forward (FW) and	target	sequence	amplicon
reverse (RV) primers	gene		size (bp)
<i>h</i> PTPRG FW	human	5'-GTTTCAAGCTAATACCACTCG-3'	155
<i>h</i> PTPRG RV	PTPRG	5'-TGGAAACAAATGAGAATGGG-3'	
/⁄BACT FW	human	5'-TGACCCAGATCATGTTTGAG-3'	290
//BACT RV	β-actin	5'-CTTCTCCTTAATGTCACGCAC-3'	
BCR/ABL FW BCR/ABL RV	Bcr/Abl	5'-GATGCTGACCAACTCGTGTG-3' 5'-AGCAGATACTCAGCGGCATT-3'	411-486
BCR/ABL FW BCR/ABL RV	Bcr/Abl	5'-GTTCCTGATCTCCTCTGACTATGAGCGTG-3' 5'-TGTGATTATAGCCTAAGACCCGGAG-3'	411-486
(external round nested PCR) mPTPRGex FW mPTPRGex RV	mouse Ptprg	5'-ATCCTATTATCCACGGGCTG-3' 5'-TGTAAATGTCTTCTCCTTCTCGTC-3'	483
(internal round nested PCR) mPTPRGin FW mPTPRGin RV	mouse PTPRG	5'-GTACCTGAGAAATAACTTCCGAC-3' 5'-AGAGCTGCAAACTTTAGAGG-3'	144
<i>m</i> βACT FW	mouse	5'-GTACCTGAGAAATAACTTCCGAC-3'	145
<i>m</i> βACT RV	β-actin	5'-GAGCAATGATCTTGATCTTCATGG-3'	

Table 1. Forward (FW) and reverse (RV) primers used for RT-PCR of *BCR/ABL*, human (*h*) and mouse (*m*) *PTPRG* and human and mouse beta actin ( $\beta ACT$ ) genes.



model 1: 1560-1485, 1190-1140, 985-875 cm-1

Figure S1. MicroFTIR performed with the conventional IR source (globar) and principal component analysis (PCA) with models 1 (A-B) and 2 (C-D), respectively. The dataset comprises the spectra of PMNs exposed to 100 nM fMLP for 1 min (red dot), 5 min (violet triangle) and 10 min (blue inverted triangle), and the spectra of non stimulated CTRL PMNs (black box). Each symbol represents the average spectrum mediating IR signals from 10-12 cells spread over an area of  $30x30 \ \mu\text{m}^2$  in sizes. Grey ellipse delimits 95% confidence interval. Statistics are available in supplementary material S5.



Figure S2. SR microFTIR and principal component analysis (PCA) with the model 2 (1700-1480 cm<sup>-1</sup>). The dataset composes of spectra of neutrophil leukocytes pre-incubated with 100 nM wortmannin (WT-PMNs) the specific and irreversible inhibitor of phosphoinositol 3 phosphate kinase (PI3K) activity and stimulated with 100 nM fMLP (black symbols), the spectra of PMNs stimulated with fMLP without the inhibition of PI3K (red, violet, and blue symbols) and the spectra of non stimulated CTRL PMNs (grey box). fMLP stimulation for 1, 5, and 10 min is indicated by dot, triangle and inverted triangles, respectively. Grey ellipse delimits 95% confidence interval. Statistics are available in supplementary material S5.



