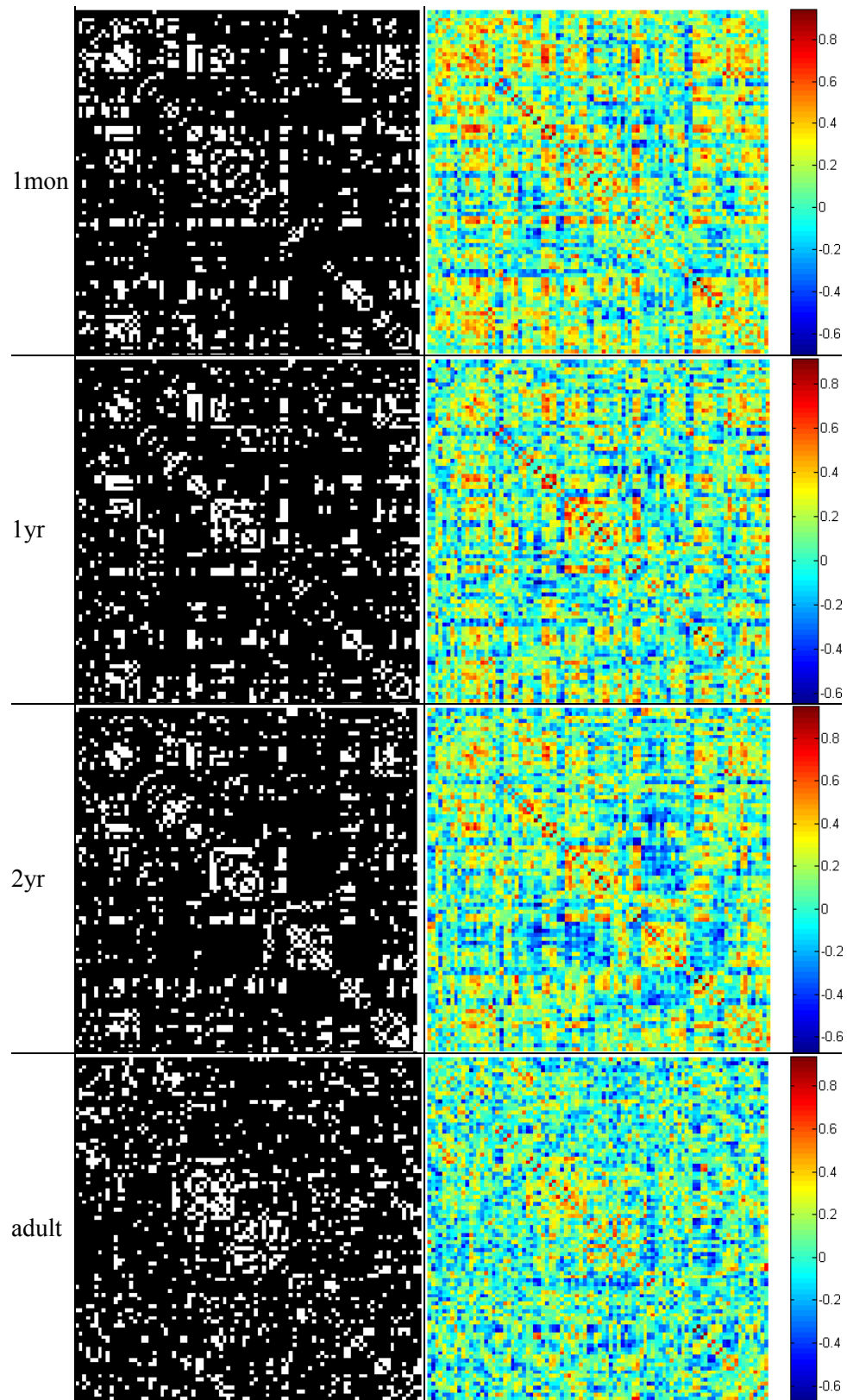


## Support Information

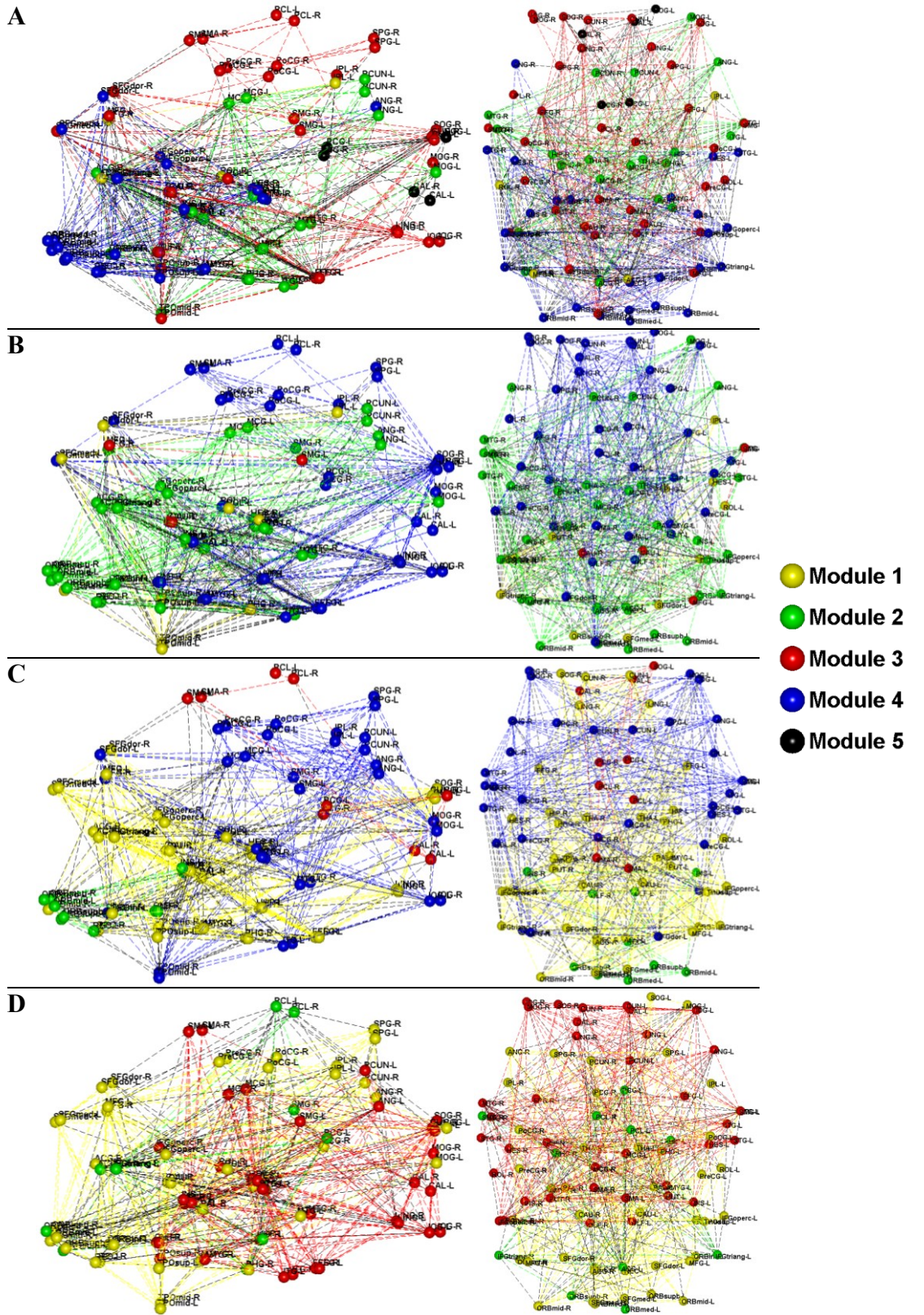
| ID | Label                                     | Label Abbr. | 1mo module | 1yr module | 2yr module | Adult module | 1mo role | 1yr role | 2yr role | Adult role |
|----|---|-------------|------------|------------|------------|--------------|----------|----------|----------|------------|
| 1  | Precentral gyrus left                     | PreCG-L     | 3          | 4          | 4          | 1            | N        | N        | N        | C          |
| 2  | Precentral gyrus right                    | PreCG-R     | 3          | 4          | 4          | 1            | C        | C        | N        | C          |
| 3  | Superior frontal gyrus (dorsal) left      | SFGdor-L    | 4          | 1          | 4          | 1            | C        | C        | C        | N          |
| 4  | Superior frontal gyrus (dorsal) right     | SFGdor-R    | 3          | 4          | 1          | 1            | C        | N        | N        | C          |
| 5  | Orbitofrontal cortex (superior) left      | ORBsupb-L   | 4          | 2          | 2          | 1            | P        | N        | C        | C          |
| 6  | Orbitofrontal cortex (superior) right     | ORBsupb-R   | 4          | 1          | 2          | 2            | C        | C        | C        | C          |
| 7  | Middle frontal gyrus left                 | MFG-L       | 3          | 3          | 1          | 1            | C        | H        | N        | C          |
| 8  | Middle frontal gyrus right                | MFG-R       | 1          | 2          | 4          | 1            | C        | C        | N        | P          |
| 9  | Orbitofrontal cortex (middle) left        | ORBmid-L    | 4          | 2          | 2          | 1            | N        | N        | N        | C          |
| 10 | Orbitofrontal cortex (middle) right       | ORBmid-R    | 4          | 2          | 1          | 1            | C        | P        | C        | C          |
| 11 | Inferior frontal gyrus (opercular) left   | IFGoperc-L  | 4          | 2          | 1          | 1            | C        | C        | N        | C          |
| 12 | Inferior frontal gyrus (opercular) right  | IFGoperc-R  | 4          | 2          | 1          | 3            | H        | H        | C        | C          |
| 13 | Inferior frontal gyrus (triangular) left  | IFGtriang-L | 4          | 2          | 1          | 2            | C        | C        | P        | C          |
