

Supplementary Information

**Cellular senescence changes and their association
with brain structure in schizophrenia and major
depressive disorder**

Supplementary Table S1: List of subcortical regions segmented by FreeSurfer.

Lateral ventricles (left/right)
Thalamus (left/right)
Caudate (left/right)
Putamen (left/right)
Pallidum (left/right)
Hippocampus (left/right)
Amygdala (left/right)
Nucleus accumbens (left/right)

Supplementary Table S2. List of cortical regions parcellated by FreeSurfer.

Banks superior temporal sulcus (left/right)
Caudal anterior-cingulate cortex (left/right)
Caudal middle frontal gyrus (left/right)
Cuneus cortex (left/right)
Entorhinal cortex (left/right)
Fusiform gyrus (left/right)
Inferior parietal cortex (left/right)
Inferior temporal gyrus (left/right)
Isthmus–cingulate cortex (left/right)
Lateral occipital cortex (left/right)
Lateral orbital frontal cortex (left/right)
Lingual gyrus (left/right)
Medial orbital frontal cortex (left/right)
Middle temporal gyrus (left/right)
Parahippocampal gyrus (left/right)
Paracentral lobule (left/right)
Pars opercularis (left/right)
Pars orbitalis (left/right)
Pars triangularis (left/right)
Pericalcarine cortex (left/right)
Postcentral gyrus (left/right)
Posterior-cingulate cortex (left/right)
Precentral gyrus (left/right)
Precuneus cortex (left/right)
Rostral anterior cingulate cortex (left/right)
Rostral middle frontal gyrus (left/right)
Superior frontal gyrus (left/right)
Superior parietal cortex (left/right)
Superior temporal gyrus (left/right)
Supramarginal gyrus (left/right)
Frontal pole (left/right)

Temporal pole (left/right)
Transverse temporal cortex (left/right)
Insula (left/right)
Banks superior temporal sulcus (left/right)
Caudal anterior-cingulate cortex (left/right)
Caudal middle frontal gyrus (left/right)
Cuneus cortex (left/right)
Entorhinal cortex (left/right)
Fusiform gyrus (left/right)
Inferior parietal cortex (left/right)
Inferior temporal gyrus (left/right)
Isthmus–cingulate cortex (left/right)
Lateral occipital cortex (left/right)
Lateral orbital frontal cortex (left/right)
Lingual gyrus (left/right)
Medial orbital frontal cortex (left/right)
Middle temporal gyrus (left/right)
Parahippocampal gyrus (left/right)
Paracentral lobule (left/right)
Pars opercularis (left/right)
Pars orbitalis (left/right)
Pars triangularis (left/right)
Pericalcarine cortex (left/right)
Postcentral gyrus (left/right)
Posterior-cingulate cortex (left/right)
Precentral gyrus (left/right)
Precuneus cortex (left/right)
Rostral anterior cingulate cortex (left/right)
Rostral middle frontal gyrus (left/right)
Superior frontal gyrus (left/right)
Superior parietal cortex (left/right)
Superior temporal gyrus (left/right)

Supramarginal gyrus (left/right)

Frontal pole (left/right)

Temporal pole (left/right)

Transverse temporal cortex (left/right)

Insula (left/right)

Supplementary Table S3. P-values indicating the association in patients with schizophrenia between the level of each SASP-related protein and the MRI measures significantly correlated with SASP indices.

	Surface area of the left transverse temporal gyrus	Surface area of the right inferior frontal gyrus pars triangularis
Angiogenin	0.105	<u>0.033</u>
Chemokine CC-4	0.076	0.096
Growth-related Oncogene- α	0.068	0.537
Insulin-like Growth Factor-Binding Protein 2	0.519	0.280
Intercellular Adhesion Molecule 1	0.480	0.348
Gp130	<u>0.038</u>	<u>0.002</u>
Macrophage Inflammatory Protein 3A	0.757	0.632
Macrophage Migration Inhibitory Factor	0.072	0.286
Monocyte Chemotactic Protein 4	0.312	0.642
Osteoprotegerin	0.700	0.445
Tissue Inhibitor of Metalloproteinases 1	<u>0.013</u>	<u>0.023</u>
Tumor Necrosis Factor Receptor I	0.258	0.085
Tumor Necrosis Factor Receptor 2	<u>0.034</u>	<u>0.021</u>
Urokinase-type Plasminogen Activator Receptor	<u>0.032</u>	0.210

Bold and underlined letters represent significant results.

Supplementary Table S4. P-values indicating the effect of the level of each SASP-related protein and the protein-by-diagnosis interaction effect on anatomical measures in all subjects.

	Surface area of the left transverse temporal gyrus		Surface area of the right inferior frontal gyrus pars triangularis	
	Protein	Protein-by-diagnosis interaction	Protein	Protein-by-diagnosis interaction
Angiogenin	<u>0.025</u>	0.739	0.348	<u>0.031</u>
Chemokine CC-4	0.083	<u>0.041</u>	0.361	0.174
Growth-related Oncogene- α	0.596	0.080	0.923	0.315
Insulin-like Growth Factor-Binding Protein 2	0.137	0.139	0.793	0.111
Intercellular Adhesion Molecule 1	0.530	0.183	0.938	0.206
Gp130	0.077	0.174	0.166	<u>0.004</u>
Macrophage Inflammatory Protein 3A	0.649	0.268	0.208	0.287
Macrophage Migration Inhibitory Factor	0.481	0.340	0.079	0.978
Monocyte Chemotactic Protein 4	0.409	0.949	0.329	0.944
Osteoprotegerin	0.893	0.880	0.771	0.683
Tissue Inhibitor of Metalloproteinases 1	<u>0.007</u>	0.323	<u>0.011</u>	0.465
Tumor Necrosis Factor Receptor I	<u>0.042</u>	0.730	0.246	0.435
Tumor Necrosis Factor Receptor 2	<u>0.006</u>	0.169	0.113	0.105
Urokinase-type Plasminogen Activator Receptor	0.354	0.079	0.787	0.291

Bold and underlined letters represent significant results.