Figure S3. The presence of p210<sup>BCR/ABL</sup> (A) and of mouse (B) or human (C) *PTPRG* cDNAs checked in Ba/F3 and in K562 cells sub-clones by polymerase chain reaction (RT-PCR). A (p210<sup>BCR/ABL</sup>) lanes: base pair (100bp) ladder (1); Ba/F3#PAR (2,3, 10, and 11); Ba/F3 transfected with p210<sup>BCR/ABL</sup> cDNA (Ba/F3#WT, 4 and 12); K562#MK (5,13), K562#G1 (6,14), K562#DA (7,15); BCR/ABL positive CTRL MEG-01 leukemia cell line (8 and 16); H<sub>2</sub>0 (9 and 17), respectively. B (*mPTPRG*) lanes: bp ladder (1); H<sub>2</sub>0 (2); H<sub>2</sub>O PCR ms nest483 F/R (3); Ba/F3#PAR (4 and 5); Ba/F3#WT (6 and 7); CTRL mouse F317L cells (8). C (*hPTPRG*) lanes: bp ladder (1); K562#MK (2); K562#DA (3); K562#G1 (4); H2O (5), respectively. D: protein phosphatase activity (mean  $\pm$  SD of 2 independent experiments) determined by p-Nitrophenyl Phosphate (pNPP, grey bars) and malachite green (MG) assays, respectively. Sample/condition: K562#MK (1), K562#G1 (2), K562#G1 + 0.2 mM Na<sub>3</sub>VO<sub>4</sub> (3); K562#DA (4), Ba/F3#PAR (5), Ba/F3#PAR + 0.2 mM Na<sub>3</sub>VO<sub>4</sub> (6); Ba/F3#WT (7), and Ba/F3#WT + 0.2 mM Na<sub>3</sub>VO<sub>4</sub> cell lysates (50µL sample adjusted to 1 mg total protein/mL cell lysate + 150 µL 50 mM Tris buffer pH 7.4, containing 1 mM EDTA and 1 mM DTT), respectively. In the MG assay 150 µM



model 1: 1560-1485,1190-1140, 985-875 cm<sup>-1</sup>

Figure S4. MicroFTIR performed with the conventional IR source (globar) and PCA with models 1 (A-B) and 2 (C-D) applied to explore K562#MK cells exposed to different experimental conditions. Each symbol average IR signals from 10-12 cells spread within 30x30  $\mu$ m<sup>2</sup> spot areas. CTRL K562#MK (black box), and K562#MK samples exposed for 24 hours to 2.0  $\mu$ M ICD-Tat (violet triangle) or to 2.0  $\mu$ M (D1028A)ICD-Tat (blue inverted triangle) recombinant proteins, or to 1.0  $\mu$ M imatinib mesylate (IMA) (red dot) are shown. Grey ellipse delimits 95% confidence interval. Statistics are available in supplementary material S5. S5. Statistics performed on PCA data.

