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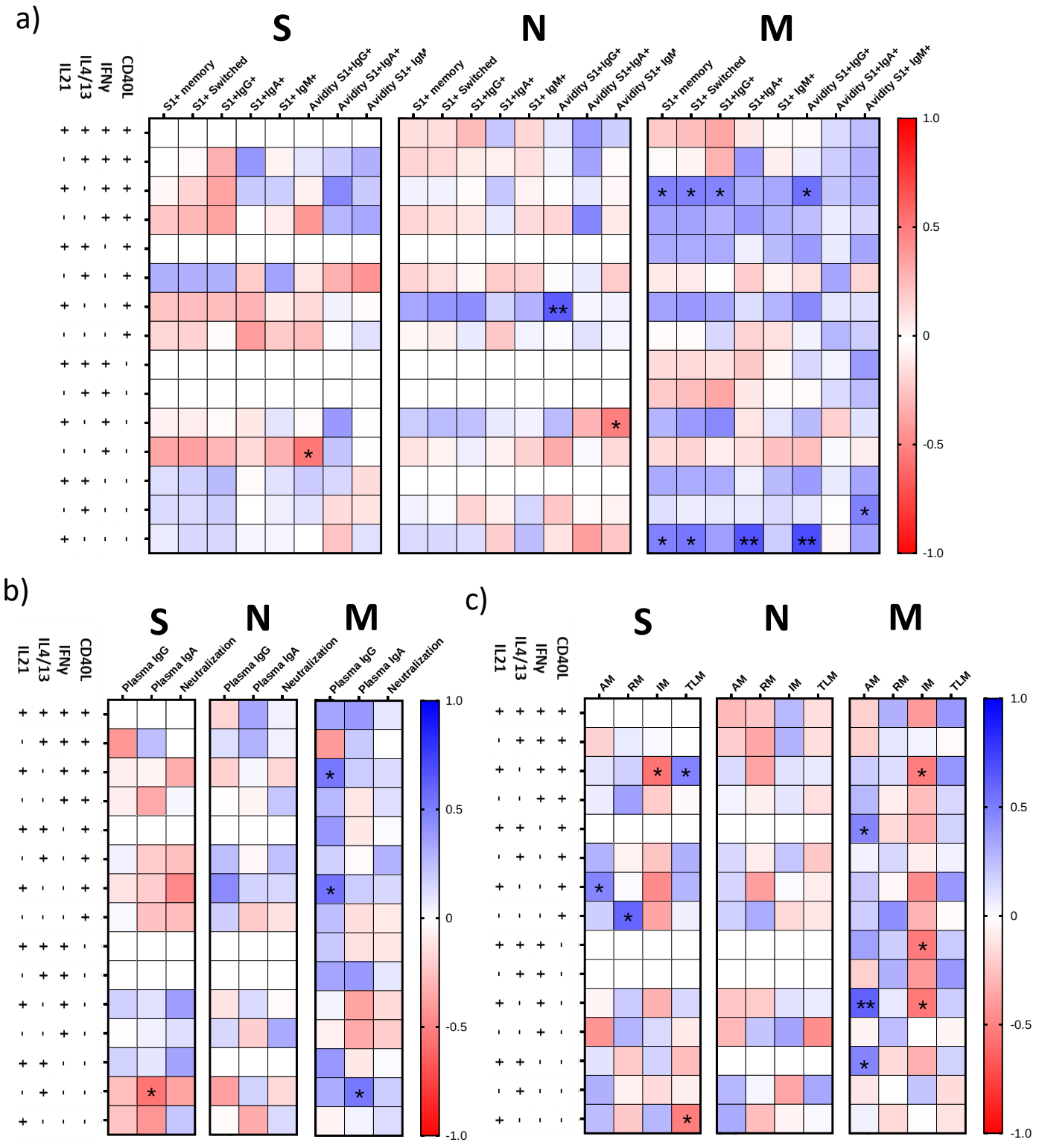
