Electronic Supplementary Material (ESI) for Molecular BioSystems

Supplementary Information

Differential protein expression in tears of patients with primary open angle and pseudoexfoliative glaucoma

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Figure 1S

12% SDS-PAGE of 8 different CTRL tear samples.

Figure 2S

Analytical performances of expression analysis. Figure 2S, panel A for CTRL, E for PXG and I for POAG, shows paired peptide exact masses associated to their retention time, of two injections of the same condition distributed along a diagonal line. Figure 2S, panels B for CTRL, F for PXG, L for POAG, shows distribution of mass error. Figure 2S, panel C for CTRL, G for PXG, M for POAG retention time coefficient of variation expressed as percentage (% CV RT) and, finally, the intensity coefficient of variation expressed as percentage (% CV intensity) has a Gaussian distribution in panels D for CTRL, H for PXG, N for POAG.

Table 1S

Clinical characteristics and demographics of enrolled subjects

Table 2S

Details of proteins identified by LC-ESI-MS^E, reported in a separated excel file.

Table 3S

Most important networks involved in each comparison.

Table 4 S

Details of MS\MS ion search of digested Cystatin S, isolated by fraction collection experiment. Table shows b- and y-ions from **IIPGGIYDADLNDEWVQR** peptide fragmentation.

Match to Query 50: 2073.094048 from(1037.554300,2+) intensity(21732.9902) by monoisotopic mass of neutral peptide Mr(calc): 2073.0167, obtaining ions score of 88 and Expect value of 5e-08. Matches ions are shown in red: 21/160 fragment ions using 42 most intense peaks

