vitamin D	0-.6	>.6-1.4	>1.4-2.9	>2.9						
No. of cases/control subjects	19/37	33/32	34/47	16/39						
OR (95% CI)	1.00	1.36 (.57-3.25)	2.63 (1.17-5.90)	1.88 (.87-4.07)	0.54					
Food containing vitamin E	0-1.06	>1.6-2.5	>2.5-3.5	>3.5						
No. of cases/control subjects	31/37	24/33	22/44	26/40						
OR (95% CI)	1.00	1.57 (.70-3.51)	.95 (.44-2.05)	1.32 (.61-2.87)	0.43					
Food containing iron	0-.2	>.2-.3	>.3-.6	>.6						
No. of cases/control subjects	35/55	12/19	30/52	25/30						
OR (95% CI)	1.00	.70 (.33-1.46)	.59 (.23--1.56)	.71 (.34-1.48)	0.42					
Junk food servings/day	0-.3	>.3-.9	>.9-1.5	>1.5						
No. of cases/control subjects	24/45	37/39	19/33	23/39						
OR (95% CI)	1.00	.79 (.35-1.80)	1.61 (.74-3.50)	.88 (.38-2.02)	0.9					
Animal fat servings/day	.4-2.1	>2.1-3.2	>3.2-4.8	>4.8						
No. of cases/control subjects	25/40	34/38	33/39	10/39						
OR (95% CI)	1.00	2.45 (.88-6.78)	3.42 (1.38-8.51)	3.08 (1.27-7.50)	0.15					
Antioxidant servings/day	.4-2.2	>2.2-3.3	>3.3-4.1	>4.1						
No. of cases/control subjects	32/39	20/42	23/40	26/35						
OR (95% CI)	1.00	1.18 (.52-2.67)	.68 (.30-1.50)	.86 (.40-1.85)	0.64					
Energy intake/day	0-1816	>1816-2205	>2205-2648	>2648						
No. of cases/control subjects	34/39	21/39	26/38	20/38						
OR (95% CI)	1.00	1.59 (.76-3.32)	.96 (.45-2.05)	.95 (.45-2.01)	0.22					

48	McCann, et al	1998	Australia	Case-control	Cases: 131/93 (M/F) Controls: 193/117 (M/F)	61.5 (onset), 70.3 68.9	Exposure to herbicides and pesticides	1.2 (0.8-1.5) Previous head injury 1.1 (0.7-1.9) History of treated depression 1.2 (0.7-2.2) Positive history of cigarette smoking 0.7 (0.4-1.1) Age 1.0 (1.01-1.04) Sex 1.2 (0.80-1.73) Family history 3.7 (2.01-6.63) Rural residency 1.7 (1.17-2.57) Ingestion of well, spring or bore water 0.6 (0.38-0.92) Hypertension 0.3 (0.18-0.42) Stroke 0.2 (0.10-0.45)
49	Smargiassi, et al	1998	Italy	Case-control	Cases: 86 (total) Controls: 86 (total)	58.2 (onset), 66.4 63.1	Alcohol	1.90 (0.75-4.79) Smoking 0.43 (0.23-0.79) General anesthesia 0.72 (0.37-1.38) Cranial trauma 2.88 (0.98-8.49) Occupational chemical exposure 2.13 (1.16-3.91) Leasure chemical exposure 1.79 (0.89-3.61) Urban residence 0.40 (0.22-0.75) Well-water 2.78 (1.46-5.28) Pesticides-herbicides 1.15 (0.56-2.36) Organic solvents 2.78 (1.23-6.26) Farming 1.25 (0.65-2.43) Transport 1.89 (0.61-5.90) Industries-handicraft 2.58 (1.00-6.64) Tertiary 0.39 (0.21-0.73)

50	Savitz, et al	1998	USA	Retrospective Cohort	139,905 117 death with PD

By duration of employment in selected occupations and magnetic field exposure

Exposure	No. of Cases	RR	(95% CI)
Employment in exposed occupations (years)			
0- < 5	53	1.0	
5- < 20	31	1.1	(0.7-1.9)
≥ 20	33	1.5	(0.9-2.5)
Career exposure (¤T-years)			
0.000-0.551	26	1.0	
0.551-1.123	29	1.3	(0.8-2.3)
1.123-2.036	26	1.1	(0.7-2.0)
2.036-4.600	18	0.8	(0.4-1.5)
4.600-15.452	18	1.8	(1.0-3.4)
RR per ¤T-year	117	1.05	(0.99-1.12)
Exposure 2-<10 years past (¤T-years)			
0.000	87	1.0	
>0.000-0.195	16	0.9	(0.5-1.6)
0.195-0.392	4	0.3	(0.1-0.9)
0.392-2.346	10	0.6	(0.3-1.3)
RR per ¤T-year	117	0.66	(0.27-1.58)
Exposure 10-<20 years past (¤T-years)			
0.000-0.268	60	1.0	
0.268-0.490	21	0.9	(0.5-1.5)
0.490-0.888	19	1.9	(1.1-3.2)
0.888-2.933	17	1.1	(0.6-2.1)
RR per ¤T-year	117	1.24	(0.88-1.76)
Exposure ≥20 years past (¤T-years)			
0.000-0.397	39	1.0	
0.397-1.159	31	1.0	(0.6-1.6)
1.159-2.268	21	0.9	(0.5-1.6)
2.268-14.547	26	1.2	(0.6-2.0)
RR per ¤T-year	117	1.06	(0.99-1.13)

51	Logroscino, et al	1998	Italy	Case-control	Cases: 49/55 (M/F) Controls: 123/229 (M/F)

Iron food + supplements

1 (≤6.8)	Ref.	Ref.
2 (≤9.2)	1.1	(0.7-1.7)
3 (≤12.8)	1.4	(0.9-2.2)
4 (>12.8)	0.9	(0.6-1.3)

p for trend = 0.60

Iron from food

1 (≤6.5)	Ref.	Ref.
2 (≤8.5)	1.1	(0.7-1.6)
3 (≤11.3)	1.6	(1.0-2.4)
4 (>11.3)	1.6	(1.0-2.50)

p for trend = 0.60

High animal fat intake among those with low iron saturation: 9.0 (2.7-29.9)

52	Gorell, et al	1998	USA	Case-control	Cases: 144 (total) Controls: 464 (total)

Exposure		
Lived in rural area	1.19	(0.73-1.93)
Lived on a farm	1.12	(0.70-1.77)
Lived or worked on a farm	1.30	(0.88-1.93)
Farming as an occupation after age 18	2.79	(1.03-7.55)
Well water ever	0.97	(0.65-1.40)
Well water before age 20	0.95	(0.64-1.45)
Gardening	0.77	(0.52-1.14)
Setting and pesticide All occupations		
Herbicides	4.10	(1.37-12.24)
Insecticides	3.55	(1.75-7.18)
Fungicides	1.60	(0.47-5.45)

