

Table S1: Differences in effective connectivity between HC, HD mutation carriers and early-HD patients (result from ANCOVA, significance level $p < 0.0014$ after Bonferroni correction).

Univariate Tests						
Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.
Intrinsic connections						
IIPC to IIPC	Contrast	,688	2	,344	6,288	,002
	Error	8,746	160	,055		
IIPC to rIPC	Contrast	,018	2	,009	,097	,908
	Error	15,064	160	,094		
IIPC to IACC	Contrast	1,329	2	,665	6,990	,00123
	Error	15,215	160	,095		
IIPC to IDLPFC	Contrast	1,463	2	,731	9,588	,000
	Error	12,203	160	,076		
rIPC to IIPC	Contrast	,526	2	,263	6,597	,002
	Error	6,382	160	,040		
rIPC to rIPC	Contrast	,940	2	,470	10,151	,000
	Error	7,406	160	,046		
rIPC to IACC	Contrast	2,122	2	1,061	15,165	,000
	Error	11,196	160	,070		
rIPC to rDLPFC	Contrast	3,747	2	1,874	28,064	,000
	Error	10,682	160	,067		
IACC to IIPC	Contrast	,650	2	,325	6,593	,002
	Error	7,889	160	,049		
IACC to rIPC	Contrast	3,220	2	1,610	32,187	,000
	Error	8,003	160	,050		
IACC to IACC	Contrast	,744	2	,372	11,808	,000
	Error	5,039	160	,031		
IACC to IDLPFC	Contrast	,495	2	,248	6,873	,00137
	Error	5,766	160	,036		
IACC to rDLPFC	Contrast	5,959	2	2,979	48,436	,000
	Error	9,842	160	,062		
IDLPFC to IIPC	Contrast	1,582	2	,791	21,630	,000
	Error	5,851	160	,037		
IDLPFC to IACC	Contrast	1,020	2	,510	20,300	,000
	Error	4,021	160	,025		
IDLPC to IDLPFC	Contrast	,117	2	,058	3,365	,037
	Error	2,781	160	,017		
IDLPFC to rDLPFC	Contrast	1,097	2	,548	22,575	,000
	Error	3,887	160	,024		
rDLPFC to rIPC	Contrast	,904	2	,452	13,762	,000
	Error	5,257	160	,033		
rDLPFC to IACC	Contrast	,895	2	,448	5,000	,008
	Error	14,324	160	,090		
rDLPFC to IDLPFC	Contrast	,775	2	,387	2,839	,061

	Error	21,828	160	,136		
rDLPFC to rDLPFC	Contrast	7,269	2	3,634	11,302	,000
	Error	51,451	160	,322		
Modulatory connections						
IIPC to IACC (2B)	Contrast	2,173	2	1,086	1,400	,250
	Error	124,191	160	,776		
IIPC to IDLPFC (2B)	Contrast	16,027	2	8,014	11,353	,000
	Error	112,941	160	,706		
rIPC to IACC (2B)	Contrast	1,820	2	,910	1,764	,175
	Error	82,507	160	,516		
rIPC to rDLPFC (2B)	Contrast	11,046	2	5,523	8,645	,000
	Error	102,216	160	,639		
IACC to IIPC (2B)	Contrast	2,173	2	1,087	1,960	,144
	Error	88,681	160	,554		
IACC to rIPC (2B)	Contrast	,311	2	,156	,232	,793
	Error	107,199	160	,670		
IACC to IDLPFC (2B)	Contrast	,357	2	,178	,297	,743
	Error	95,954	160	,600		
IACC to rDLPFC (2B)	Contrast	8,054	2	4,027	6,982	,00124
	Error	92,282	160	,577		
IDLPFC to IIPC (2B)	Contrast	4,962	2	2,481	4,549	,012
	Error	87,266	160	,545		
IDLPFC to IACC (2B)	Contrast	1,825	2	,913	1,611	,203
	Error	90,649	160	,567		
IDLPFC to rDLPFC (2B)	Contrast	1,316	2	,658	1,081	,342
	Error	97,369	160	,609		
rDLPFC to rIPC (2B)	Contrast	5,145	2	2,573	5,205	,006
	Error	79,080	160	,494		
rDLPFC to IACC (2B)	Contrast	,274	2	,137	,450	,638
	Error	48,745	160	,305		
rDLPFC to IDLPFC (2B)	Contrast	,625	2	,313	1,177	,311
	Error	42,478	160	,265		