| 14 | Inferior frontal gyrus (triangular) right | IFGtriang-R | 4          | 1          | 1          | 2            | H        | C        | C        | C          |
| 15 | Orbitofrontal cortex (inferior) left      | ORBinf-L    | 4          | 2          | 1          | 1            | H        | C        | C        | C          |
| 16 | Orbitofrontal cortex (inferior) right     | ORBinf-R    | 2          | 2          | 4          | 1            | H        | C        | C        | C          |
| 17 | Rolandic operculum left                   | ROL-L       | 3          | 1          | 1          | 1            | C        | C        | C        | C          |
| 18 | Rolandic operculum right                  | ROL-R       | 1          | 4          | 4          | 3            | C        | H        | C        | C          |
| 19 | Supplementary motor area left             | SMA-L       | 3          | 4          | 3          | 3            | C        | N        | C        | C          |
| 20 | Supplementary motor area right            | SMA-R       | 3          | 4          | 3          | 3            | C        | N        | C        | N          |
| 21 | Olfactory left                            | OLF-L       | 3          | 4          | 2          | 3            | C        | C        | C        | N          |
| 22 | Olfactory right                           | OLF-R       | 3          | 4          | 2          | 3            | C        | C        | C        | C          |
| 23 | Superior frontal gyrus (medial) left      | SFGmed-L    | 4          | 1          | 1          | 1            | C        | C        | N        | N          |
| 24 | Superior frontal gyrus (medial) right     | SFGmed-R    | 3          | 4          | 1          | 1            | H        | C        | N        | C          |
| 25 | Orbitofrontal cortex (medial) left        | ORBmed-L    | 4          | 2          | 2          | 2            | N        | C        | P        | C          |
| 26 | Orbitofrontal cortex (medial) right       | ORBmed-R    | 4          | 2          | 2          | 1            | N        | N        | C        | C          |
| 27 | Rectus gyrus left                         | REC-L       | 4          | 2          | 2          | 1            | P        | C        | H        | H          |
| 28 | Rectus gyrus right                        | REC-R       | 4          | 2          | 1          | 1            | C        | C        | C        | C          |
| 29 | Insula left                               | INS-L       | 4          | 2          | 2          | 3            | N        | N        | N        | C          |