53	Savitz, et al	1998 USA	Case-control	Cases: 168 (total) Controls: 504 (total)		Electrical engineers	1.1	(0.8-1.5)
						Electrical technicians	0.9	(0.4-2.0)
						Broadcast equipment operator	0.9	(0.4-2.2)
						Electronic repair	1.5	(0.7-3.0)
						Telephone installers and repairers	1.2	(0.5-2.8)
						Supervisors, power installers, and repairers	1.0	(0.8-1.4)
						Electricians Electric power installers and repairers	0.9	(0.4-1.9)
						Power plant operators	2.1	(0.9-4.7)
54	Tzourio, et al	1997 Europe	Case-control	Cases: 82/111 (M/F) Controls: 246/333 (M/F)	80 79	Parkinson' s disease and smoking (ever versus never) by age and sex		
						Men	1.8	(0.9-3.6)
						Women	0.8	(0.5-1.5)
						< 75	0.4	(0.1-0.9)
						75-79	1.2	(0.5-2.7)
						80-83	1.8	(0.8-3.9)
						> 83	2.3	(0.9-6.3)
55	de Rijk, et al	1997 The Netherlands	Cross-sectional	Of 5342 subjects, 31 prevalent PD	2.8 (duration), 71.0	Vitamin E, per 10 mg/d	0.5	(0.2-0.9)
						Beta carotene, per 1 mg/d	0.6	(0.3-1.2)
						Vitamin C, per 100 mg/d	0.9	(0.4-1.8)
						Flavonoids, per 10 mg/d	0.9	(0.7-1.2)
56	Liou, et al	1997 Taiwan	Case-control	Cases: 65/55 (M/F) Controls: 130/110 (M/F)	58.3 (onset), 63.1 63.5	Duration of living rural residence (yr)		
						0	1.00	
						1-19	1.23	(0.51-2.98)
						≥ 20	1.68	(0.81-3.47)
						Duration of farming (yr)		
						0	1.00	
						1-19	1.54	(0.73-3.23)
						≥ 20	0.85	(0.43-1.69)
						Duration of using herbicides / pesticides (yr)		
						0	1.00	
						1-19	1.41	(0.52-3.85)
						≥ 20	6.72	(2.62-17.21)
						Duration of using paraquat (yr)		
						0	1.00	
						1-19	0.96	(0.24-3.83)
						≥ 20	6.44	(2.41-17.2)
						Duration of consuming well water (yr)		
						0	1.00	
						1-19	0.58	(0.26-1.32)
						≥ 20	0.71	(0.40-1.28)
						duration of smoking cigarettes (yr)		
						0	1.00	
						1-19	0.44	(0.13-1.45)
						≥ 20	0.43	(0.20-0.90)
57	Hellenbrand, et al	1997 Germany	Case-control	Cases: 251/129 (M/F) Controls 1: 379 (total) Controls 2: 376 (total)	50.5 (onset), 56.2 56.2 56.5	Smoking in pack-years		
						<1	1.0	
						1-10	0.9	(0.5-1.4)
						10-20	0.6	(0.4-1.1)
						20-30	0.4	(0.2-0.7)
						30-40	0.2	(0.1-0.4)
						> 40	0.4	(0.2-0.9)

58	Scheider, et al	1997 USA	Case-control	Cases: 57 (M) Controls: 50 (M)	67.0 66.5	Vitamin E	1.18	(0.47-2.98)	
						Vitamin C	1.48	(0.67-3.29)	
						Total carotene	1.17	(0.49-2.81)	
						Alpha-carotene	11.39	(0.51-3.79)	
						Beta-carotene	1.67	(0.59-4.76)	
						Lycopene	0.69	(0.30-1.57)	
						Total xanthophylls	3.16	(1.08-9.30)	
						Lutein	3.04	(1.04-8.89)	
						Cryptoxanthin	1.38	(0.62-3.06)	
						Other xanthins	4.51	(1.44-14.1)	
59	Gorell, et al	1997 USA	Case-control	Cases: 90/54 (M/F) Controls: 293/171 (M/F)		Lead	≤ 20	1.08	(0.55-2.13)
							> 20	2.05	(0.97-4.31)
						Iron	≤ 20	1.02	(0.59-1.75)
							> 20	1.27	(0.69-2.34)
						Copper	≤ 20	1.15	(0.55-2.41)
							> 20	2.49	(1.06-5.89)
						Manganese	≤ 20	0.40	(0.05-3.24)
							> 20	10.61	(1.06-105.83)
						Mercury	≤ 20	0.55	(0.12-2.52)
							> 20	0.65	(0.07-5.79)
						Zinc	≤ 20	0.45	(0.10-2.02)
							> 20	1.19	(0.24-6.02)
						Lead and copper	Both exposures > 20 years	5.25	(1.59-17.21)
						Lead and iron	Both exposures > 20 years	2.84	(1.07-7.50)
						Iron and copper	Both exposures > 20 years	3.69	(1.40-9.71)
60	Davis, et al	1996 Hawaii	The Honolulu Heart Program	7968 men 92 incident PD	45-68 years 30 years: follow-up	**RR comparing men serum uric acid concentration above the median with men uric acid concentrations equal to or below the median.**			
						examination and restriction		**No. of subjects**	**No. of cases**	**RR**	**(95% CI)**
						Total		7,968	92	0.6	(0.4-1.0)
						Under age 75 years		7,968	56	0.5	(0.3-0.9)
						Nonsmokers only		2,399	51	0.5	(0.3-1.0)
						Smokers		5,569	41	0.8	(0.4-1.5)
						Diagnosed ≥ 5 years after the uric acid measurement		7,686	86	0.6	(0.4-1.0)
61	Hellenbrand,et al	1997 Germany	Case-control	Cases: 251/129 (M/F) Controls 1: 379 (total) Controls 2: 376 (total)	50.5 (onset), 56.2 56.2 56.5	Herbicide use	Never	1.0	-	0.001	
							1-40	1.7	(1.0-2.6)		
							41-80	3.0	(1.5-6.0)		
							> 80	2.4	(1.0-6.0)		
						Insecticide use	Never	1.0	-	0.001	
							1-40	1.8	(1.1-2.7)		
							41-80	2.5	(1.4-4.5)		
							> 80	2.1	(0.9-4.8)		
						Organochlorines	Never	1.0	-	0.26	
							Ever	5.8	(1.1-30.4)		
							NPN	2.1	(1.4-3.2)		
						Alkylated phosphates and carbamates	Never	1.0	-	0.03	
							Ever	2.5	(1.3-4.6)		
							NPN	2.2	(1.4-3.4)		
						*NPN: pesticide exposure, but unable to specify product name					
						Wood paneling in the home	Never	1.0	-	0.16	
							1-15 yr	1.3	(0.8-2.2)		
							> 15 yr	1.6	(1.1-2.4)		

