

## Introduction

Specific brain structural endophenotypes and personality traits are associated with differentiated predisposition and manifestation of disorders.

Individual differences in cognitive emotion processing are associated with variation in:

- Personality traits and types (Montag C. 2012)
- Stress response (Aubib Horth N. 2012)
- Genetics (Gardini S. 2009)
- Enterotypes (Arumugam M. 2011)
- Brain function (Bodgan R. 2012)
- Trace metals (Abumaria N. 2012)
- Health risk and treatment response (Hamburg MA. 2010, Chapman B. 2011)
- Subtypes of diseases (Smith TW. 2006)

The Tri-anthropo Type Paschalidis (TATP), the Three Human Type Model, provides a concise and multidimensional approach of identifying individuality in the function of the Human body<sup>(1)</sup>

## Objective

- Present the TATP
- Review scientific literature to verify TATP
- Validate the TATP clinically and examine the key personality traits associated with heightened risk of subtypes of anxiety and affective diseases that a specific parent inherits to a child

## Methods and Materials

- Computerized literature search
- Paschalidis System of Empirically based analysis, Identification, and Assessment of the Three Human Personality Types and Detection of Biological and Psychological Markers<sup>(1)</sup>
- Observational study: Participants: 180 adolescents, 12-18 years old, with a diagnosis of anxiety and affective disorder and their parents and 180 matched controls
- 3T Structural-Magnetic Resonance Images (MRI)

## Conclusions

Genetic individual differences of key brain regions of the limbic system determine three distinct personality types and predict different subtypes of anxiety and affective disorders.

The inherited personality type and not the corresponding psychopathology of parents is the predominant predictor of specific disease (ie. anxiety and affective disorders, **Figure 1**).

TATP is:

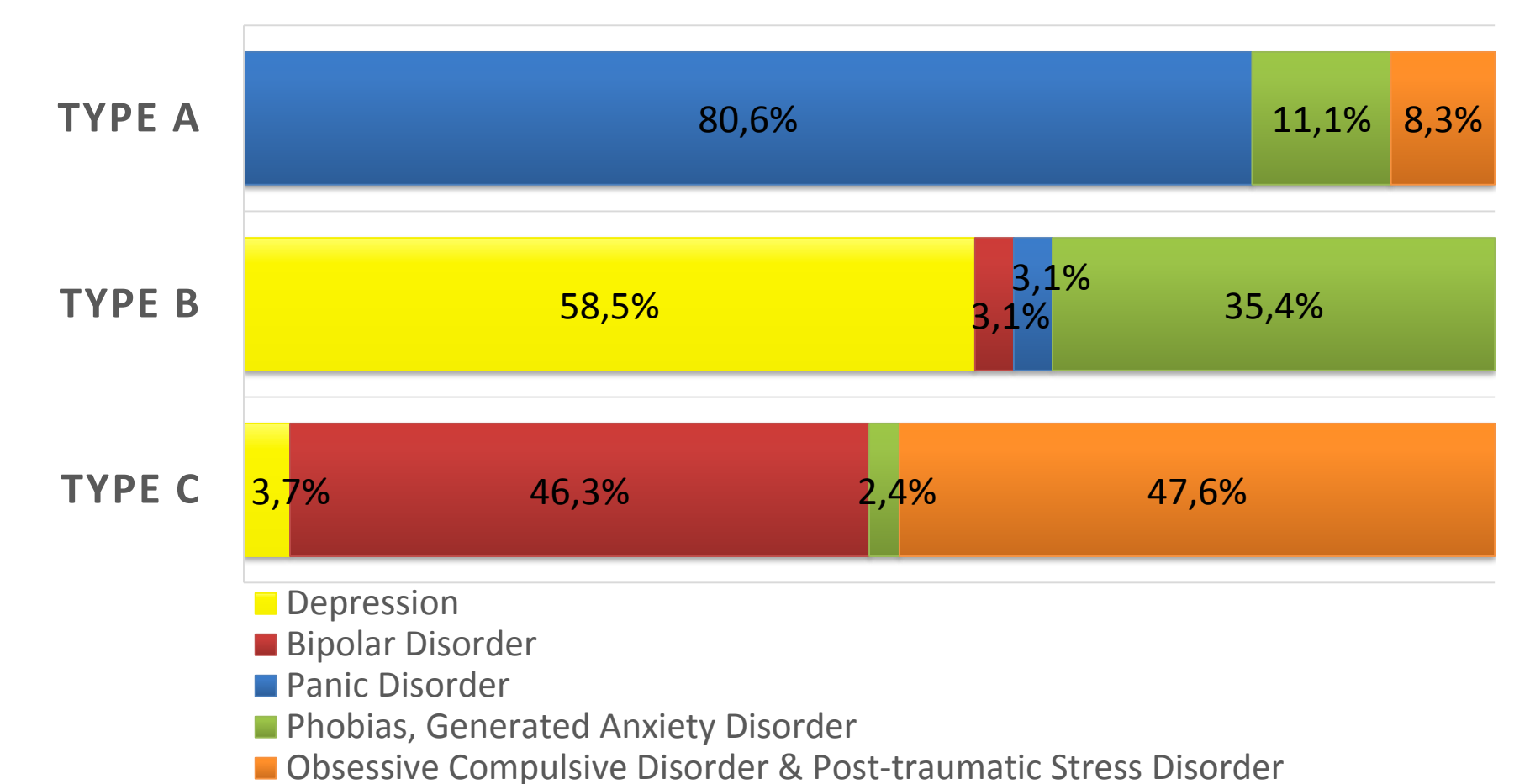
- A unique cognitive and neurobiological causal model
- A novel approach for the detection of biological and psychological markers
- A special key for understanding connection between brain function and its plasticity with disease prevention
- A translational and multidisciplinary approach to research and therapeutic interventions
- A tool for understanding individual human type nutritional needs used to prevent and cure disease

