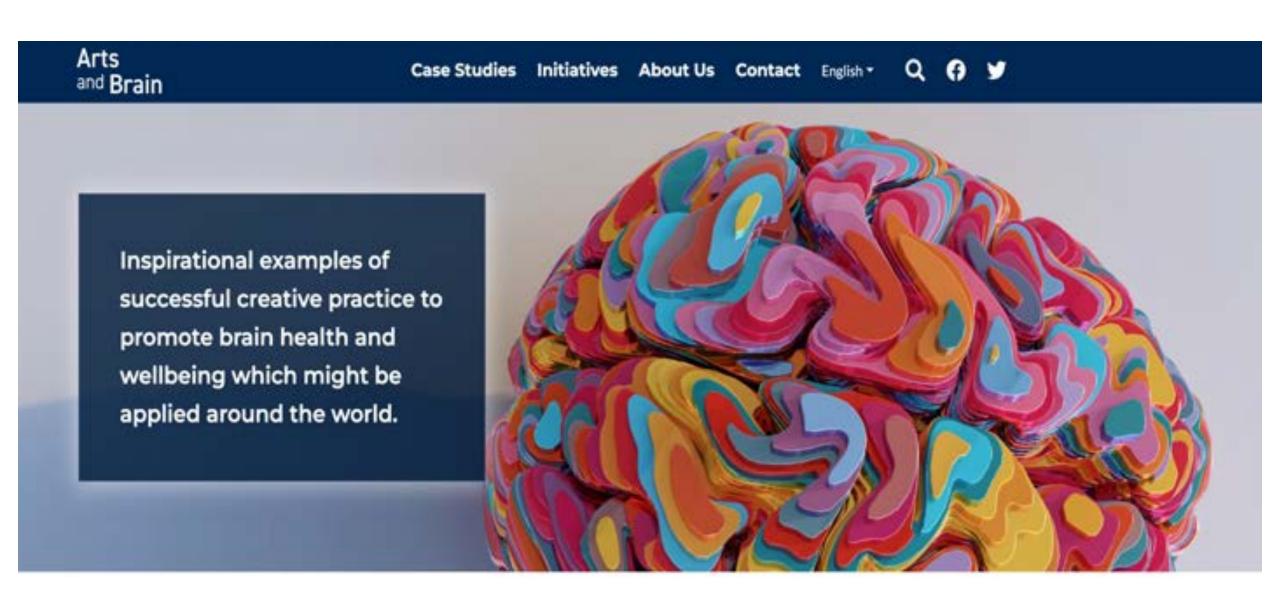








# Network





#### **Case Studies**

We have gathered together a wide variety of case studies which reflect a variety of resources, situations and cultures from around the world. We believe there are methods and learnings here that can be widely applied.

We have grouped them by the country they originated in, click below for case studies from each. You can also use the search function at the top right hand of this page to look for case studies under the following tags:

- In the community
- In care homes
- In care settings
- Intergenerational
- Dance
- Books
- Music
- Sensory Boxes
- Dementia Cafe
- Resources







#### **Argentina**

Please click on links below for case studies from Argentina.

Read More

#### **Brazil**

Please click on links below for case studies from Brazil.

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#### Ireland

Please click on links below for case studies from Ireland.

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#### Nicaragua

Please click on links below for case studies from Nicaragua.

Read More

#### **Rest of World**

Please click on links below for case studies from the rest of the World.

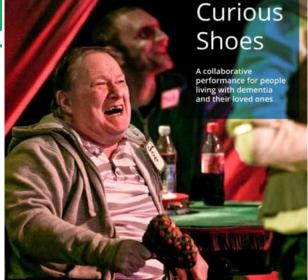
Read More

#### UK

Please see a selection of case studies from around the UK.

Read More





Curious



Donate

Music & dementia

Make a playlist

Help and inspiration

Get involved



can help people living with dementia

Dementia Creatives

AAA

**Dementia Craftivists** 

partnership with Youth Sports Trust. This is an innovative pilot project combining the worlds of music and sport to deliver health and wellbeing outcomes for both the young and the older

**DEEP Moments** 

More DEEP Creativity

← Back to Home / Dementia Craftivists







What is Craftivism?







