Table S3. Studies describing general effects of non-metalic chemical allergens on T cell function.

References	Chemicals	Read-out	Experimental system	Patients	Remarks
Hou, 2020 [79]	2-Mercaptobenzothiazole 2-Methoxy-4-methylphenol 4-Methylaminophenol sulfate 4-Nitrobenzyl bromide Benzo[a]pyrene Cyclamen aldehyde Diethyl maleate DNCB Ethyl acrylate Eugenol Formaldehyde Glutaraldehyde Glyoxal Hexyl cinnamic aldehyde Hydroxycitronellal Imidazolidinyl urea Linalool m-Aminophenol p-Benzoquinone Phenyl benzoate PPD Resorcinol Tetramethylthiuram disulfide trans-Cinnamaldehyde	CD69 relative fluorescence intensity	Jurkat clone E6-1 human T lymphocyte cell line	no	Cell viability >50% confirmed Jurkat T cells only express one TCR CD69 as T cell activation marker can be upregulated TCR-independently (Frentsch et al., 2005)
Clouet, 2019 [82]	Cinnamaldehyde Eugenol Farnesol Geraniol MI Resorcinol	T cell proliferation detected by CSFE dilution	THP-1 cell line allogeneic CD4+ T cells from PBMC coculture	no	Mixed lymphocyte reaction (non-autologous system)
Frombach, 2018 [78]	2-Mercaptobenzothiazole DNCB PPD	IL-23R /CD119, CD44 and CD124 expression IL-4, IL-17 and IFN-γ secretion	Primary human keratinocytes, moDCs and non-autologous lymphocytes from PBMC coculture	no	Mixed lymphocyte reaction (non-autologous system)

Mai, 2017 [81]	Formaldehyde	IL-17 and IL-22 expression and secretion	Fresh heparinized blood incubated with PMA-Ionomycin	104 workers exposed to low-level formaldehyde (19/104 with history of ACD) 90 unexposed controls	Immunophenotyping of PMA-Ionomycin stimulated T cells reveals differences in T cell subsets No antigen-specificity assessed
Baló-Banga, 2015 [80]	Clindamycin	IL-6 secretion	IL-6 solid phase immunoassay in PBMC	Analysis of heterogeneous patient groups by different in vivo diagnostic tests to complement in vitro testing Specific results of IL-6 release only for one patient	20 minutes drug incubation of PBMC in tubes (suspension culture): little direct contact expected between T cells and potential APC

ACD, allergic contact dermatitis; APC, antigen presenting cells; CD, cluster of differentiation; CSFE, carboxyfluorescein diacetate succinimidyl ester; DNCB, 2,4-Dinitrochlorobenzene; DNFB, 1-Fluoro-2,4-dinitrobenzene; IFN, interferon; IL, interleukin; MI, Methylisothiazolinone; moDCs, monocytes-derived dendritic cells; PBMC, peripheral blood mononuclear cells; PMA, phytohemagglutinin; PPD, *p*-Phenylenediamine; TCR, T cell receptor.

Additional reference:

Frentsch, M., Arbach, O., Kirchhoff, D., Moewes, B., Worm, M., Rothe, M., Scheffold, A., and Thiel, A. (2005). Direct access to CD4+ T cells specific for defined antigens according to CD154 expression. Nat Med *11*, 1118-1124.