Supplementary Table e-1: Genetic associations with cutaneous adverse reactions in epilepsy

Drug	Associated allele	Cutaneous adverse reaction	OR (95% CI)	Population	Study
Carbamazepine	*HLA-A*31:01*	MPE	8.3 (3.6–19.4)	Northern European	McCormack et al 2011[8]
		HSS	12.4 (1.3–121)		
		SJS	25.9 (4.9–116.2)		
		MPE	8.57 (1.7–57.5)	White Canadian	Amstutz et al 2013[9]
		HSS	26.36 (2.5–307.9)		
		HSS	8.8 (2.5-30.7)	Korean	Kim et al 2011[10]
		HSS/SJS/TEN	10.8 (5.9-19.6)	Japanese	Ozeki et al 2011[11]
	*HLA-B*15:02*	SJS/TEN	2504 (126-49522)	Han Chinese	Chung et al 2004[12]
		SJS/TEN	81 (46–143)	Han Chinese	Cheung et al 2013[13]
		SJS/TEN	54.8 (14.6-205.1)	Thai	Tassaneeyakul et al 2010[14]
Phenytoin	*HLA-B*15:02*	SJS/TEN	5.6 (2.8-11.6)	SE Asian	Li et al 2015[15]
	*CYP2C9*3*	DRESS	9.2 (4.3-20)	Han Chinese	Chung et al 2014[16]
		SJS/TEN	12 (6.4-22)		

		SJS/TEN	4.3(1.4-13)	Thai	Tassaneeyakul et al 2016[17]
Lamotrigine	*HLA-A*24:02*	MPE	4.1 (1.2–13.7)	Korean	Moon et al 2015[18]
	*HLA-B*15:02*	SJS/TEN	4.5 (1.6-13)	SE Asian	Li et al 2015[15]
Oxcarbazepine	*HLA-B*15:02*	SJS	27.9 (7.8-99.2)	Han Chinese	Chen et al 2017[19]
	*HLA-B*38:02*	MPE	6.3 (1.8-22)	Han Chinese	Lv et al 2016[20]

Supplementary Table e-1: A summary of the associated genetic risk variants for cADRs in various populations. MPE: Maculopapular exanthema, HSS: Hypersensitivity syndrome, DRESS: Drug rash with eosinophilia and systemic symptoms, SJS: Stevens-Johnson syndrome, TEN: Toxic epidermal necrolysis.

Demographic	Description	n (%)
Gender	Male	826 (46%)
	Female	963 (54%)
Diagnosis	Generalized epilepsy, not otherwise specified, with spike and wave EEG	48 (2%)
	Childhood absence epilepsy	9 (0.5%)
	Juvenile absence epilepsy	16 (0.9%)
	Juvenile myoclonic epilepsy	53 (3%)
	Generalized tonic-clonic seizures only, with spike and wave EEG	7 (0.4%)
	Focal epilepsy, not otherwise specified	189 (11%)
	Focal epilepsy, documented lesion negative	435 (25%)
	Focal epilepsy, documented hippocampal sclerosis	193 (11%)
	Focal epilepsy, documented lesion other than hippocampal sclerosis	610 (34%)
	Epilepsy, not otherwise specified	195 (11%)
	Not epilepsy	29 (2%)
Age of epilepsy onset	Mean (range)	23 years (1 month-90 years)
Family History	Yes	538 (30%)
	No	1251 (70%)
Total		**1789**

Supplementary Table e-2: Patient demographics within our cohort. Patient information on gender, epilepsy diagnosis, age at onset and positive family history of seizures are presented here for our entire discovery and replication cohort. 29 patients were trialled on an anti-epileptic drug but did not have a clinical diagnosis of epilepsy.