**Creative Aging** International We Celebrate Aging



#### ORIGINAL REPORT

#### EFFECTS OF DANCE ON MOVEMENT CONTROL IN PARKINSON'S DISEASE: A COMPARISON OF ARGENTINE TANGO AND AMERICAN BALLROOM

Madeleine E. Hackney, BFA1 and Gammon M. Earhart, PhD, PT1,2,3



Motor and nonmotor manifestations in Parkinson's disease (Romenets et al., 2015)







Social Spatial cognition

Depression & well-being



**Community-based tango** 

Argentine tango dance compared to mindfulness meditation and a waiting-list control: A randomised trial for treating depression

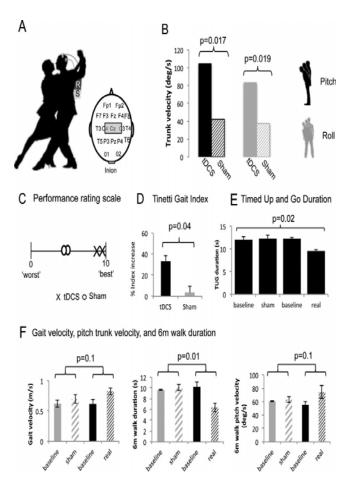
Rosa Pinniger a, e, Rhonda F. Brown a, Einar B. Thorsteinsson a, Patricia McKinley b, c





- Six-week program.
- **Depression** levels were significantly reduced in the tango (effect size d=0.50, p=.010), and meditation groups (effect size d=0.54, p=.025), relative to waiting-list controls.
- **Stress levels** were significantly reduced only in the **tango** group (effect size d=0.45, p=.022).
- Mindfulness-meditation and tango dance could be effective complementary adjuncts for the treatment of depression/stress programmes.

# NIBS during tango dancing in Parkinson's disease Kaskia et al, 2014

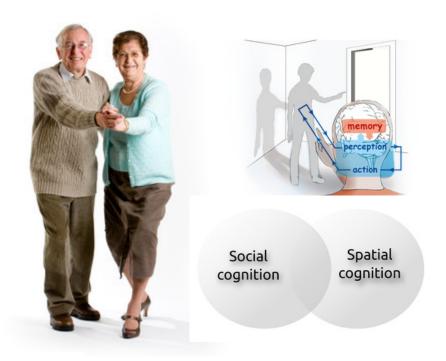


# Community-based Argentine tango dance: increased participation of individuals with PD (Foster 2013)



Increased participation in complex daily activities, recovery of activities lost since the onset of PD, and engagement in new activities.

# Spatial Cognition and Disease Severity in PD (McKee, 2013)



Compared to classical motor cognition terapy, Improved on **disease severity** (p=0.008), **spatial cognition** (p=0.021), **balance** (p=0.038), and **executive function** (p=0.012). Gains were maintained 10–12 weeks postintervention.

# Therapeutic Argentine tango dancing for people with mild Parkinson's disease: a feasibility study



#### Depression & well-being

Section	Time (min)	Activity	Objectives
Warm up	0–10	Large amplitude movement of each joint through full range Rib/pelvic dissociation movements	Prepare the body/muscles for dance Increase range of motion at joints Decrease trunk rigidity
Individual step practice	10–25	Introduction to rhythm and beat of music Stepping forwards, backwards, sideways in patterns following dance instructor Seated practice footwork	Training ear to identify external cues to movement Practice movement coordinated to rhythm of music Practice weight shift, large amplitude steps, challenging balance Practice of complex foot and ankle movement patterns while seated
Break	25-30	Seated rest	Prevent fatigue
Partnered Practice tango steps	30–50	Partnered practice with modified tango "embrace" Shared leading and following roles Practice of stepping patterns in time with music Encouraging postural awareness with respect to position partnered "embrace" Practice turning, change of direction	Address motor difficulties with gait speed, step length, movement initiation coordination, weight shift Aerobic training Balance retraining Teaching movement strategies for complex movement such as turning/walking backwards
Break	50-55	Seated Rest	Prevent fatigue
Cool down	55–60	Breathing Gentle stretching Close with applause	Relaxation Encourage deep breathing with basal expansion Establish sense of accomplishment

- Health-related Quality of Life and Alternative Forms of Exercise in Parkinson Disease (Hackney et al., 2009)
- Tango significantly improved on well-being (p=0.03), social support (p=0.05) and social interaction (p<0.01) at post-testing.</li>

# Amazonian Dance in PD – Aline Hass



#### Can creative arts projects help people deal with trauma from personal or group conflict?

Role of creative activities and projects in helping recovery from trauma due to personal or group conflict was a strong theme of 2023 Creative Brain Week