						Contact with wood preservatives	Never	1.0	-
							in free time	2.0	(1.3-3.1)
							at work	2.3	(1.4-3.7)
						Wood preservative exposure as assessed by JEM only	Never	1.0	-
							Ever	1.1	(0.8-1.7)
						JEM, taking into account free time exposure	Never	1.0	-
							Ever	1.4	(0.9-2.2)
							in free time	1.7	(1.0-2.7)
						Gases and vapors	Never	1.0	-
							In free time	1.4	(0.5-3.6)
							at work	1.7	(1.2-2.4)
						Solvents	Never	1.0	-
							In free time	3.4	(1.5-7.5)
							at work	1.8	(1.2-2.7)
						Glues, paints, Lacquers	Never	1.0	-
							In free time	1.5	(0.9-2.6)
							at work	1.5	(1.0-2.3)
						Exhaust fumes	Never	1.0	-
							In free time	1.9	(1.1-3.4)
							at work	2.4	(1.5-3.6)
						Carbon monoxide	Never	1.0	-
							In free time	1.3	(0.7-2.5)
							at work	1.9	(1.2-3.0)
62	Rocca, et al	1996	Italy	Case-control	Cases: 27/35 (M/F) Controls: 54/70 (M/F)				
						Principal lifetime occupation			
						Farmer		0.6	(0.3-1.3)
						Fisherman		1.9	(0.4-10.6)
						Factory worker		1.5	(0.5-4.3)
						Craftsman		0.9	(0.3-2.5)
						Salesman		1.0	(0.3-3.5)
						Clerk		0.8	(0.3-2.2)
						Housewife		1.1	(0.5-2.6)
						Other		1.4	(0.5-3.3)
						Educational level			
						Illiterate		1.9	(0.9-4.4)
						Under 5th grade		1.1	(0.6-2.2)
63	De Michele,et al	1996	Italy	Case-control	Cases: 77/39 (M/F) Controls: 154/78 (M/F)	55.2 (onset), 62.5 62.0			
						Smoking		0.83	(0.50-1.38)
						Well-water drinking		2.17	(1.28-3.69)
						head trauma		2.33	(0.97-5.60)
						Strict diet		1.50	(0.34-4.64)
						General anesthesia		1.05	(0.79-2.84)
						Parkinson's disease			
						Total diagnoses		14.60	(7.2-29.6)
						Definite or probable diagnoses		22.50	(8.2-61.4)
						Essential tremor		3.10	(1.5-6.2)

64	Martyn, et al	1995	UK	Case-control	Cases: 108/64 (M/F) Controls: 220/123 (M/F)	70.8 70.7	Birthweight Weight at 1 year	0.7 1.0	(0.31-1.58) (0.97-1.02)
							Characteristics of the first house inhabited in childhood		
							Large town	1.0	
							small town	0.9	(0.56-1.40)
							Village	1.4	(0.82-2.49)
							Isolated house	0.8	(0.24-2.76)
							No bathroom	1.0	
							bathroom	1.1	(0.71-1.71)
							No WC	1.0	
							Outdoor WC	0.9	(0.56-1.40)
							Indoor WC	1.0	(0.55-1.70)
							Crowding		
							≤ 1.5 persons / bedroom	1.0	
							> 1.5 persons / bedroom	1.1	(0.68-1.69)
							Social class at birth		
							I, II, IIIn	1.0	
							IIIm	1.0	(0.60-1.62)
							IV, V	1.5	(0.85-2.53)
							Current social class		
							I, II, IIIn	1.0	
							IIIm	0.8	(0.49-1.30)
							IV, V	1.4	(0.79-2.32)
							Educational		
							Left school ≤ 14	1.0	
							Left school > 14	0.8	(0.52-1.35)
							Further education	0.8	(0.47-1.55)
							Birth order		
							2nd or order	1.0	
							1st born	1.0	(0.65-1.44)
							Sibship size		
							Only child	1.0	
							1 or 2 sibs	1.2	(0.62-2.24)
							3 or more sibs	0.9	(0.46-1.67)
							Chickenpox		
							never	1.0	
							< median age	0.8	(0.40-1.45)
							> median age	0.9	(0.47-1.69)
							unknown age	1.3	(0.62-2.63)
							don't know	1.3	(0.77-2.09)
							Scarlet fever		
							never	1.0	
							< median age	0.7	(0.32-1.49)
							> median age	0.8	(0.35-1.76)
							unknown age	0.7	(0.14-3.79)
							don't know	0.7	(0.34-1.48)
							Diphtheria		
							never	1.0	
							yes (any age)	2.3	(1.17-4.65)
							don't know	1.0	(0.33-3.01)
							Bronchitis		
							never	1.0	
							yes (any age)	1.3	(0.72-2.38)
							don't know	1.2	(0.58-2.39)

						Group		
						never	1.0	
						yes (any age)	4.1	(1.07-16.06)
						don't know	0.8	(0.39-1.65)
						Whooping cough		
						never	1.0	
						< median age	1.3	(0.63-2.62)
						> median age	0.8	(0.41-1.59)
						unknown age	1.7	
						don't know	1.0	(0.63-1.59)
						Rheumatic fever		
						never	1.0	
						yes (any age)	2.5	(1.00-6.07)
						don't know	1.0	(0.18-5.76)
						Measles		
						never	1.0	
						yes (any age)	0.7	(0.38-1.34)
						don't know	0.9	(0.46-1.66)
						Head injury		
						Never	1.0	
						Yes	0.6	(0.29-1.27)
						Don't know	1.5	(0.43-4.85)
						Cigarette smoking		
						Current smoker	1.0	
						Ex-smoker	1.2	(0.69-2.13)
						Never	2.0	(1.08-3.56)
65	Semchuk, et al	1995	Canada	Case-control	Cases: 75/55 (M/F) Controls: 150/110 (M/F)	58.0 (onset), 68.5 68.3	Herbicide use	3.06	(1.3.4-7.00)
							Family history of Parkinson's disease	5.76	(2.60-12.77)
							Head trauma	3.10	(1.67-5.75)
							Family history of essential tremor	2.37	(1.20-4.69)
							smoking	0.48	(0.29-0.80)

Table 2. Evidence table for epidemiological studies on association between genetic factors and Parkinson's disease