Figure 1S

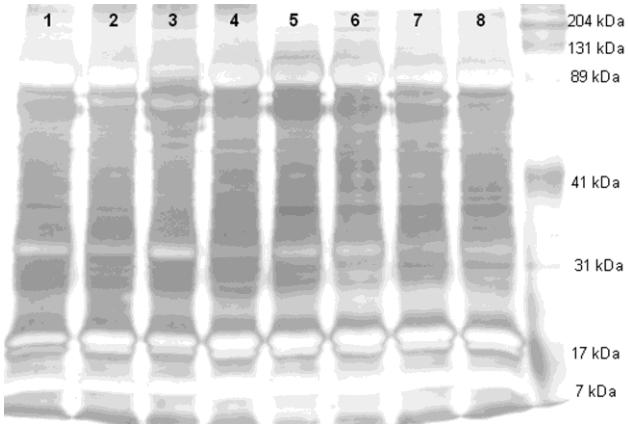
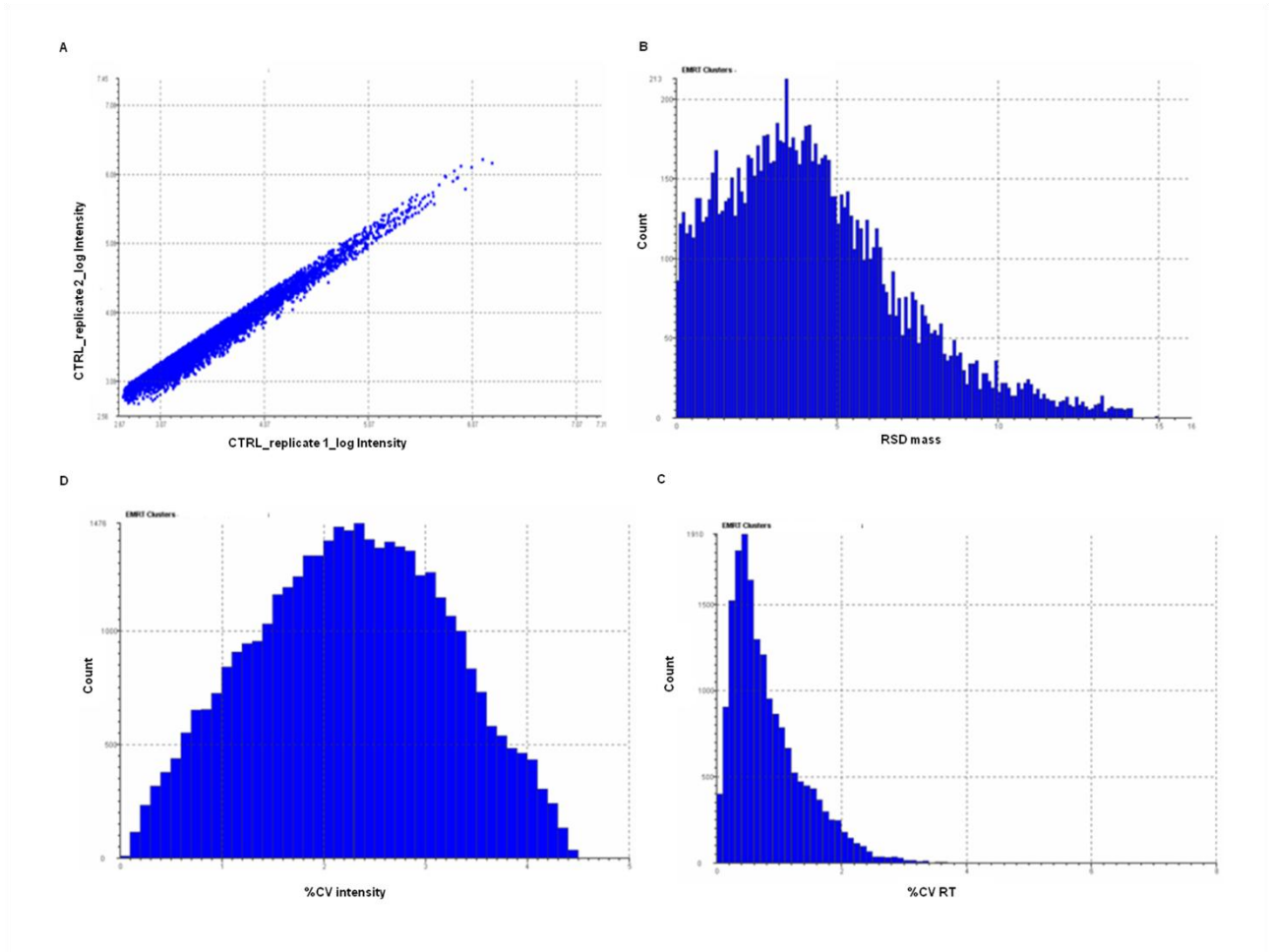
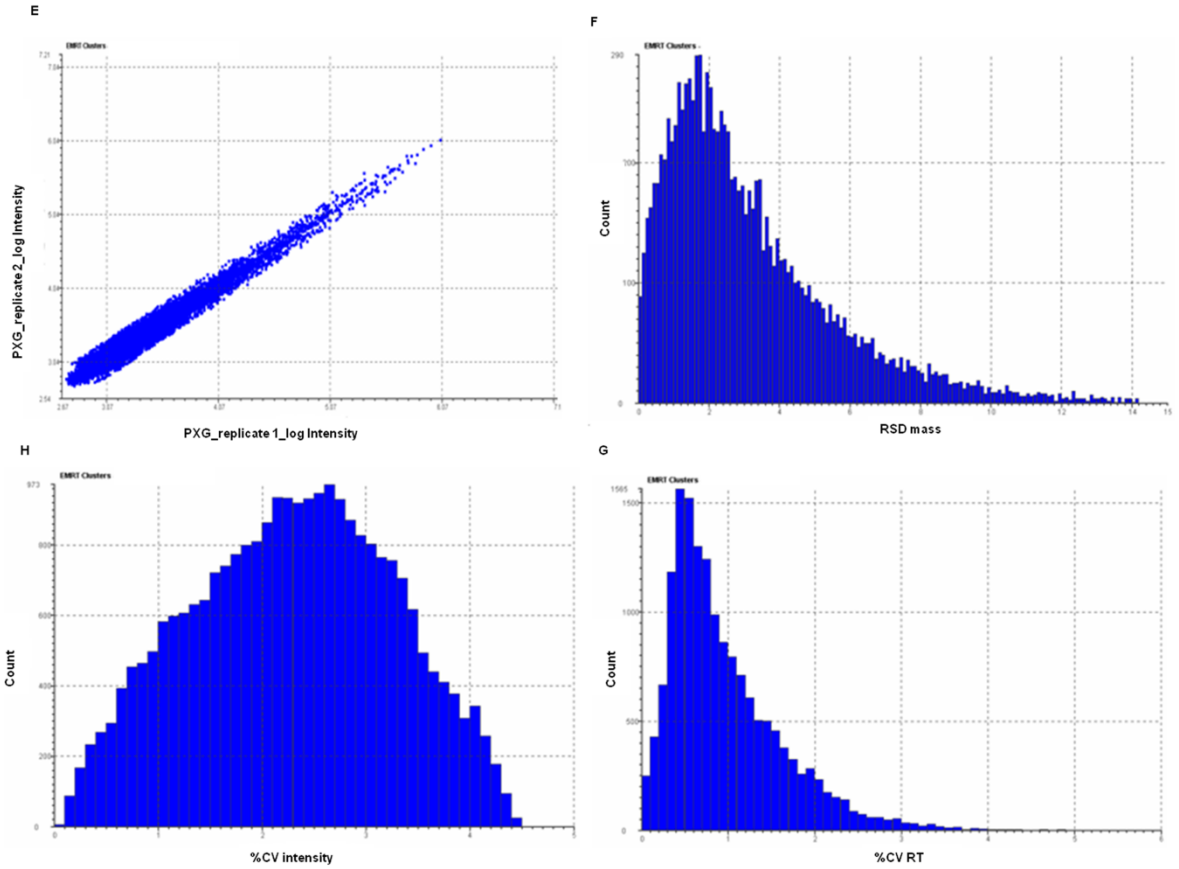


