

Supplementary material/Annex

Supplementary table S1: List of publications

Disease	Antigen	Other species/ antigens	Cohort	Cytokines	Surface markers	Index	Cell density (cells/cm ²)	Type of serum	Length of exposure	Day of granuloma formation	Reference
Be hypersensitivity	BeO or BeSO ₄	-	Patient & healthy	N	N	-	-	30% HS	5	5	[42]
Brain Injury	<i>Bacillus Calmette-Guérin</i> (BCG)	-	Patient & healthy	N	Y	Index of maturation	5.26x10 ⁵	8% HS	12	12	[24]
Leprosy	<i>M.leprae</i>	BCG and PPD	Patient	Y	Y	-	6.25x10 ⁵	10% HS	5	5	[76]
Leprosy	<i>M.leprae</i>	-	Healthy	Y	Y	-	1.05x10 ⁵	20% FBS	10	9	[12]
Psoriasis vulgaris	Superantigen SPEA	SEB	Patient & healthy	Y	N	-	5.26x10 ⁴	10% FBS	4	4	[80]
Severe sepsis	BCG or <i>C.burnetti</i>		Patient & healthy	Y	N	-	7.81x10 ⁵	10% FBS	9	6	[57]
-	AIPO4	-	Healthy	N	N	Index of maturation	5.26x10 ⁵	7.5% HS	7	4	[25]
-	PPD	-	Patient & healthy	N	N	-	-	30% FBS	6	3	[77]
-	<i>Candida albicans</i>	-	Healthy	Y	Y	Multinucleation index	3.13x10 ⁵	10% FBS	6	3	[26]
-	2 <i>Candida</i> species	-	Healthy	N	Y	-	5.26x10 ⁵	8% HS	6	6	[2]
-	8 <i>Candida</i> species	-	Healthy	Y	Y	-	1.32x10 ⁶	8% HS	6	4	[41]
Sarcoidosis	<i>Candida albicans</i>	-	Healthy	N	N	-	3.13x10 ⁵	5% HS	6	6	[79]
Sarcoidosis	BCG	-	Patient & healthy	Y	Y	-	1.05x10 ⁶	8% HS	8	3	[45]
Sarcoidosis	PPD or HSA	-	Patient & healthy	Y	N	GI-S	1.14x10 ⁶	10% HS	7	7	[23]*
Sarcoidosis	PPD	-	Patient & healthy	Y	Y	-	1.14x10 ⁶	10% HS	7	7	[56]
Sarcoidosis	PPD	-	Patient & healthy	Y	N	-	-	10% HS	7	7	[78]*
Sarcoidosis	<i>Mycobacterium abscessus</i> (MAB)	-	Patient & healthy	Y	Y	-	1.05x10 ⁶	10% HS	7	7	[50]
Schistosomiasis	<i>S.mansoni</i>	SWAP	Patient	N	N	GI-B	9.38x10 ⁵	10% HS	5	5	[32]
Schistosomiasis	<i>S.mansoni</i>	-	Patient	N	N	GI-B	9.38x10 ⁵	10% HS	5	5	[31]
Schistosomiasis	<i>S.mansoni</i>	-	Patient	Y	N	GI-B	9.38x10 ⁵	10% HS	5	5	[30]
Schistosomiasis	<i>S.mansoni</i>	Smp40 antigen	Patient	Y	N	-	-	10% HS	3	3	[59]

