



VIENNA, AUSTRIA

Towards the Next 100 Years
Contemporary Perspectives in
Communication Sciences and Disorders

100th
Anniversary Celebration of IALP

June 27-29, 2024

The poster features a blue background with a white speech bubble containing the IALP logo and the text '100th Anniversary Celebration of IALP'. Below this, a photograph of the Vienna State Opera House is shown. The dates 'June 27-29, 2024' are displayed in a white box at the bottom.



The History of Autism Spectrum Disorders Committee (ASD)

Chair: Prof. Kakia Petinou, Vice Chair: Dr. Yvette Hus, PhD

Osnat Segal, Sara Ferman, Maria Christopoulou, Ioannis Vogindroukas, Carol Westby, Kristine Jensen de Lopez, Skye Adams, Lilly Cheng, Amor Johnson, Natalie Neubauer, Suma Suswaram.

OUTLINE

Part 1: Historical Roots

Part 2: Multilingual & Multicultural Aspects

Part 3: Symptomatology & Intervention

Part 4: Future Directions

BRIEF FACTS

Despite variability in documented ASD prevalence is estimated at:
62/10,000

Prevalence appears to be roughly equally distributed across the globe and ethnic groups (Gillon et al., 2017; Elfien, 2022)

WHO PLAN: in its resolution at the *67th World Health Assembly* advocates for comprehensive, coordinated, and timely efforts of identification & management of ASD

Endorsed by more than 60 countries across the globe.

Supports greater collaboration between member states & stakeholders

BRIEF FACTS [2]

Result of complex neurobiological and pathophysiological underpinnings

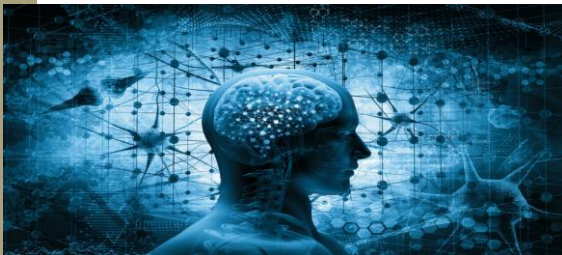
Aberrant brain circuitry manifested during infancy (Baron-Cohen, 1995; Paul, 2007; Petinou & Minaidou, 2017; Tager-Flushberg, 2016; Westby, 2014 Social Neuroscience)

A combination of environmental and genetic factors appear to synergize through complicated mechanisms responsible for the development of ASD



LANGUAGE AS A DYNAMIC SYSTEM WITH ITS OPTIMUM UNFOLDING BEING TRIGGERRED THROUGH SOCIAL INTERACTION VIS-À-VIS CHILD AND CAREGIVER(S)

*Petinou, K., Taxitari, L., Phinikettos, I. & Theodorou, E. (under review 2021). Dynamic Linguistic Interconnectedness and Variability in Toddlers. A cluster analysis. **Journal of Psycholinguistic Research**, vol 50, no 4. Pp-797-814.*

