

Figure S1. General traits of protein identification. (A) Table showing the percentage of proteins, the mean sequence coverage, the number of identified peptides and the mean number of peptide spectrum matches (PSM) in the dataset. (B) Venn diagram showing proteins identified in both responders and non-responders samples. The numbers represent the total number of proteins identified in each particular dataset. (C) Linear regression obtained by plotting the logarithm of the number of PSMs for 2 replicates of the same sample (R_{i1} vs R_{i2}), for different samples of the same group (R_i vs R_j) and for samples from different groups (R_i vs NR_j).

Figure S2: Relative quantifications and ROC curves for the 7 proteins that displayed differential abundances between R and NR patients in the second cohort. Histograms represent the relative quantification for the different serum proteins at baseline between R and NR samples from population 2. Significant difference is noted by asterisk ($p < 0.05$, Mann-Whitney test). The results presented are the mean $\pm$ SEM. Associated ROC curves were built (black lines for each protein). Ceruloplasmin : CERU; Complement component : CO7; inter-alpha-trypsin inhibitor heavy chain ITIH, plasminogen : PLMN, Protein S Vitamin K-dependent protein : PROS, protein S100A9 : S100A9, zinc -alpha2 – glycoprotein : ZA2G.

Table S1. Correlations of protein abundances versus clinical parameters. Summary of Spearman rank correlation coefficients and p-values for comparisons of individual protein relative abundance and clinical parameters. ρ : Spearman rank correlation coefficient; p-value: associated calculated p-values ($n = 22$).

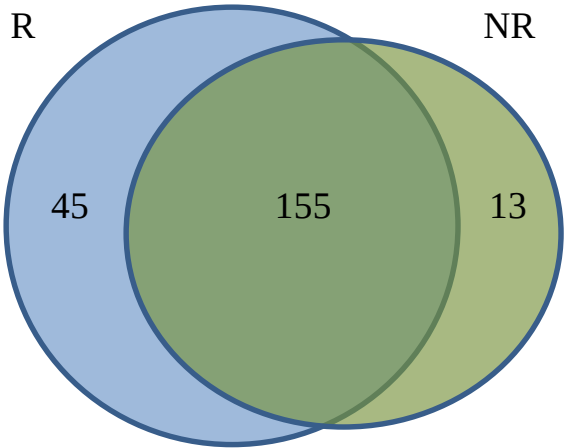
Table S2: Demographic, clinical and biological data of RA patients from population 2 at baseline. All differences between responders versus non-responders at baseline of the second cohort were non-significant (p -values >0.05 ; Mann-Whitney non-parametric test). Only DAS28 at 6 month and Δ DAS28 showed a significant difference between R and NR patients. VAS: Visual Analogue Scale (patient assessment of pain); ESR: Erythrocyte Sedimentation Rate; CRP: C-reactive protein; DAS: Disease Activity Score at initiation of treatment; Δ DAS28: DAS 28 difference between 6 months and baseline. Values are mean $\pm$ SEM.

Figure S1

A

Proteins	Fraction	Mean protein coverage	Mean number of peptides	Mean number of PSM
Unique to R samples	21.1%	15.78	3.5	13.7
Unique to NR samples	6.1%	11.44	2.2	9.6
Common to R and NR samples	72.8%	40.12	13.7	645
Present in all 22 samples	33.8%	54.40	21.8	1399
Present in only 1 sample	18.1%	13.41	3.4	5.9