Schistosomiasis	<i>S.mansoni</i>	-	Patient & healthy	N	N	GI-B	5.26x10 ⁵	10% HS	15	5	[29]
Schistosomiasis	<i>S.mansoni</i>	-	Patient & healthy	Y	N	GI-B	-	10% HS	6	3	[33]
Schistosomiasis	<i>S.mansoni</i>	SWAP	Patient & healthy	N	N	GI-B	9.38x10 ⁵	10% HS	7	7	[34]
Schistosomiasis	<i>S.mansoni</i>	SWAP & 28GST	Patient & healthy	Y	N	GI-B	9.38x10 ⁵	10% HS	5	5	[35]
-	<i>M.Tb H37Rv</i> or BCG	-	Healthy	N	Y	-	1.88x10 ⁶	10% FBS	7	4	[44]
TB	<i>M.Tb H37Rv</i> & species	<i>M.smeg</i> & <i>M.avium</i>	Healthy	Y	Y	-	2.11x10 ⁵	10% HS	9	3	[40]
TB	<i>M.Tb H37Rv</i> & species	<i>M.avium</i> , <i>M.smeg</i> , <i>M.phlei</i> , <i>M.kans</i> , <i>M.Tb Erdmann</i> , <i>M.Tb Beijing</i> , <i>M.microti</i> , <i>M.bovis</i> BCG	Healthy	N	Y	-	5.26x10 ⁵	10% HS	30	14	[27]
TB	<i>M.Tb H37Rv</i> & species	<i>M.kansasii</i> , <i>M.chelonae</i> & <i>M.smeg</i>	Healthy	N	Y	-	5.26x10 ⁵	10% HS	21	21	[38]
TB	<i>M.Tb H37Rv</i> & species	<i>M.smeg</i>	Healthy	N	N	-	5.26x10 ⁵	7.5% HS	11	3	[65]
TB	<i>M.Tb H37Ra</i> , <i>H37Rv</i> & species	<i>M.smeg</i> & <i>M.phlei</i>	Healthy	N	N	-	5.71x10 ⁵	US	8	5	[66]
TB	<i>M.Tb H37Ra</i> & species	<i>M.mass R</i> & <i>M.mass CIP</i>	Healthy	Y	Y	-	5.26x10 ⁵	10% HS	10	7	[10]
TB	<i>M.Tb H37Rv</i> & species	INH resistant 255R & 267R	Healthy	Y	Y	-	1.88x10 ⁶	10% FBS	6	3	[46]
TB/T2DM	<i>M.Tb</i> strains	<i>M.Tb Erdmann</i>	Patient & healthy	Y	Y	-	3.16x10 ⁵	5% HS	15	8	[3]
TB/T2DM	<i>M.Tb</i> strains	<i>M.Tb Erdmann</i>	Patient & healthy	Y	N	-	3.16x10 ⁵	5% HS	15	8	[72]
TB/T2DM	<i>M.Tb</i> strains	<i>M.Tb Erdmann</i>	Healthy	Y	N	-	1.05x10 ⁵	5% HS	8	8	[73]
TB	<i>M.Tb</i> strains	<i>M.Tb Erdmann</i>	Healthy	Y	N	-	3.16x10 ⁵	5% HS	8	8	[74]
TB	<i>M.Tb H37Ra</i> , BCG & species	<i>M.marinum</i>	Healthy; vaccinated	Y	Y	-	5.26x10 ⁴	20% FBS	10	7	[53]
TB	<i>M.Tb H37Ra</i> or BCG	-	Healthy	N	N	-	5.26x10 ⁴	10% FBS	5	1	[62]
TB/T2DM	BCG & <i>M.Tb</i> strain	<i>M.Tb Erdmann</i>	Patient & healthy	Y	N	-	3.16x10 ⁵	5% HS	15	8	[81]