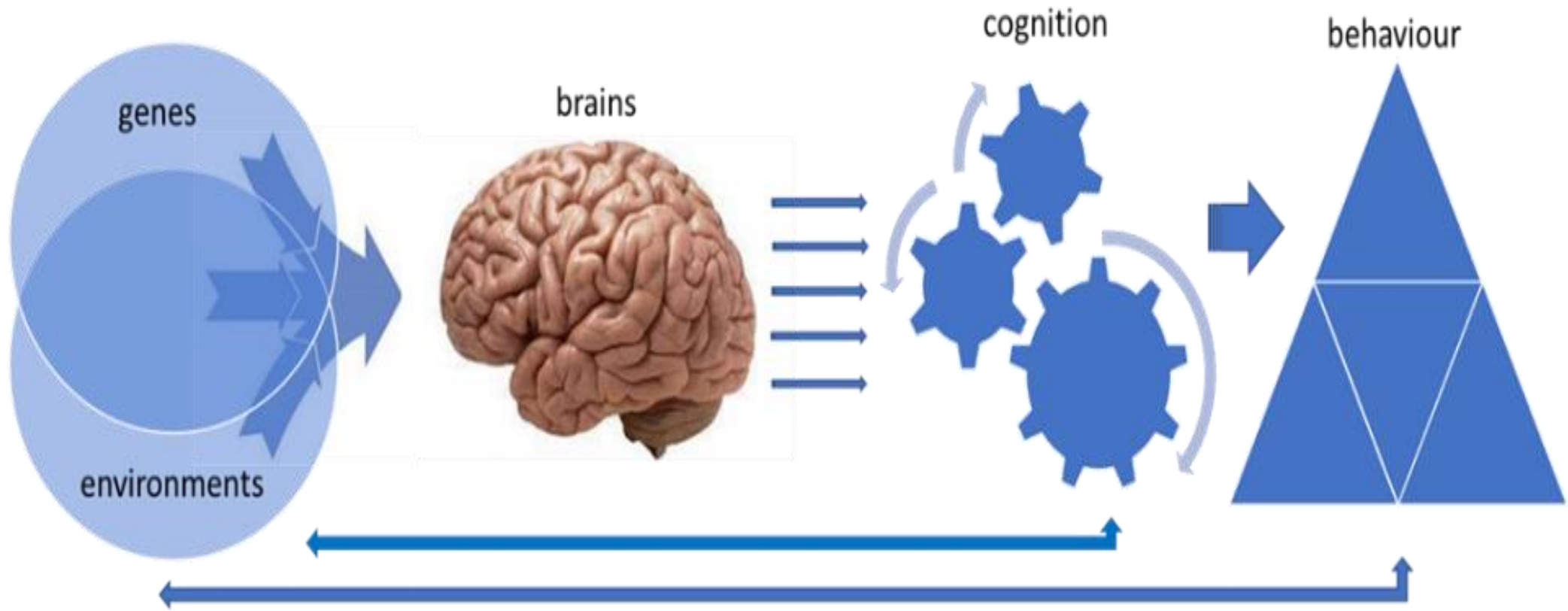


**Behavioral what
we see
RT**

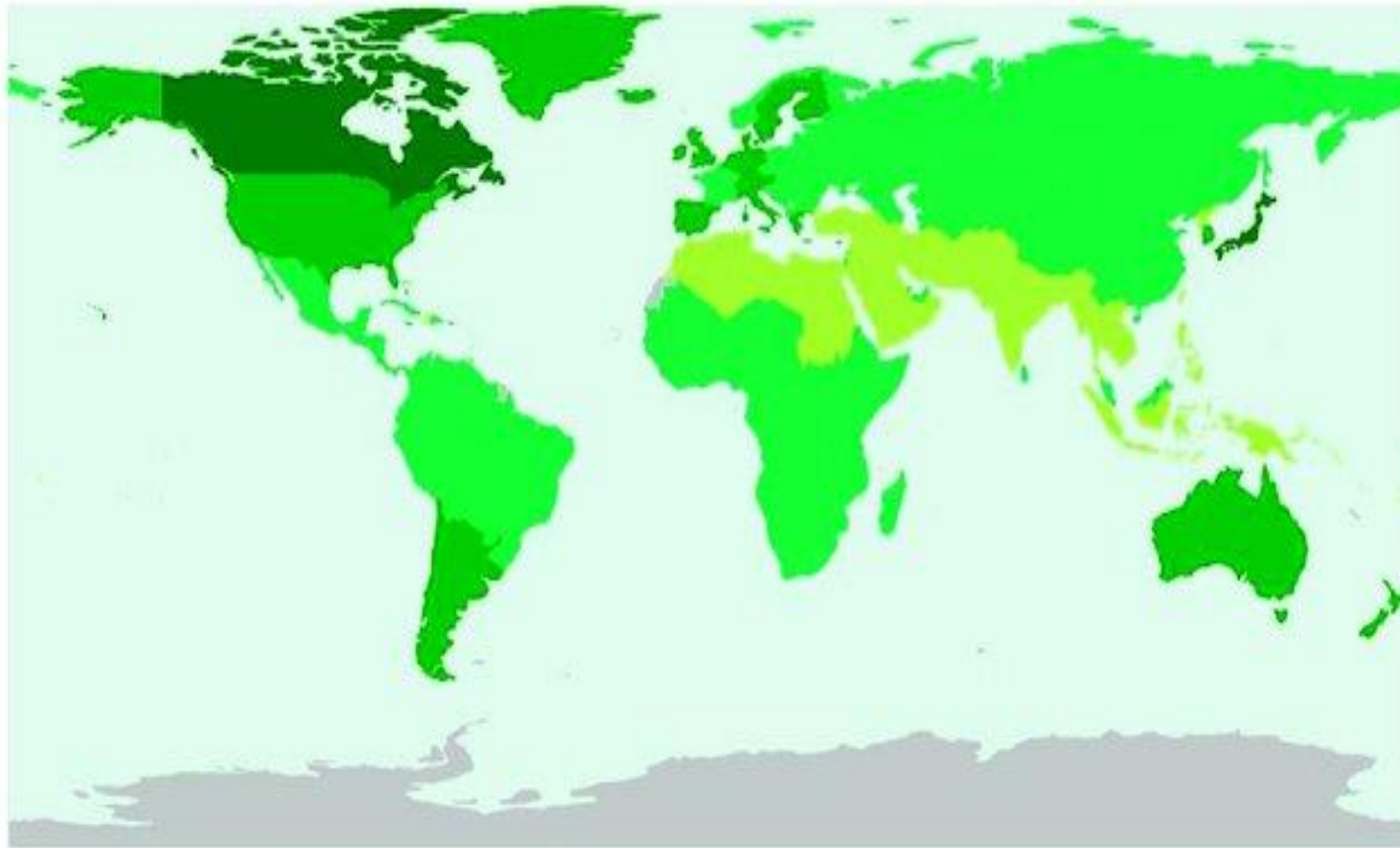
**Neurophysiologi-
cal brain
responses ERP
ABR ASSR EEG**

