

LuTx genetika

SNP v imunitních genech:

rs1800587	<i>IL1A</i> (IL-1 α -889)	G>A	rs2275913	<i>IL17A</i>	G>A
rs1143634	<i>IL1B</i> (IL-1 β +3962)	G>A	rs763780	<i>IL17F</i>	T>C
rs16944	<i>IL1B</i> (IL-1 β -511)	A>G	rs34816169	<i>C17orf99</i> (IL-40)	A>C
rs2234650	<i>IL1R1</i> (IL-1R1 pst1 1970)	C>T	rs4071641	<i>C17orf99</i> (IL-40)	T>C
rs315952	<i>IL1RN</i> (IL-1RA mspa1 11100)	T>C	rs67249807	<i>C17orf99</i> (IL-40)	C>T
rs4251961	<i>IL1RN</i>	T>C	rs72898209	<i>C17orf99</i> (IL-40)	C>T
rs579543	<i>IL1RN</i>	G>A	rs9915090	<i>C17orf99</i> (IL-40)	T>C
rs2069763	<i>IL2</i> (IL-2 +166)	C>A	rs361525	<i>TNFA</i> (TNF- α -238)	G>A
rs2069762	<i>IL2</i> (IL-2 -330)	A>C	rs1800629	<i>TNFA</i> (TNF- α -308)	G>A
rs2243248	<i>IL4</i> (IL-4 -1098)	T>G	rs2430561	<i>INFG</i> (γ -IFN +874)	T>A
rs2070874	<i>IL4</i> (IL-4 -33)	C>T	rs1800450	<i>MBL2</i> (MBL2 cd54)	C>T
rs2243250	<i>IL4</i> (IL-4 -590)	C>T	rs11003125	<i>MBL2</i> (MBL2 -550)	G>C
rs1801275	<i>IL4R</i> (IL-4R α +1902)	A>G	rs35705950	<i>MUC5B</i>	G>T
rs1800797	<i>IL6</i> (IL-6 +565)	A>G	rs2609255	<i>FAM13A</i>	G>T
rs1800795	<i>IL6</i> (IL-6 -174)	C>G	rs2076295	<i>DSP</i>	T>G
rs2227307	<i>CXCL8</i> (IL8)	T>G	rs2736100	<i>TERT</i>	C>A
rs4073	<i>CXCL8</i> (IL8)	A>T	rs657152	<i>ABO</i>	A>C
rs1800896	<i>IL10</i> (IL-10 -1082)	T>C	rs5743185	<i>PMS1</i>	G>A
rs1800872	<i>IL10</i> (IL-10 -592)	T>G	rs10109853	<i>IDO2</i>	C>T
rs1800871	<i>IL10</i> (IL-10 -819)	A>G	rs4503083	<i>IDO2</i>	T>A
rs3212227	<i>IL12</i> (IL-12 -1188)	T>G			