B



C

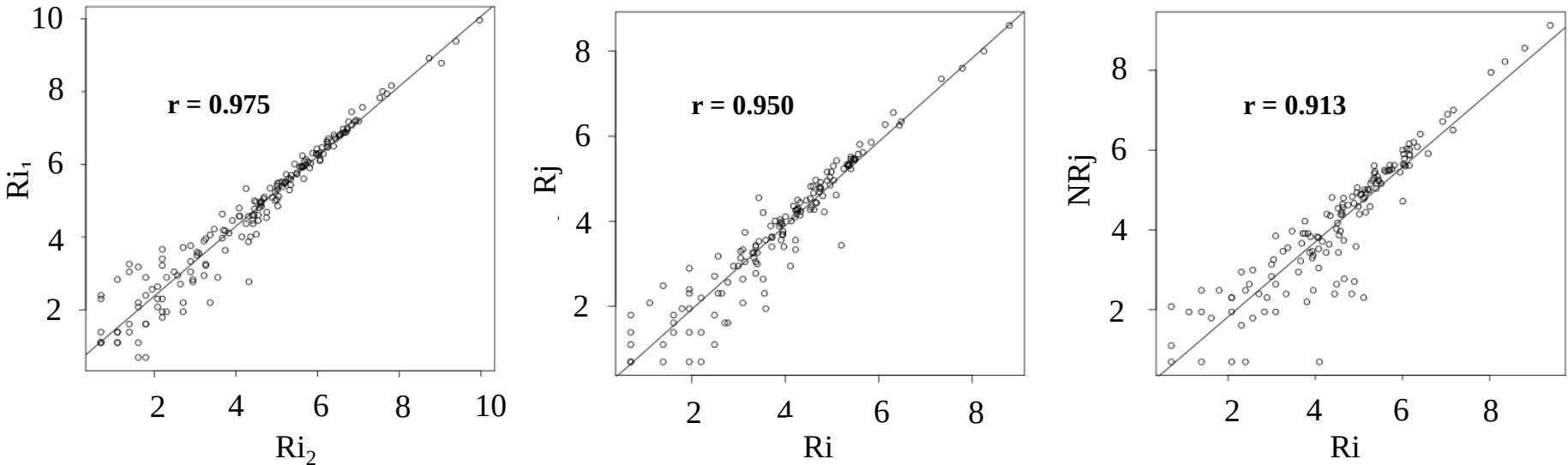


Table S1

		CERU	ITIH1	CO7	IC1	PROS	PLMN	C1R	S100A9	ZAG2	ITIH3	TRFE	CPN2
DAS28	ρ	0.29	0.34	0.23	0.21	0.29	-0.05	0.23	0.23	0.07	0.23	-0.18	0.20
	p-value	0.20	0.12	0.30	0.34	0.19	0.84	0.30	0.30	0.74	0.31	0.42	0.37
Age	ρ	-0.23	-0.29	-0.39	-0.24	-0.35	-0.17	-0.36	-0.32	-0.13	-0.37	0.39	-0.27
	p-value	0.31	0.18	0.07	0.27	0.11	0.44	0.10	0.14	0.57	0.09	0.07	0.23
CRP	ρ	0.46	0.37	0.37	0.45	0.42	0.14	0.30	0.36	0.28	0.33	-0.61	0.29
	p-value	0.08	0.17	0.17	0.09	0.12	0.62	0.27	0.18	0.31	0.24	0.02	0.29
ESR	ρ	0.10	0.15	0.13	0.08	0.22	-0.17	-0.04	0.08	-0.08	0.12	-0.34	0.01
	p-value	0.68	0.55	0.60	0.73	0.36	0.48	0.87	0.75	0.75	0.61	0.15	0.96
Pain	ρ	0.06	-0.02	-0.07	-0.08	-0.29	0.10	-0.23	-0.11	0.09	-0.21	-0.08	-0.18
	p-value	0.81	0.95	0.77	0.76	0.24	0.67	0.34	0.66	0.71	0.39	0.75	0.47
Delta DAS28	ρ	-0.71	-0.75	-0.71	-0.67	-0.77	-0.37	-0.74	-0.57	-0.39	-0.76	0.55	-0.74
	p-value	0.0002	<0.0001	0.0002	0.0007	<0.0001	0.086	<0.0001	0.006	0.075	<0.0001	0.008	<0.0001