**Neurobiological
brain morphology,
synapses,
neurological substrate**

**Molecular
hormones, DNA
sequencing,**



FROM GENES TO THE BEHAVIOR



0%-0.4% 0.4%-0.6% 0.6%-0.8% 0.8%-1%

Figure 1.
Thermograph

2017 world Autism prevalence
Map:

Light green: 0-0.4%;

Bright green : 0.4-0.6%;

Green: 0.6-0.8%;

Dark green: 0.8-1%.

The figure was elaborated using R
software (R Core Team) to
represent open access data which
have been previously
standardized to age and sex

Part 1: Historical Roots-Prolegomena

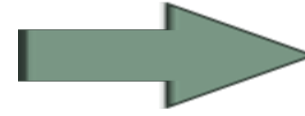
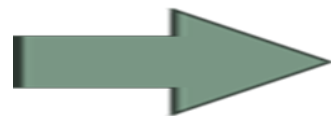
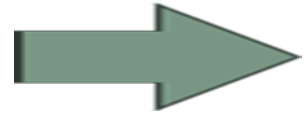
Going back hundreds of years many people who now fall under the ASD umbrella, would not only have been accepted but could have been highly respected

In other situations, in ancient Greece, people “with special needs and difficulties” would not survive-Spartans

Other cultures, eastern civilizations, people “did not care” if you were different or not as long as you served in the community

Diversity, heterogeneity, different cultural, societal, political and religious aspects determined the degree of handicap

Historical timeline



1800:
Ref. to
Medieval
Manuscript
Roman
Egyptian
Village-
Idiots
Demons
Possessed



1911:
Eugene
Bleuer
Swiss
Psychiatr
'EAYTOS
AYTOS
SELF'
Absorption
Subset of
Symptoms

1930
Russia: 1st
described &
defined
Autism:
Grunya
Sukhareva
1940-1990
Bluma
Zeigarnik
Marian
Kovaleskaya
Olga
Vinogradova

1943 USA
Leo
Kanner
Early
[Infantile
Autism]
1944
Austria:
Hans
Asperger
[High
function
Autism]

1950-1960
Bruno
Bettelheim
Refrigerator
Mother
Syndrome

1990's- to-
present
ASD Etiology,
Pathogenesis,
Theoretical
aspects:
Genetics
ToM
Central
Coherence
Theory
Neuroscience
Neurobiology
Neuro-
physiology
Molecular