Ref.No.	Authors	Year	County	Type	Subjects	Age	Association with allele (genotype)
66	Tan, et al	2005	Hong Kong	Case-control	Cases: 98/87 (M/F) Controls: 103/103 (M/F)	68.9 70.3	**Analysis of 2677 (A/T/G) -3435(C/T) haplotypes in the MDR1 gene** **Haplotypes** X^2 **p value OR (95% CI)** A-C vs. rest 2.075 .15 0.75 (0.52-1.08) T-C vs. rest 10.514 .001 1.73 (1.25-2.38) G-C vs. rest 5.185 .02 0.66 (0.46-0.93) A-T vs. rest NA NA NA NA T-T vs. rest 14.521 <.001 0.33 (0.19-0.59) G-T vs. rest 4.342 .04 1.43 (1.03-1.97)
67	Mamah, et al	2005	USA	Case-control	Cases: 313/244 (M/F) Controls: 257/300 (M/F)	68 68	**Either SNCA 261/261 or MAPTH 1 /H1 vs. neither** OR: 1.96 (1.34-2.84)
68	Groen, et al	2004	USA	Case-control	Cases: 53/38 (M/F) Controls: 63/119 (M/F)	50.6 72.9	Three SNPs (Leu63Leu, Ala340Thr, and Asn521Thr) in the PINK1gene were not associated with PD
69	Tan, et al	2004	Poland	Case-control	Cases: 90/68 (M/F) Controls: 70/69 (M/F)	63.3 73.1	**Haplotypes** X^2 **p value OR (95% CI)** A-C vs. rest 0.365 0.546 0.85 (0.05-14.00) G-C vs. rest 2.850 0.091 0.25 (0.06-1.08) T-C vs. rest 0.046 0.831 1.05 (0.76-1.45) A-T vs. rest 0.802 0.370 2.68 (0.54-13.40) G-T vs. rest 0.102 0.749 1.07 (0.77-1.49) T-T vs. rest 0.300 0.584 0.84 (0.51-1.38)
70	Lin, et al	2004	Taiwan	Case-control	Cases: 112/98 (M/F) Controls: 139/121 (M/F)	63.6, 5.2 63.7	**ACA-AA vs. ACT-AT+TT** All: 0.934 (0.859-1.015), Woman: 0.897 (0.817-0.985), Woman, onset age < 60: 0.796 (0.749-0.847)
71	Healy, et al	2004	UK	Case-control	Cases: 576 (total) Controls: 514 (total)	55.3 (onset) 56.2	tSNP-7 A→G, +SNP-14 C→G, tSNP-15 T→G, tSNP-19 T→G in the PINK 1 gene: no association
72	Clarimon, et al	2004	Finland	Case-control	Cases: 144 (total) Controls: 135 (total)	67.2 65.85	M54L and Q192R polymorphims in the PON1 gene: no association
73	Elbaz, et al	2004	France	Case-control	Cases: 190 (total) Controls: 419 (total)	64 (onset) 67 67	pesticides no yes O or 1 CYP2D6*4 1.0 1.50 (0.92-2.43) 2 CYP2D6*4 allele 1.0 3.28 (1.16-9.27)
74	Spadefora, et al	2003	Italy	Case-control	Cases: 108/81 (M/F) Controls: 81/101 (M/F)		**NACP - REP1 polymorphism** **Genotype (bp) OR 95% CI Allele (bp) OR 96% CI** 265/269 0.35 (0.04-3.51) 265 0.23 (0.04-1.50) 267/267 1.02 (0.36-2.91) 267 0.88 (0.64-1.22) 267/269 0.84 (0.49-1.44) 269 1.00 267/271 0.90 (0.23-3.44) 271 1.24 (0.69-2.25) 269/269 1.00 269/271 1.12 (0.49-2.56)

75	Eerola, et al	2003	Finland	Case-control	Cases: 87/60 (M/F) Controls: 50/87 (M/F)	67.2 65.8	**DJ-1 exon-1 ins/del polymorphism** **PD, n=147** **controls, n=137** **Alleles** Del 85(31) 76(29) Ins 187(69) 182(71) X^2=0.20, 1df, -p=0.65 **Genotype** Del / Del 13(10) 10(8) Ins / Del 59(43) 56(43) Ins / Ins 64(47) 63(49) X^2=0.29, 2df, p=0.86
76	Engelborghs, et al	2003	Belgium	Nested case-control	Cases: 17/13 (M/F) Controls: 86/103 (M/F)	75.4 58.8	**APOE (proportions)** E2 E3 E4 PD 0.050 0.800 0.150 Controls 0.069 0.762 0.169 p=0.783
77	Tan, et al	2003	Singapore	Case-control	Cases: 112/90 (M/F) Controls: 109/93 (M/F)	65 64	**Nerr1 haplotypes** **Haplotypes** **PD patients** **Controls** 3G-CA (10) 228 (0.564) 241 (0.597) 3G-CA (9) 4 (0.010) 3 (0.007) 2G-CA (10) 121 (0.299) 97 (0.24) 2G-CA (9) 51 (0.126) 63 (0.156) p value 0.253
78	Wang, et al	2003	China	Case-control	Cases: 89/71 (M/F) Controls: 89/71 (M/F)	58.8(onset), 66.8 65.9	**Cholecystokinin, Cholecystokinin-A receptor**

	Parkinson's disease	Controls		Hallucinators	Non-hallucinators	
Polymorphism	**n(%)**	**n(%)**	**p**	**n(%)**	**n(%)**	**p**
CCK-45C > T						
CC	74 (46.3)	75 (46.9)		15 (33.3)	31 (68.9)	
CT	70 (43.8)	69 (43.1)	0.993	23 (53.3)	11 (24.4)	0.003
TT	16 (10.0)	16 (10.0)		7 (13.3)	3 (6.7)	
CCKAR779T > C						
TT	85 (53.1)	90 (56.3)		17 (37.8)	26 (57.8)	
TC	65 (40.6)	60 (37.5)	0.843	22 (48.9)	16 (35.6)	0.145
CC	10 (6.3)	10 (6.3)		6 (13.3)	3 (6.7)	

79	Zheng, et al	2003	USA	Case-control	Cases: 79/25 (M/F) Controls: 41/42 (M/F)	61.8 70.0	**Heterozygous NURR1 polymorphism** NI6P: 2.84 (1.17-6.88)

80	Drożdzik, et al	2003	Poland	Case-control	Cases: 56/51 (M/F) Controls: 50/53 (M/F)	57.2 74.1	

Class of MDR1 genotype	n (%) Parkinson's disease patients (n=107)	n (%) Controls (n=103)	p
3435CC	26 (24.3)	24 (23.3)	NS
3435CT	66 (61.7)	58 (56.3)	NS
3435TT	15 (14.0)	21 (20.4)	NS

	Exposed with Parkinson's disease (n=59)	Non-exposed with parkinson's disease (n=48)	p
3435CC	7 (11.9)	19 (39.6)	<0.001
3435CT	43 (72.9)	23 (47.9)	<0.01
3435TT	9 (15.3)	6 (12.5)	NS

81	Tan, et al	2003	Singapore	Case-control	Cases: 114/90 (M/F) Controls: 121/95 (M/F)	64.4 64.2	

Dopamine D2 receptor TaqIA and TaqIB

	Parkinson's disease, n (%)	Controls, n (%)	OR (95% CI)
TaqIA			
Allele			
A1	166 (40.7)	170 (39.4)	1.06 (0.80-1.39)
A2	242 (59.3)	262 (60.6)	
Total	408	432	
Genotype			
A1A1	36 (17.6)	35 (16.2)	
A1A2	94 (46.1)	100 (46.3)	
A2A2	74 (36.3)	81 (37.5)	
Total	204	216	
TaqIB			
Allele			
B1	181 (44.4)	181 (41.9)	1.11 (0.84-1.45)
B2	227 (55.6)	251 (58.1)	
Total	408	432	
Genotype			
B1B1	44 (19.6)	43 (19.9)	
B1B2	101 (49.5)	95 (44.0)	
B2B2	63 (30.9)	78 (36.1)	
Total	204	216	