| 30 | Insula right                              | INS-R       | 4          | 2          | 2          | 3            | N        | N        | C        | P          |
| 31 | Anterior cingulate gyrus left             | ACG-L       | 1          | 2          | 1          | 2            | C        | H        | C        | C          |
| 32 | Anterior cingulate gyrus right            | ACG-R       | 2          | 2          | 1          | 1            | H        | H        | C        | C          |
| 33 | Middler cingulate gyrus left              | MCG-L       | 2          | 2          | 4          | 3            | C        | C        | C        | H          |
| 34 | Middler cingulate gyrus right             | MCG-R       | 2          | 2          | 4          | 3            | H        | H        | C        | C          |
| 35 | Posterior cingulate gyrus left            | PCG-L       | 5          | 4          | 3          | 2            | H        | C        | C        | C          |
| 36 | Posterior cingulate gyrus right           | PCG-R       | 5          | 4          | 3          | 1            | N        | N        | C        | N          |
| 37 | Hippocampus left                          | HIP-L       | 2          | 4          | 1          | 2            | C        | C        | P        | C          |
| 38 | Hippocampus right                         | HIP-R       | 2          | 4          | 1          | 3            | C        | H        | C        | C          |
| 39 | ParaHippocampal gyrus left                | PHG-L       | 2          | 1          | 1          | 1            | C        | C        | C        | P          |
| 40 | ParaHippocampal gyrus right               | PHG-R       | 2          | 2          | 1          | 2            | C        | C        | C        | C          |
| 41 | Amygdala left                             | AMYG-L      | 4          | 4          | 1          | 3            | C        | H        | N        | N          |
| 42 | Amygdala right                            | AMYG-R      | 4          | 4          | 1          | 1            | C        | C        | C        | C          |
| 43 | Calcarine cortex left                     | CAL-L       | 5          | 4          | 3          | 3            | C        | N        | H        | N          |
| 44 | Calcarine cortex right                    | CAL-R       | 5          | 4          | 3          | 3            | N        | N        | C        | C          |