Some more facts

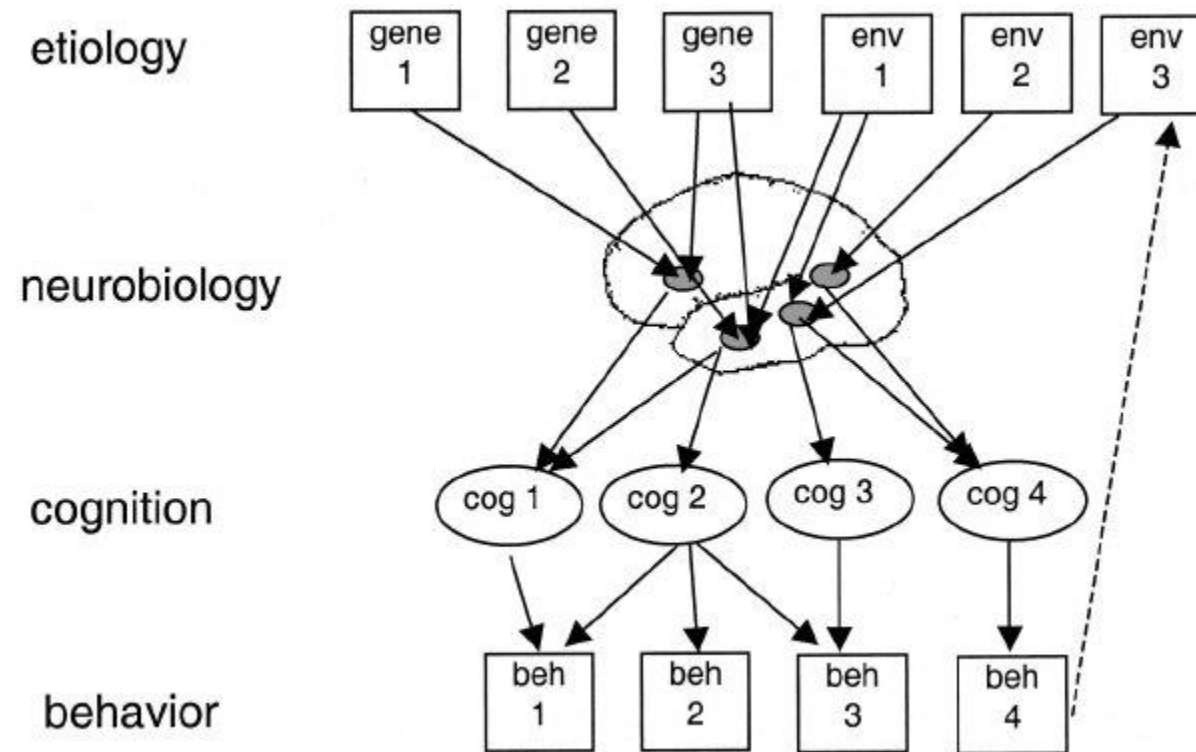
1940's the terminology of Autism is taking its own form

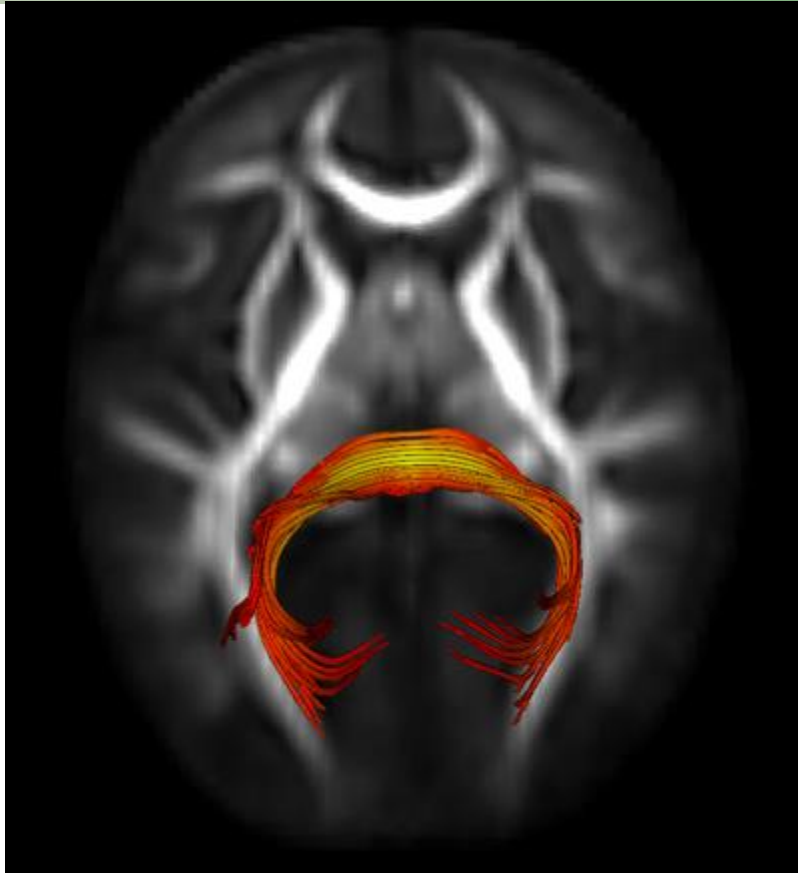
First ASD diagnosis was performed in the USA 1943