82	Lin, et al	2003	Taiwan	Case-control	Cases: 98/95 (M/F) Controls: 129/125 (M/F)	63.5 (onset), 68.8 68.7	**Variable number tandem repeat polymorphism in the dopamine transporter**

VNTR copy number (bp)	PD patients (n=193) Number	Frequency	Controls (n=254) Number	Frequency
Total alleles				
6 (320)	2	0.005	1	0.002
7 (360)	2	0.005	5	0.010
8 (400)	1	0.003	0	0
9 (440)	32	0.083	30	0.059
10 (480)	342	0.886	465	0.915
11 (520)	7	0.018	7	0.014
Genotypes				
6 / 10 (320 / 480)	2	0.010	1	0.005
7 / 7 (360 / 360)	0	0	0	0
7 / 9 (360 / 440)	1	0.005	0	0
7 / 10 (360 / 480)	1	0.005	5	0.020
8 / 10 (400 / 480)	1	0.005	0	0
9 / 9 (440 / 440)	1	0.005	1	0.004
9 / 10 (440 / 480)	29	0.150	26	0.102
9 / 11 (440 / 520)	0	0	2	0.008
10 / 10 (480 / 480)	151	0.782	241	0.842
10 / 11 (480 / 520)	7	0.036	5	0.020

10/10 both sex: 0.66 (0.45-0.97)
male: 0.48 (0.25-0.93)
female: 1.02 (0.49-2.11)

83	Ross, et al	2003	UK	Case-control	Cases: 49/41 (M/F) Controls: 40/89 (M/F)	37-81 80-97	Various mtDNA haplotypes : no relation mt4216C mutation : increased risk
84	Elbaz, et al	2003	France	Case-control	Cases: 119/90 (M/F) Controls: 289/199 (M/F)	65 (onset), 68 68	**S18Y polymorphism in the ubiquitin carboxy-terminal hydrolase-L1 gene**

S18Y genotype, % (n	Controls	Patients	OR	(95% CI)	OR (95% CI)SY+YY vs. SS
All subjects	n=488	n=209			
SS	66 (323)	67 (139)	1.00	(ref.)	1.00 (ref.)
SY	30 (145)	32 (67)	0.98	(0.69-1.39)	0.92 (0.65-1.30)
YY	4 (20)	1 (3)	0.34	(0.10-1.18)	

Age at onset ≤ 61 SY+YY: 0.53 (0.29-0.99)

85	Tan, et al	2003	Singapore	Case-control	Cases1: 57/47 (M/F) Controls1: 58/47 (M/F) Cases1: 58/47 (M/F) Controls1: 58/47 (M/F)	59.1 (onset), 64.0 63.9 59.1 (onset), 64.5 64.4	**Non-amyloid component of plagues (NACP) - Ref1**

	0 / 0	0 / 1	0 / 2	1 / 1	1 / 2	2 / 2
study one						
PD (no.=104)	0.09	0.17	0.29	0.10	0.23	0.12
Controls (no. =104)	0.16	0.27	0.24	0.12	0.19	0.02
study two						
PD (no.=102)	0.23	0.18	0.22	0.11	0.13	0.13
Controls (no. =102)	0.14	0.29	0.25	0.02	0.17	0.13
combined study						
PD (no.=206)	0.16	0.17	0.25	0.11	0.18	0.13
Controls (no. =206)	0.15	0.28	0.25	0.07	0.18	0.07

86	Levecgue, et al	2003	France	Case-control	Cases: 119/90 (M/F) Controls: 289/199 (M/F)	65 (onset), 68 68	

Neuronal nitric oxide synthose (nNOS) and inducible (iNOS)

Polymorphism	Controls(%)	Cases (%)	OR	(95% CI)	p
iNOS 22	n=482	n=207			
GG	36	34	1.00	(ref.)	-
GA	47	57	1.21	(0.85-1.73)	0.28
AA	17	9	0.56	(0.32-1.01)	0.05
AA versus GG+GA			0.50	(0.29-0.86)	0.01
General test					0.02
Trend test					0.27
nNOS 18	n=488	n=209			
CC	46	42	1.00	(ref.)	-
CT	43	44	1.15	(0.80-1.64)	0.46
TT	11	14	1.45	(0.85-2.48)	0.17
CT+TT versus CC			1.20	(0.85-1.69)	0.30
General test					0.21
Trent test					0.18
nNOS 29	n=488	n=209			
CC	54	45	1.00	(ref.)	-
CT	38	43	1.41	(0.99-2.03)	0.06
TT	8	12	2.33	(1.27-4.26)	0.01
CT+TT versus CC			1.53	(1.08-2.16)	0.02
General test					0.01
Trent test					0.004

nNOS 18 nNOS 29 haplotypes (%)	Controls (n=976 chromosomes)	Cases (n=418 chromosomes)	OR	p
C-C	60	54	0.47	0.02
C-T	7	10	1.41	0.10
T-C	13	12	0.96	0.84
T-T	20	24	1.28	0.05

polymorphism		Controls (%)	Cases(%)			
nNOS 29	iNOS 22	n=482	n=207	OR	(95% CI)	p
CC	GG+GA	45	43	1.00	(ref.)	-
CC	AA	9	3	0.29	(0.11-0.76)	0.01
CT+TT	GG+GA	38	48	1.41	(0.98-2.04)	0.07
CT+TT	AA	8	6	0.97	(0.49-1.93)	0.93
				interaction		0.16

significant interaction between nNOS29 and nNOS18 and smoking

87	Wu, et al	2002	Taiwan	Case-control	Cases: 164/70 (M/F) Controls: 179/72 (M/F)	59.3 (onset), 65.3 62.2	

CYP2E1 Polymorphism	PD patients N (%)	Controls N (%)	p-value	OR	(95% CI)
Late-onset PD	178	175			
Total allele			0.858		
c1	276(77.5)	269(76.9)			
c2	80(22.5)	81(23.1)		1.039	(0.731-1.477)
Genotype			0.895		
c1 / c1	106(59.5)	101(57.7)	0.747	1.079	(0.706-1.648)
c1 / c2	64(36.0)	67(38.3)	0.601	0.905	(0.588-1.394)
c2 / c2	8(4.5)	7(4.0)	1.000	1.129	(0.401-3.184)
Early-onset PD	56	76			
Total allele			0.569		
c1	82(73.2)	116(76.3)			
c2	30(26.8)	36(23.7)		0.848	(0.484-1.487)
Genotype			0.791		
c1 / c1	29(51.8)	43(56.6)	0.601	0.824	(0.412-1.649)
c1 / c2	24(42.9)	30(39.5)	0.723	1.150	(0.570-2.319)
c2 / c2	3(5.3)	3(3.9)	0.698	1.377	(0.267-7.093)