Figure 2S





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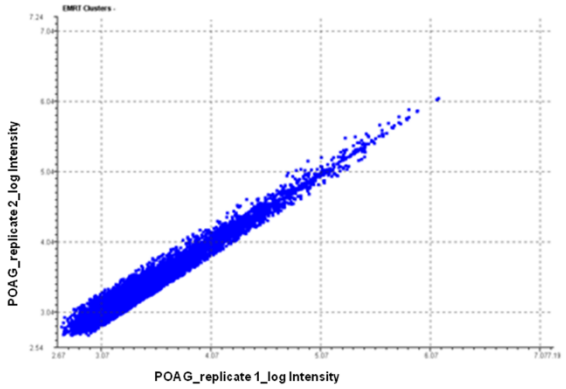
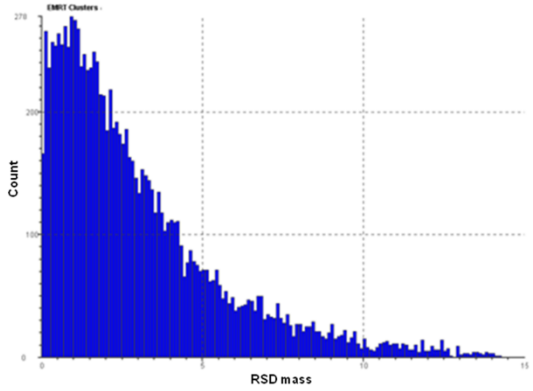


L



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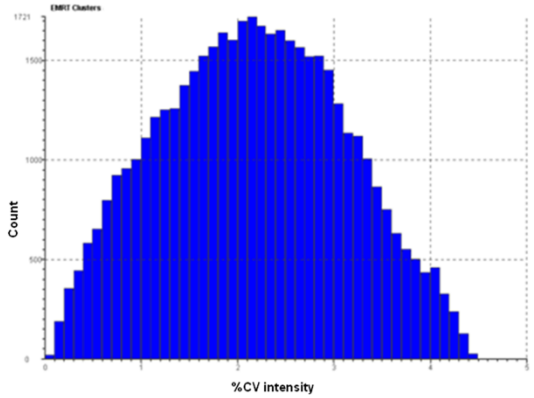

M

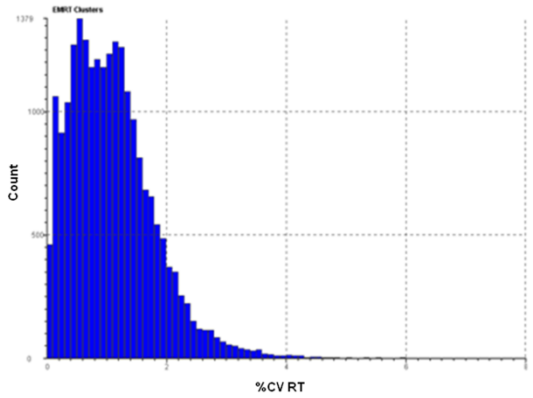

Table 1S

	POAG	PXG	CTRL	
Number of eyes	9	7	8	
Mean Age (years ±SD)	57.8±5.03	58.71±3.59	55.87±3.18	p=n.s.*
Gender M/F	4/5	4/3	4/4	p=n.s.*
Mean IOP (mmHg±SD)	14.7 ±2.4	15.4±3.21	13.8±2.3	p=n.s.*
Mean time on therapy (years±SD)	3.4±1.6	3±1.15	NA	p=n.s.*
MD (db±SD)	-4.2 ± 0.8§†	-3.6 ±0.9§†	+0.8±0.4†	p= n.s.§ p<0.05†