Interleukin 1 genový klastř

Interleukin 6

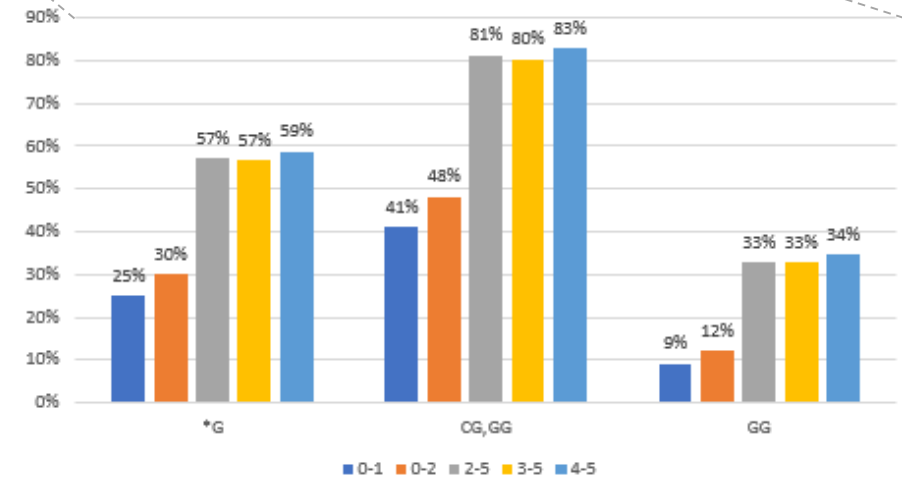
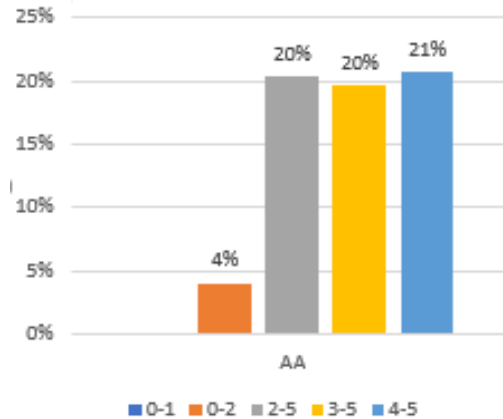
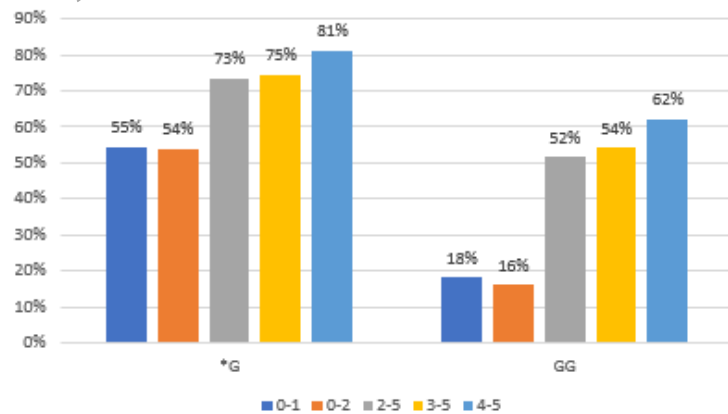
mannose binding lectin 2

Interleukin 2

Infekce	SNP	rs16944 IL-1β -511 A>G			rs1800587 IL-1α -889 G>A			rs1800795 IL-6 -174 C>G			rs1800797 IL-6 +565 A>G			rs1800450 MBL2 C>T			rs2069763 IL-2 +166 C>A				
		REF allele	REF homo.	REF carriage	REF allele	REF homo.	REF carriage	REF allele	REF homo.	REF carriage	REF allele	REF homo.	REF carriage	REF allele	REF homo.	REF carriage	REF allele	REF homo.	REF carriage		
	N																				
	Status1																				
	Status2																				
virové	39	47	p-value	0,0689	0,4977	0,0365	1,0000	0,4364	0,2518	0,0020	0,0069	0,0302	0,0022	0,0135	0,0184	0,8732	0,7243	0,6705	0,0701	0,0318	0,7178
bakteriální	53	33	p-value	0,0091	0,3840	0,0023	0,7962	0,4195	0,5312	0,3853	0,4366	0,5563	0,3468	0,5499	0,3760	0,0623	0,0372	0,8550	0,3580	1,0000	0,0497
0-1 vs 2-5	22	64	p-value	0,0198	0,4464	0,0064	0,1600	0,7895	0,0034	0,0002	0,0003	0,0301	0,0005	0,0012	0,0226	0,7561	1,0000	0,1754	0,0699	0,1075	0,2296
0-2 vs 3-5	25	61	p-value	0,0082	0,5792	0,0012	0,1594	0,5507	0,0654	0,0016	0,0027	0,0480	0,0025	0,0078	0,0353	0,7497	0,9383		0,0393	0,0717	0,1577

- 0 - bez infekcí
- 1 - intermitentní běžné nekomplikované infekce
- 2 - častější běžné infekce
- 3 - infekce vyžadující hospitalizaci
- 4 - těžké infekce vyžadující hospitalizaci na JIP
- 5 - infekce s následkem smrti

