V2.1 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 PC Interview of Parabrachial Parabrachial PC Interview of Parabrachia P	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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connectivity,	GPi_premotor		GPi_premotor	DISTAL (3)		see ³
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			l	1	Parcellation	

¹ until 07/2023 ² from 07/2023

				according to Oxford Thalamic Connectivity	
GPi_prefrontal		GPi_prefrontal	DISTAL (3)	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 Atlas (5)	see ³
STN_limbic		STN_limbic	DISTAL (3)	Structural connectivity, Parcellation according to Oxford Thalamic Connectivity Atlas (5)	see ³
PPN	Pedunculopontine nucleus	PPN	see ⁶	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		
STN-SNr	Subthalamic nucleus to substantia nigra	STN-SNr	11	HCP 1065	see ¹¹		

	pars reticulata	I	I	1	1
	connection				
STN-SNc	Subthalamic nucleus	STN-SNc	11	HCP 1065	see 11
	to substantia nigra				
	pars compacta				
	connection				
vtaPP_sIMFB	VTA projection	VTApp	10	HCP 1021	DN-VTA-SFG-MFG-lateral
	pathway (formerly				OFV
	slMFB: supero-lateral branch of the medial				
	forebrain bundle)				
GPi_PPN	Globus pallidus	GPi-PPN	Rajamani et	HCP 1065	GPi-PPN (PPN
OI I_I I IV	internus to	GITTIN	al. (2023, in	1101 1003	segmentation according
	pedunculopontine		prep.)		to ⁶)
	nucleus connection				
PPN2Precentral	Pedunculopontine	PPN-M1	Rajamani et	HCP 1021	PPN-M1 (BA4)
	nucleus to M1		al. (2023, in		
	connection		prep.)		
PPN2SMA	Pedunculopontine	PPN-SMA	Rajamani et	HCP 1021	PPN-SMA (BA6)
	nucleus to SMA		al. (2023, in		
CTN DDN	connection	CTNI DDNI	prep.)	LICD 10/F	CTAL DDAL/DDAL
STN_PPN	Subthalamic nucleus	STN-PPN	Rajamani et	HCP 1065	STN-PPN (PPN
	to pedunculopontine nucleus connection		al. (2023, in prep.)		segmentation according to ⁶)
	nucleus connection		ргер./		
Ventral_Trigeminal	Ventral	vttt	Rajamani et	HCP 1021	Manual ROI definitions
vonaa_mgomma	trigeminothalamic	· · · · ·	al. (2023, in	1.002.	manaan kon aammaana
	tract		prep.)		
Dorsal_Trigeminal	Dorsal	dttt	Rajamani et	HCP 1021	Manual ROI definitions
	trigeminothalamic		al. (2023, in		
	tract		prep.)		
Rubro_Cortical	Rubrocortical tract	rct	Rajamani et	HCP 1021	Manual ROI definitions
			al. (2023, in		
	D.I I		prep.)	1100 4004	M IDOLL CO.
Rubro_Spinal	Rubrospinal tract	rst	Rajamani et	HCP 1021	Manual ROI definitions
			al. (2023, in prep.)		
Rubro_Cerebellar	Rubrocerebellar tract	rct	Rajamani et	HCP 1021	Manual ROI definitions
	rabiocorosonar arace	100	al. (2023, in	1.002.	manaan kon aammaana
			prep.)		
Rubro_Olivary	Rubroolivary tract	rot	Rajamani et	HCP 1021	Manual ROI definitions
			al. (2023, in		
			prep.)		
Med_Lemniscus	Medial lemniscus	ml	Rajamani et	HCP 1021	Manual ROI definitions
			al. (2023, in		
BA8	STN to Brodman area	STN-BA8	prep.) Rajamani et	Cortical Atlas by	STN -frontal eye fields
DAO	8 connection	STN-DAO	al. (2023, in	12	31N -Irontal eye helds
	o connection		prep.)	& HCP 1065	
			ріср.,	Q 1101 1000	
BA6	STN to Brodman area	STN-BA6	Rajamani et	Cortical Atlas by	STN -Supplementary
	6 connection		al. (2023, in	12	Motor Area
			prep.)	& HCP 1065	
BA45_47	STN to Brodman area	STN-BA45BA47	Rajamani et	Cortical Atlas by	STN - Inferior Frontal
	45 and 47 connections		al. (2023, in	12	Gyrus
			prep.)	& HCP 1065	
BA4	STN to Brodman area	STN-BA4	Rajamani et	Cortical Atlac by	STN - Primary Motor
DV4	4 connection	JIN-DA4	al. (2023, in	Cortical Atlas by	Cortex
	. comiccion		prep.)	& HCP 1065	Johns
			15 - 15 7		
BA25	STN to Brodman area	STN-BA25	Rajamani et	Cortical Atlas by	STN -subgenual anterior
	25 connection		al. (2023, in	12	cingulate cortex
			prep.)	& HCP 1065	
			1		

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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