## Results

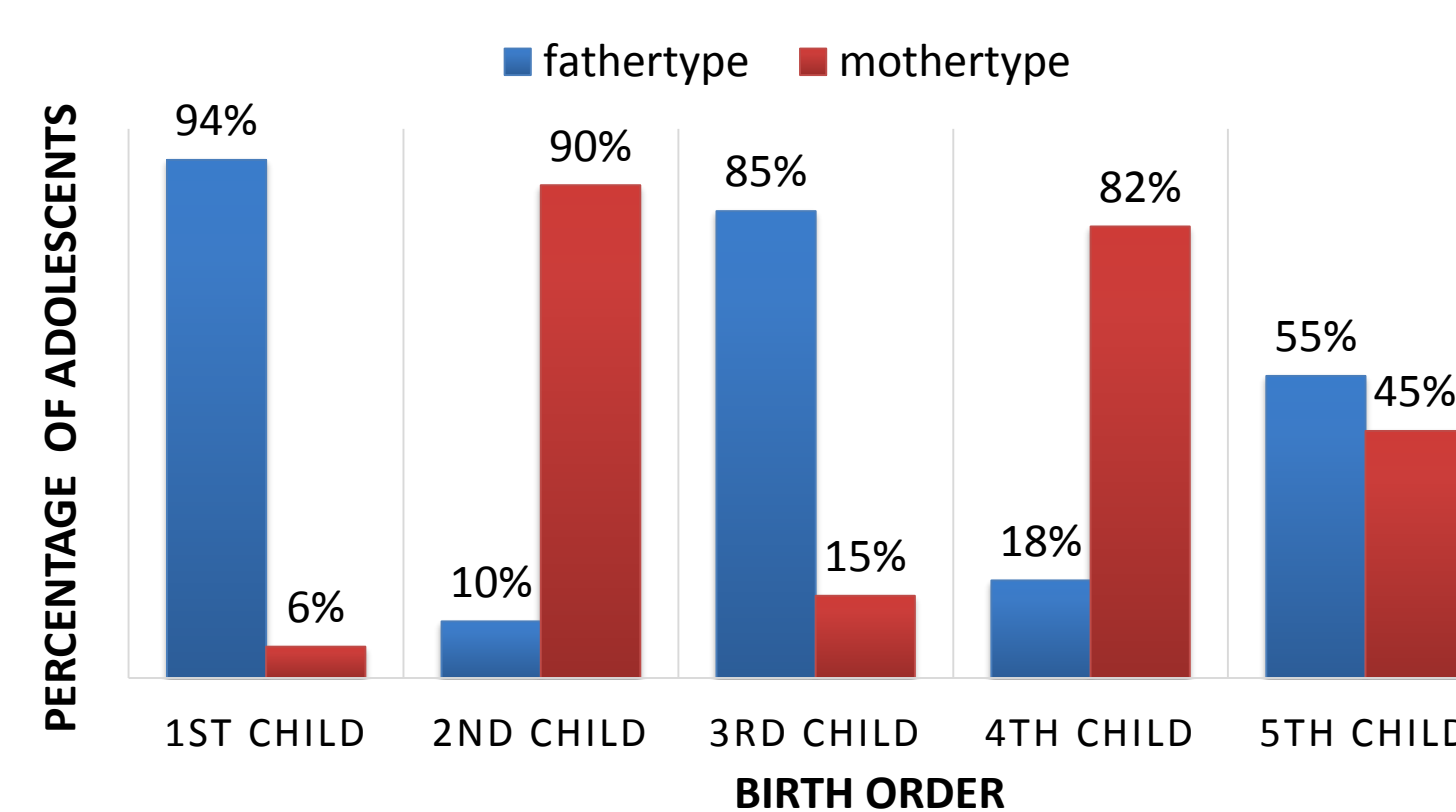
- Correlation of personality traits** with neuroanatomical and genetic differences and vulnerability to anxiety and affective disorders was observed (**Table 1**)
- Human personality types are **genetically determined** (**Figure 1**)
- Correlation of diseases** with human personality type (**Figure 2**)
- Hierarchical Cluster Analysis showed clustering of certain personality traits in three coherent groups (**Figure 4**)
- MRI showed that differences in key brain regions** of the limbic system are associated with the human personality type ( $p=0,062$ ) (**Figure 3**)
- Each personality type (A, B, C) group was positively correlated with grey matter volume in specific key brain regions (*Paired t tests and ANCOVA analysis:  $p<0,05$* ) (**Figure 3 and Figure 4**)
- Evidence shows that the transition of biometals is associated with the human type, the enterotype, the brain intestine connection and the Global Assessment of Stress Response Scale<sup>(1)</sup>