variablestype of testresultcomparisonsignificance P<0.05	ignificance le				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	P<0.05	comparison	result	type of test	variables
PC-1   All Pairwise Multiple   1 min fMLP vs. CTRL   YES     Comparison   10 min fMLP vs. CTRL   YES     (Dunn's Method)   1 min fMLP vs. 5 min fMLP   NO <sup>(a)</sup> 1 min fMLP vs. 10 min fMLP   NO <sup>(b)</sup> 5 min fMLP vs. 10 min fMLP   NO <sup>(b)</sup>			H = 171.568, (P=<0.001)	Kruskal-Wallis One Way ANOVA on Ranks	
PC-1   All Pairwise Multiple   5 min fMLP vs CTRL   YES     Comparison   1 min fMLP vs CTRL   YES     (Dunn's Method)   1 min fMLP vs. 5 min fMLP   NO <sup>(a)</sup> 5 min fMLP vs. 10 min fMLP   NO <sup>(b)</sup> 5 min fMLP vs. 10 min fMLP   NO <sup>(b)</sup>	YES	1 min fMLP vs. CTRL			
Image: Comparison (Dunn's Method) Image: C	YES	5 min fMLP vs CTRL		All Doimuico Multiplo	PC-1
(Dunn's Method) I min fMLP vs. 10 min fMLP NO <sup>(b)</sup> 5 min fMLP vs. 10 min fMLP NO <sup>(b)</sup>	YES	10 min fMLP vs CTRL		Comparison	
5 min fMLP vs. 10 min fMLP NO	NO <sup>(a)</sup>	1 min fMLD vs. 10 min fMLD		(Dunn's Method)	
		5 min fMLP vs. 10 min fMLP			
Knyskal Wallia One Way U = 221 501	NO	5 IIIII IIVILP VS. 10 IIIII IIVILP	H = 221.501	Kmushal Wallia One Way	
ANOVA on Ranks $(P=<0.001)$			H = 221.391, (P=<0.001)	ANOVA on Ranks	
1 min fMLP vs CTRL NO	NO	1 min fMLP vs CTRL			
PC-2 All Pairwise Multiple 5 min fMLP vs CTRL YES	YES	5 min fMLP vs CTRL		All Pairwise Multiple	PC-2
Comparison 1 min fMI P vs 5 min fMI P VFS	VES	1 min fMLP vs 5 min fMLP		Comparison	-
(Dunn's Method) 1 min fMLP vs. 10 min fMLP VS.	VES	1 min fMLP vs. 10 min fMLP		(Dunn's Method)	
5 min fMLP vs. 10 min fMLP VES	VES	5 min fMLP vs. 10 min fMLP			
Figure 1 CD, model 1 (1560-1485, 1190-1140, 985-875 cm <sup>-1</sup> )	115	<b>140.985-875 cm<sup>-1</sup></b> )	560-1485, 1190-1	Figure 1 CD, model 1 (1	
Kruskal-Wallis One Way ANOVA on Ranks $H = 182.147$ , $(P = < 0.001)$ $P = < 0.001$	P=<0.001		H = 182.147, (P=<0.001)	Kruskal-Wallis One Way ANOVA on Ranks	
1 min fMLP vs. CTRL YES	YES	1 min fMLP vs. CTRL			
5 min fMLP vs CTRL YES	YES	5 min fMLP vs CTRL			DC 1
PC-1 All Pairwise Multiple 10 min fMLP vs CTRL YES	YES	10 min fMLP vs CTRL		All Pairwise Multiple	PC-I
(Dunn's Method) 1 min fMLP vs. 5 min fMLP YES	YES	1 min fMLP vs. 5 min fMLP		(Dunn's Method)	
1 min fMLP vs. 10 min fMLP NO <sup>(c)</sup>	NO <sup>(c)</sup>	1 min fMLP vs. 10 min fMLP		(2 41110 1/104104)	
5 min fMLP vs. 10 min fMLP YES	YES	5 min fMLP vs. 10 min fMLP			
Kruskal-Wallis One Way ANOVA on Ranks $H = 234.088$ , (P=<0.001) $P=<0.00$	P=<0.001		H = 234.088, (P=<0.001)	Kruskal-Wallis One Way ANOVA on Ranks	
1 min fMLP vs. CTRL NO	NO	1 min fMLP vs. CTRL			
PC-2 All Deirruige Multiple 5 min fMLP vs CTRL YES	YES	5 min fMLP vs CTRL		All Deimine Meddinle	PC-2
Comparison 1 min fMLP vs C1KL 1ES	IES VES	10 mm IMLP VS CTKL		Comparison	10-
(Dunn's Method) 1 min fMLP vs. 10 min fMLP VES	VES	1 min fMLP vs. 5 min fMLP		(Dunn's Method)	
5 min fMI P vs. 10 min fMI P	TLS VEG	5 min fMLP vs. 10 min fMLP			
Figure 1 EF. model 2 (1700-1480 cm <sup>-1</sup> )	YES	80 cm <sup>-1</sup> )	model 2 (1700-14	Figure 1 EF.	
Kruskal-Wallis One Way $H = 200.912$ ,		,	H = 200.912,	Kruskal-Wallis One Way	
ANOVA on Ranks (P=<0.001)			(P=<0.001)	ANOVA on Ranks	
1 min fMLP vs. CTRL YES	YES	1 min fMLP vs. CTRL			
PC-1 All Pairwige Multiple 5 min fMLP vs CTRL YES	YES	5 min fMLP vs CTRL		All Doimuico Multiplo	PC-1
Comparison 1 min fML P vs C1 KL 1 ES	IES VES	10 min IMLP VS CIKL		Comparison	101
(Dunn's Method) 1 min fMLP vs. 10 min fMLP VES	VES	1 min fMLP vs. 5 min fMLP		(Dunn's Method)	
5 min fMLP vs. 10 min fMLP	I LS	5 min fMLP vs. 10 min fMLP			
Kruckel Wellie One Wey, H = 151 104	NO <sup>(d)</sup>	5 IIIII IIVILE VS. 10 IIIII IIVILE	II = 151 104	Knuckal Wallia One Way	РС-3
ANOVA on Ranks $(P=<0.001)$	NO		(P=<0.001)	ANOVA on Ranks	
I min IMLP vs. CIKL NO 5 min fMI P vs. CTRI VFS	NU YES	1 IMIN INILP VS. UIKL 5 min fMI P vs CTRI			
PC-3 All Pairwise Multiple 10 min fMLP vs CTRL YES	YES	10 min fMLP vs CTRL		All Pairwise Multiple	
Comparison 1 min fMLP vs. 5 min fMLP YES	YES	1 min fMLP vs. 5 min fMLP		Comparison (Dunn's Method)	
(Dunn's Method) 1 min fMLP vs. 10 min fMLP YES	YES	1 min fMLP vs. 10 min fMLP			
5 min fMLP vs. 10 min fMLP YES	YES	5 min fMLP vs. 10 min fMLP			

