

BRAINS

Brain Imaging in Normal Subjects

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<http://www.sinapse.ac.uk/research-resources/brains-pro>
(or search 'SINAPSE BRAINS')

Purpose and structure

- Database of healthy people
- Already conducted studies & future studies (consent)
- From prenatal to **old age**
- Original scans (T1, T2, FLAIR)
- Associated clinical data
- Searchable (XNAT)
 - e.g. by age, blood pressure, medications, MMSE, sequence
- Provide reference for clinical reporting, control images for studies, repository for

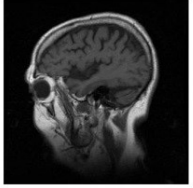
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BRAINS: Brain Images of Normal Subjects

Subject Detail







Age at Scan:	79.0
Sex:	female
Handedness:	unknown
First Language:	English
Ethnicity:	White
Sequence Types:	T1, T2, FLAIR
Systolic B.P.:	176
Diastolic B.P.:	77
Has hypertension:	Yes
Has prior stroke:	No
Has diabetes:	Available not encoded
MMSE Score:	29

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T1 Sample Slice

The following Universities are charitable bodies, registered in Scotland, with registration numbers as below:

 UNIVERSITY of ABERDEEN SC019683	 UNIVERSITY of STIRLING SC011159	 University of Glasgow SC021474	 UNIVERSITY of DUNDEE SC015096	 UNIVERSITY of EDINBURGH SC013532	 SPARK
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Samples to be included: Edinburgh

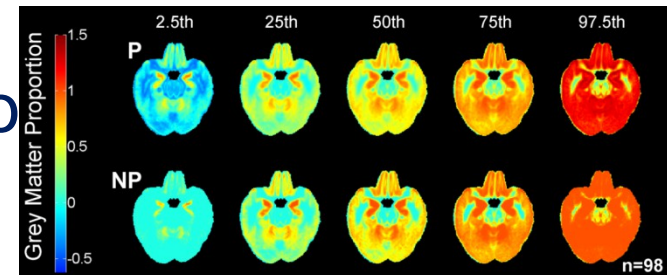
Study Name	Principal Investigator	N	Age yrs
LBC 1921/Simpsons study	Shenkin	160	75-80
LBC 1936	Deary	729	70-72
NABS wave 1 (1998-2000)	MacLulich	97	65-75
NABS wave 2 (2004-2006)	MacLulich	51	65-75
Psychology	Pernet, Parra, Dewar	11x2, 20, 20	50-60
NIH DTI study	Bastin	80	25-65
Psychiatry controls	McIntosh, Hall	70	20-50
CaliBrain	Lawrie	15	25-42
Psychiatry Amygdala studies	Hall	100	25-45
Bipolar controls	McIntosh	102	16-25
Neonatal	Boardman	~100	neonates
MERMAID	Denison	25	prenatal
Imagin'/Imagin'2	Norman, Denison	30+	prenatal
TOTAL		1,610+	

Samples to be included: Rest of Scotland

Study Name	Principal Investigator	N	Age yrs
ABC 1921	Whalley	240	77-80
ABC 1936	Whalley, Soiza	413	68-73
PINE	Counsell	82	55-84
ELTHI	Ross	288	30-60
Glasgow PSOBID	Cavanagh	104	20-60
Infant study	Brauer	30	<1 yr
Infant study	Cavanagh	30	<1 yr
TOTAL		1,187	
TOTAL SCOTLAND		>2,797	

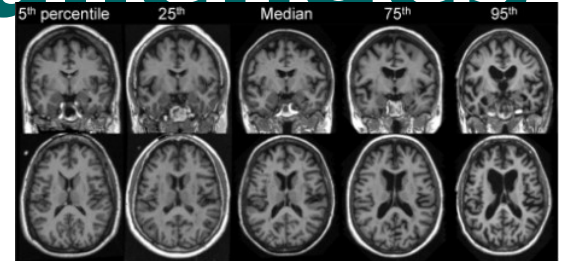
Challenges and how overcome

- Ethical approval
 - Steering committee (PIs), amending future consent forms
 - Support from Caldicott Guardian 'model of good practice'
- Data linkage across and between studies
 - Schema mapping, experienced people, CALIBRAIN
- Levels of access
 - Steering group, access agreements
- Data storage
 - Online registration, secure lo DICOM
- Data presentation



Future opportunities/challenges

- Creation of brain atlas
- Adding new studies
 - Data linkage/mapping across sites, scanners, ages
- Clinical scans?
- International collaboration?
 - Ethical & legal issues
- How to present data
 - Non-parametric atlas needs large numbers



Acknowledgments



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Job

Andrew
Robson

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Health Foundation



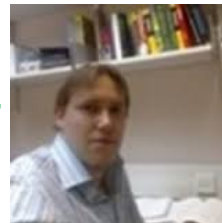
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**PIs and funders of
all original studies**

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