Supplementary Table 1. Results of L-CBMN and other genotoxicity assay studies in individuals exposed to dust[a] – new data not included in ref. 4

Exposure subjects, country	**Number of participants (sex and age)**	**Exposure type and measurement**	**Exposure period or duration**	**No of BNCs evaluated in L-CBMN assay and stain**	**Quality Score**	**Results and comments**		**Ref.**
Children exposed to sawdust, Egypt	40 E, 100% men, n.s. 35 C, 100% men, n.s., attending regular school in the same district	Delinquent children exposed to sawdust in handicraft training school	n.s.	n.s.	18/27	L-CBMN	↑2.5 ± 1 *vs.* 6.2 ± 1.2	Koraa[24]
						MDA (nmol/ml)	↑2.5 ± 1.2 *vs.* 5.2 ± 2	
						Blood serotonin (ng/ml)	↑32.1 ± 13.2 *vs.* 81.2 ±2 5.2	
Coal miners, two cities, Brazil	71 E, 100% men, 42.75 ± 8.45 y 57 C, 100% men, 41.51 ± 15.04 y, same cities not exposed to genotoxins, ionizing radiation, coal, and chemicals	Occupational, mixed coal dust exposure, n.s.	12.63 ± 7.87 y	2000 BNL Giemsa	19/27	L-CBMN	↑MN 3.12 ± 2.93 *vs.* 7.46 ± 4.64	Rohr[25]
							↑NB 5.17 ± 3.31 *vs.* 6.10 ± 4.48	
							↑NPB 5.59 ± 4.06 *vs.* 12.33 ± 7.48	
						Comet assay	↑DI 15.53 ± 8.80 *vs.* 33.69 ± 28.70	
							↑DF 12.40 ± 6.18 *vs.* 27.46 ± 23.75	
						TBARs (nm/mg protein)	↓10.30 ± 4.81 *vs.* 5.94 ± 1.90	
						SOD (U/g protein)	↑50.26 ± 25.17 *vs.* 81.60 ± 14.39	
						CAT (U/mg protein)	↓2.13 ± 1.31 *vs.* 0.84 ± 0.87	
Coal miner workers exposed to coal dust, Russia	143 E, 100% men, 50.11 ± 7.36 y (24–60) 127 C, 100% men, 47.67 ± 8.45 y (25–60)	Occupational, mixed coal dust exposure, n.s.	23.26 ± 9.66 y (4–39)	1000 BNL Giemsa	18/27	L-CBMN	↑MN 7.51 ± 1.83 *vs.* 11.15 ± 3.81	Sinitsky[26]
							↑NPB 2.36 ± 1.27 *vs.* 4.04 ± 2.82	
							↑NB 5.83 ± 2.55 *vs.* 7.23 ± 2.54	
							↓NDI 2.16 ± 0.15 *vs.* 1.91 ± 0.19	
							↔ apoptosis 1.34 ± 0.55 *vs.* 1.71 ± 1.04	
						Different sub categories with higher exposure had higher MN levels		