88	Kelada, et al	2002	USA	Case-control	Cases: 113/73 (M/F) Controls: 193/103 (M/F)	67.9 69.1

	Cases	Controls	Comparison
Genotype			
MAO-B intron 13	106(57.0)	138(46.6)	OR=1.52
Number G / GA / GG (%)	80(43.0)	158(53.4)	(95% CI: 1.05-2.20)
Number A / AA (%)			
MAO-A EcoRV			
Number Y / YY (%)	32(21.9)	63(28.5)	OR=0.70
Number N / YN / NN (%)	114(78.1)	158(71.5)	(95% CI: 0.43-1.15)
DRD2 Taq1B			
Number B12 (%)	49(27.0)	76(27.5)	OR=1.05
Number B22 (%)	129(73.0)	209(72.5)	(95%CI: 0.69-1.59)

	males		Females	
(A) MAO-B intron 13				
Genotype	G	A	GG / GA	AA
Sample size (n)	126	180	118	58
Odds ratio (95% CI)	0.27 (0.13-0.58)	1.26 (0.60-2.63)	0.62 (0.25-1.34)	0.64 (0.18-2.21)
X^2 interaction	8.14		0.001	
p-value	<0.01		0.98	

89	Furuno, et al	2002	Italy	Case-control	Cases: 95 (total) Controls: 106 (total)		**Single locus MDR1 genotypes**

Position	Genotype	All PD (N=95) N (%)	EOPD (N=25) N (%)	LOPD (N=70) N (%)	Controls (N=106) N (%)
3435	CC	20(21.1)	5(20.0)	15(21.4)	28(26.4)
(exon 26)	CT	50(52.6)	11(44.0)	39(55.7)	58(54.7)
	TT	25(26.3)	9(36.0)	16(22.9)	20(18.9)
2677	GG	28(29.5)	4(16.0)	24(34.3)	37(35.0)
(exon 21)	GA	3(3.2)	1(4.0)	2(2.8)	3(2.8)
	AA	0(0.0)	0(0.0)	0(0.0)	0(0.0)
	GT	40(42.1)	16(64.0)	24(34.3)	42(39.6)
	AT	3(3.2)	0(0.0)	3(4.3)	3(2.8)
	TT	21(22.1)	4(16.0)	17(24.3)	21(19.8)
-129	TT	92(96.8)	24(96.0)	68(97.1)	100(94.3)
(exon 1b)	TC	3(3.2)	1(4.0)	2(2.8)	6(5.7)
	CC	0(0.0)	0(0.0)	0(0.0)	0(0.0)

90	Wang, et al	2002	China	Case-control	Cases: 89/71 (M/F) Controls: 89/71 (M/F)	58.8 (onset), 66.8 65.9	**ACT gene polymorhism**

A vs. T	119/320	126/320	0.944	(0.703-1.268)
AA vs. TT	18/77	22/78	0.829	(0.412-1.666)
TA vs. TT	83/142	82/138	0.984	(0.670-1.445)
AA vs. TA vs. TT	101/160	104/160	0.971	(0.684-1.379)
Onset age > 50 years	66/110	104/160	0.923	(0.623-1.367)
Onset age ≤ 51 years	35/50	104/160	1.077	(0.655-1.771)
UCH-L1 gene S18Y (C54A) polymorhism				
A vs. C	158/320	150/320	1.053	(0.803-1.382)
AA vs. CC	38/78	35/80	1.114	(0.639-1.940)
CA vs. CC	82/122	80/125	1.114	(0.767-1.706)
AA vs. CA vs. CC	120/160	115/160	1.043	(0.745-1.461)
Onset age > 50 years	100/110	115/160	1.265	(0.881-1.816)
Onset age ≤ 51 years	20/50	115/160	0.557	(0.314-0.985)

91	Nicoletti, et al	2002	Italy	Case-control	Cases: 88/71 (M/F) Controls: 84/106 (M/F)	59.4 (onset), 66.2 74.9	**A2M polymorphisms**

	PD (n=159)	Controls (n=190)	OR	(95% CI)
Allele: number of alleles /total number (%)				
Val	99/316 (31.3)	97/190 (25.5)	1.36	(0.93-1.99)
Ile	217/316 (68.7)	283/190 (74.5)		
Ins	245/318 (77.0)	291/190 (76.6)	0.96	(0.64-1.44)
Del	73/318 (23.0)	89/190 (23.4)		
Genotype				
Ile / Ile	70/158 (44.3)	102/190 (53.7)	1.00	
Val / Ile	77/159 (48.7)	79/190 (41.6)	1.49	(0.90-2.46)
Val / Val	11/159 (7.0)	9/190 (4.7)	1.72	(0.60-4.96)
Del / Del	11/159 (6.9)	7/190 (3.7)	1.62	(0.52-5.1)
Ins / Del	51/159 (32.1)	75/190 (39.5)	0.76	(0.40-1.28)
Ins / Ins	97/159 (61.0)	108/190 (56.8)	1.00	

92 Maraganore, et al Italy 2002 Case-control Cases: 88/71 (M/F) Controls: 84/106 (M/F) 59.4 (onset), 66.2 74.9

Estrogen receptor XbaI genotypes

Sample or stratum	n	Genotype frequencies, n (%) 1/1	1/2	2/2	OR (95% CI) 2/2 vs. 1/2 plus 1/1	OR (95% CI) 2/2 plus vs. 1/2 1/1
Controls	193	88 (45.6)	80 (41.5)	25 (13.0)	1.00 (ref.)	1.00 (ref.)
Cases	312	142 (45.5)	134 (43.0)	36 (11.5)	0.84 (0.47-1.48)	0.92 (0.63-1.35)

Estrogen receptor PvuII genotypes

Sample or stratum	n	Genotype frequencies, n (%) 1/1	1/2	2/2	OR (95% CI) 2/2 vs. 1/2 plus 1/1	OR (95% CI) 2/2 plus vs. 1/2 1/1
Controls	189	55 (29.1)	92 (48.7)	42 (22.2)	1.00 (ref.)	1.00 (ref.)
Cases	306	89 (29.1)	156 (51.0)	61 (19.9)	0.76 (0.47-1.20)	0.92 (0.61-1.40)

93 Buchanan, et al 2002 Australia Case-control Cases: 219/219 (M/F) Controls: 234/251 (M/F) 65-70 65-70

Cys282Tyr SNP

Genotypes			
Wt/Wt	405 (83.5)	391 (89.3)	
Wt/282Tyr	76 (15.7)	46 (10.5)	
282Tyr/282Tyr	4 (0.8)	1 (0.2)	
Alleles			
Wt	886 (91.3)	828 (94.5)	
282Tyr	84 (8.7)	48 (5.5)	0.59 (0.39-0.91)