2 SNP v genu *IL6* jsou ve vazbě
Haplotypy v naší populaci:
GG 56%
CA 43%
CG <1%
GA <0,1%



rs1800795 (IL-6 -174) C>G

Nosičství alely *G

Inf. 0-1 vs. 2-5: 41 % vs. 81 %, OR **6.26** (2.18–18.01), p=0.0003

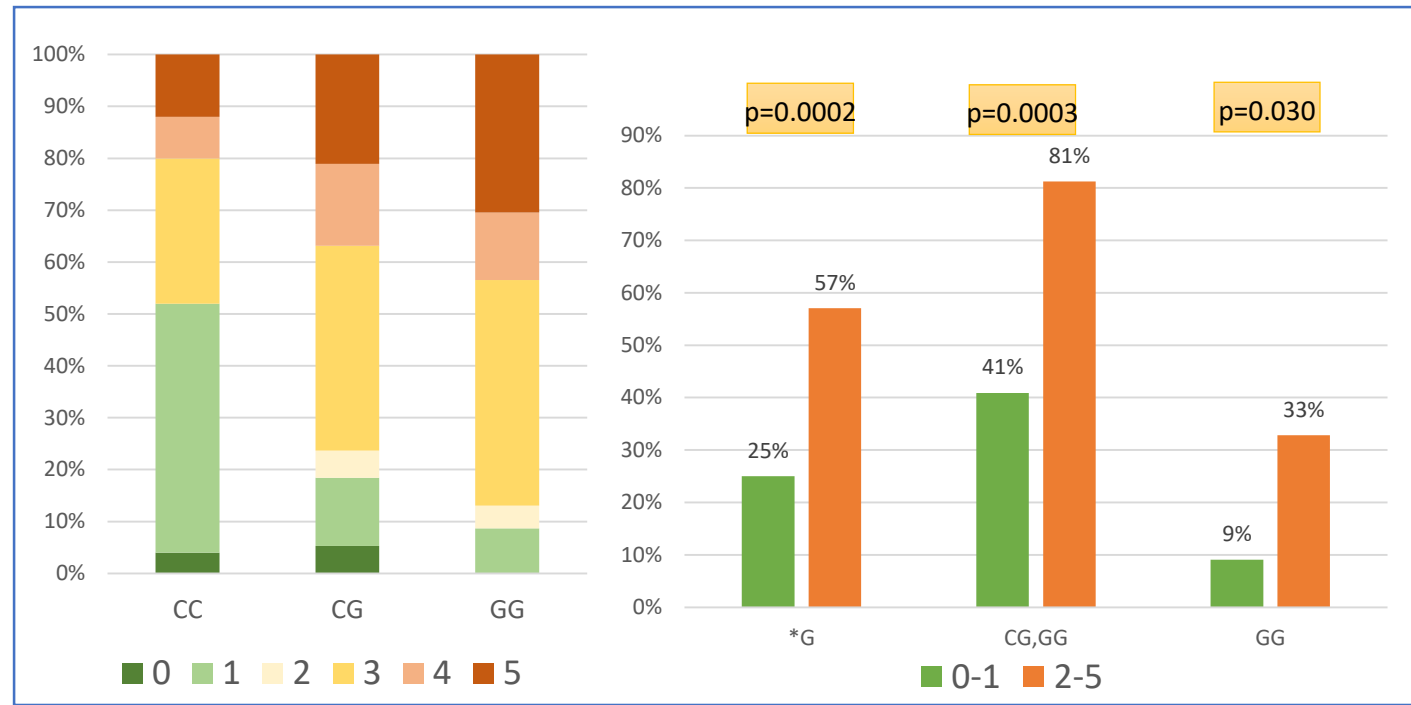
Virové infekce: 56% vs. 83 %. OR **3.77** (1.40–10.13), p=0.0069