Workers in a coal mine with pneumoconiosis (CWP) and healthy workers, Turkey	23 E-CWP, n.s., 68.27 ± 4.74 y* 29 E, n.s., 34.69 ± 6.03 y* 29 C, n.s., 33.28 ± 5.23 y*	Occupational, mixed coal dust exposure 1.66 mg/m^3 (2 mg/m^3 is no CWP level)	E-CWP 24.04 ± 7.39 y* E 8.86 ± 5.38 y*	1000 BNL Giemsa	16/27	L-CBMN*	↑E-CWP *vs.* E+C: 4.64 ± 0.22 *vs.* 4.75 ± 0.24	Ulker[27]
						SCE*	↑E-CWP *vs.* E and C: 8.81 ± 1.79 *vs.* 5.73 ± 0.78 *vs.* 5.61 ± 0.13	
workers in a bituminous coal mine, Turkey	39 E, n.s., 40.02 ± 0.89 y (30–49 y) 34 C, n.s., 39 ± 0.96 y (30–49), managerial jobs	Occupational, mixed coal dust exposure 1.45 mg/m^3 (1.26–1.75mg/m^3) (2 mg/m^3 is no CWP level)	15.25 ± 0.40 y (10–12 y), 37.5 h per week	1000 BNL Giemsa	16/27	L-CBMN*	↑18.91 ± 0.74 *vs.* 27.17 ± 1.54	Donbak[28]
						CA*	↑1.05 ± 0.17 *vs.* 5.82 ± 0.37	
						SCE*	↑6.24 ± 0.12 *vs.* 9.96 ± 0.28	
						The results were significantly correlated with the exposure duration period		
Workers at the surface in a sub-bituminous open cast coal mine, Colombia	50 E coal transport, 18 E equipment field maintenance, 17 E coal stripping, 15 E coal embarking, n.s., 44.0 ± 7.5 y 100 C, matched by age and similar socio-economic status, n.s., 43.7 ± 7.8 y	Occupational, coal dust, n.s.	17.7 ± 6.9 y (5–30)	2000 BNL Giemsa	18/27	L-CBMN	↑2.9 ± 4.0 *vs.* 8.6±4.8	Leon-Mejia[29]
						Comet assay	↑TL 14.3 ± 2.5 *vs.* 23.4 ± 6.5 ↑TI *vs.* 2.9 ± 1.5 13.1 ± 7.9 ↑DI 9 ± 6.4 *vs.* 60 ± 39.5	
Open cast coal mining workers, Northern Colombia	200 E, 100% men, 44.0 ± 7.5 y (24–60) 100 C, 100% men, 43.7 ± 7.8 y (26–60)	Occupational mixed exposure to coal dust containing dust particles, heavy metals and PAHs, n.s.	17.7 ± 6.9 y (5–30)	2000 BNL Giemsa	17/27	L-CBMN	↑MN in E significantly correlated with exposure	Espitia-Perez[30]
						Comet assay	↑Tail DNA % and damage index in E significantly correlated with exposure	
						Buccal MN	↑In E- MN, buds, karryorhexis and kariolysis significantly correlated with exposure	
						L-CBMN higher in E GSTT1+ carriers Buccal MN, buds and comet assay parameters higher in GSTM1 null carriers		

						Buccal MN, bud, bridge and comet assay parameters lower in XRCC1 and hOGG1 variant carriers Buccal nuclear buds significantly higher in CYP1A1 variant carriers Cell death in buccal MN higher in GSTT1/M1 null carriers		
Refineries workers with cobalt (Co) exposure from Belgium, Norway and Finland or hard metal dust (tungsten carbide particles in hard metals) (WC-Co) exposure from Sweden and England	35 E (Co), 100% men, 38.5 ± 7.7 y 29 E (WC-Co), 100% men, 40.7 ± 12.4 y 35 C, 100% men, similar socio-economic conditions, from five respective plants (warehouse, general services, or administration), 38.0 ± 8.8 y	Occupational, cobalt-containing dust, moderate exposure Spot urine 20 mg Co /g creatinine, equivalent to an airborne exposure 20 µg/m^3 , the current ACGIH TLV-TWA	Co 9.9 ± 8.8 y (1.0–31.0) WC–Co 10.3 ± 7.9 y (1.0–27.0)	2000 BNL Giemsa	19/27	Cross-Sectional Study, only MN-MonoN correlated with workplace		De Boeck[31]
						Comet assay	↔ TL: C *vs.* Co *vs.* WC-Co: 0.64 ± 1.25 *vs.* 0.71 ± 1.38 *vs.* 0.65 ± 1.23 TD: C *vs.* Co *vs.* WC-Co: 0.51 ± 1.35 *vs.* TD 0.50 *vs.* 0.57 ± 1.24 ± 1.44, TM: C *vs.* Co *vs.* WC-Co: 0.34 ± 1.47 *vs.* 0.37 ± 1.85 *vs.* 0.40 ± 1.45	
						Fpg comet assay	↔ TL: C *vs.* Co *vs.* WC-Co: 0.052 ± 0.144, 0.007 ± 0.247, 0.024 ± 0.096 TD: C *vs.* Co *vs.* WC-Co: 0.069 ± 0.157, 0.060 ± 0.197, 0.019 ± 0.166 TM: C *vs.* Co *vs.* WC-Co: 0.050 ± 0.157 *vs.* 0.069 ± 0.218 *vs.* 0.022 ± 0.158	
						L-CBMN	↔ MN in BN: C *vs.* Co *vs.* WC-Co: 3.9 ± 1.7 *vs.* 5.3 ± 1.9 *vs.* 3.8 ± 1.5 MN in MonoN: C *vs.* Co *vs.* WC-Co: 6.1 ± 1.5 *vs.* 5.3 ± 1.6 *vs.* 6.8 ± 1.7	
						8-OHdG-U µmol/mol creatinine	C *vs.* Co *vs.* WC-Co: 1.46 ± 1.48 *vs.* 1.52 ± 1.69 *vs.* 1.63 ± 1.42	