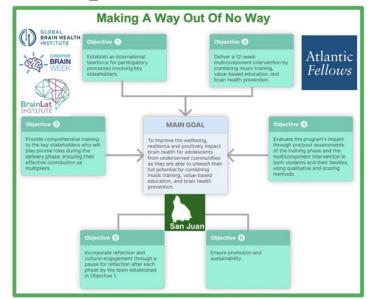


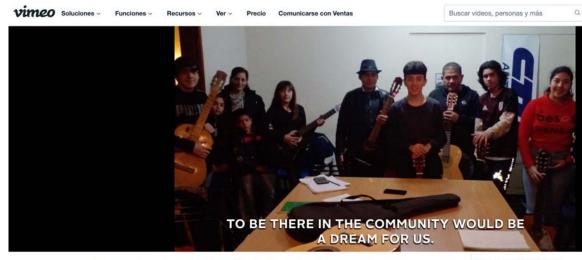
# A way out of no way





The
ATLANTIC
Philanthropies





Music for Brain Health in Latin America and Beyond with Copa Y Vida - An Atlantic Fellows project

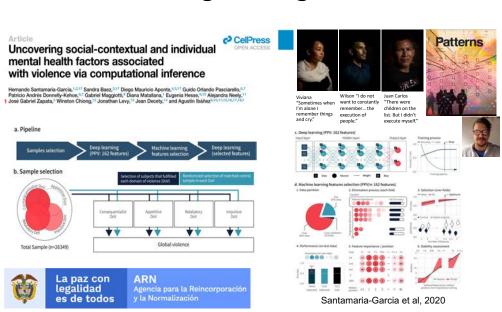


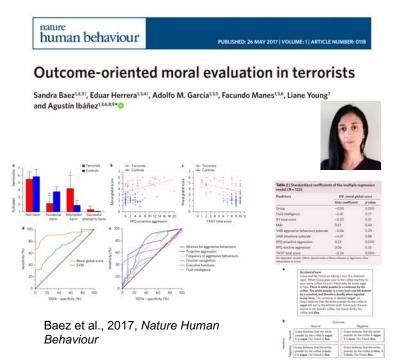


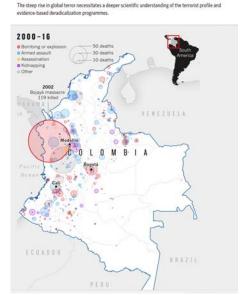
### Violence and Peace in Colombia



Débora Arango: Envigado, 2005







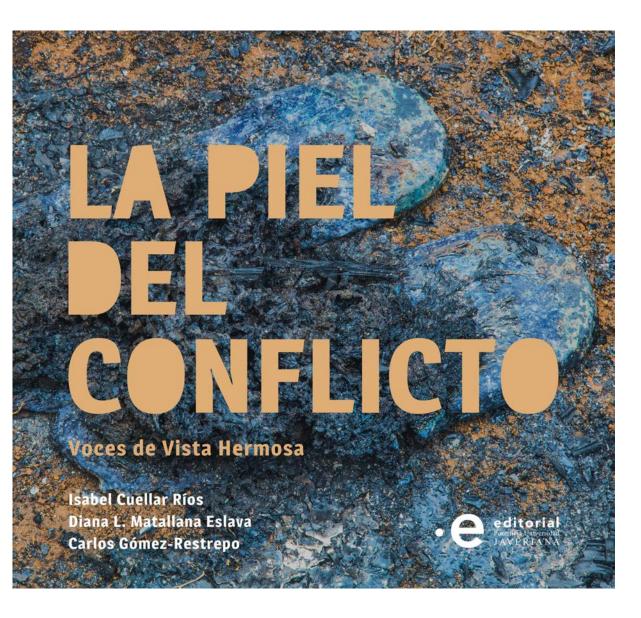
Understanding and countering terrorism





Readon S. Colombia: after the violence. Nature, 2018. doi: 10.1038/d41586-018-04976-7.

# The skin of the conflict







Arango, Débora. Modern Art Mus.