Genotyp GG

Inf. 0-1 vs. 2-5: 9 % vs. 33 %, OR **4.88** (1.04–22.88), p=0.0301

Virové infekce: 15% vs. 36 %. OR **3.12** (1.09–8.94), p=0.0302

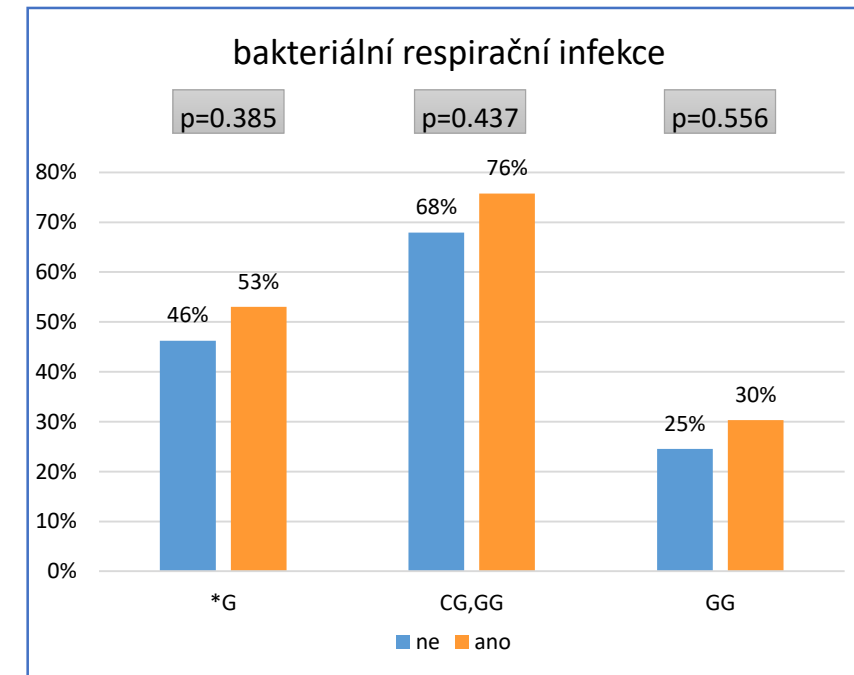
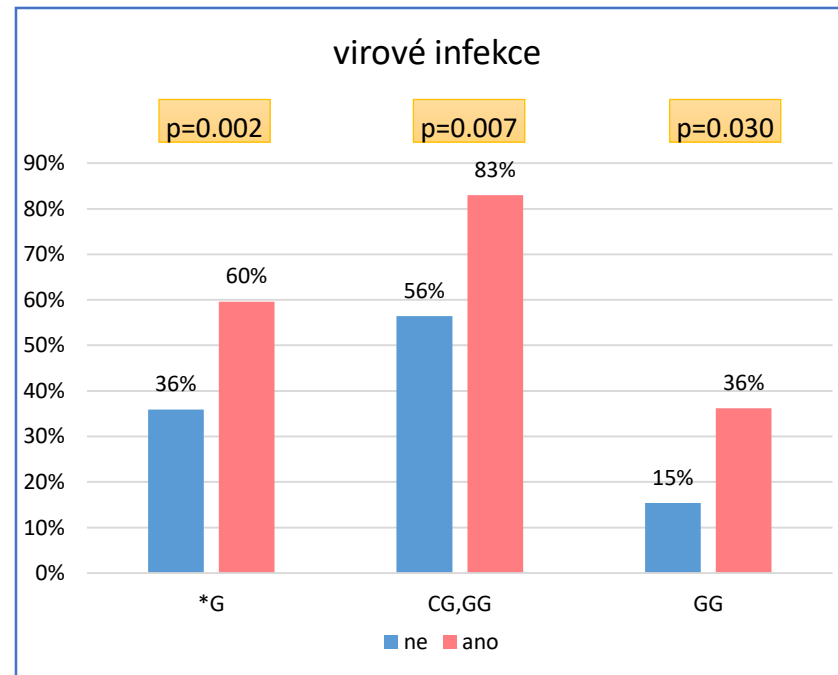
lit.: *G → association with higher IL-6 levels



rs1800797 (IL-6 +565) A>G

Výsledky obdobné jako pro rs1800795*G, protože tyto dva SNP jsou ve vazbě.

(haplotypy rs1800795-rs1800797 v naší populaci: GG 56%, CA 43%, CG <1%, GA <0,1%)