Footwear workers, Brazil	29 SBA, 100% men, 27.10 ± 7.07 y, 19 WBA, 100% men, 25.38 ± 4.40 y 25 C, 100% men, 30.64 ± 8.76 y	Occupational, Footwear worker exposed to solvent based-SBA or water based adhesive-WBA and dust, n.s.	3.98 ± 4.13 y SBA *vs.* 5.80 ± 4.03 y WBA	2000 BNL Giemsa	15/27	L-CBMN	↔ SBA *vs.* WBA *vs.* C: 4.90 ± 2.34 *vs.* 3.88 ± 1.93 *vs.* 5.20 ± 2.33	Heuser[32]
						Comet assay (%)	↑damage frequency SBA *vs.* WBA 2.76 ± 1.99 *vs.* 0.78 ± 0.91, C 1.52 ± 1.31 ↑damage index (0–800) SBA *vs.* WBA 8.35 ± 7.85 *vs.* 2.13 ± 2.45, SBA↑ *vs.* C 3.44 ± 3.24, WBA↓ *vs.* C	
						buccal MN	↔SBA *vs.* WBA *vs.* C: 1.15 ± 1.45 *vs.* 0.69 ± 0.87 *vs.* 0.62 ± 0.73	
Gulf War I veterans with inhalation only exposure to uranium dust	22 E low exposure, n.s., n.s. 13 E high exposure, n.s., n.s.	Occupational-soldiers Urine conc low exposure<10µg U/mg creatinine and high exposure ≥10 µg U/mg creatinine 0.012 *vs.* 7.694 uU	n.s.	2000 BNL Giemsa	14/27	L-CBMN*	↔31.95 ± 3.35 *vs.* 32.92 ± 4.05	Mcdiarmid[33]
						No significant increase in other assay used: CA, FISH and L-HPRT mutation		
Phosphate fertilizer factory, North China	40E, n.s., n.s. 40 C students, from the same city matched by age, gender and smoking, n.s., n.s.	Chronic occupational, mixed exposure in one years measured HF and SiF_4 0.5–0.8mg/m^3, NH_3 0.01–0.05 mg/m^3, SO_2 0.02–0.07 mg/m^3 floating dust <10 µm diameter 0.05–0.20mg/m^3	n.s.	2000 BNL Giemsa	16/27	CA	↑ 0.91 *vs.* 0.24 ↑Dicentrics 3 *vs.* 11 ↑Centric rings 13 *vs.* 52 ↑Acentric fragments 2 *vs.* 24 ↔Translocations 3 *vs.* 8 ↔minutes 5 *vs.* 8 ↑Gaps 6 *vs.* 85 ↑Chromatid breaks 28 *vs.* 73	Meng[34]
						L-CBMN	↑ 0.62 ± 0.54 *vs.* 1.55 ± 0.71	
						Increase of damage with exposure period up to 10 years, then decrease of parameters		

Workers with cobalt (Co) or hard metal dust (WC-Co) exposure, Belgium	21 E (Co), 100% men, n.s. 26 E (WC-Co), 100% men, n.s. 26 C, 100% men, n.s.	Occupational, cobalt-containing dust, moderate exposure, urine spot exposure level corresponded on average to the ACGIH TLV-TWA (20 µg Co/m^3)	n.s.	2000 BNL Giemsa	16/27	L-CBMN	↑ MonoMN (n.a.) n.s.	Mateuca,[45] De Boeck[31]
						comet assay DNA damage was increased in XRCC1Arg[280]His MonoMN was significantly higher in hOGG1[326] and XRCC3[241] variants, but not for hOGG1 Urinary 8-hydroxydeoxyguanosine (8-OHdG) and MNCB were not influenced by the polymorphisms in hOGG1, XRCC3 genes		

[a]Abbreviations: B – buccal cells; C – control; f – female; h – hours; L – lymphocytes; L-CA – chromosome aberrations in lymphocytes; L-CBMN – lymphocyte cytokinesis-block micronucleus assay; L-SCE – lymphocyte sister chromatid exchange assay; m – male; MI – mitotic index; MN – micronuclei; N – nasal cells; NB – nuclear buds; NDI – nuclear division index; N-MN – nasal micronucleus assay; NPB – nucleoplasmic bridges; n.s. – not specified; QS –study quality score; y – years; MonoN-mononucleated cells; PAHs – polycyclic aromatic hydrocarbons; HPRT – Hypoxanthine–guanine phosphoribosyl transferase; CAT– catalase activity; SOD – superoxide dismutase activity; TBARs – thiobarbituric acid reactive substances; DI – damage index; DF – damage frequency; MDA – malondialdehyde; TL – tail length in µm; TD or TI – tail DNA intensity in %; TM – tail movement; ↑ significant increase and ↓ significant decrease; numbers following the arrows in brackets indicate the mean ratio; ↔ no effect.
Values are given as mean ± SD, if not otherwise specified; * mean ± SEM; [§]means calculated from original results, which were reported as Log(MN) and Log(SCE), respectively.

