V2.2 DBS Tractography Atlas

Structures

Ca	Former filename ¹	Complete anatomical	New filename ²	Source/	Based on	ROI
Extended amygdala		name		Defined by		
Extended amygdala	Ca	Caudate	Cd	CIT168 (1)	i.a. HCP S500	see ¹
HTH Hypothalamus Hy CTT168 (*) HTH Hypothalamus Hy CTT168 (*) MN Mammillary body MB CTT168 (*) NAC Nucleus accumbens Ac CTT168 (*) Parabrachial pigmented nucleus Pu Putamen SNc Substantia nigra, pars reciculata reciculata reciculata ventral tegmental area between the more and pallidum VTA Ventral tegmental area External pallidum GPI_temporal GPI_temporal GPI_sensorimotor GPI_sensorimotor GPI_primarymotor GPI_primarymotor GPI_primarymotor GPI_primarymotor GPI_primarymotor GPI_premotor					subject release (2)	
HN	EXA	Extended amygdala	EA	CIT168 (1)		see 1
MN					,	4
HTH	HN	Habenula	Hb	CIT168 (1)		see '
Mammillary body MB CIT 168 (*) Interview of Parabrachial PBP Parabrachial PBP Parabrachial PBP Parabrachial PBP CIT 168 (*) Interview of Parabrachial Parabrachial PBP CIT 168 (*) Interview of Parabrachial Interview of Parabrachial Parabrachial Parabrachial PBP CIT 168 (*) Interview of Parabrachial Interview of Parabrachia Interv	ШΤШ	Hunothalamus	Ш	CIT140 (1)	•	coo 1
MN Mammillary body MB CIT168 (*) i.a. HCP SS00 subject release (*) i.a. HC	11111	Trypotrialarius	i iy	C11100()		see
NAC Nucleus accumbens Ac CIT168 (*) subject release (*) see 1 PBP Parabrachial pigmented nucleus Pu CIT168 (*) ia. HCP S500 subject release (*) see 1 SNc Substantia nigra, pars compacta SNc CIT168 (*) ia. HCP S500 subject release (*) ia. HCP S500 subject releas	MN	Mammillary body	MB	CIT168 (1)		see ¹
PBP Parabrachial pigmented nucleus Putamen Pu CIT168 (1) subject release (2) i.a. HCP 5500 subject release (subject release (²)	
PBP	NAC	Nucleus accumbens	Ac	CIT168 (1)	i.a. HCP S500	see ¹
Pu pigmented nucleus Putamen SNc Substantia nigra, pars compacta SNr Substantia nigra, pars reticulata SNr Substantia nigra, pars reticulata VeP Ventral pallidum VP CIT168 (1) La. HCP 5500 subject release (2) La. HCP 5500 subject release (3) La. HCP 5500 subject release (4) La. HCP 5500 subject release (5) La. HCP 5500 subject release (7) La. HCP 5500 subject					•	
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SNC Substantia nigra, pars compacta SNr Substantia nigra, pars compacta SNr Substantia nigra, pars reticulata VeP Ventral pallidum VP CIT168 (*) VENTA Ventral tegmental area VTA CIT168 (*) VENTA VENTA VENTA VENTA CIT168 (*) VENTA VENT	ru	rutamen	ru	CI1 100 (*)		see ·
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VeP Ventral pallidum VP CIT168 (¹) ia. HCP S500 subject release (²) ia. HCP S500 subject release (²	SNr	Substantia nigra, pars	SNr	CIT168 (1)	i.a. HCP S500	see 1
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¹ until 07/2023 ² from 07/2023

GPi_prefrontal		GPi_prefrontal	DISTAL (³)	according to Oxford Thalamic Connectivity Atlas (5) Structural connectivity, Parcellation according to Oxford Thalamic Connectivity	see ³
GPi_postparietal		GPi_postparietal	DISTAL (³)	Atlas (5) Structural connectivity, Parcellation according to Oxford Thalamic Connectivity	see ³
GPi_occipital		GPi_occipital	DISTAL (³)	Atlas (5) Structural connectivity, Parcellation according to Oxford Thalamic Connectivity Atlas (5)	see ³
RN	Red nucleus	RN	DISTAL (3)	ICBM 152 2009a	see 3
STN	Subthalamic nucleus	STN	DISTAL (³)	& b (nonlinear; ⁴ ICBM 152 2009a & b (nonlinear; ⁴	see ³
STN_associative		STN_associative	DISTAL (³)	Structural connectivity, Parcellation according to Oxford Thalamic Connectivity	see ³
STN_motor		STN_motor	DISTAL (³)	Atlas (5) Structural connectivity, Parcellation according to Oxford Thalamic Connectivity	see ³
STN_limbic		STN_limbic	DISTAL (³)	Atlas (5) Structural connectivity, Parcellation according to Oxford Thalamic Connectivity	see ³
PPN	Pedunculopontine nucleus	PPN	see ⁶	Atlas (5) DTI fractional anisotropy (FA) maps from in vivo and in situ post- mortem magnetic resonance images (MRI) & histological	See ⁶
STH	Subthalamic nucleus	STH	CIT168 (¹)	evaluation i.a. HCP S500 subject release (²)	see ¹