In the Mississippi- Donald Triplett who passed away last year at age of 89 (Zucker et al., "A different Key")

Abu Dharr 17th century AD (friend of Muhamad the Prophet)- "who wondered in the desert and was the light and sunshine for people"-
Obsessions and repetitive hand movements

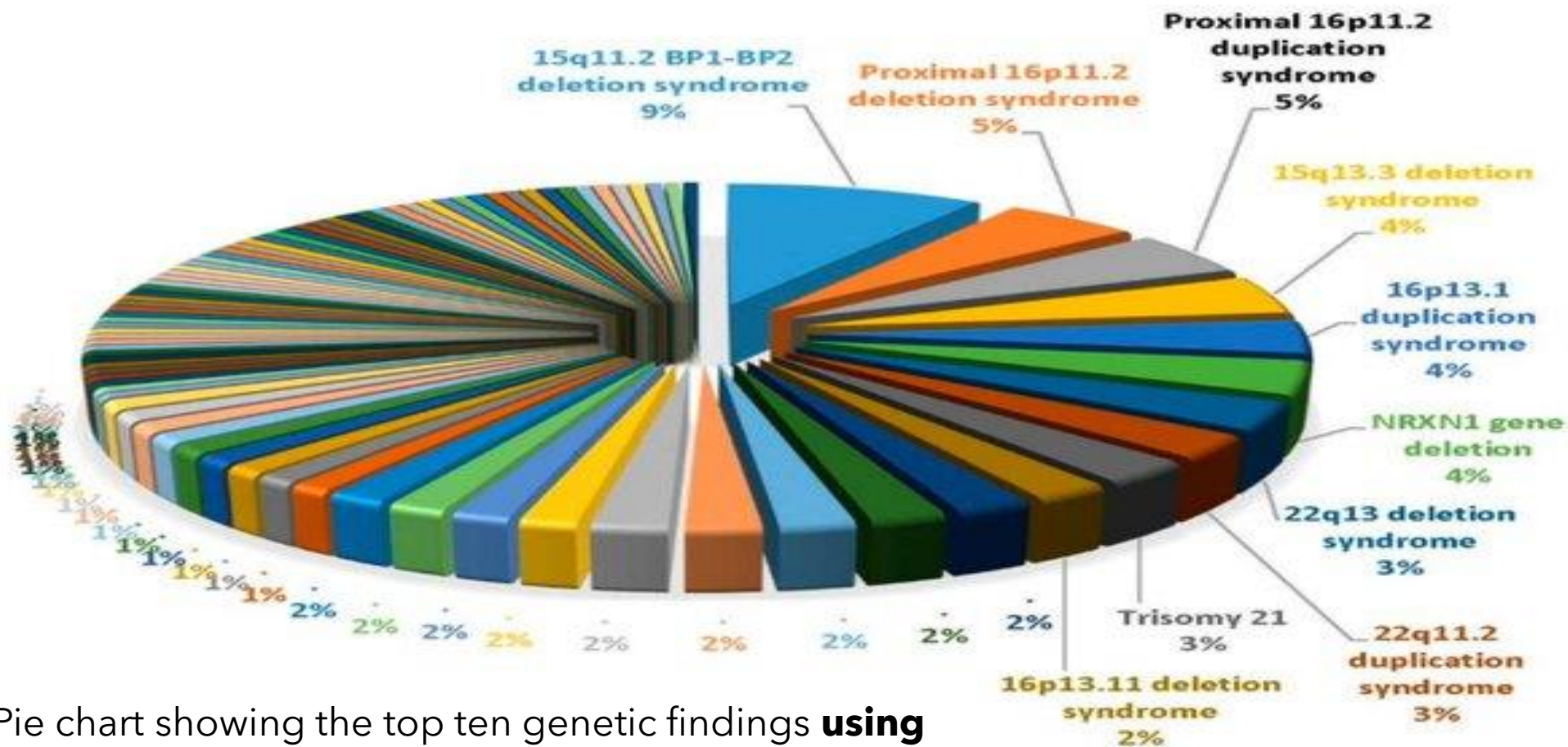
Newton, Einstein, Michelangelo etc.