TB/T2DM	BCG & <i>M.Tb</i> strain	<i>M.Tb Erdmann</i>	Patient & healthy	Y	N	-	3.16x10 ⁵	5% HS	15	8	[75]
TB	<i>M.Tb H37Rv</i> or BCG	-	Patient & healthy	Y	N	-	-	20% HS	11	8	[67]
TB	BCG	-	Healthy; vaccinated	N	Y	-	5.26x10 ⁵	10% HS	15	9	[63]
TB	BCG	-	Healthy; 5 vaccinated	N	Y	-	5.36x10 ⁵	10% FBS	21	11	[39]
TB	BCG	-	Patient & healthy	Y	N	GI-B	7.81x10 ⁵	5% FBS	10	5	[28]
TB	BCG	<i>C.burnetti</i>	Patient & healthy	Y	Y	-	7.81x10 ⁵	10% FBS	9	9	[58]
TB	<i>M.Tb H37Rv</i>	-	Healthy	Y	Y	-	-	20% HS	8	8	[48]
TB	<i>M.Tb H37Rv</i>	-	Healthy	Y	Y	-	5.26x10 ⁵	10% HS	9	3	[51]
TB	<i>M.Tb H37Rv</i>	-	Healthy	N	N	-	-	10% FBS	3	3	[68]
TB	<i>M.Tb H37Rv</i>	-	Healthy	N	N	-	-	10% HS	25	14	[69]
TB	<i>M.Tb H37Rv</i>	mmpL11	Healthy	N	Y	GI-S	1.05x10 ⁶	10% HS	12	7	[36]
TB	<i>M.Tb H37Rv</i>	-	Healthy	N	N	-	1.05x10 ⁶	10% HS	7	4	[70]
TB	<i>M.Tb H37Rv</i>	-	Healthy	Y	Y	-	1.32x10 ⁶	20% HS	8	6	[52]
TB	<i>M.Tb H37Rv</i>	Δ whiB3, whiB3	Healthy	N	N	-	5.26x10 ⁵	US	9	6	[37]
TB	<i>M.Tb H37Rv</i>	-	Healthy	Y	Y	-	-	10% FBS	9	3	[5]
TB	<i>M.Tb H37Rv</i>	Δ regX3	Healthy	N	N	-	7.89x10 ⁵	US	9	9	[71]
TB	<i>M.Tb H37Rv</i>	-	Patient & healthy	Y	Y	GI-S	1.05x10 ⁶	10% HS	12	7	[22]
TB	<i>M.Tb H37Rv</i>	-	Patient & healthy	N	Y	-	1.05x10 ⁶	10% HS	7	7	[49]
TB	PPD	-	Healthy	Y	Y	-	-	2.5% HS	6	6	[43]
TB	PPD	-	Patient & healthy	Y	N	-	-	10% HS	7	7	[78]*
TB	PPD or HSA	-	Patient & healthy	Y	N	GI-S	1.14x10 ⁶	10% HS	7	7	[23]*

Legend: Y= Yes, N= No, HS: human serum; FBS: fetal bovine serum; US: unspecified; PPD: purified protein derivative; and * indicates repeating publication that included 2 separate disease cohorts.

Cell density could not be calculated in some cases, as type of well plates used and/or volume were not specified.

Supplementary table S2: Virulence of mycobacterial species/strains

Slowly growing species (> 7 days)			Rapidly growing species (< 7 days)	
Virulent	Intermediate	Avirulent	Virulent	Avirulent
<i>M.Tb Beijing</i> (MTBC)	<i>M.bovis BCG</i> (NTM)	<i>M.avium</i> (NTM)	<i>M.massiliense</i> (NTM)	<i>M.abscessus</i> (NTM)
<i>M.Tb Erdmann</i> (MTBC)	<i>M.microti OV254</i> (NTM)	<i>M.kansasii</i> (NTM)		<i>M.chelonae</i> (NTM)
<i>M.Tb H37Rv</i> (MTBC)		<i>M.marinum</i> (NTM)		<i>M.smegmatis</i> (NTM)
		<i>M.Tb H37Ra</i> (MTBC)		<i>M.phlei</i> (NTM)

Supplementary Table B: Virulence of mycobacterial species/strains as proposed by Lay G et al., 2007 and Je S et al., 2016. MTBC: *Mycobacterial tuberculosis* complex, NTM: non-tuberculous mycobacterial species

Supplementary table S3: Studies with a focus on evaluating the impact of cytokine(s) blockage

Disease / antigen	Reference	Cytokine(s) and/or treatment:
TB-BCG	(58)	Anti-TNF- α
TB- <i>M. Tb H37Rv</i>	(37)	Anti-TNF- α
TB- <i>M. Tb H37Rv</i>	(43)	Anti-TNF- α
TB- <i>M. Tb H37Rv</i>	(5)	Anti-TNF- α and etanercept
Schistosomiasis	(29)	Immune complexes from chronic intestinal schistosomiasis sera
Schistosomiasis	(52)	Anti-IL-4 & Anti-IL-10
Schistosomiasis	(31)	Anti-GM-CSF & Anti-TNF- α

Well plates

- 12
- 24
- 96

Day of granuloma formation

Well plates

- 12
- 24
- 96

Cell density (cells/cm²)

6