Drawing by Rafael Posso, artist and victim of the Las Brisas massacre



Gómez Jaramillo. La Violencia



Stinkfish, Street art, Medellin



'Magdalenas por el Cauca', Art initiative that pays tribute to the disappeared people and their mothers



Art and cultural agency to transcend pain and transform conflict



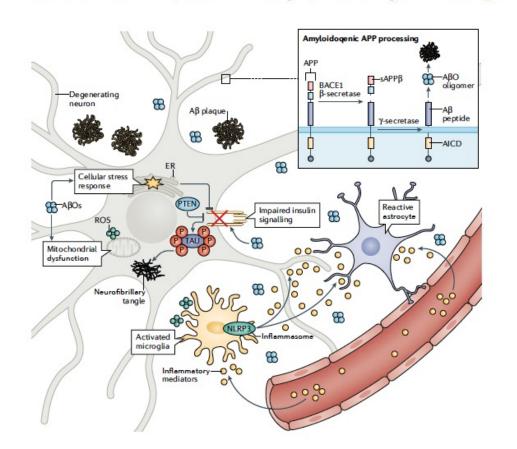
# The universe within: The body's internal appraisal of environmental demands

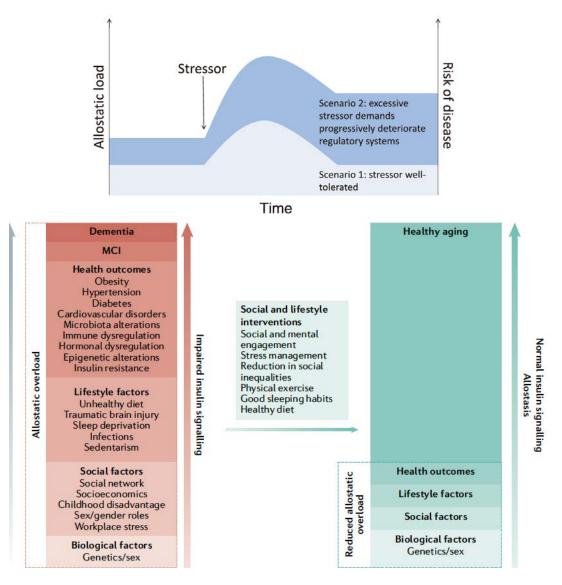


### Allostasis and neurodegeneration

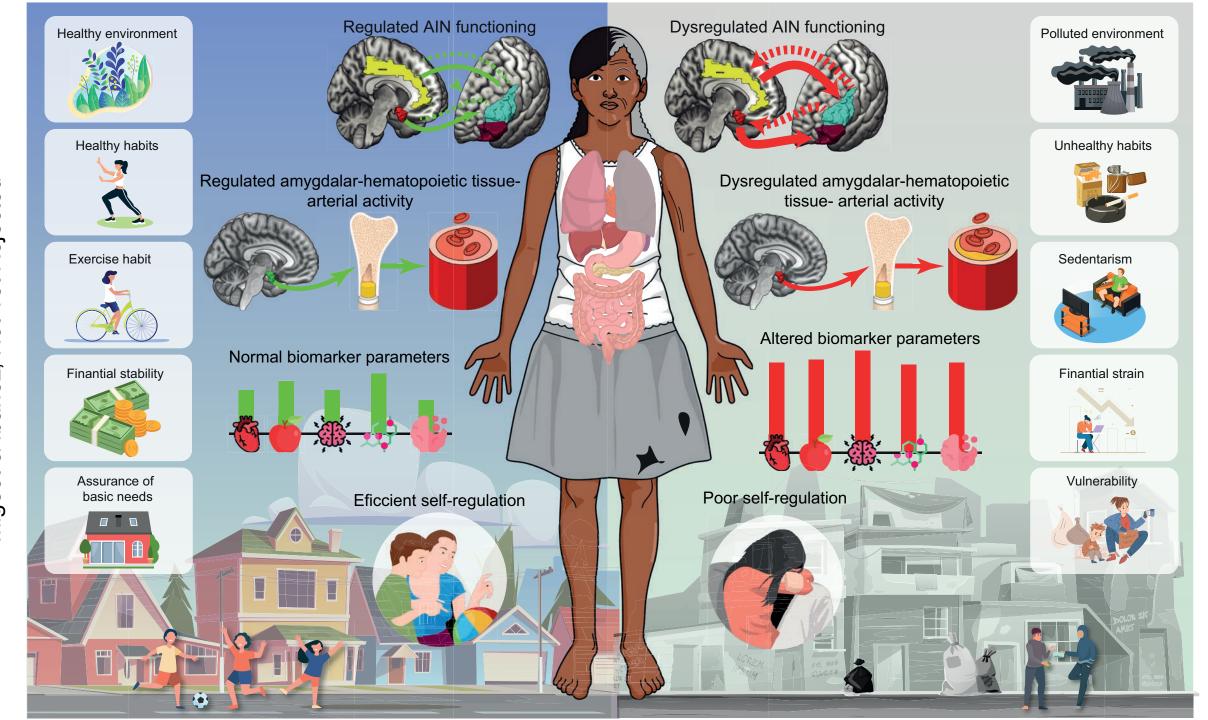
# Impaired insulin signalling and allostatic load in Alzheimer disease