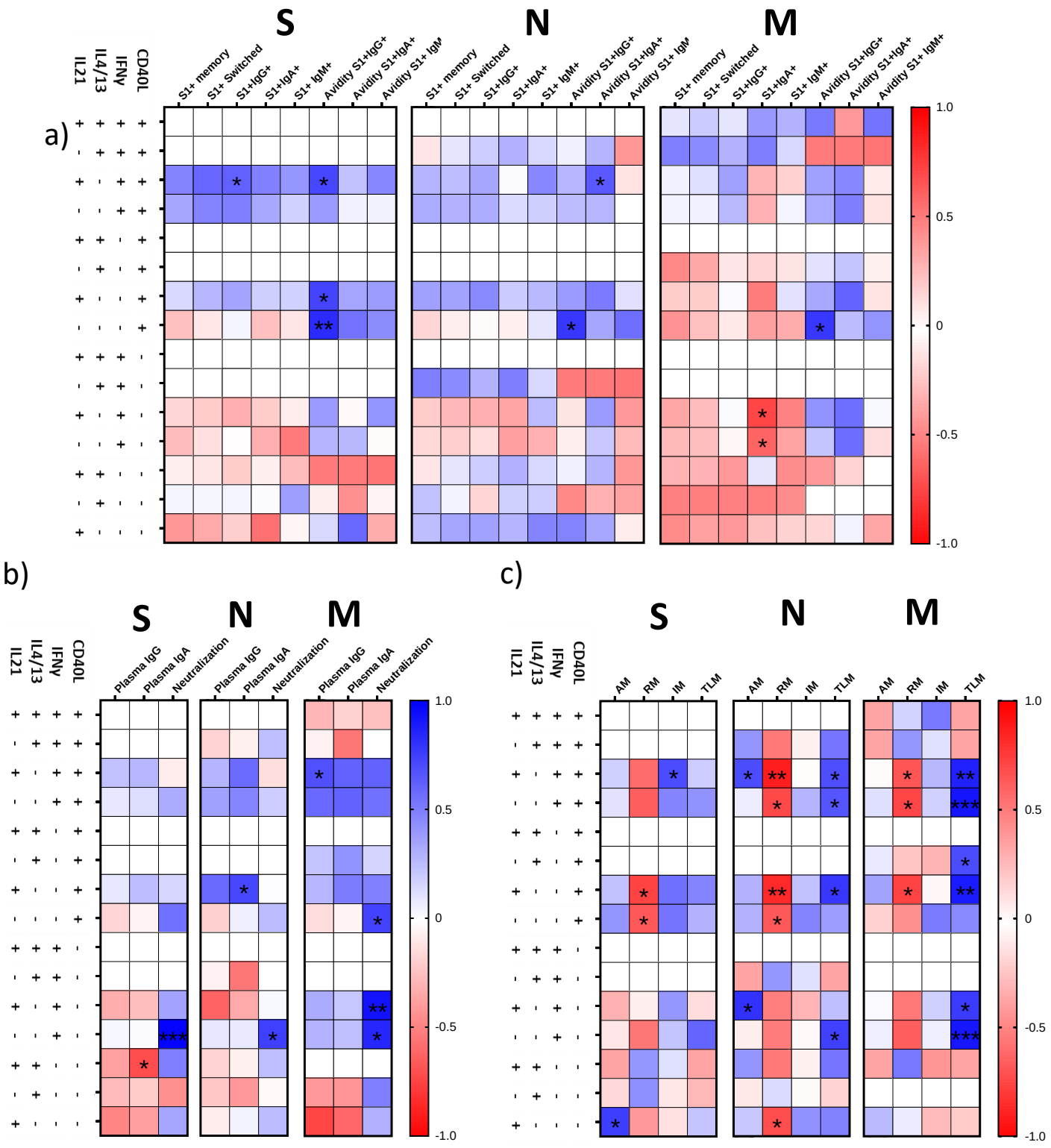
Supplemental information