Outcome	Neural & Genetic correlation of personality and emotional process	Mapping Vulnerability to Anxiety and Affective disorders
Studies	Killcrose S. 1997 Suhara T. 2001 Cutsuridis V. 2009 Colin De Young 2010 Soholowski K. 2012 Kapogiannis D. 2012	Pei-jung WU, 2012 Barnet JH. 2011 Wright IC. 2002 Volgsten H. 2009 Farmer RF. 2009 Kim B. 2011 Roseann M. 2012 Jing Chen, 2011 Mac Master E. 2008

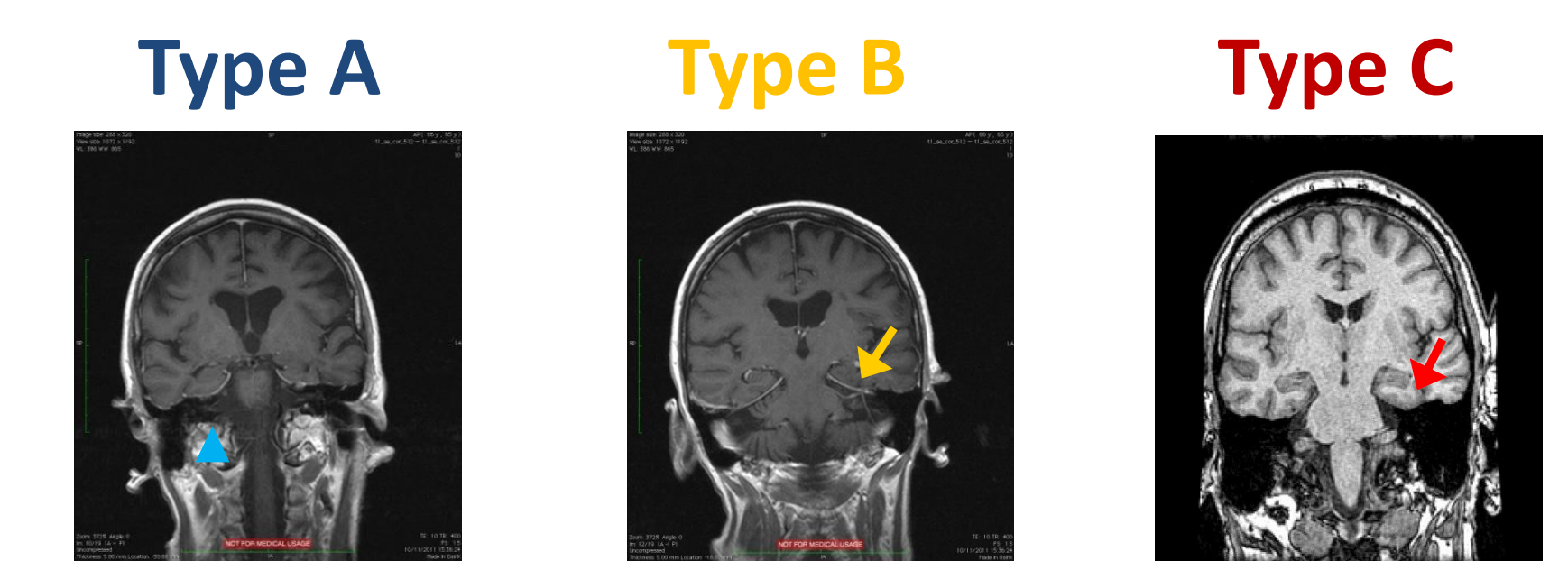
**Table 1.** Correlation of personality traits with neuroanatomical/genetic differences and vulnerability to anxiety/affective disorders.