| 45 | Cuneus left                               | CUN-L       | 3          | 4          | 1          | 3            | C        | H        | N        | P          |
| 46 | Cuneus right                              | CUN-R       | 3          | 4          | 1          | 3            | C        | P        | C        | C          |
| 47 | Lingual gyrus left                        | LING-L      | 3          | 4          | 1          | 3            | C        | H        | N        | P          |

|    |                                |          |   |   |   |   |   |   |   |   |
|----|--------------------------------|----------|---|---|---|---|---|---|---|---|
| 48 | Lingual gyrus right            | LING-R   | 3 | 4 | 1 | 3 | N | H | C | C |
| 49 | Superior occipital gyrus left  | SOG-L    | 5 | 4 | 3 | 1 | C | C | C | N |
| 50 | Superior occipital gyrus right | SOG-R    | 3 | 4 | 1 | 3 | C | H | C | N |
| 51 | Middle occipital gyrus left    | MOG-L    | 2 | 2 | 4 | 1 | C | C | P | C |
| 52 | Middle occipital gyrus right   | MOG-R    | 3 | 4 | 4 | 3 | N | C | N | N |
| 53 | Inferior occipital gyrus left  | IOG-L    | 3 | 4 | 4 | 3 | N | C | C | H |
| 54 | Inferior occipital gyrus right | IOG-R    | 3 | 4 | 4 | 3 | N | C | C | N |
| 55 | Fusiform gyrus left            | FFG-L    | 3 | 4 | 1 | 3 | H | C | P | N |
| 56 | Fusiform gyrus right           | FFG-R    | 3 | 4 | 1 | 3 | H | H | P | N |
| 57 | Postcentral gyrus left         | PoCG-L   | 3 | 4 | 4 | 1 | N | C | N | N |
| 58 | Postcentral gyrus right        | PoCG-R   | 3 | 4 | 4 | 1 | N | C | P | C |
| 59 | Superior parietal gyrus left   | SPG-L    | 3 | 4 | 4 | 1 | N | N | N | C |
| 60 | Superior parietal gyrus right  | SPG-R    | 3 | 4 | 4 | 1 | N | C | N | C |
| 61 | Inferior parietal lobule left  | IPL-L    | 1 | 1 | 4 | 1 | C | C | N | N |
| 62 | Inferior parietal lobule right | IPL-R    | 3 | 4 | 4 | 1 | N | N | N | C |
| 63 | Supramarginal gyrus left       | SMG-L    | 3 | 3 | 4 | 3 | N | C | N | C |
| 64 | SupraMarginal gyrus right      | SMG-R    | 3 | 2 | 4 | 2 | N | C | N | C |
| 65 | Angular gyrus left             | ANG-L    | 2 | 2 | 4 | 3 | C | C | C | C |
| 66 | Angular gyrus right            | ANG-R    | 4 | 2 | 4 | 1 | C | N | P | N |
| 67 | Precuneus left                 | PCUN-L   | 2 | 2 | 4 | 3 | N | C | N | C |
| 68 | Precuneus right                | PCUN-R   | 2 | 2 | 4 | 1 | N | C | P | P |
| 69 | Paracentral lobule left        | PCL-L    | 3 | 4 | 3 | 2 | N | N | N | C |
| 70 | Paracentral lobule right       | PCL-R    | 3 | 4 | 3 | 2 | N | N | C | C |