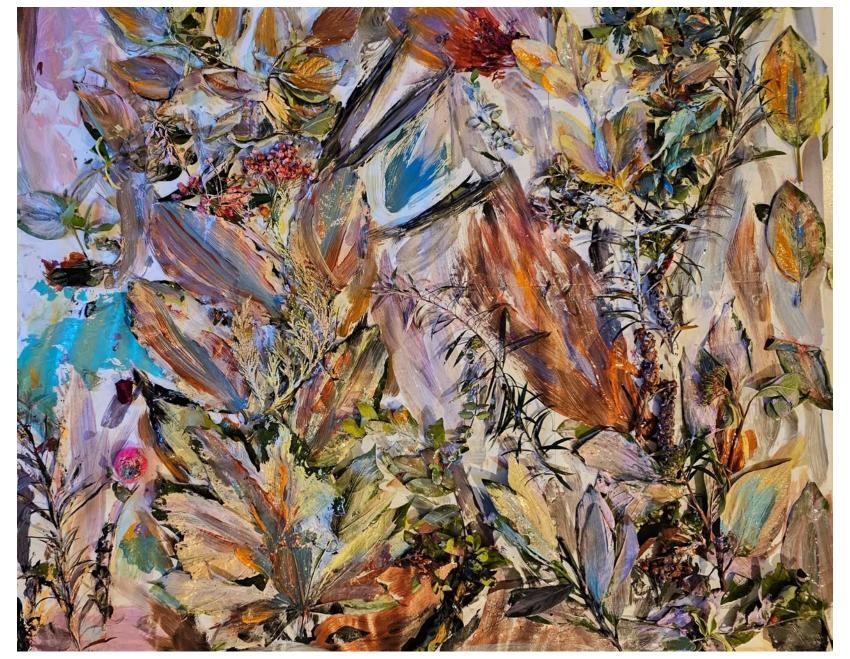
Fernanda G. De Felice<sup>1,2,3™</sup>, Rafaella A. Gonçalves¹ and Sergio T. Ferreira<sup>3,4</sup>





De Felice et al, Nature Reviews Neuroscience 2022; Thomson et al, JAD, 2019



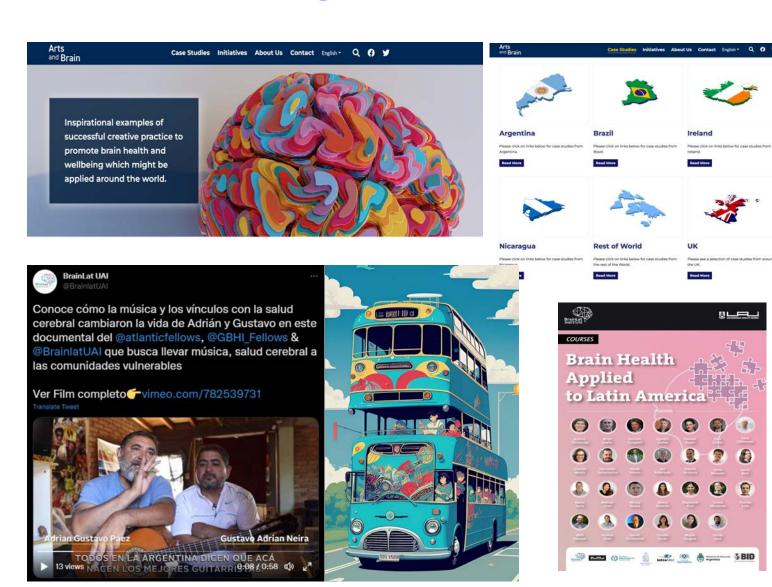


Agustin Ibanez, Aline Haas, and Nisha L Sajnani. Conflict, arts, and health: Moving beyond traditional academic divisions between biology and culture. Accepted

### How we can use this knowledge to know how?

- Rational minds?
- Creativity and health
- Creativity and conflict
- Transdisciplinarity
- Self-regulation, biology, and adversities

Miller 2002, 2018; Seeley et al 2008; Lucchiari et al 2020, Daswson et al, 2020





### Thank you! Muchas Gracias!

















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