The researchers believe that brain circuits involved within a brain structure known as the splenium of the corpus callosum (shown in this scan) may account for the differences in gaze shifting between the two groups.

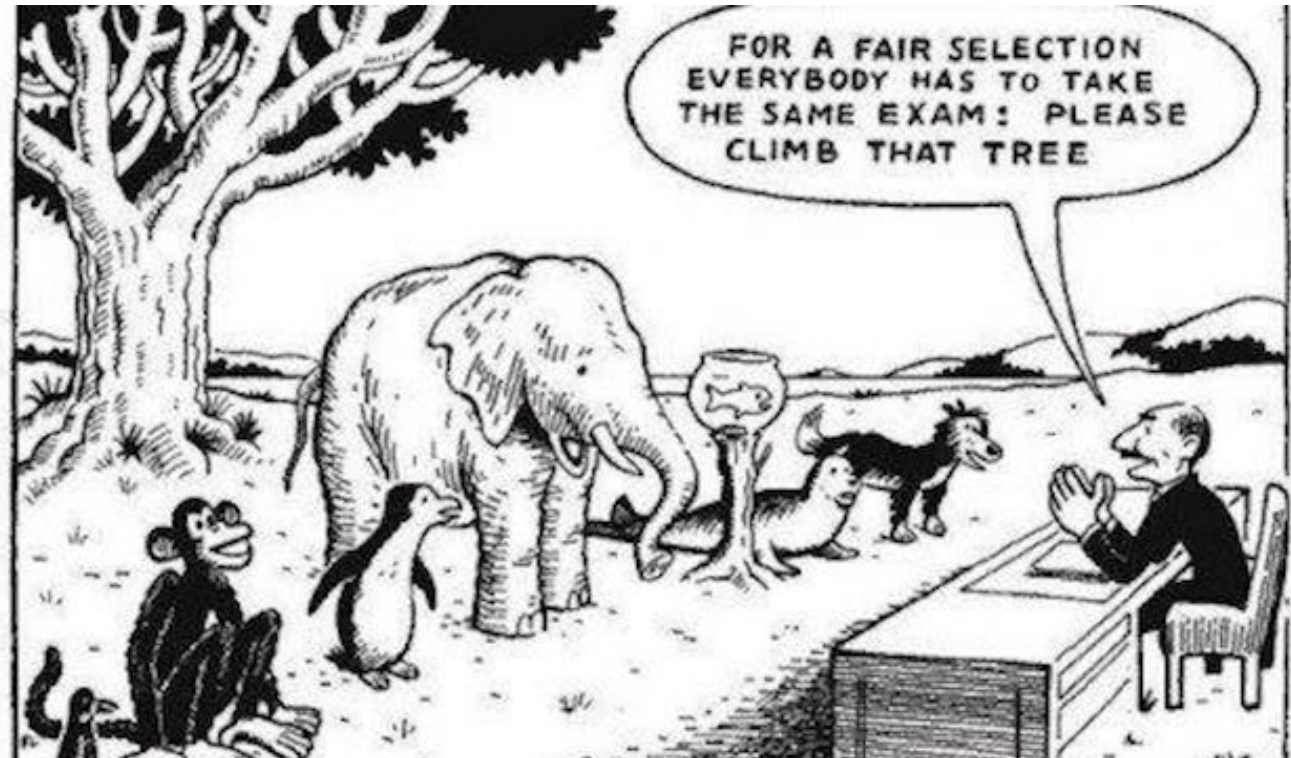
Image courtesy of Jason Wolff, Ph.D.,



Pie chart showing the top ten genetic findings **using ultra-high-resolution chromosomal microarrays from a large cohort of over 10,000** consecutive patients presenting for genetic services and laboratory testing with neurodevelopmental disorders affecting brain function and/or structure problems of unknown cause with developmental/intellectual disabilities and/or ASD by Ho et al. 2016

AS OF TODAY-NARRATIVE

- **SAME BUT DIFFERENT**
- **NOT ONE TREATMENT SOLUTION FOR ALL**
- **HETEROGENEITY**
- **DIFFERENT TRAJECTORIES**
- **DIFFERENT OUTCOMES**
- **ANSWERS AND MORE QUESTIONS**
- **SOLUTIONS BUT CHALLENGES**
- **AS IALP CULTURAL LINGUISTIC DIVERSITY**
- **REHABILITATION IMPLEMENTATION ACROSS THE GLOBE**
- **REHABILITATION SHOULD NOT BE FORGOTTEN**





Part 2. Multilingualism and Multicultural Aspects in ASD

Multilingualism: Once viewed skeptically, now recognized as beneficial to ASD language development-an extra tool

Cultural Impact: Essential for tailored interventions, enhancing social integration for children with ASD.