<sup>(a)</sup> Mann-Whitney Rank Sum Test: T = 4853, P = 0.009

<sup>(b)</sup> Mann-Whitney Rank Sum Test: T = 4537, P = 0.042

<sup>(c)</sup> Mann-Whitney Rank Sum Test: T = 4471, P = 0.042

<sup>(d)</sup> t-test: t = 2.019, P = 0.045

Figure S1 AB, model 1 ( 1560-1485, 1190-1140, 985-874 cm <sup>-1</sup> )				
variables	Type of test	result	comparison	significance level P<0.05
	Kruskal-Wallis One Way ANOVA	F = 206.842, (P<0.001)		
			1 min fMLP vs. CTRL	YES
501			5 min fMLP vs CTRL	YES
PC-1	All Pairwise Multiple		10 min fMLP vs CTRL	YES
	Sidak method)		1 min fMLP vs. 5 min fMLP	YES
			1 min fMLP vs. 10 min fMLP	YES
			5 min fMLP vs. 10 min fMLP	YES
	Kruskal-Wallis One Way ANOVA	F = 46.756, (P<0.001)		
			1 min fMLP vs. CTRL	NO
DC A			5 min fMLP vs CTRL	YES
PC-2	All Pairwise Multiple		10 min fMLP vs CTRL	NO
	Comparison (Holm- Sidak method)		1 min fMLP vs. 5 min fMLP	YES
			1 min fMLP vs. 10 min fMLP	NO
			5 min fMLP vs. 10 min fMLP	YES
	Figu	ıre S1 CD, model	2 ( 1700-1480 cm <sup>-1</sup> )	
	Kruskal-Wallis One Way ANOVA			P=<0.001
			1 min fMLP vs. CTRL	P<0.05
			5 min fMLP vs CTRL	P<0.05
PC-1	All Pairwise Multiple Comparison (Holm- Sidak method):		10 min fMLP vs CTRL	P=0.970
			1 min fMLP vs. 5 min fMLP	P<0.05
			1 min fMLP vs. 10 min fMLP	P<0.05
			5 min fMLP vs. 10 min fMLP	P<0.05
	Kruskal-Wallis One Way ANOVA on Ranks			P=0.243
PC-2			1 min fMLP vs. CTRL	P = 0.710
			5 min fMLP vs CTRL	P = 0.352
			10 min fMLP vs CTRL	P=0.980
	t-test on the means		1 min fMLP vs. 5 min fMLP	P=0.059
			1 min fMLP vs. 10 min fMLP	P=0.710
			5 min fMLP vs. 10 min fMLP	P=0.352

