Species	Stressor	Substance interaction with lung residents cell membrane components	Systemic acute phase response	Reference
Mouse	Carbon black nanoparticles	Yes, intratracheal instillation of 162 µg.	Yes, significant increase of plasma serum amyloid A (SAA) at 1 and day 28 after exposure.	(Bourdon et al., 2012)
Mouse	Multiwalled carbon nanotubes	Yes, intratracheal instillation of 18, 54 and 128 µg.	Yes, increased levels of plasma SAA3 after 1 day, with 128 µg.	(Saber et al., 2013)
Mouse	Multiwalled carbon nanotubes (referred as CNT_{small})	Yes, intratracheal instillation of 18, 54 and 162 µg.	Yes, increased plasma SAA3 1, 3 and 28 days after exposure to 162 µg, and 3 days after exposure to 18 and 54 µg.	(Poulsen, Saber, Mortensen, et al., 2015; Poulsen, Saber, Williams, et al., 2015)
Mouse	Multiwalled carbon nanotubes (referred as CNT_{large})	Yes, 18, 54 and 162 µg. intratracheal instillation of	Yes, increased plasma SAA3 1 and 3 days after exposure to 162 µg, and 3 days after exposure to 54 µg.	(Poulsen, Saber, Mortensen, et al., 2015; Poulsen, Saber, Williams, et al., 2015)
Mouse	Graphene oxide	Yes, intratracheal instillation of 18, 54 and 162 µg.	Yes, increased SAA3 plasma levels 3 days after exposure to 54 and 162 µg.	(Bengtson et al., 2017)
Mouse	Multiwalled carbon nanotubes	Yes, intratracheal instillation of 54 µg.	Yes, increased SAA1/2 and SAA3 plasma levels 1 day after exposure to. No change in SAA1/2 and SAA3 28 and 92 days after exposure.	(Poulsen et al., 2017)
Mouse	Multiwalled carbon nanotubes	Yes, intratracheal instillation of 6, 18 and 54 µg.	Yes, increased SAA1/2 plasma levels 1 day after exposure. No change in SAA1/2 28 and 92 days after exposure. Increased SAA3 plasma levels 1 days after exposure. Increased SAA3 plasma levels 28 and 92 days after exposure.	(Poulsen et al., 2017)
Mouse	Carbon black	Yes, intratracheal instillation of 162 µg.	Yes, increased SAA3 plasma levels 1 days after exposure. No change in SAA3 28 and 92 days after exposure. No change in SAA1/2 plasma levels.	(Poulsen et al., 2017)

Species	Stressor	Substance interaction with lung residents cell membrane components	Systemic acute phase response	Reference
Mouse	Particulate matter from non-commercial airfield	Yes, intratracheal instillation of 6, 18 and 54 µg.	Yes, increased plasma SAA3 levels after exposure to 54 µg.	(Bendtsen et al., 2019)
Mouse	Diesel exhaust particles	Yes, intratracheal instillation of 18, 54 and 54 µg.	Yes, increased plasma SAA3 levels after exposure to 54 µg.	(Bendtsen et al., 2019)
Mouse	Nanofibrilated celluloses (FINE NFC, BIOCID FINE NFC and AS)	Yes, intratracheal instillation of 6 and 18 µg.	FINE NFC increased plasma SAA3 1 day after exposure to 6 and 18 µg, while AS increased SAA3 after exposure to 18 µg. After 28 days, only 6 µg of FINE NFC increased plasma SAA3.	(Hadrup et al., 2019)
Mouse	Copper oxide	Yes, intratracheal instillation of 2, 6 and 12 µg.	Yes, increased plasma SAA1/2 level after exposure to 6 µg.	(Gutierrez et al., 2023)
Mouse	Tin dioxide	Yes, intratracheal instillation of 54 and 162 µg.	Yes, increased plasma SAA3 after exposure to 162 µg.	(Gutierrez et al., 2023)
Mouse	Titanium dioxide	Yes, intratracheal instillation of 162 µg.	Yes, increased plasma SAA3 and SAA1/2 after exposure to 162 µg.	(Gutierrez et al., 2023)
Mouse	Carbon black	Yes, intratracheal instillation of 162 µg.	Yes, increased plasma SAA3 and SAA1/2 after exposure to 162 µg.	(Gutierrez et al., 2023)
Mouse	Singlewalled carbon nanotubes	Yes, pharyngeal aspiration of 40 µg.	Yes, increase serum C-reactive protein (CRP), haptoglobin and SAP 1 day after exposure.	(Erdely et al., 2011)
Mouse	Multiwalled carbon nanotubes	Yes, pharyngeal aspiration of 40 µg.	Yes, increase serum CRP, haptoglobin and SAP 1 day after exposure. No changes after 28 days.	(Erdely et al., 2011)
Mouse	Serum amyloid A	Yes, intratracheal instillation (2 µg) once a week for 10 weeks.	Yes, increased levels of endogenous serum SAA3.	(Christophersen et al., 2021)
Human	Welding fumes	Yes, median exposure to welders ($PM_{2.5}$) was 1.66 mg/m^3 and 0.04 mg/m^3 for controls, during 5.3 h.	No changes in serum CRP 6 hours after exposure, but significantly increased serum CRP levels 16 hours after welding.	(Kim, Chen, Boyce, & Christiani, 2005)
Human	Wood smoke	Yes, 4h exposure to 240-280 µg/m^3.	Yes, significant increase in blood SAA after exposure,	(Barregard et al., 2006)