rs16944 (IL-1 β -511) G>A

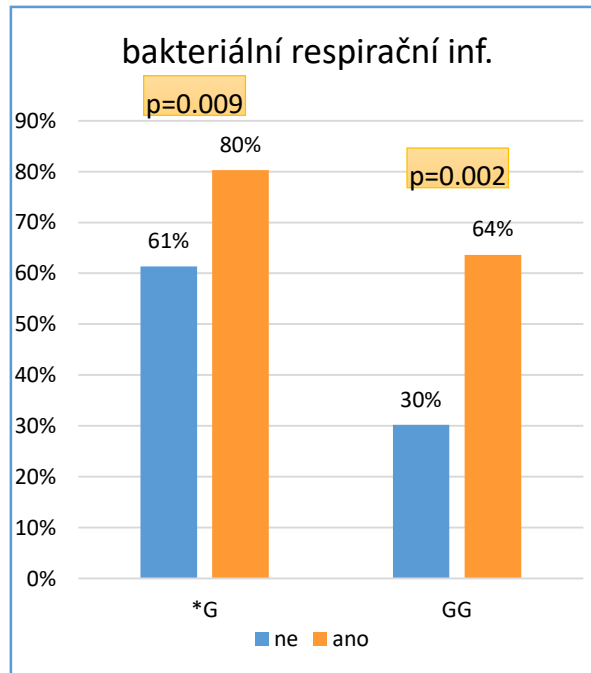
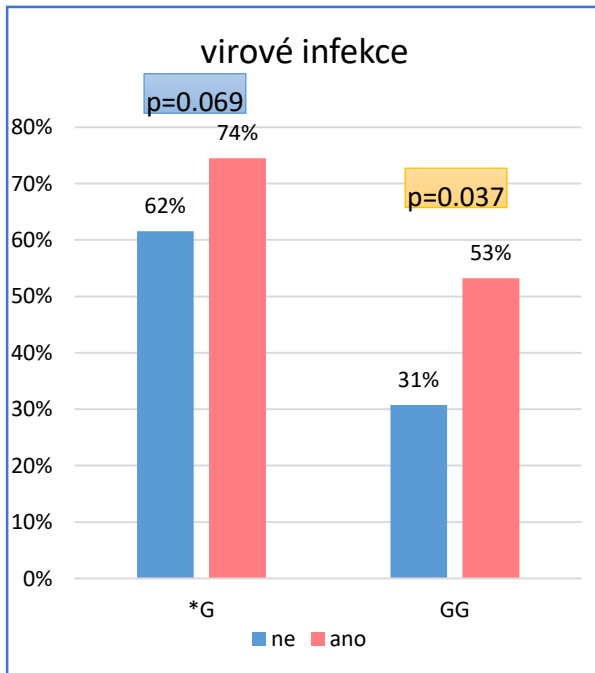
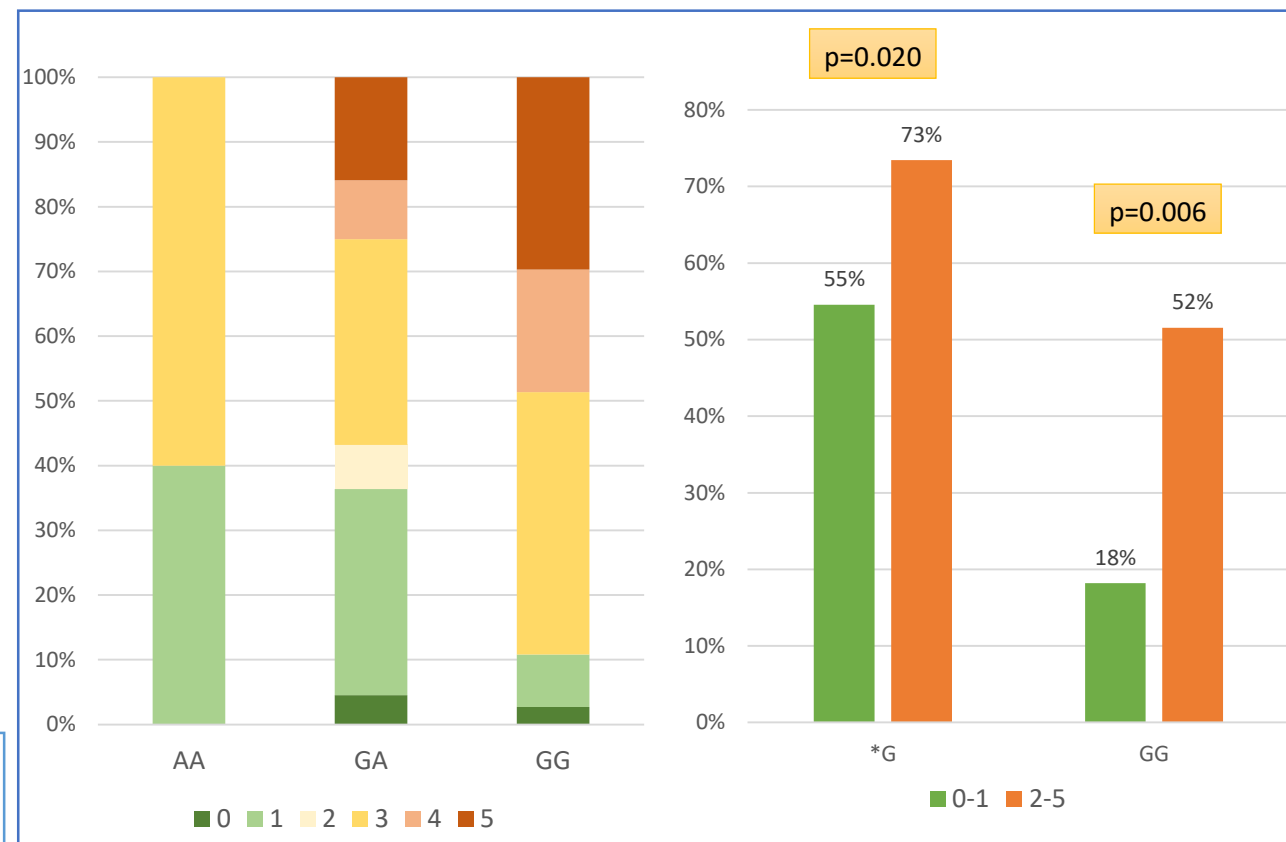
Genotyp GG