**Figure 2.** Correlation of diseases with human personality type

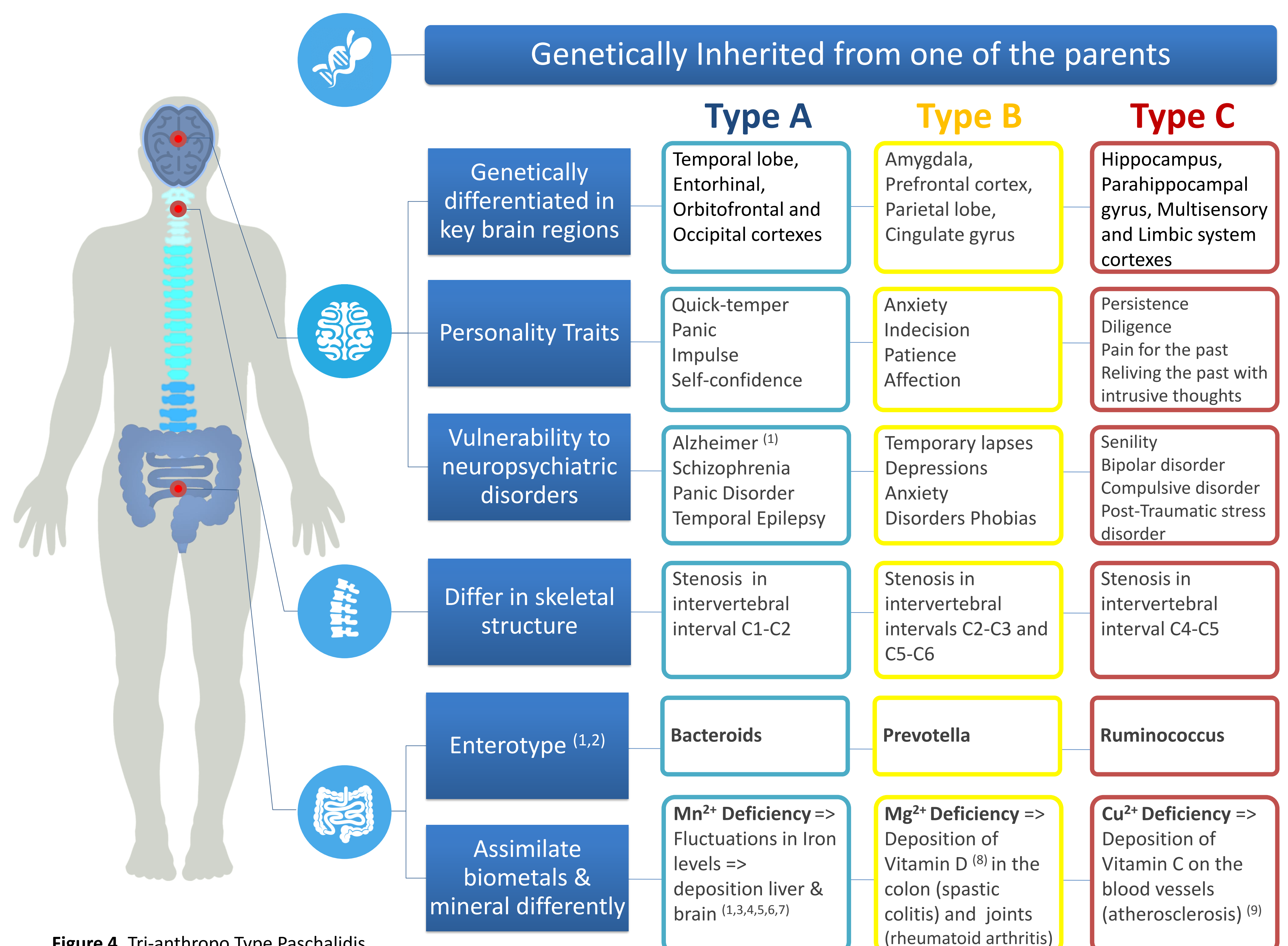


**Figure 1.** Human personality types are genetically determined (Pearson statistic chi-square test: scores are significant at  $p<0,05$ )



**Figure 3.** Representative MRI images demonstrating measurement of limbic system' regions: relation of volume of entorhinal gyrus (AOB), amygdala and hippocampus with the three personality types.

## Tri-anthropo Type Paschalidis



**Figure 4.** Tri-anthropo Type Paschalidis

## Contact



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