Figure S5. Statistics performed on PCA data

	Figure 2 AB (1 min fMLP stimul	ation), model 1 ( 1560-1485, 1190-1140, 9	1000000000000000000000000000000000000
variables	Type of test	Comparison	significance level
	ANOVA on Ranks		P=<0.001
		PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P<0.05
PC-1	All Pairwise Multiple Comparison (Dunp's Method)	WT-PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P<0.05
	(Dum's Method)	PMNs +100 nM fMLP 1 min vs. WT-PMNs +100 nM fMLP 1 min	P<0.05
	Kruskal-Wallis One Way ANOVA		P=<0.001
		PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P<0.05
PC-2	All Pairwise Multiple Comparison Procedures	WT-PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P<0.05
	(nonn-sidak method)	PMNs +100 nM fMLP 1 min vs. WT-PMNs +100 nM fMLP 1 min	P<0.05
]	Figure 2 CD (5 min fMLP stimul	ation), model 1 ( 1560-1485, 1190-1140, 9	<b>085-875 cm</b> <sup>-1</sup> )
	Kruskal-Wallis One Way ANOVA		P=<0.001
		PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P<0.05
PC-1	All Pairwise Multiple Comparison Procedures (Holm Sidak method)	WT-PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P<0.05
	(Home-stuar method)	PMNs +100 nM fMLP 5 min vs. WT-PMNs +100 nM fMLP 5 min	P<0.05
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001
		PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P<0.05
PC-2	All Pairwise Multiple Comparison	WT-PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P=0.498
	(Dum's Method)	PMNs +100 nM fMLP 1 min vs. WT-PMNs +100 nM fMLP 5 min	P<0.05
]	Figure 2 EF (10 min fMLP stimu	lation), model 1 ( 1560-1485, 1190-1140, 9	985-875 cm <sup>-1</sup> )
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001
		PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05
PC-1	All Pairwise Multiple Comparison (Dunn's Method)	WT-PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05
		PMNs +100 nM fMLP 10 min vs. WT-PMNs +100 nM fMLP 10 min	P<0.05
	Kruskal-Wallis One Way		P=<0.001
		PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05
PC-2	All Pairwise Multiple Comparison Procedures (Holm-Sidak method)	WT-PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05
	(Home Sidak incurou)	PMNs +100 nM fMLP 10 min vs. WT-PMNs +100 nM fMLP 10 min	P<0.05

Figure S2 AB (1 min fMLP stimulation), model 2 (1700-1480 cm <sup>-1</sup> )				
variables	Type of test	comparison	significance level	
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001	
		PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P<0.05	
PC-1	All Pairwise Multiple Comparison (Dunp's Method)	WT-PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P<0.05	
	(Dunin's inteniou)	PMNs +100 nM fMLP 1 min vs. WT-PMNs +100 nM fMLP 1 min	P<0.05	
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001	
		PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P=0.860	
PC-2	All Pairwise Multiple Comparison	WT-PMNs +100 nM fMLP 1 min vs. CTRL PMNs	P<0.05	
	(Dunn's Method)	PMNs +100 nM fMLP 1 min vs. WT-PMNs +100 nM fMLP 1 min	P<0.05	
	Figure S2 CD (5 min fMLI	P stimulation), model 2 ( $1700-1480 \text{ cm}^{-1}$	)	
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001	
		PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P<0.05	
PC-1	All Pairwise Multiple Comparison (Dunn's Method)	WT-PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P<0.05	
		PMNs +100 nM fMLP 5 min vs. WT-PMNs +100 nM fMLP 5 min	P<0.05	
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001	
		PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P<0.05	
PC-2	All Pairwise Multiple Comparison	WT-PMNs +100 nM fMLP 5 min vs. CTRL PMNs	P=0.498	
	(Dunn's Method)	PMNs +100 nM fMLP 1 min vs. WT-PMNs +100 nM fMLP 5 min	P<0.05	
	Figure S2 EF (10 min fML)	P stimulation), model 2 ( 1700-1480 cm <sup>-1</sup>	)	
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001	
		PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05	
PC-1	All Pairwise Multiple Comparison	WT-PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05	
	(Dunit's Method)	PMNs +100 nM fMLP 10 min vs. WT-PMNs +100 nM fMLP 10 min	P<0.05	
	Kruskal-Wallis One Way ANOVA		P=<0.001	
		PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05	
PC-2	All Pairwise Multiple Comparison Procedures (Holm Sidak method)	WT-PMNs +100 nM fMLP 10 min vs. CTRL PMNs	P<0.05	
	(Homeordak liiculou)	PMNs +100 nM fMLP 10 min vs. WT-PMNs +100 nM fMLP 10 min	P<0.05	

