

493 **Genetic predisposition to tinnitus in the UK Biobank population**

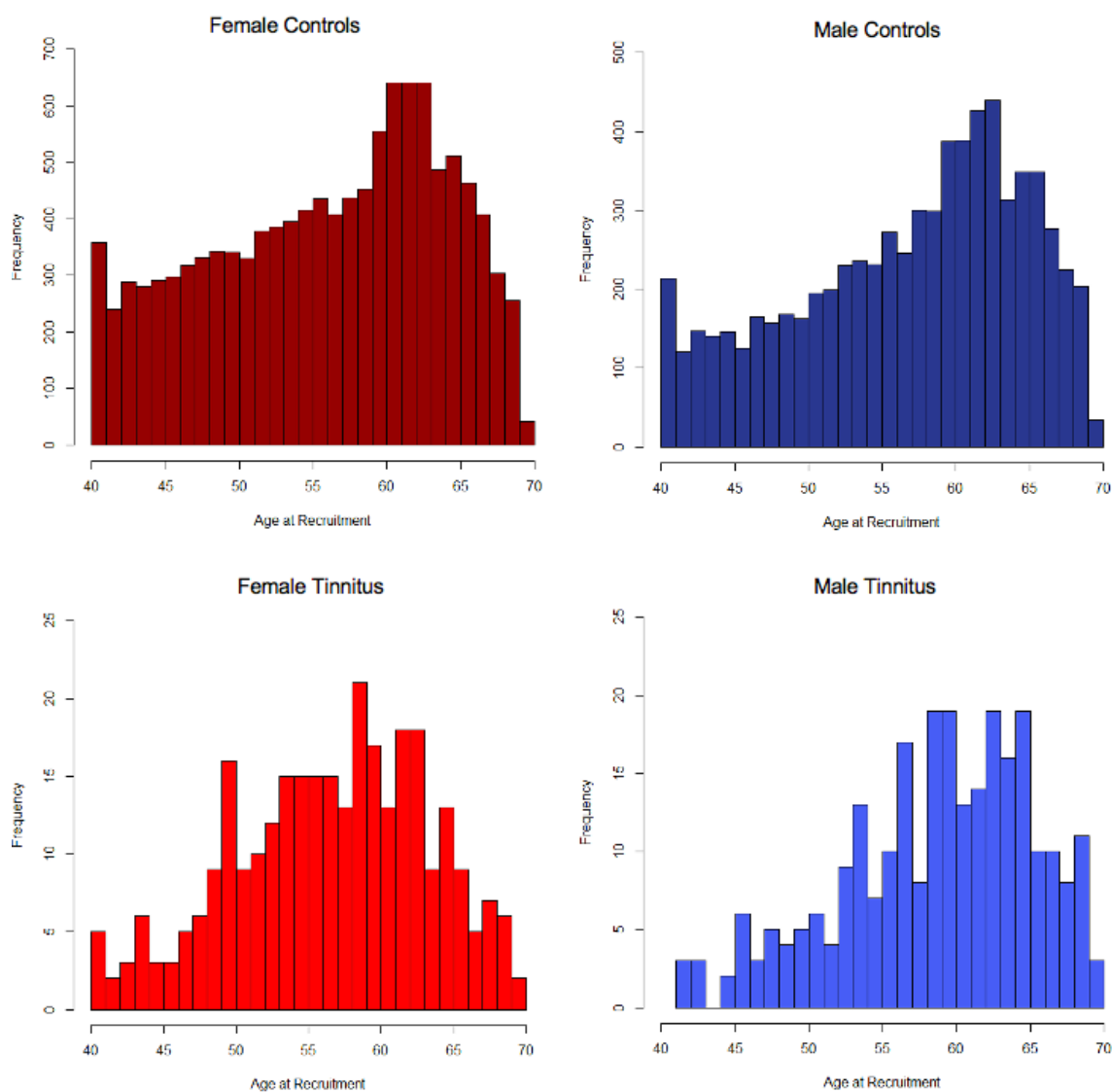
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500 **Supplementary Information**