Positive Outcomes: Linked to improved nonverbal IQ, adaptive skills, broader vocabulary, executive functioning, narrative skills

Part 2. Multilingualism and Multicultural Aspects in ASD

Global Norms: Multilingual households are standard worldwide, contrasting with the monolingual focus of Western-dominated autism research. IALP ADVOCATES FOR MULTILINGUAL-MULTICULTURAL-Grech 2019

Persistent Skepticism: Concerns about multilingualism for minimally verbal ASD children continue despite positive evidence.

Potential Benefits: Multilingualism is associated with improved executive function in some ASD cases

Embracing Multilingualism: The need to embrace multilingualism in research and practice to inform culturally competent care and intervention strategies.

Part 2. Multilingualism and ASD

Diagnosis Disparities: Uneven ASD diagnosis rates globally, with later diagnoses in non-Western population

Responsive Services: Advocating for services attuned to cultural nuances.

Research Needs: Urging for global studies on cultural impacts in ASD care.

Embrace Diversity: Essential to inform inclusive, culturally competent practices

Part 2. Big Picture Take Away

Evidence-Based Benefits: Multilingual environments support ASD development

Mitigating Disparities: Cultural responsiveness bridges diagnostic gaps

Research Call: Urgent need for studies on multilingual and multicultural integration in ASD interventions

Part 3: Symptomatology & Intervention

All continents, geopolitical regions, socioeconomic layers, linguistic, cultural, and religious communities.

Affects more males than females

Neurodevelopmental Disorder

More often co-morbid with other NDDs, medical, psychiatric, learning disabilities, or genetic syndromes, ADHD etc.

Determining Autism Presence is Difficult

Autism: a cluster of early-appearing social communication issues & repetitive sensory–motor behaviours and interests

Associated with a genetic underpinnings,

No direct complex genetic link has been found

Not as clear as in Fragile X, Angelman or William syndrome.

Autism Diagnosis Protocols

In the past 70 years emergence of standardized diagnostic guidelines for the identification of autism worldwide.

WHO'S International Statistical Classification of Diseases and Related Health Problems- ICD 10.

[ICD-10-CA Reference Guide] and ICD 11 [ICD-11 revision]; both the 10th & 11th are employed in various regions of the world.

ICF-International Classification Functioning Application of the ICF in Children with Language Impairments (Westby, 2016)

American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders- DSM-5 [APA 2013] and the DSM 5-TR (Text Revision) [APA 2022 DSM5-TR]

Most countries with highest childhood autism rates lack resources

Global Burden of Disease Study (GBD) show 4.57 million children under five living with autism, or about 1 / 138 kids.

The largest numbers of young autistic children live in developing or low- and middle-income countries

Over one million children each in South Asia and Sub-Saharan Africa

The highest rates of childhood autism are seen in the Middle East, Central Asia and North Africa

Most countries with highest childhood autism rates lack resources

The largest numbers of young autistic children live in developing or low- and middle-income countries,

Over one million children each in South Asia and Sub-Saharan Africa

The highest rates of childhood autism are seen in the Middle East, Central Asia and North Africa.

Most countries with highest childhood autism rates lack resources [Peter Hotez 2018]

India has the largest number of autistic children (851,000), followed by China (422,000), Nigeria (207,000), Pakistan (172,000) and Indonesia (159,000).