variables	Type of test	comparison	significance level: P<0.05
			1 1000
PC-1	t-test on the means Ba/F3 PAR vs. Ba/F3WT Mann-Whitney Rank Sum Test		P=<0.001
PC-2			P=0.124
	Figure 4 CD, model 2 ( 1	560-1485, 1190-1140, 985-874 cm-1 )	
	Kruskal-Wallis One Way ANOVA on Ranks	A	P=<0.001
PC-1		K562#MK vs. K562#DA	P<0.05
	All Pairwise Multiple Comparison (Dunn's Method)	K562#MK vs. K562#G1	P<0.05
	(2 amis ricaisa)	K562#G1 vs. K562#DA	P<0.05
	Kruskal-Wallis One Way ANOV on Ranks	A	P=0.238
PC-2		K562#MK vs. K562#DA	P=0.538
	Mann-Whitney Rank Sum Test	K562#MK vs. K562#G1	P=0.054
		K562#G1 vs. K562#DA	P=0.706
	Figure 4 EF, m	odel 1 (1700-1480 cm-1)	
PC-1	t-test on the means		P=<0.001
PC-2	Mann-Whitney Rank Sum Test	- Ba/F3 PAR vs. Ba/F3WT -	P=0.329
Figure 4 GH, model 2 ( 1700-1480 cm <sup>-1</sup> )			
	Kruskal-Wallis One Way ANOVA on Ranks	Α	P=<0.001
PC-1		K562#MK vs. K562#DA	P<0.05
	All Pairwise Multiple Comparison (Duup's Mathod)	K562#MK vs. K562#G1	P<0.05
		K562#G1 vs. K562#DA	P<0.05
	Kruskal-Wallis One Way ANOVA	A	P=<0.001
PC-2	All Pairwise Multiple Comparison (Holm-Sidak method)	K562#MK vs. K562#DA	P=0.724
		K562#MK vs. K562#G1	P<0.05
		K562#G1 vs. K562#DA	P<0.05

## Figure 4 AB, model 1 (1560-1485, 1190-1140, 985-874 cm-1)

Figure S5. Statistics performed on PCA data

Figure 5 AB, model 1 ( 1560-1485, 1190-1140, 985-874 cm <sup>-1</sup> )			
variables	Type of test	comparison	significance level P<0.05
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001
		CTRL K562#MK vs. 1.0 µM IMA	YES
		CTRL K562#MK vs. 2.0 µM ICD-Tat	YES
PC-1	All Pairwise Multiple	CTRL K562#MK vs. 2.0 µM (D1028A)ICD-Tat	YES
	(Dunn's Method)	1.0 µM IMA vs. 2.0 µM (D1028A)ICD-Tat	YES
		1.0 µM IMA vs. 2.0 µM ICD-Tat	NO
		2.0 µM ICD-Tat vs. 2.0 µM (D1028A)ICD-Tat	YES
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001
		CTRL K562#MK vs. 1.0 µM IMA	NO
		CTRL K562#MK vs. 2.0 µM ICD-Tat	NO
PC-2	All Pairwise Multiple	CTRL K562#MK vs. 2.0 µM (D1028A)ICD-Tat	YES
	(Dunn's Method)	$1.0\mu M$ IMA vs. $2.0\mu M$ (D1028A)ICD-Tat	YES
		1.0 µM IMA vs. 2.0 µM ICD-Tat	NO
		2.0 µM ICD-Tat vs. 2.0 µM (D1028A)ICD-Tat	YES
	Figure 5	5 CD, model 2 ( 1700-1480 cm <sup>-1</sup> )	
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001
		CTRL K562#MK vs. 1.0 µM IMA	YES
		CTRL K562#MK vs. 2.0 µM ICD-Tat	YES
PC-1	All Pairwise Multiple	CTRL K562#MK vs. 2.0 µM (D1028A)ICD-Tat	YES
	Comparison (Dunn's Method)	1.0 µM IMA vs. 2.0 µM (D1028A)ICD-Tat	YES
		$1.0\mu M$ IMA vs. $2.0\mu M$ ICD-Tat	NO
		2.0 µM ICD-Tat vs. 2.0 µM (D1028A)ICD-Tat	YES
	Kruskal-Wallis One Way ANOVA on Ranks		P=0.243
PC-2		CTRL K562#MK vs. 1.0 µM IMA	NO
		CTRL K562#MK vs. 2.0 µM ICD-Tat	NO
	All Pairwise Multiple Comparison (Dunn's Method)	CTRL K562#MK vs. 2.0 µM (D1028A)ICD-Tat	YES
		1.0 µM IMA vs. 2.0 µM (D1028A)ICD-Tat	YES
		1.0 µM IMA vs. 2.0 µM ICD-Tat	NO
		2.0 µM ICD-Tat vs. 2.0 µM (D1028A)ICD-Tat	YES