94 Lin, et al 2002 Taiwan Case-control Cases: 72/55 (M/F) Controls: 110/88 (M/F) 61.5 (onset) 61.5

Deletion / insertion (ID /I) polymorphism of ACE gene

Genotype					
DD	28 (0.22)	24 (0.12)	5.67	1.13	(1.01-1.25)
DI and II	99 (0.78)	174 (0.88)	-	-	
Allele					
D	102 (0.40)	136 (0.34)	2.25	1.28	(0.93-1.78)
I	152 (0.60)	260 (0.66)	-	-	

95 Hernan, et al 2002 USA Nested case-control Cases: 129/134 (M/F) Controls: 203/246 (M/F)

MAOB genotype	Cases, n (%)	Control subjects, n (%)	OR	(95% CI)
Woman (NHS)				
AA	35 (30.2)	82 (3.3)	1.0	(ref.)
GA	55 (47.4)	114 (46.3)	1.1	(0.7-1.8)
GG	26 (22.4)	50 (20.3)	1.2	(0.7-2.3)
Men (HPFS)				
A	51 (52.0)	114 (56.2)	1.0	(ref.)
G	47 (48.0)	89 (43.8)	1.1	(0.7-1.8)
Overall				
A / AA	-	-	1.0	(ref.)
G / GG / GA	-	-	1.1	(0.8-1.6)

COMT genotype	Cases, n (%)	Control subjects, n (%)	OR	(95% CI)
Woman (NHS)				
HH	24 (21.4)	62 (26.3)	1.0	(ref.)
HL	62 (55.4)	118 (50.0)	1.3	(0.8-2.3)
LL	26 (23.2)	56 (23.7)	1.2	(0.6-2.2)
Men (HPFS)				
HH	26 (25.7)	50 (24.6)	1.0	(ref.)
HL	44 (43.6)	102 (50.3)	0.8	(0.4-1.4)
LL	31 (30.7)	51 (25.1)	1.1	(0.6-2.1)
Overall				
HH			1.0	(ref.)
HL			1.0	(0.7-1.5)
LL			1.1	(0.7-1.8)

96	Maraganore, et al	2001	USA	Case-control	Cases: 197/122 (M/F) Controls: 74/122 (M/F)	64 (onset), 70 72	

Tau Gene Haplotype

Sample or Stratum	n	Genotype Frequencies, n (%) H1/H1	H1/H2	H2/H2	OR (95% CI) H1/H1 vs H1/ H2 plus H2/H2	OR (95% CI) H1/H1 plus H1/ H2 vs H2/H2
Controls	190	124 (65.3)	60 (31.6)	6 (3.2)	1.00 (ref.)	1.00 (ref.)
Patients						
All	308	226 (73.4)	71 (23.1)	11 (3.6)	1.48 (0.98-2.23)	0.97 (0.34-2.77)
Adjusting for possible PSP cases	289	209 (72.3)	69 (23.9)	11 (3.8)	1.43 (0.94-2.15)	0.90 (0.31-2.56)
Positive family history	38	29 (76.3)	8 (21.1)	1 (2.6)	1.81 (0.79-4.16)	1.13 (0.13-9.97)
Negative family history	270	197 (73.0)	63 (23.3)	10 (3.7)	1.45 (0.95-2.21)	0.98 (0.33-2.86)
Controls, age at exam ≤ 71 yr	85	55 (64.7)	28 (32.9)	2 (2.4)	1.00 (ref.)	1.00 (ref.)
Patients, age at exam ≤ 71 yr	168	126 (75.0)	39 (23.2)	3 (1.8)	1.52 (0.84-2.77)	1.12 (0.17-7.52)
Controls, age at exam ≤ 71 yr	105	69 (65.7)	32 (30.5)	4 (3.8)	1.00 (ref.)	1.00 (ref.)
Patients, age at exam ≤ 71 yr	140	100 (71.4)	32 (22.9)	8 (5.7)	1.33 (0.77-2.31)	0.79 (0.23-2.75)
Controls, European origin	152	99 (65.1)	47 (30.9)	6 (4.0)	1.00 (ref.)	1.00 (ref.)
Patients, European origin	252	185 (73.4)	59 (23.4)	8 (3.2)	1.54 (0.98-2.44)	1.55 (0.51-4.73)
Controls, nondemented	187	121 (64.7)	60 (23.1)	6 (3.2)	1.00 (ref.)	1.00 (ref.)
Patients, nondemented	297	219 (73.7)	68 (22.9)	10 (3.4)	1.53 (1.01-2.31)	0.98 (0.34-2.86)

97	Farin, et al	2001	USA	Case-control	Cases: 93/62 (M/F) Controls: 148/83 (M/F)	69 69

The C47T polymorphism of the mitochondrial targeting sequen of the SOD2 gene

Genotype	Cases No.	Cases %	Controls No.	Controls %	OR	(95%CI)
CC	35	22.6	51	22.1	1.00	-
CT	77	49.7	125	54.1	0.90	(0.54-1.50)
TT	43	27.7	55	23.8	1.14	(0.63-2.05)
CT or TT	120	77.4	180	77.9	0.97	(0.60-1.58)

98 | Tan, et al | 2001 | USA | Case-control | Cases: 100 (total) Controls: 194 (total) | 53.4 (onset), 61 57

	Total number of alleles	Number of ADH1 A1 allele	Allele frequency (%)
PD patients (total)	200	12	6.0
Family history	106	6	5.7
Without family history	94	6	6.4
Healthy controls (Caucasians)	200	9	4.5
Healthy controls (Hispanics)	186	11	5.9

99 | Wu, et al | 2001 | Taiwan | Case-control | Cases: 162/162 (M/F) Controls: 145/52 (M/F) | 67.2 65.8

MOB allele	Patients with PD, n=220; n (%)	Control subjects, n=191; n (%)	OR	(95% CI)
Total alleles				
A	230 (81.6)	209 (86.4)	0.698	(0.434-1.123)
G	52 (18.4)	33 (13.6)	1.432	(0.891-2.302)
Genotype				
A, A/A	169 (76.8)	158 (82.7)	0.692	(0.425-1.128)
A/G	14 (6.4)	16 (8.4)	0.743	(0.353-1.566)
G, G/G	37 (16.8)	17 (8.9)	2.069	(1.124-3.811)
Men				
A	122 (77.2)	123 (87.9)	0.468	(0.250-0.878)
G	36 (22.8)	17 (12.1)	2.135	(1.138-4.004)
Women				
A/A	47 (75.8)	35 (68.6)	1.432	(0.625-3.282)
A/G	14 (22.6)	16 (31.4)	0.638	(0.276-1.477)
G/G	1 (1.6)	0 (0.0)		NA

Factors and COMT genotype	Patients with PD, n=222; n (%)	Control subjects, n=191; n (%)	OR	(95% CI)
Men				
H/H	93 (58.1)	91 (65.0)	0.747	(0.468-1.194)
H/L, L/L	67 (41.9)	49 (35.0)	1.338	(0.838-2.137)
Women				
H/H	32 (51.6)	28 (54.9)	0.876	(0.417-1.842)
H/L, L/L	30 (48.4)	23 (45.1)	1.141	(0.543-2.400)