Species	Stressor	Substance interaction with lung residents cell membrane components	Systemic acute phase response	Reference
			and 3 and 20 h after exposure, no change in CRP.	
Human	Brazing fumes	Yes, 6h exposure to 1.4, 2 and 2.5 mg/m^3.	Yes, increased blood CRP 24h after exposure to 2 and 2.5 mg/m^3.	(Brand et al., 2014)
Human	Fumes from welding aluminium	Yes, 6h exposure to 2.5 mg/m^3.	Yes, significantly increased blood CRP 24 after exposure. No change after exposure nor a week after exposure.	(Hartmann et al., 2014)
Human	Fumes from welding zinc coated materials	Yes, 6h exposure to 2.5 mg/m^3.	Yes, significantly increased blood CRP 24 after exposure. No change after exposure nor a week after exposure.	(Hartmann et al., 2014)
Human	Traffic related particulate matter	Yes, exposure during work hours.	Yes, serum CRP and SAA were significantly and positively associated with increases in exposure.	(Meier et al., 2014)
Human	Fumes from brazing galvanized steel, using aluminum bronze wire	Yes, 6h exposure to 2.5 mg/m^3.	Yes, significant increase in serum CRP and SAA 29 h after exposure. No change 6 nor 10 h after exposure.	(Baumann et al., 2016)
Human	Fumes from welding galvanized steel and aluminum, using zinc wire	Yes, 6h exposure to 2 mg/m^3.	Yes, significant increase in serum CRP and SAA 29 h after exposure. No change 6 nor 10 h after exposure.	(Baumann et al., 2016)
Human	Fumes from brazing galvanized steel using zinc wire	Yes, 6h exposure to 2 mg/m^3.	Yes, significant increase in serum CRP 29 h after exposure. No change 6 nor 10 h after exposure.	(Baumann et al., 2016)
Human	Dust from pulp and paper mill	Yes, exposure during working hours.	Yes, blood CRP, SAA and fibrinogen were significantly and positively associated with the exposure.	(Westberg et al., 2016)
Human	Zinc welding fumes	Yes, 6h exposure to 2.5 mg/m^3	Yes, significant plasma SAA increase at 24 h. No effect at 6h.	(Baumann et al., 2018)
Human	Copper welding fumes	Yes, 6h exposure to 2.5 mg/m^3	Yes, significant plasma SAA increase at 24 h. No effect at 6h.	(Baumann et al., 2018)

Species	Stressor	Substance interaction with lung residents cell membrane components	Systemic acute phase response	Reference
Human	Zinc and copper welding fumes	Yes, 6h exposure to 2.5 mg/m^3	Yes, significant plasma SAA increase at 24 h. No effect at 6h.	(Baumann et al., 2018)
Human	Zinc oxide	Yes, 4h exposure to 0.5, 1 and 2 mg/m^3.	Yes, dose-response relationship in CRP and SAA blood levels 24 h after exposure.	(Monse et al., 2018)
Human	Emissions from iron foundries	Yes, exposure during working hours.	Yes, blood SAA levels increased with increasing particulate matter exposure. No significant effects were observed for blood CRP.	(Westberg et al., 2019)
Human	Fumes from small arms firing	Yes, exposure during controlled shooting sessions.	Yes, increased blood CRP levels 24h after exposure	(Sikkeland et al., 2018)
Human	Ambient particulate matter	Yes, 4h exposure	Yes, increased levels of blood SAA and CRP 1h and 20h after exposure.	(Wyatt, Devlin, Rappold, Case, & Diaz-Sanchez, 2020)
Human	Micro-sized zinc oxide	Yes, 2h exposure to 2 mg/m^3.	Yes, increased blood CRP 22h and 2 days after exposure. No changes in CRP or SAA 3 days after exposure.	(Monse et al., 2021)
Human	Nano-sized zinc oxide	Yes, 2h exposure to 2 mg/m^3.	Yes, increased blood CRP and SAA 22h and 2 days after exposure. No changes in CRP or SAA 3 days after exposure.	(Monse et al., 2021)
Human	Emissions from pine wood stove (three stone fire stove)	Yes, 2 h exposure to 500 µg/m^3.	Yes, increased CRP and SAA blood levels 24 h after exposure. No change 3h after exposure.	(Walker et al., 2022)

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