Most countries with highest childhood autism rates lack resources [Peter Hotez 2018]

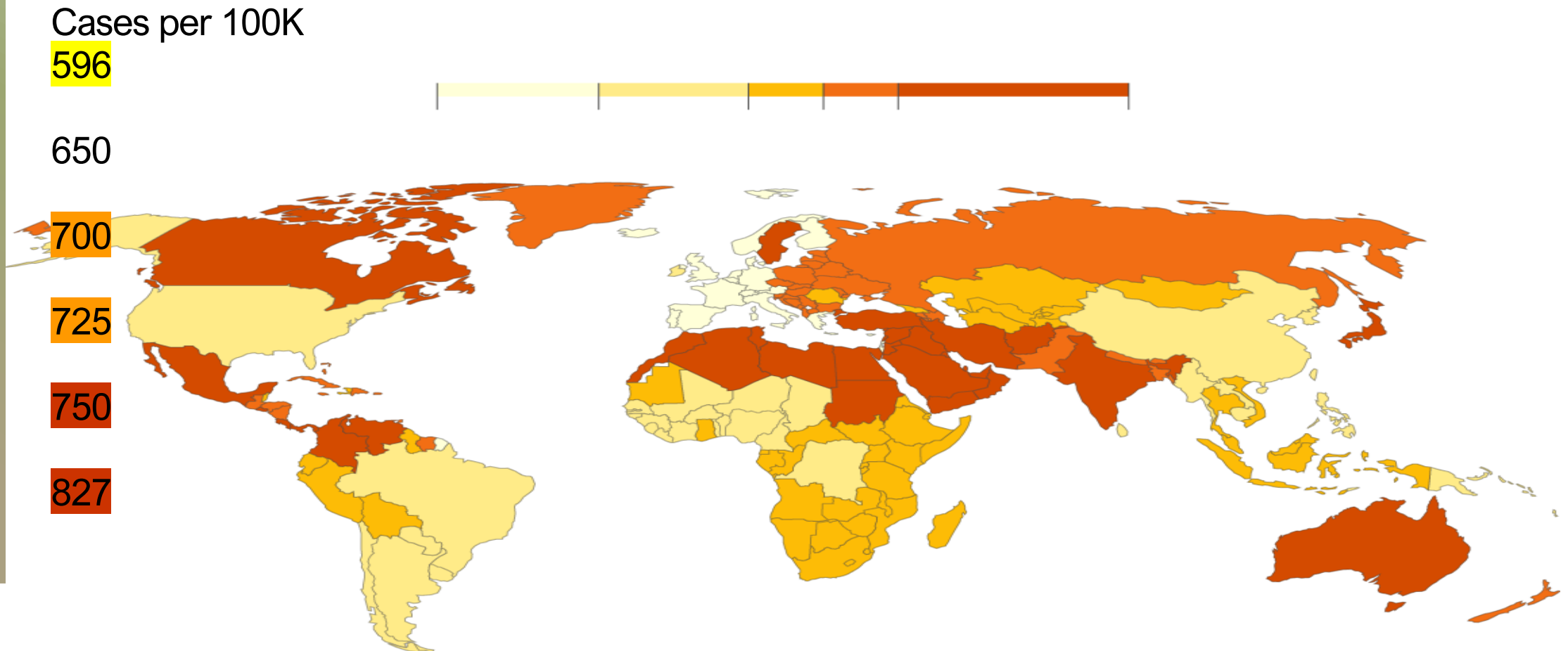
In contrast:

about 150,000 kids with autism live in North America & less than 140,000 in Western Europe.

The limited resources create a dilemma that requires rethinking the situation using solutions not yet put to the test in a cohesive manner.

Prevalence of autism in children under five

Most countries with highest childhood autism rates lack resources [Peter Hotez]<https://www.axios.com/2018/09/27/>



Future Directions: Establish an International Consortium: economic, world bank, autism researchers Think tank to solve this problem:

"The huge numbers of children on the autism spectrum living in resource-limited countries mean new and better global health policies are needed to ensure that they can receive access to care and support."

"Both de-stigmatizing autism and providing resources for the world's children on the autism spectrum should be priorities for the United Nations." **[Peter Hotez 2018]**

Conclusions-Food fo thought



1. Heterogeneity in ASD
2. Across the years it has always been there
3. Better grasp on pathogenesis and etiology
4. Better ways to identify early symptomatology
5. Long road ahead
6. Challenges
7. Keen eye on the future
8. Valid and accurate tools
9. Advocate for Evidence Based Practice
10. Foster translational research

BEST SPEECH THERAPIST EVER



The Flammarion Wood engraving. The image is often used as a metaphorical illustration of either the scientific or the mystical quests for knowledge. Credit: RGB Ventures / SuperStock / Alamy Stock Photo.

THE COMFORT ZONE



Unexpected surprises



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https://www.freepik.com/premium-ai-image/tree-with-books-that-say-books-it_182225161.htm



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Thank you for your attention



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