

# LigandCytokCorrOutputAllore

Proc Varcomp to see whether there is an effect of ID on variance  
age (young or old), ligand and their interaction are fixed effects.

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## Variance Components Estimation Procedure

### Class Level Information

Class	Levels	Values
ID	159	3 4 5 10 16 18 19 20 21 23 26 27 28 29 33 34 35 38 39 43 48 52 60 61 62 63 64 65 68 74 82 83 88 89 91 93 95 96 99 101 102 103 115 116 120 122 123 129 130 131 136 137 138 140 141 149 150 154 155 156 157 158 162 163 166 167 169 170 172 174 175 176 178 179 180 181 182 184 185 187 191 196 197 199 201 202 204 205 208 209 211 212 214 215 216 217 219 220 221 222 223 224 226 227 228 230 232 233 234 235 236 237 239 241 244 246 247 248 249 251 252 253 254 255 256 259 261 263 264 271 272 273 274 275 276 280 281 282 283 284 285 286 288 289 290 293 295 297 298 299 300 301 303 305 306 307 308 309 310
AgeGr	2	0 1
Ligand	6	Flagellin LPS LTA PGN Pam3Cys PolyU

Number of Observations Read 954  
Number of Observations Used 954

Dependent Variable: AdjIL6pos

### REML Iterations

Iteration	Objective	Var(ID)	Var(Error)
0	4745.12141	138.8455271822	107.2849619301
1	4745.12141	138.8455271822	107.2849619301

Convergence criteria met.

### REML Estimates

Variance Component	Estimate
Var(ID)	138.84553
Var(Error)	107.28496

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## Variance Components Estimation Procedure

### Asymptotic Covariance Matrix of Estimates

	Var(ID)	Var(Error)
Var(ID)	313.72095	-4.88750
Var(Error)	-4.88750	29.32500

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## The Mixed Procedure

### Model Information

Data Set	TLR.CD11CHI_IL6TNF
Dependent Variable	AdjIL6pos
Covariance Structure	Unstructured
Subject Effect	ID
Estimation Method	REML
Residual Variance Method	None
Fixed Effects SE Method	Prasad-Rao-Jeske- Kackar-Harville
Degrees of Freedom Method	Kenward-Roger

### Class Level Information

Class	Levels	Values
ID	159	3 4 5 10 16 18 19 20 21 23 26 27 28 29 33 34 35 38 39 43 48 52 60 61 62 63 64 65 68 74 82 83 88 89 91 93 95 96 99 101 102 103 115 116 120 122 123 129 130 131 136 137 138 140 141 149 150 154 155 156 157 158 162 163 166 167 169 170 172 174 175 176 178 179 180 181 182 184 185 187 191 196 197 199 201 202 204 205 208 209 211 212 214 215 216 217 219 220 221 222 223 224 226 227 228 230 232 233 234 235 236 237 239 241 244 246 247 248 249 251 252 253 254 255 256 259 261 263 264 271 272 273 274 275 276 280 281 282 283 284 285 286 288 289 290 293 295 297 298 299 300 301 303 305 306 307 308 309 310
Ligand	6	Flagellin LPS LTA PGN Pam3Cys

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PolyU  
AgeGr                    2    0 1

## Dimensions

Covariance Parameters	21
Columns in X	21
Columns in Z	0
Subjects	159
Max Obs Per Subject	6

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## The Mixed Procedure

### Number of Observations

Number of Observations Read	954
Number of Observations Used	954
Number of Observations Not Used	0

### Iteration History

Iteration	Evaluations	-2 Res Log Like	Criterion
0	1	7912.30899664	
1	1	7149.71404635	0.00000000

Convergence criteria met.

### Estimated R Correlation Matrix for ID 3

Row	Col1	Col2	Col3	Col4	Col5	Col6
1	1.0000	0.6170	0.4804	0.4780	0.3775	0.2933
2	0.6170	1.0000	0.7276	0.7396	0.6309	0.3726
3	0.4804	0.7276	1.0000	0.8944	0.8044	0.4207
4	0.4780	0.7396	0.8944	1.0000	0.8711	0.4587
5	0.3775	0.6309	0.8044	0.8711	1.0000	0.4021
6	0.2933	0.3726	0.4207	0.4587	0.4021	1.0000

### Covariance Parameter Estimates

Cov Parm	Subject	Estimate
UN(1,1)	ID	364.02
UN(2,1)	ID	181.65
UN(2,2)	ID	238.11
UN(3,1)	ID	138.03
UN(3,2)	ID	169.08
UN(3,3)	ID	226.76
UN(4,1)	ID	140.92

