

METADATA

R604

connectivity
ATLAS

Experiment

• Animal	
○ Case number / original protocol number	R604 / YvD07
○ Species / strain / gender / birth date / weight	Rat /Sprague Dawley/ Male /05.03.2007/325g /
○ Source (provider)	Scanbur BK AS
○ Microbiological status (e.g. FELASA)	conventional animal, free from zoonoses
○ Behavioral data	NA
○ Genetic characteristics	NA
• Experimental parameters	
○ Date / time (dd.mm.yyyy)	11.05.2007
○ Responsible investigator	YvD
○ Surgery parameters	
▪ Anaesthesia / analgesia	1,13 ml hypnorm:dormicum (1:1), s.c.
▪ Perioperative monitoring	Rectal temperature, reflexes (leg withdrawal, cornea)
▪ Postoperative care	Temgesic 0,17 ml, s.c.
○ Axonal tracing parameters	
▪ Injection target localization	Bregma coordinates: AP = -2,4 mm; ML = 5,2 mm (left); DV = 0.2 - 2.0 mm subpial Needle inserted with 25° rotation towards left from the midsagittal plane
▪ Tracer substance	Biotinylated dextran amine (10 kDa, Molecular Probes), 10% in 0.1M phosphate buffer, pH7.4
▪ Tracer delivery	Pressure injection with 1 ml Hamilton syringe and glass pipette (tip diameter = 60 µm)
○ Survival time	7 days
• Perfusion	
○ Date / time (dd.mm.yyyy)	18.05.2007
○ Responsible investigator	YvD
○ Surgery parameters	
▪ Anaesthesia / analgesia	Nembutal 0,55 ml i.p.
○ Procedure	transcardial approach
○ Solutions	0,9% saline, 4% paraformaldehyde, 10% sucrose
• Tissue extraction	
○ Date / time (dd.mm.yyyy)	18.05.2007
○ Responsible investigator	YvD
○ Storage	30% sucrose

Histology

• Tissue block processing	
○ Date / time (dd.mm.yyyy)	22.05.2007
○ Embedding	NA
○ Tissue blocking	Coronal
○ Procedure defining block face angle	External landmarks adjusted to flat skull position
○ Tissue marks	Shallow razor cut on right side
• Sectioning	
○ Date / time (dd.mm.yyyy)	22.05.2007 and 20.06.2007
○ Equipment	Freezing microtome (Microm HM450)
○ Section thickness	50 µm
○ Sampling	All
○ Section numbering	Consecutively from first section including prefrontal cortex
○ Storage procedure	0.1M PBS, pH 7.4 + 0.1 % PFA
• Staining 1 BDA	
○ Date / time (dd.mm.yyyy)	23.05.2007, 25.05.2007, 21.06.2007, 22.06.2007, 25.06.2007, 30.07.2007
○ Sampling	1:2 from entire brain
○ Staining procedure(s)	Histochemistry for BDA
○ Mounting procedure	manual on standard 1" glass
• Staining 2 NR	
○ Date / time (dd.mm.yyyy)	24.05.2007, 29.05.2007, 27.06.2007, 13.09.2007
○ Sampling	1:2 from entire brain (same selection as for BDA staining)
○ Staining procedure(s)	Neutral Red counterstaining for BDA sections
○ Mounting procedure	manual on standard 1" glass
• Staining 3 CO	
○ Date / time (dd.mm.yyyy)	24.05.2007, 29.05.2007
○ Sampling	1:2, from SI
○ Staining procedure(s)	histochemistry for cytochrome oxidase
○ Mounting procedure	manual, on standard 1" glass

Image acquisition

• Slide scanning	
○ Date / time (dd.mm.yyyy)	...
○ Equipment /software	Olympus Bx52 /20x Olympus UplanApo,NA 0.70 / NeuroLucida Virtual Slice (v 6.0)
○ File format(s)	TIFF
• Image processing	
○ Adjustments	rotate, crop
○ File format(s)	TIFF, PFF, JPEG

Databasing

• Filename / metadata link	metadataR604.pdf
• Location parameters	...

Analysis

• Injection site	
○ Procedure	Histological analysis of cytochrome oxidase patterns in SI (position) / Image analysis (size)
○ Position	SI barrel cortex, whisker D3
○ Size	Volume = 0,23 mm ³ ; largest area = 46947 µm ²

Original publication

Zakiewicz IM, van Dongen YC, Leergaard TB, Bjaalie JG (2010) - submitted manuscript