POAG: primary open angle glaucoma
PXG: pseudo-exfoliative glaucoma
CTRL: controls
SD: standard deviation
M=male; F=female; IOP= intra-ocular pressure; MD= mean defect
db= decibel
*t-test for independent samples
† t-test for independent samples; CTRL versus POAG, CTRL versus PXG
§ t-test for independent samples; POAG versus PXG
NA: not applicable
NS: not significant

Table 3S

	CTRL vs PXG comparison	
Network	**Associated Network Functions**	**score**
1	Dermatological Diseases and Conditions, Genetic Disorder, Inflammatory Disease	49
2	Protein Synthesis, Cell Cycle, Inflammatory Response	49
	CTRL vs POAG comparison	
Network	**Associated Network Functions**	**score**
1	Inflammatory Response, Cellular Function and Maintenance, Antigen Presentation	60
2	Cell-To-Cell Signaling and Interaction, Tissue Development, Cell Morphology	19
	PXG vs POAG comparison	
Network	**Associated Network Functions**	**score**
1	Cellular Movement, Lipid Metabolism, Molecular Transport	40

Table 4S

#	b	b^{++}	b*	b^{*++}	b^{0}	b^{0++}	Seq.	y	y^{++}	y*	y^{*++}	y^{0}	y^{0++}	#
1	114.0913	57.5493					I							18
2	227.1754	114.0913					I	1960.9399	980.9736	1943.9134	972.4603	1942.9294	971.9683	17
3	324.2282	162.6177					P	1847.8559	924.4316	1830.8293	915.9183	1829.8453	915.4263	16
4	381.2496	191.1285					G	***1750.8031***	875.9052	1733.7766	867.3919	1732.7925	866.8999	15
5	438.2711	219.6392					G	***1693.7816***	847.3945	1676.7551	838.8812	1675.7711	838.3892	14
6	551.3552	276.1812					I	***1636.7602***	818.8837	1619.7336	810.3705	1618.7496	809.8784	13
7	714.4185	357.7129					Y	***1523.6761***	762.3417	1506.6496	753.8284	1505.6655	753.3364	12
8	829.4454	415.2264			811.4349	406.2211	D	***1360.6128***	680.8100	1343.5862	672.2968	1342.6022	671.8047	11
9	900.4825	450.7449			882.4720	441.7396	A	***1245.5858***	623.2966	1228.5593	614.7833	1227.5753	614.2913	10
10	1015.5095	508.2584			997.4989	499.2531	D	***1174.5487***	587.7780	1157.5222	579.2647	1156.5382	578.7727	9
11	1128.5936	564.8004			1110.5830	555.7951	L	***1059.5218***	530.2645	1042.4952	521.7513	1041.5112	521.2592	8
12	1242.6365	621.8219	1225.6099	613.3086	1224.6259	612.8166	N	***946.4377***	473.7225	929.4112	465.2092	928.4272	464.7172	7
13	1357.6634	679.3353	1340.6369	670.8221	1339.6529	670.3301	D	***832.3948***	416.7010	815.3682	408.1878	814.3842	407.6958	6
14	1486.7060	743.8566	1469.6795	735.3434	1468.6955	734.8514	E	***717.3679***	359.1876	700.3413	350.6743	699.3573	350.1823	5
15	1672.7853	836.8963	1655.7588	828.3830	1654.7748	827.8910	W	***588.3253***	294.6663	571.2987	286.1530			4
16	1771.8537	886.4305	1754.8272	877.9172	1753.8432	877.4252	V	***402.2459***	201.6266	385.2194	193.1133			3
17	1899.9123	950.4598	1882.8858	941.9465	1881.9018	941.4545	Q	303.1775	152.0924	286.1510	143.5791			2
18							R	***175.1190***	88.0631	158.0924	79.5498			1