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UN(4,2)	ID	176.35
UN(4,3)	ID	208.13
UN(4,4)	ID	238.76
UN(5,1)	ID	118.25
UN(5,2)	ID	159.86
UN(5,3)	ID	198.89
UN(5,4)	ID	221.00
UN(5,5)	ID	269.61
UN(6,1)	ID	66.1015

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##### Covariance Parameter Estimates

Cov Parm	Subject	Estimate
UN(6,2)	ID	67.9190
UN(6,3)	ID	74.8229
UN(6,4)	ID	83.7221
UN(6,5)	ID	77.9801
UN(6,6)	ID	139.52

##### Fit Statistics

-2 Res Log Likelihood	7149.7
AIC (smaller is better)	7191.7
AICC (smaller is better)	7192.7
BIC (smaller is better)	7256.2

##### Null Model Likelihood Ratio Test

DF	Chi-Square	Pr > ChiSq
20	762.59	<.0001

##### Solution for Fixed Effects

Effect	Ligand	Age group		Standard Error	DF	t Value	Pr >  t
		1=old	0=young				
Intercept			20.9610	1.3124	157	15.97	<.0001
AgeGr		0	11.4021	1.8738	157	6.08	<.0001
AgeGr		1	0	.	.	.	.
Ligand	Flagellin		46.1781	1.7679	157	26.12	<.0001
Ligand	LPS		40.0819	1.6134	157	24.84	<.0001
Ligand	LTA		37.4179	1.6354	157	22.88	<.0001
Ligand	PGN		27.3358	1.7277	157	15.82	<.0001
Ligand	Pam3Cys		3.3667	2.1411	157	1.57	0.1179
Ligand	PolyU		0	.	.	.	.
Ligand*AgeGr	Flagellin	0	-13.9355	2.5241	157	-5.52	<.0001

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Ligand*AgeGr	Flagellin	1	0	.	.	.	.
Ligand*AgeGr	LPS	0	-12.5969	2.3035	157	-5.47	<.0001
Ligand*AgeGr	LPS	1	0	.	.	.	.
Ligand*AgeGr	LTA	0	-12.7256	2.3349	157	-5.45	<.0001
Ligand*AgeGr	LTA	1	0	.	.	.	.
Ligand*AgeGr	PGN	0	-19.0495	2.4668	157	-7.72	<.0001
Ligand*AgeGr	PGN	1	0	.	.	.	.

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Solution for Fixed Effects

Effect	Ligand	Age group		Estimate	Standard Error	DF	t Value	Pr >  t
		1=old	0=young					
Ligand*AgeGr	Pam3Cys	0		5.2569	3.0570	157	1.72	0.0875
Ligand*AgeGr	Pam3Cys	1		0	.	.	.	.
Ligand*AgeGr	PolyU	0		0	.	.	.	.
Ligand*AgeGr	PolyU	1		0	.	.	.	.

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
AgeGr	1	157	1.66	0.1992
Ligand	5	153	221.85	<.0001
Ligand*AgeGr	5	153	25.55	<.0001

Least Squares Means

Effect	Ligand	Age group		Estimate	Standard Error	DF	t Value	Pr >  t
		1=old	0=young					
Ligand*AgeGr	Flagellin	0		64.6058	1.8592	157	34.75	<.0001
Ligand*AgeGr	Flagellin	1		67.1391	1.8244	157	36.80	<.0001
Ligand*AgeGr	LPS	0		59.8481	1.7496	157	34.21	<.0001
Ligand*AgeGr	LPS	1		61.0428	1.7169	157	35.55	<.0001
Ligand*AgeGr	LTA	0		57.0554	1.7051	157	33.46	<.0001
Ligand*AgeGr	LTA	1		58.3789	1.6732	157	34.89	<.0001
Ligand*AgeGr	PGN	0		40.6494	1.7472	157	23.27	<.0001
Ligand*AgeGr	PGN	1		48.2968	1.7145	157	28.17	<.0001
Ligand*AgeGr	Pam3Cys	0		40.9867	2.1603	157	18.97	<.0001
Ligand*AgeGr	Pam3Cys	1		24.3277	2.1199	157	11.48	<.0001
Ligand*AgeGr	PolyU	0		32.3631	1.3374	157	24.20	<.0001
Ligand*AgeGr	PolyU	1		20.9610	1.3124	157	15.97	<.0001

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Tests of Effect Slices

Effect	Ligand	Num DF	Den DF	F Value	Pr > F
Ligand*AgeGr	Flagellin	1	157	0.95	0.3323
Ligand*AgeGr	LPS	1	157	0.24	0.6267
Ligand*AgeGr	LTA	1	157	0.31	0.5803
Ligand*AgeGr	PGN	1	157	9.76	0.0021
Ligand*AgeGr	Pam3Cys	1	157	30.29	<.0001
Ligand*AgeGr	PolyU	1	157	37.03	<.0001