MAOB	COMT	Patients with PD, n=218; %	Controls, n=185; %	OR	(95% CI)
A, A/A, A/G	H/H	99 (45.41)	100 (54.05)	0.707	(0.477-1.048)
A, A/A, A/G	H/L, L/L	84 (38.53)	69 (37.30)	1.054	(0.704-1.578)
G, G/G,	H/H	21 (9.63)	14 (7.57)	1.302	(0.642-2.639)
G, G/G,	H/L, L/L	14 (6.42)	2 (1.08)	6.279	(1.408-28.001)

100 | Mellick, et al | 2000 | Australia | Case-control | Cases: 69/73 (M/F) Controls: 69/73 (M/F) | 59 (onset), 66 66

Analysis of the S18Y (C54A) UCH-L1 polymorphism and PD

PD risk analysis	PD	Controls	OR	(95% CI)
A vs. C	51/284	44/284	1.19	(0.77-1.86)
AA or CA vs. CC	42/142	41/142	1.04	(0.62-1.73)
Onset age < 60 years	18/71	41/142	0.84	(0.44-1.60)
Onset age < 50 years	8/26	41/142	1.10	(0.44-2.72)

101	Harhangi, et al	2000	The Netherlands	Nested Case-contro	Cases: 38/69 (M/F) Controls: 2153/2652 (M/F)	77.4 69	

APOE	All PD (n=104)	PD without dementia (n=79)	PD with dementia (n=25)
APOE genotype			
APOE3E3	1.0 (ref.)	1.0 (ref.)	1.0 (ref.)
APOE2			
Crude	1.67 (1.01-2.72)	1.15 (0.63-2.09)	5.40 (2.00-14.54)
Adjusted	1.69 (1.03-2.80)	1.18 (0.65-2.17)	5.55 (2.02-15.22)
APOE4			
Crude	0.90 (0.55-1.46)	0.62 (0.34-1.13)	2.91 (1.08-7.85)
Adjusted	0.98 (0.60-1.61)	0.67 (0.36-1.22)	3.60 (1.31-9.87)

102	Maraganore, et al	1999	USA	Case-control	Cases: 90/49 (M/F) Controls: 39/74 (M/F)	62 (onset), 69 74	**Ubiquitin carboxy-terminal hydrolase L1 genotypes**

Genotype	Cases	Controls	OR	(95% CI)
193M /193M or 193M/wt vs wt/wt	0/138	0/112	-	
S18Y/S18Y vs wt/wt	2/97	4/68	0.31	(0.05-1.88)
S18Y/wt vs wt/wt	35/130	42/106	355	(0.31-0.99)
S18Y/S18Y or S18Y/wt vs wt/wt:	37/132	46/110	0.53	(0.30-0.94)
Total sample				
Age at onset < 62y	17/66	46/110	0.48	(0.24-0.97)
Age at onset ≥ 62y	20/66	46/110	0.58	(0.29-1.15)

103	Harhangi, et al	1999	The Netherlands	Nested Case-contro	Cases: 27/53 (M/F) Controls: 63/98 (M/F)	77.3 76.8	**NAT-2 polymorphism**

	55-64		65-74		≥ 75		Overall	
	Control	Patient	Control	Patient	Control	Patient	Control	Patient
Genotype	(n=14)	(n=7)	(n=46)	(n=22)	(n=101)	(n=51)	(n=161)	(n=80)
WT/WT	0	0	0.11	0.14	0.04	0.06	0.06	0.07
WT/M	0.29	0.86	0.3	0.27	0.49	0.37	0.42	0.39
M/M	0.71	0.14	0.59	0.59	0.47	0.57	0.53	0.54

104	Paola, et al	1998	Italy	Case-control	Cases: 59/41 (M/F) Controls: 118/82 (M/F)	58.6 (onset), 66.6 64.2	CYP2D6 PMs: 0.69 (0.24-1.99) CYP2D6 PMs and solvent exposure: 14.47 (1.16-185.23)

105	Checkoway, et al	1998	USA	Case-control	Cases: 57/41 (M/F) Controls: 89/57 (M/F)	69 71	

MAO-B allele	OR	(95% CI)
A	1.00	
G	1.70	(0.94-0.39)

	MAO-B allele			
	A		G	
Smoking status / pack-years	OR	(95% CI)	OR	(95% CI)
Never	1.00		1.00	
Ever	1.44	(0.45-4.68)	0.24	(0.10-0.55)
> 0-10.8	3.02	(0.67-13.6)	0.36	(0.12-1.04)
10.9-23.2	1.86	(0.27-12.7)	0.06	(0.01-0.47)
23.3-43.3	1.31	(0.28-6.06)	0.10	(0.01-0.92)
> 43.3	4.25	(0.58-31.2)	0.25	(0.07-0.88)

106	Sandy, et al	1996	USA	Case-control	Cases: 108 (total) Controls: 236 (total)	young-onset (≤51)	One or more CYP2D6B alleles: 0.58 (0.33-1.00) One or more of four nonfunctional alleles (CYP2D6 A, B, D and D2): 0.68 (0.41-1.13)

Table 3. Environmental factors in relation to Parkinson's disease

Basic characteristics						
Agriculture region residence	-2	-3	-21	-29	-41	-43
	↑48	-52	-56			
Smoking	↓3	↓8	↓10	-12	↓13	↓14
	-24	↓26	↓29	↓32	↓33	-34
	↓35	-40(No special reason for non-smoking : ↑)			↓41	↓43
	↓46	-48	↓49	↓54(<75 year only)		↓56
	↓57	-63	↓64	↓65		
Educational level	↓10	-40	↓41	-62		
No children	↑12					
Exercise	↓24	-40				
Pets	↓29	↓40				
Country of birth (other than USSR)	↑32					
Urban area	-35	-41	↓49			
Physical strain of work	-40					
Age	↑48					
Sex	-48					
Birthweight	-64					
Weight at 1 year	-64					
Social class at birth	-64					
Current social class	-64					
Birth order	-64					
Sibship size	-64					
Occupation						
Agriculture production crops	↑4					
Transporting	↓4	-9	-31	-42	-49	
Metal, machinery and related engineers	↓4					
Drivers	↓4	↓46				
Manufacturing	↓4	-9	-31			
Technicians	↓4	-9				
Clerk	↑9	↓42	-62			
Sales	↓9	-31	-42	-62		
Agriculture, fishery, forestry	↓9	↑13(farming)	-21	↑ 23(men who worked on a plantation more than 20years)		
	-24	-29	↗31	-40	-42	-46
	-49	↑52	-56	-62		
Mining	-24	-31	↑42			
Chemical / Petrol	-24	↑49				
Textile manufacture	-24					
Service	↘31	-42	↓49			
Processing	-31	-42				
Machine trades	-31					