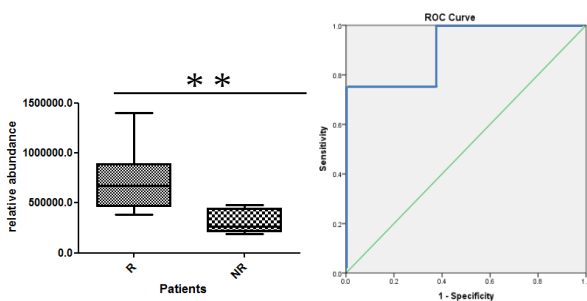
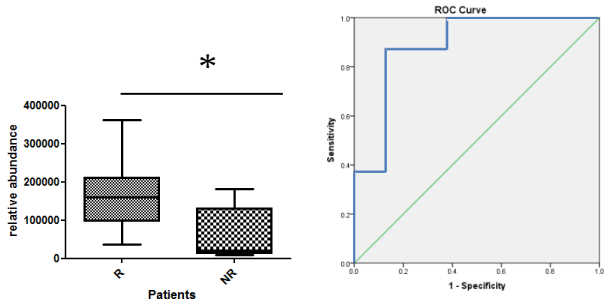
Table S2

	Population 2 (serum)						p-value
	Responders (n=9)			Non responders (n=7)			
	mean ± SEM	median	min_max	mean ± SEM	median	min_max	
Age (years)	48 ± 6	46.6	16.0_72.0	55 ± 3	54.5	41.1_62.4	0.41
Sex (f/m)	05/02	—	—	05/02	—	—	-
Methotrexate (mg/week)	12.8 ± 2.5	15.00	0_20.0	9.3 ± 2.5	12.5	0_15.0	0.12
Corticoids (mg/day)	7.1 ± 2.5	5.00	0_20	6.9 ± 2.5	10.0	0_16.0	0.96
Pain (0–100 mm VAS)	59 ± 8	60.00	20_100	56 ± 9	50.0	20.0_80	0.79
ESR (mm/hour)	30.8 ± 10.0	25.00	4.0_92.0	34.6 ± 11.0	25.0	3.0_86.0	0.95
CRP (mg/l)	38.7 ± 14.3	27.00	2.0_118.0	22.7 ± 11.2	8.0	4.0_71.0	0.77
DAS28	4.13 ± 0.22	4.10	3.39_5.23	3.83 ± 0.51	3.47	2.18_6.26	0.299
DAS28 6 month	1.98 ± 0.25	2.10	0.70_2.97	3.53 ± 0.51	3.04	2.28_6.14	0.0059
ΔDAS28	-2.12 ± 0.33	-1.61	-3.80_-1.13	-0.30 ± 0.33	-0.42	-1.73_0.91	0.0033

Figure S2

Complement component C7

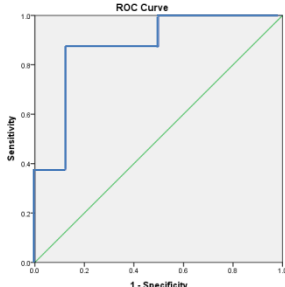
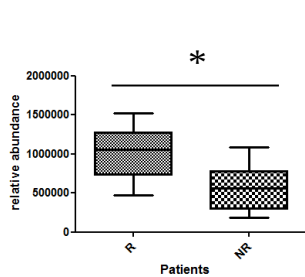
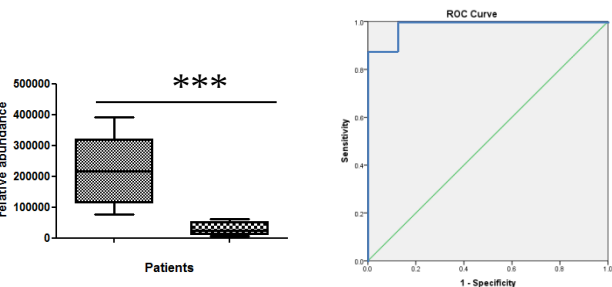
Zinc-alpha-2-glycoprotein



Protein S100A9

Plasminogen

Vitamin K-dependent protein S



Inter-alpha-trypsin inhibitor heavy chain H1

Ceruloplasmin