| 71 | Caudate left                   | CAU-L    | 3 | 3 | 1 | 1 | H | C | N | P |
| 72 | Caudate right                  | CAU-R    | 3 | 3 | 1 | 1 | H | C | N | N |
| 73 | Putamen left                   | PUT-L    | 2 | 4 | 1 | 3 | C | C | H | C |
| 74 | Putamen right                  | PUT-R    | 3 | 1 | 1 | 3 | H | C | N | C |
| 75 | Pallidum left                  | PAL-L    | 2 | 2 | 1 | 1 | C | C | N | C |
| 76 | Pallidum right                 | PAL-R    | 4 | 2 | 1 | 1 | C | N | C | N |
| 77 | Thalamus left                  | THA-L    | 2 | 2 | 1 | 1 | C | C | N | N |
| 78 | Thalamus right                 | THA-R    | 2 | 2 | 1 | 1 | C | C | N | N |
| 79 | Heschl gyrus left              | HES-L    | 4 | 1 | 4 | 3 | C | C | C | C |
| 80 | Heschl gyrus right             | HES-R    | 4 | 2 | 1 | 3 | H | C | C | N |
| 81 | Superior temporal gyrus left   | STG-L    | 4 | 2 | 4 | 3 | N | C | C | N |
| 82 | Superior temporal gyrus right  | STG-R    | 4 | 2 | 4 | 3 | C | N | C | N |
| 83 | Temporal pole (superior) left  | TPOsup-L | 4 | 2 | 1 | 1 | C | C | C | C |
| 84 | Temporal pole (superior) right | TPOsup-R | 3 | 1 | 1 | 3 | C | H | P | C |
| 85 | Middle temporal gyrus left     | MTG-L    | 2 | 2 | 4 | 1 | C | C | H | C |
| 86 | Middle temporal gyrus right    | MTG-R    | 2 | 2 | 4 | 3 | C | C | P | C |
| 87 | Temporal pole (middle) left    | TPOmid-L | 3 | 1 | 4 | 1 | C | C | C | P |
| 88 | Temporal pole (middle) right   | TPOmid-R | 2 | 1 | 4 | 1 | C | H | C | C |
| 89 | Inferior temporal gyurs left   | ITG-L    | 2 | 4 | 4 | 3 | N | C | N | N |
| 90 | Inferior temporal gyrus right  | ITG-R    | 2 | 2 | 4 | 3 | H | H | C | N |

**Table S1.** Cortical and subcortical regions used as nodes of the brain networks, their module assignments, and modular topological roles in the brain networks of different age. The modular topological roles are in following categories: connector hub (H), provincial hub (P), connector non-hub (c), and provincial non-hub (N).



**Fig. S1.** Correlation matrices for age groups of 1-month-old (a), 1-year-old (b), 2-year-old (c), and adult (d) are shown on the top row of each panel, and their adjacent matrices corresponding to the network cost of 0.16 are shown on the bottom row. The colorbar indicates correlation coefficients.



**Fig. S2.** Anatomical location based representation of brain networks and their modularity organization: 1-month-old (A), 1-year-old (B), 2-year-old (C), and adult (D). Within-module connections are color-coded with the same color of their nodes, while between-module connections are coded with gray color.