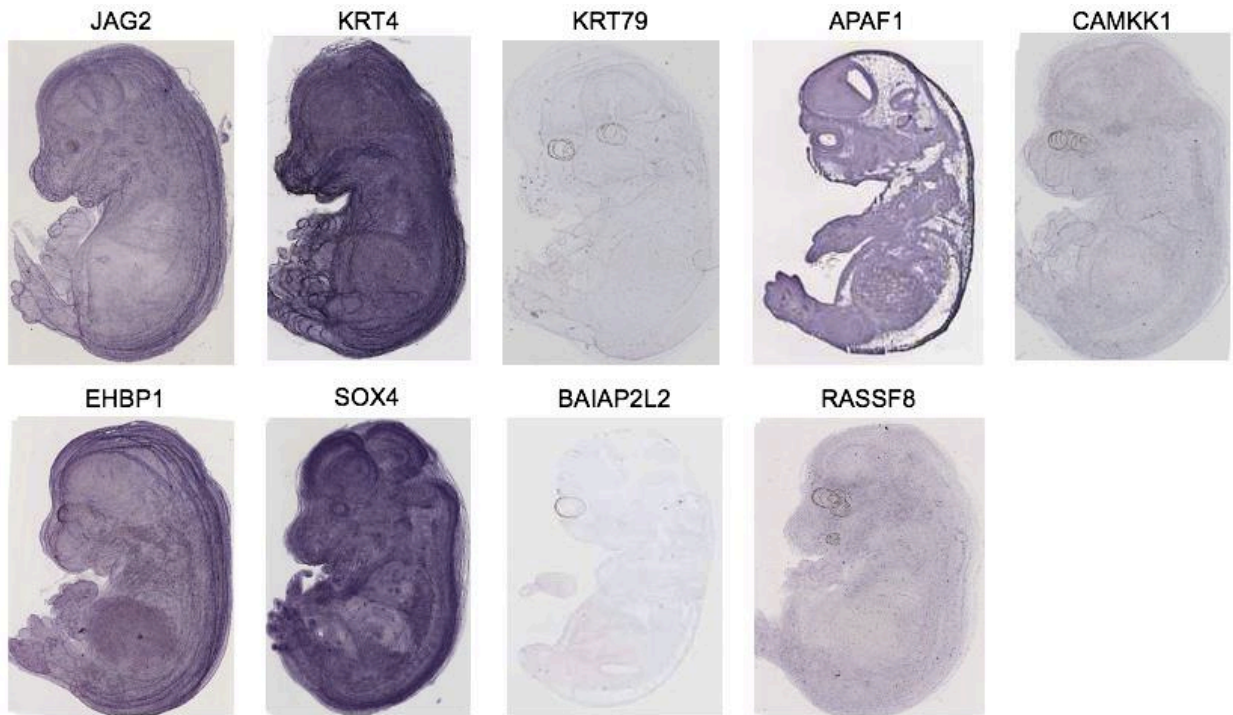
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502 **Fig S1.** Age distribution of all included participants in both tinnitus and control cohorts. At the
503 time of recruitment, all participants fell between 40 and 70 years of age. In all four groups,
504 distribution was approximately equivalent, with the peak of participants being 60-65 years old.

	Field Subject	Field Number	Categories Excluded
Ethnicity			
	Genetic ethnic grouping	22006	Non-Caucasian
Environment			
	Noisy workplace	4825	Yes for ≥ 1 year
	Loud music exposure	4836	Yes for ≥ 1 year
Hearing			
	Hearing difficulty	2247	Yes or total deafness
	Hearing aid	3393	Yes
	Cochlear implant	4792	Yes
	Unsuppurative otitis media	131229	Death, hospital admissions, primary care records
	Suppurative otitis media	131231	Death, hospital admissions, primary care records
	Eustachian obstruction	131235	Death, hospital admissions, primary care records
	Mastoiditis	131239	Death, hospital admissions, primary care records
	Choleseatoma of middle ear	131241	Death, hospital admissions, primary care records
	Perforation of tympanic membrane	131243	Death, hospital admissions, primary care records
	Otosclerosis	131251	Death, hospital admissions, primary care records
	Conductive and sensorineural hearing loss	131259	Death, hospital admissions, primary care records
	Otalgia and effusion of ear	131263	Death, hospital admissions, primary care records
Cardiovascular			
	Stroke	42006	Death, hospital admissions, primary care records
	Hypertensive disease	131289	Death, hospital admissions, primary care records
Central Nervous System			
	Type of cancer	40006	Malignant neoplasms of eye, brain, and other parts of CNS
	Bacterial meningitis	130993, 130995	Death, hospital admissions, primary care records
	Meningitis	130997, 130999	Death, hospital admissions, primary care records
	Encephalitis, myelitis, and encephalomyelitis	131001, 131003	Death, hospital admissions, primary care records
	Intracranial and intraspinal abscess and granuloma	131005, 131007	Death, hospital admissions, primary care records
	Intracranial and intraspinal phlebitis and thrombophlebitis	131009	Death, hospital admissions, primary care records
	Huntington's disease	131013	Death, hospital admissions, primary care records
	Hereditary ataxia	131015	Death, hospital admissions, primary care records
	Spinal muscular atrophy	131017	Death, hospital admissions, primary care records
	Postpolio syndrome	131021	Death, hospital admissions, primary care records
	Parkinson's disease	131023	Death, hospital admissions, primary care records