Supplementary Table 2. Results of buccal and nasal micronucleus cytome assay and other genotoxicity assay studies in individuals exposed to dust[a] – new data not included in ref. 4

Exposure subjects, country	Number of participants (sex and age)	Exposure type and measurement	Exposure period or duration	No of buccal/nasal cells and stain	Quality Score	Results of BMCyt and other assays and comments		Ref.
Coal mine workers, Colombia	100 E, n.s, 44 ± 7.5 y (24–60) 100 C, n.s, 43.7 ± 7.8 y (27–60), same region, genetic background and lifestyle habits no exposure to genotoxins, coal, and cigarettes	Occupational mixed exposure to coal dust Blood trace elements measurement PIXE	17.7 ± 6.9 y (5–30 y)	2000 Giemsa	20/27	Diff	↑MN 1 ± 2.2 *vs.* 8.8 ± 12.8	Leon-Mejia[51]
							↑NB 1 ± 1.1 *vs.* 2.7 ± 4.2	
						Cell death	↑KAR 35.8 ± 30.5 *vs.* 64.8 ± 54.9	
							↑KYC 36.1 ± 40.1 *vs.* 25.3 ± 17.3	
						Sub categories with direct coal exposure had higher DNA damage level		
Coal mine workers, two cities, Brazil	41 E, n.s., 36.86 ± 14 y 29 C, n.s., 46.69 ± 18.11 y, same cities not exposed to genotoxins, ionizing radiation, coal, chemicals	Occupational mixed exposure to coal dust Blood trace elements measurement PIXE	13.83 ± 8.12 y	2000 Giemsa	17/27	Basal	↑1 ± 1.31 *vs.* 14.34 ± 6.73	Rohr[52]
							↑MN 0.03 ± 0.19 *vs.* 0.51 ± 0.78	
						Diff	↑MN 0.21 ± 0.41 *vs.* 3.10 ± 2.22	
							↔NB 6.93 ± 3.46 *vs.* 7.66 ± 3.39	
							↑BN 10.79 ± 3.67 *vs.* 13.26 ± 4.90	
						Cell death	↑CC 11.79 ± 3.53 *vs.* 5.73 ± 3.62	
							↔KAR 10 ± 2.42 *vs.* 10.80 ± 4.98	
							↔PYC 8.45 ± 2.98 *vs.* 8.46 ± 3.23	
							↔KYC 13.07 ± 3 *vs.* 13.12 ± 4.45	
Foundry workers, India	100 E, 100% men, 37.83 ± 10.22 y (21–58) 100 C, 100% men , 38.48 ± 9.83 (22–58), not exposed to genotoxins, ionizing radiation, coal, chemicals	Occupational, questionnaire, n.s.	9.96 ± 1.90 y	2000 Feulgen	18/27	No differences in BMCyt		Singaravelu[53]
						S	↑MN 2.22 ± 0.42 *vs.* 4.84 ± 0.03	
							↑BN 6.52 ± 0.23 *vs.* 13.28 ± 0.20	
							↑BEC 6.29 ± 0.18 *vs.* 18.36 ± 0.23	
							↑NB 0.61 ± 0.27 *vs.* 1.63 ± 0.27	
						NS	↑MN 1.52 ± 0.09 *vs.* 1.71 ± 0.14	
							↑BN 4.59 ± 0.16 *vs.* 8.59 ± 0.28	
							↑BEC 4.10 ± 0.05 *vs.* 17.51 ± 0.21	
							↑NB 0.14 ± 0.06 *vs.* 1.39 ± 0.21	