Tracts

Tracts						
Former filename	Complete anatomical name	New filename	Defined by	Based on	ROI	
ansa_lenticularis	Ansa lenticularis	al	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
ATR	Anterior Thalamic Radiation	atr	10	HCP 1021	Th-PC	
DRTT_v1	Dentatorubrothalamic Tract	drtt-SMA	10	HCP 1021	DN-RN- VO - SMA (BA6)	
DRTT	Dentatorubrothalamic Tract	drtt-M1	Rajamani et al. (2023, in prep.)	HCP 1021	DN-RN - VIM - M1 (BA4)	
NDRTT	Non-decussating Dentatorubrothalamic Tract	ndrtt	10	HCP 1021	DN-RN - VIM - M1 (BA4)	
lenticular_fasciculus	Fasciulus lenticularis	lenf	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
MFB	Medial Forebrain Bundle	mfb	10	HCP 1021	VTA-Ac-OC	
stn2gpi_sm	Subthalamic nucleus to globus pallidus internus connection (sensorimotor fibres)	STN-GPi- sensorimotor	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
stn2gpi_ass	Subthalamic nucleus- to globus pallidus internus connection (associative fibres)	STN-GPi- associative	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
stn2gpe_sm	Subthalamic nucleus to globus pallidus externus connection (sensorimotor fibres)	STN-GPe- sensorimotor	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
stn2gpe_ass	Subthalamic nucleus- to globus pallidus externus connection (associative fibres)	STN-GPe- associative	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
gpe2stn_sm	Globus pallidus externus to subthalamic nucleus connection (sensorimotor fibres)	GPe-STN- sensorimotor	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
gpe2stn_ass	Globus pallidus externus to subthalamic nucleus connection (associative fibres)	GPe-STN- associative	7	Expert neuroanatomist's definition, foundation: Morel atlas (8,9) & CIT168 (1)	see ⁷	
vtaPP_sIMFB	VTA projection pathway (formerly sIMFB: supero-lateral	VTApp	10	HCP 1021	DN-VTA-SFG-MFG-lateral OFV	

GPi_PPN	branch of the medial forebrain bundle) Globus pallidus internus to	GPi-PPN	Rajamani et al. (2023, in	HCP 1065	GPi-PPN (PPN segmentation according
PPN2Precentral	pedunculopontine nucleus connection Pedunculopontine nucleus to M1	PPN-M1	Rajamani et al. (2023, in	HCP 1021	to ⁶) PPN-M1 (BA4)
PPN2SMA	connection Pedunculopontine nucleus to SMA	PPN-SMA	prep.) Rajamani et al. (2023, in	HCP 1021	PPN-SMA (BA6)
STN_PPN	connection Subthalamic nucleus to pedunculopontine nucleus connection	STN-PPN	prep.) Rajamani et al. (2023, in prep.)	HCP 1065	STN-PPN (PPN segmentation according to ⁶)
CST_pathway	Corticospinal tract	cst	Rajamani et al. (2023, in prep.)	HCP 1065	Motor & Premotor regions defined by HMAT atlas (¹¹ – manual
Ventral_Trigeminal	Ventral trigeminothalamic	vttt	Rajamani et al. (2023, in	HCP 1021	midbrain slice Manual ROI definitions
Dorsal_Trigeminal	tract Dorsal trigeminothalamic	dttt	prep.) Rajamani et al. (2023, in	HCP 1021	Manual ROI definitions
Rubro_Cortical	tract Rubrocortical tract	rct	prep.) Rajamani et al. (2023, in	HCP 1021	Manual ROI definitions
Rubro_Spinal	Rubrospinal tract	rst	prep.) Rajamani et al. (2023, in prep.)	HCP 1021	Manual ROI definitions
Rubro_Cerebellar	Rubrocerebellar tract	rct	Rajamani et al. (2023, in	HCP 1021	Manual ROI definitions
Rubro_Olivary	Rubroolivary tract	rot	prep.) Rajamani et al. (2023, in	HCP 1021	Manual ROI definitions
Med_Lemniscus	Medial lemniscus	ml	prep.) Rajamani et al. (2023, in	HCP 1021	Manual ROI definitions
BA8	STN to Brodman area 8 connection	STN-BA8	prep.) Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN -frontal eye fields
BA6	STN to Brodman area 6 connection	STN-BA6	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN -Supplementary Motor Area
BA45_47	STN to Brodman area 45 and 47 connections	STN-BA45BA47	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN - Inferior Frontal Gyrus
BA4	STN to Brodman area 4 connection	STN-BA4	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN - Primary Motor Cortex
BA25	STN to Brodman area 25 connection	STN-BA25	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN -subgenual anterior cingulate cortex
BA24_32	STN to Brodman area 24 & 32 connection	STN-BA24BA32	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN - Dorsal anterior Cingulate Cortex & Preguneal Anterior Cingulate Cortex

BA1_2_3	STN to Brodman area 1 & 2 & 3 connection	STN-BA1BA2BA3	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN -Somatosensory Cortex (1°, 2°, 3°)
BA13	STN to Brodman area 13 connection	STN-BA13	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN - Insular cortex
BA10	STN to Brodman area 10 connection	STN-BA10	Rajamani et al. (2023, in prep.)	Cortical Atlas by 12 & HCP 1065	STN - Fronto-Parietal cortex

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