	Secondary Parkinsonism	131025	Death, hospital admissions, primary care records
	Dystonia	131031	Death, hospital admissions, primary care records
	Alzheimer's disease	131037	Death, hospital admissions, primary care records
	Multiple sclerosis	131043	Death, hospital admissions, primary care records
	Epilepsy	131049	Death, hospital admissions, primary care records
	Status epilepticus	131051	Death, hospital admissions, primary care records
	Transient cerebral ischaemic attacks	131057	Death, hospital admissions, primary care records
	Vascular syndromes of the brain in cerebrovascular disease	131059	Death, hospital admissions, primary care records
	Disorders of the trigeminal nerve	131063	Death, hospital admissions, primary care records
	Facial nerve disorders	131065	Death, hospital admissions, primary care records
	Nerve root and plexus disorders	131071	Death, hospital admissions, primary care records
	Myasthenia gravis and other myoneural disorders	131093	Death, hospital admissions, primary care records
	Infantile cerebral palsy	131101	Death, hospital admissions, primary care records
	Hydrocephalus	131111	Death, hospital admissions, primary care records
	Toxic encephalopathy	131113	Death, hospital admissions, primary care records

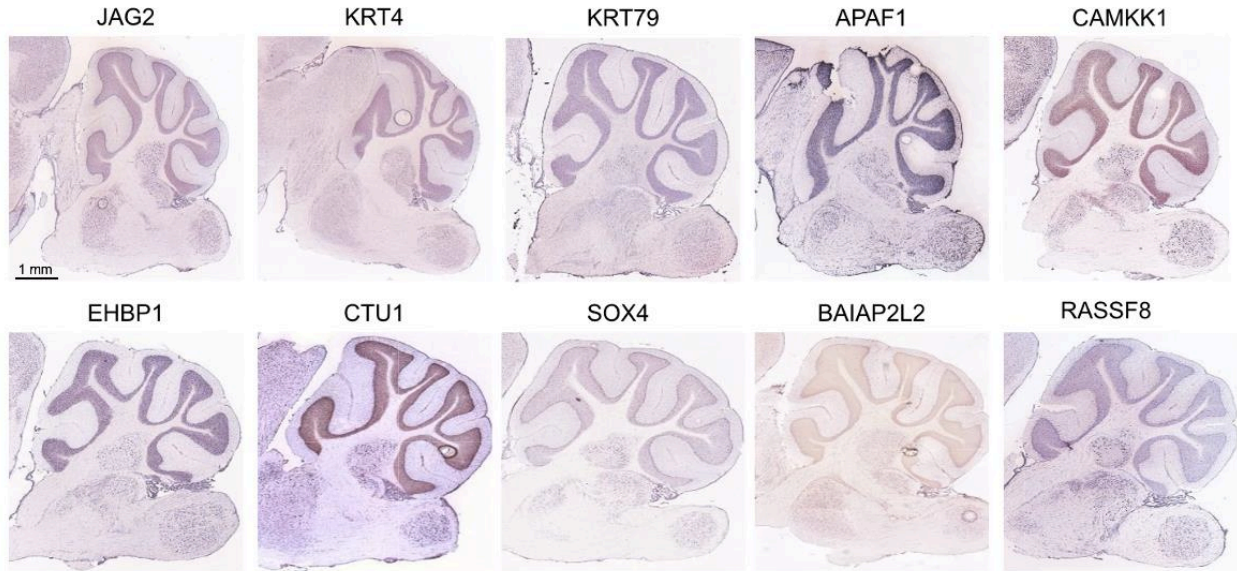
506 **Table S1.** UK Biobank fields disqualified from GWAS.

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509 **Fig S2. *In situ* hybridization of additional gene hits in 14.5 embryonic mice.** Genes already
510 available on the eMouseAtlas exhibit varying levels of expression in the brain during this stage
511 of development, with *Baiap2l2* and *Krt79* showing minimal expression. Image credit: EMAGE
512 Project (EMAGE: 3758, 16846, 14151, 12754, 14122, 12668, 13766, 29351, 11832).



513

514 **Fig S3. *In situ* hybridization of additional gene hits in adult mice.** All genes already
 515 recorded by the Allen Brain Atlas show some level of mRNA expression, with *Camkk1*, *Ctu1*,
 516 and *Rassf8* showing the most elevated levels across samples. Scaling is equal across images.
 517 Image credit: Allen Institute (<https://mouse.brain-map.org/experiment/show?id=69735652>,
 518 <https://mouse.brain-map.org/experiment/show?id=69735956>, [https://mouse.brain-
 520 map.org/experiment/show?id=68522308](https://mouse.brain-

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