Memory B cells targeting SARS-CoV-2 spike protein and their dependence on $CD4^+$ T cell help

Jernej Pušnik, Enrico Richter, Bianca Schulte, Ramona Dolscheid-Pommerich, Christian Bode, Christian Putensen, Gunther Hartmann, Galit Alter, and Hendrik Streeck



Supplemental figure 1) Associations between the polyfunctional subsets of SARS-CoV-2-specific CD4+ T cells and B cell parameters in recovered individuals. Related to figure 3. a) Correlated are the frequencies of CD4+ T cell expressing different combinations of CD40L, IFNγ, IL-4/13, and IL-21 and a) parameters determining quantity and quality of S1-specific memory B cell response, b) serological parameters, c) frequencies of memory B cell subsets within the S1+ IgG+ population. Each heat-map shows CD4+ T cell response specific for one of the three proteins. Cells are color-coded concerning spearman's correlation coefficient. Significant correlations are marked by asterisks. The number of independent experiments represented in the above graphs is n=18.



Supplemental figure 2) Associations between the polyfunctional subsets of SARS-CoV-2-specific CD4+ T cells and B cell parameters in severely ill individuals. Related to figure 5. a) Correlated are the frequencies of CD4+ T cell expressing different combinations of CD40L, IFNγ, IL-4/13, and IL-21 and a) parameters determining quantity and quality of S1-specific memory B cell response, b) serological parameters, c) frequencies of memory B cell subsets within the S1+ IgG+ population. Each heat-map shows CD4+ T cell response specific for one of the three proteins. Cells are color-coded concerning spearman's correlation coefficient. Significant correlations are marked by asterisks. The number of independent experiments represented in the above graphs is n=11.

	Age	Gender	# Symptoms	Cough*	Fever*	Loss of taste*	Loss of smell*	Dyspnea*	ARDS*	Pre-existing condition
Healthy										
1	14	F	0	0	0	0	0	0	0	not asked
2	14	F	2	1	1	0	0	0	0	
3	55	M	0	0	0	0	0	0	0	
4	52	M	0	0	0	0	0	0	0	
5	29	F	1	1	0	0	0	0	0	
6	29	M	0	0	0	0	0	0	0	
7	30	M	0	0	0	0	0	0	0	
8	38	M	0	0	0	0	0	0	0	
Recovered										
1	50	F	1	1	0	0	0	0	0	not asked
2	11	M	1	0	1	0	0	0	0	
3	15	M	0	0	0	0	0	0	0	
4	32	F	2	1	0	1	0	0	0	
5	64	F	4	1	1	1	0	1	0	
6	31	M	2	1	1	0	0	0	0	
7	54	M	5	1	1	1	1	1	0	
8	60	M	1	1	0	0	0	0	0	
9	12	F	1	1	0	0	0	0	0	
10	66	M	3	1	0	1	1	0	0	
11	21	M	1	1	0	0	0	0	0	
12	20	F	1	0	0	0	0	1	0	
13	49	F	3	1	0	1	1	0	0	
14	55	F	3	0	1	1	1	0	0	
15	52	M	1	1	0	0	0	0	0	
16	66	F	1	1	0	0	0	0	0	
17	21	M	1	1	0	0	0	0	0	
18	57	M	1	1	0	0	0	0	0	
19	49	F	3	1	0	1	1	0	0	
Severely ill										
1	59	F	4	1	1	0	0	1	1	None
2	52	M	2	/	/	/	/	1	1	AH
3	51	M	1	/	/	/	/	/	1	AH
4	52	F	1	1	0	0	0	0	0	Ulcerative colitis
5	45	M	6	1	1	1	1	1	1	Asthma
6	56	F	4	1	1	0	0	1	1	Hypothyroidism
7	43	F	2	0	1	0	0	0	1	None
8	65	M	4	1	1	0	0	1	1	AH, Diabetes mellitus (T2)
9	58	M	3	1	1	0	0	0	1	COPD, AH
10	71	M	2	0	0	1	0	0	1	None
11	79	M	5	1	1	1	0	1	1	None
12	71	M	3	1	0	0	0	1	1	Heart disease
13	84	M	4	1	1	0	0	1	1	Heart disease

ARDS (Acute respiratory distress syndrome), COPD (Chronic obstructive pulmonary disease), AH (Arterial hypertension)
* 1 = yes, 0 = no
/ = Data not available

Supplemental table 1) Demographic data regarding participants of the study. Related to STAR methods section; Study participants. Displayed are the age in years, gender (F=female, M=male), the total number of symptoms, and specification of symptoms (including cough, fever, loss of taste, loss of smell, dyspnea, and acute respiratory distress syndrome). In the case of severely ill individuals, pre-existing conditions are listed that were reported during hospitalization.