Inf. 0-1 vs. 2-5: 18 % vs. 52 %, OR **4.79** (1.46–15.73), p=0.0064

Inf. 0-2 vs. 3-5: 16 % vs. 54 %, OR **6.19** (1.90–20.18), p=0.0012

Virové infekce: 31% vs. 53 %. OR **2.56** (1.05–6.22), p=0.0365

Bakteriální resp. inf.: 30% vs. 64 %. OR **4.05** (1.61–10.16), p=0.0023



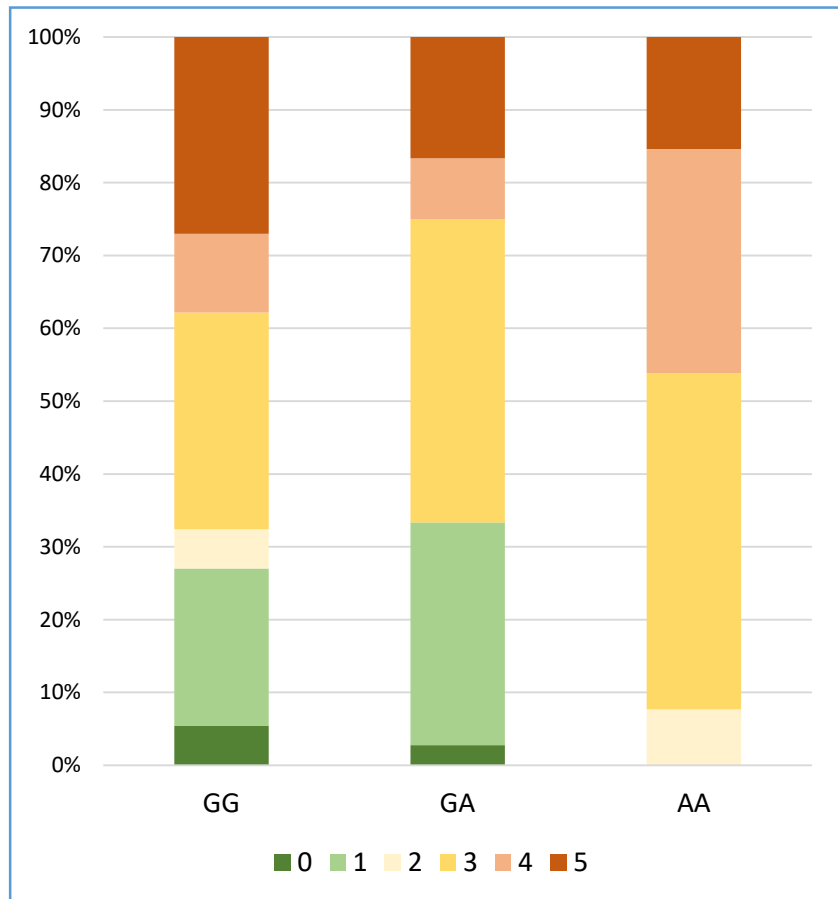
*Lit.: A → lower IL-1 β mRNA expression
A → associated with decreased infection risk*

rs1800587 (IL-1 α -889) G>A

Genotyp AA

Inf. 0-1 vs. 2-5: 0 % vs. 20 %, $p=0.0034$

Inf. 0-2 vs. 2-5: 4 % vs. 20 %, OR **5.88** (0.73–47.89), $p=0.0654$



Lit.: AA \rightarrow increased transcriptional activity of the IL1A gene, slight increase of the IL-1 α mRNA and protein levels