Cotton weavers, Pakistan	51 E, 100% male, 37.73 ± 1.33 y 51 C, 100% male, 31.06 ± 1.41 y, similar socio-economic conditions, BMI, smoking and diet	Occupational, cotton dust mixture exposure Spectrometer measurements of dust particles and pesticides *$\mu g/m^3$: inhalable dust: 4816 ± 2365, thoracic dust: 4299 ± 2339; PM 2.5: 1305 ±9 24	15.27 ± 1.22 y	2000 Feulgen	19/27	Exposure correlation with BN only for 10–16 years of exposure, for exposure in general correlation with all cell death parameters (CC, KAR, KYC, PYC)		Khan[54]
Calcite factory workers, Turkey	50 E, n.s., 30.76 ±0.73 y 50 C, n.s., 30.68 ± 1.28 y, working at university, no previous genotoxin exposure	Occupational, questionnaire, n.s.	3.62 ± 0.40 y	1000 Giemsa	18/27	Diff	↑MN* 8.04 ± 0.78 *vs.* 20.36 ± 0.78	Diler[55]
							↑BN* 4.08 ± 0.61 *vs.* 9.13 ± 0.61	
							↑BEC* 4.37 ± 1.06 *vs.* 9.62 ± 1.06	
						Cell death	KAR 1.07 ± 0.17 *vs.* 2.66 ± 0.17	
							KYC 1.27 ± 0.30 *vs.* 3.50 ± 0.30	
Furniture workers, Turkey	20 E, n.s., 31 ± 6.71 y 20 C, n.s., 24.6 ± 4.95 y	Occupational, mixed soft and hard wood dust Amount of wood at the table surface in one day 4.7–28.9 mg/m^3	16.6 ± 7.51 y	1000 Giemsa	16/27	Diff	↑MN 1.50 ± 1.18 *vs.* 6.63 ± 1.65	Celik[56]
							↑BEC 1.12 ± 1 *vs.* 5.48 ± 1.73	
							↑KYL 1.92 ± 0.97 *vs.* 7.87 ± 1.54	
							↑KAR 2.05 ± 1.06 *vs.* 9.30 ± 2.06	
							↑BN 2.20 ± 1.74 *vs.* 10.70 ± 2.08	

Workers in a veneer factory (VF) and carpenters from a furniture factory (FF), Austria	51 E VF, 49% males, m 44.4 ± 10.8, f 38.3 ± 10.8 y 38 E FF, 92% males, m 41.5 ± 12.9 y, f 42.3 ± 11.5 65 C, 66% males, m 38.8 ± 7.9, f 35.1 ± 5.5 y	Occupational, low levels of wood dust. Personal air sampling, gravimetric analysis, Inhalable dust levels: FF – 0.66 mg/m^3 VF – 0.39 mg/m^3 Individual measurements: FF – 0.84, VF – 0.31mg/m^3	FF m 24.1 ± 12.5, f 22.3 ± 7.7 VF m 22.3 ± 7.7, f 9.1 ± 9.1 y	2000 buccal, 1500 nasal Feulgen staining	18/27	Basal buccal	↑5‰ *vs.* 7‰	Wultsch[57]
						Buccal and nasal BN, CC, KYL, KAR, MN significantly higher in the exposed workers, exposed did not differ in MN values, but did in BN, CC, KYL, KAR		
Construction and furniture workers, Australia	31 E, 100% male, 39.3±11.8y (18–60) 19 C, 100%male, (23–62) 37.9 ± 11.2 y, computer engineers and pantry chefs	Occupational, wood dust exposure Personal sampler through two working shifts Inhalable dust level 2.9 ± 2.5 mg/m^3 (0.8–22.9)	20 ± 10.6 y	1000 buccal 1000 nasal Feulgen staining	17/27	buccal	↑MN 2.8 ± 1.5 *vs.* 1.6 ± 0.8	Bruschweiler[58]
							↑Diff 646 ± 9.1 *vs.* 449 ± 17.1	
							↓basal 51 ± 24 *vs.* 21 ± 1.9	
							↑BN 7 ± 0.5 *vs.* 4.2 ± 0.2	
							↑CC 57 ± 3.1 *vs.* 43 ± 2.6	
							↑KAR 92 ± 5 *vs.* 186 ± 9.8	
							↑PYC 22 ± 2 *vs.* 36 ± 3	
							↑KYL 123 ± 7.5 *vs.* 259 ± 14.5	
							↔NB 0.6 ± 0.1 *vs.* 1.1 ± 0.1	
						nasal	MN 3.2 ± 2.2 *vs.* 0.9 ± 0.85	
						Buccal and nasal parameters were correlated with age, exposure, duration of exposure and status of smoking		
Stainless steel production workers, Finland	29 E to Cr^{6+}, 100% male, 48.1 (35–62) 14 E to Cr^{3+}, 100% male, 48.4 (34–56) 5 E to chromite ore, 100% male, 49.2 (39–58) 39 C, 100% male, 44.6 y (35–59) from cold rolling mill	Chromium dust measurement in the air 1.8mg/m^3 total dust Cr^{3+} 2.4 mg/m^3, 248 $\mu g/m^3$ Cr exposure Chromite: 1 mg/m^3 dust, 22 $\mu g/m^{Cr3+}$	21.4 y (14–30) 24.4 y (14–30) 27.6 y (19–31)	200/4000 nasal Papanicolau staining DAPI–FISH MN+/−	17/27	nasal	↔MN	Huvinen[59]
						Cr^{3+}	MN+ 2.29 ± 2.02 *vs.* MN− 4.50 ± 2.03	
						Cr^{6+}	MN+ 2.62 ± 2.65 *vs.* MN− 4.41 ± 2.40	
						chromite	MN+ 2.80 ± 3.27 *vs.* MN− 4.80 ± 2.77	
						C	MN+ 2.67 ± 2.22 *vs.* MN− 5.18 ± 2.91	