Figure 6 AB, model 1 ( 1560-1485, 1190-1140, 985-874 cm <sup>-1</sup> )				
variables	Type of test	comparison	significance level P<0.05	
	Kruskal-Wallis One Way ANOVA		P=<0.001	
		CTRL K562#G1 vs. CTRL K562#MK	YES	
		CTRL K562#G1 vs. 0.5 µM IMA #G1	YES	
PC-1	All Pairwise Multiple	CTRL K562#G1 vs. 0.5 µM IMA #MK	YES	
	Comparison (Holm-Sidak Method)	CTRL K562#MK vs. 0.5 IMA µM #G1	YES	
		CTRL K562#MK vs. 0.5 IMA µM #MK	YES	
		0.5 µM IMA #G1 vs. 0.5 µM IMA #MK	YES	
	Kruskal-Wallis One Way ANOVA on Ranks		P=<0.001	
		CTRL K562#G1 vs. CTRL K562#MK	YES	
PC-2		CTRL K562#G1 vs. 0.5 µM IMA #G1	YES	
	All Pairwise Multiple	CTRL K562#G1 vs. 0.5 µM IMA #MK	YES	
	(Dunn's Method)	CTRL K562#MK vs. 0.5 IMA µM #G1	YES	
		CTRL K562#MK vs. 0.5 IMA µM #MK	YES	
		0.5 µM IMA #G1 vs. 0.5 µM IMA #MK	YES	
	Figure 6 CD,	model 2 ( 1700-1480 cm <sup>-1</sup> )		
	Kruskal-Wallis One Way ANOVA		P=<0.001	
		CTRL K562#G1 vs. CTRL K562#MK	YES	
DC 1		CTRL K562#G1 vs. 0.5 µM IMA #G1	YES	
PC-1	All Pairwise Multiple	CTRL K562#G1 vs. 0.5 µM IMA #MK	YES	
	(Holm-Sidak Method)	CTRL K562#MK vs. 0.5 IMA µM #G1	YES	
		CTRL K562#MK vs. 0.5 IMA µM #MK	YES	
		0.5 µM IMA #G1 vs. 0.5 µM IMA #MK	YES	
	Kruskal-Wallis One Way ANOVA on Ranks		P=0.243	
PC-2		CTRL K562#G1 vs. CTRL K562#MK	YES	
		CTRL K562#G1 vs. 0.5 µM IMA #G1	YES	
	All Pairwise Multiple	CTRL K562#G1 vs. 0.5 µM IMA #MK	YES	
	Comparison (Dunn's Method)	CTRL K562#MK vs. 0.5 IMA µM #G1	YES	
		CTRL K562#MK vs. 0.5 IMA µM #MK	YES	
		0.5 μM IMA #G1 vs. 0.5 μM IMA #MK	YES	

Figure S5. Statistics performed on PCA data



Figure S6. Correlation loadings of PCA in Figure 1 AB. The unsupervised identification of variables giving major contributions to the models. Values that lie within the upper and lower bounds of the plot are modelled by PCs. Those that lie between the two lower bounds are not. An attempt has been made to assign tyrosine (Y), serine (S), and threonine (T) according to the data available in the literature (Refs 43-48).