

# Supplementary Information of

## Neurodegeneration and Cancer: Where the Disorder Prevails

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### **CDS diseases (abundance and structural disorder)**

#### **AD\_DOWN (positive) vs AD\_UP (negative)**

<http://www.tartaglialab.com/boxplotter/view/629/a6f02b1232/>

#### **PD\_DOWN (pos) vs PD\_UP (neg)**

<http://www.tartaglialab.com/boxplotter/view/631/c68cb71821/>

#### **SCZ\_DOWN (pos) vs. SCZ\_UP (neg)**

<http://www.tartaglialab.com/boxplotter/view/636/23064d250f/>

### **Cancers (abundance and nucleic-acid binding propensity)**

#### **CRC\_DOWN (pos) vs. CRC\_UP (neg)**

<http://www.tartaglialab.com/boxplotter/view/643/8e2fd086a3/>

#### **LC\_DOWN (pos) vs. LC\_UP (neg)**

<http://www.tartaglialab.com/boxplotter/view/644/c70a66dc46/>

#### **PC\_DOWN (pos) vs. PC\_UP (neg)**

<http://www.tartaglialab.com/boxplotter/view/639/0f2a9ac422/>

**Table S1.** *Protein abundance analysis.* We provide links to the statistical analysis of genes sets performed with *boxplotter* (<http://www.tartaglialab.com/boxplotter/submit>)

A

Positive / Negative	R-AD (DOWN)	R-AD (UP)	R-PD (DOWN)	R-PD (UP)	R-SCZ (DOWN)	R-SCZ (UP)
CRC (DOWN)	●	●	●	●	●	●
CRC (UP)	●	●	●	●	●	●
LC (DOWN)	●	●	●	●	●	●
LC (UP)	●	●	●	●	●	●
PC (DOWN)	●	●	●	●	●	●
PC (UP)	●	●	●	●	●	●













Structural Disorder

B

Positive / Negative	AD (DOWN)	AD (UP)	PD (DOWN)	PD (UP)	SCZ (DOWN)	SCZ (UP)
R-CRC (DOWN)	●	●	●	●	●	●
R-CRC (UP)	●	●	●	●	●	●
R-LC (DOWN)	●	●	●	●	●	●
R-LC (UP)	●	●	●	●	●	●
R-PC (DOWN)	●	●	●	●	●	●
R-PC (UP)	●	●	●	●	●	●

Structural Disorder

**Figure S1.** *Enrichments in structural disorder propensities.* We used random sets of genes to measure the signal strength of structural disordered propensities for A) Cancers B) CNS diseases.

FileA/FileB	AD (DOWN)	AD (UP)
CRC (DOWN)	 N 0.90	 P 0.60
CRC (UP)		 P 0.76
LC (DOWN)	 N 0.79	 P 0.71
LC (UP)	 N 0.77	 P 0.71
PC (DOWN)	 N 0.80	 P 0.56
PC (UP)	 N 0.83	 P 0.71

**Figure S2.** *Classification of proteins binding to amyloid fibrils.* Proteins interacting with amyloid fibrils are physico-chemically similar to those overexpressed in Alzheimer's disease, in agreement with experimental findings.