Footwear workers, Brazil	29 SBA, 100% men, 27.10 ± 7.07 y, 19 WBA, 100% men, 25.38 ± 4.40 y 25 C, 100% men, 30.64 ± 8.76 y	Occupational, Footwear worker exposed to solvent based-SBA or water based adhesive-WBA and dust	3.98 ± 4.13 y SBA *vs.* 5.80 ± 4.03 y WBA	2000 Feulgen staining	15/27	L-CBMN	↔ SBA *vs.* WBA *vs.* C: 4.90 ± 2.34 *vs.* 3.88 ± 1.93 *vs.* 5.20 ± 2.33	Heuser[32]
						Comet assay (%)	↑DF: SBA *vs.* WBA 2.76 ± 1.99 *vs.* 0.78 ± 0.91, C 1.52 ± 1.31 ↑DI (0–800): SBA *vs.* WBA 8.35 ± 7.85 *vs.* 2.13 ± 2.45, SBA↑ *vs.* C 3.44 ± 3.24, WBA↓ *vs.* C	
						Buccal MN	↔SBA *vs.* WBA *vs.* C: 1.15 ± 1.45 *vs.* 0.69 ± 0.87 *vs.* 0.62 ± 0.73	
Open cast coal mining workers, Northern Colombia	200 E, 100% men, 44.0 ± 7.5 y (24–60) 100 C, 100% men, 43.7 ± 7.8 y (26–60)	Occupational mixed exposure to coal dust containing dust particles, heavy metals and PAHs	17.7 ± 6.9 (5–30)	2000 BNL, 1000 buccal Giemsa	17/27	L-CBMN	↑MN in E significantly correlated with exposure	Espitia-Perez[30]
						Comet assay	↑TD and DI in E significantly correlated with exposure	
						Buccal MN	↑In E- MN, KAR, KYL significantly correlated with exposure	
						L-CBMN higher in E GSTT1+ carriers Buccal MN, NB and comet assay parameters higher in GSTM1 null carriers Buccal MN, NB, NPB and comet assay parameters lower in XRCC1 and hOGG1 variant carriers ↑Buccal NB in CYP1A1 variant carriers Cell death in buccal MN higher in GSTT1/M1 null carriers		

[a]Abbreviations: B – buccal cells; C – control; f – female; h – hours; L – lymphocytes; L-CA – chromosome aberrations in lymphocytes; L-CBMN – lymphocyte cytokinesis-block micronucleus assay; L-SCE – lymphocyte sister chromatid exchange assay; m – male; MI – mitotic index; MN – micronuclei; N – nasal cells; NB – nuclear buds; NDI – nuclear division index; N-MN – nasal micronucleus assay; NPB – nucleoplasmic bridges; n.s. – not specified; QS –study quality score; y – years; CC – condensed chromatin; KAR – kariorrhectic chromatin; PYC – pycnotic cells, KYC – karyolytic cells; Diff – differentiated cells; Basal – basal cells; PIXE – particle-induced X-ray emission technique; S – smokers; NS – non-smokers; TL – tail length in μm; TD or TI – tail DNA intensity in %, TM – tail movement.

↑ significant increase, ↓ significant decrease, number following the arrow in brackets indicates the mean ratio, ↔ no effect

Values are given as mean ± SD, if not otherwise specified; * mean ± SEM; [§]means calculated from original results that were reported as Log(MN) and Log(SCE), respectively.