

A Novel “Reactomics” Approach for Cancer Diagnostics. *Sensors* 2012, 12, 5572-5585

Sofiya Kolusheva ^{1,†}, Rami Yossef ^{2,†}, Aleksandra Kugel ², Nirit Hanin-Avraham ¹,
Meital Cohen ², Eitan Rubin ² and Angel Porgador ^{2,*}

¹ Ilse Katz Institute for Nanoscale Science and Technology, Ben Gurion University of the Negev, Beer Sheva 84105, Israel; E-Mails: kolushev@bgu.ac.il (S.K.); nirithanin@yahoo.com (N.H.-A.)

² The Shraga Segal Department of Microbiology and Immunology and the National Institute for Biotechnology in the Negev, Ben Gurion University of the Negev, Beer Sheva 84105, Israel; E-Mails: yossefra@bgu.ac.il (R.Y.); sasha.kugel@gmail.com (A.K.); kupervaser@yahoo.com (M.C.); erubin@bgu.ac.il (E.R.)

[†] These authors contributed equally to this work.

* Author to whom correspondence should be addressed; E-Mail: angel@bgu.ac.il;
Tel.: +972-8-647-7283; Fax: +972-8-647-7626.

Table S1. Age distribution, gender and clinical characteristics of sera samples used. All samples were collected and stored at Fundeni Clinical Institute Bucharest, Romania by RNTech Company. Samples were shipped to Ben-Gurion University, Israel and processed following established protocols (see Methods). Abbreviations: AJCC/UICC TNM classification, American Joint Committee on Cancer (AJCC)/International Union against Cancer (UICC) tumor-node-metastasis (TNM) classification.

Group	Age at Excision	Sex	Clinical Diagnosis (specimen)	AJCC/UICC TNM classification	AJCC/UICC Stage Group
Stomach	75	F	Adenocarcinoma	T2bN2M0	IIIA
Stomach	63	M	Adenocarcinoma	T2bN0M0	IB
Stomach	55	M	Adenocarcinoma	T2aN0M0	IB
Stomach	64	F	Adenocarcinoma	T2bN2M1	IV
Stomach	58	M	Adenocarcinoma	T4N2M0	IV
Stomach	70	F	Adenocarcinoma	T3N2M0	IIIB
Stomach	67	M	Adenocarcinoma	T2aN0M0	IB
Stomach	66	F	Adenocarcinoma	T2aN1M0	II
Stomach	66	F	Adenocarcinoma	T2bN1M0	II
Stomach	59	M	Adenocarcinoma	T2aN2M0	IIIA
Stomach	63	F	Adenocarcinoma	T2AN1M0	II

Table S1. *Cont.*

Group	Age at Excision	Sex	Clinical Diagnosis (specimen)	AJCC/UICC TNM classification	AJCC/UICC Stage Group
Stomach	61	M	Adenocarcinoma	T2bN1M0	II
Stomach	65	F	Adenocarcinoma	T2aN1M1	IV
Stomach	62	M	Adenocarcinoma	T2aN2M0	IIIA
Stomach	65	M	Adenocarcinoma	T3N3M0	IV
Stomach	65	M	Adenocarcinoma	T2bN0M0	IB
Stomach	74	M	Adenocarcinoma	T2bN2M0	IIIA
Stomach	75	F	Adenocarcinoma	T2bN1M0	II
Stomach	68	M	Adenocarcinoma	T3N1M0	IIIA
Stomach	63	M	Adenocarcinoma	T3N2M0	IIIB
Stomach	69	M	Adenocarcinoma	T2bN1M0	II
Stomach	72	M	Adenocarcinoma	T2bN2M0	IIIA
Stomach	66	M	Adenocarcinoma	T2bN2M0	IIIA
Stomach	63	M	Adenocarcinoma	T2bN1M0	II
Stomach	63	M	Adenocarcinoma	T2bN1M0	II
Stomach	69	M	Adenocarcinoma	T2bN1M0	II
Stomach	59	M	Adenocarcinoma	T4N2M0	IV
Stomach	60	M	Adenocarcinoma	T2aN2M0	IIIA
Stomach	70	F	Adenocarcinoma	T2aN1M0	II
Stomach	66	M	Adenocarcinoma	T2bN1M1	IV
Stomach	59	M	Adenocarcinoma	T2aN1M0	II
Stomach	57	F	Adenocarcinoma	T2bN0M0	IIA
Stomach	64	M	Adenocarcinoma	T2bN1M0	II
Stomach	45	M	Adenocarcinoma	T4N2M0	IV
Stomach	69	M	Adenocarcinoma	T2aN2M0	IIIA
Stomach	63	M	Adenocarcinoma	T2bN2M0	IIIA
Stomach	65	M	Adenocarcinoma	T2bN0M0	IIA
Stomach	53	M	Adenocarcinoma	T2bN0M0	IIA
Stomach	67	M	Adenocarcinoma	T2N1M0	II
Stomach	68	M	Adenocarcinoma	T2aN0M0	IIA
Stomach	57	M	Adenocarcinoma	T3N2M0	IIIB
Stomach	59	F	Adenocarcinoma	T3N1M0	IIIA
Stomach	56	F	Adenocarcinoma	T2bN3M0	IV
Stomach	56	M	Adenocarcinoma	T2aN0M0	IIA
Stomach	59	M	Adenocarcinoma	T3N2M1	IV
Stomach	77	M	Adenocarcinoma	T2bN1M0	II
Stomach	65	M	Adenocarcinoma	T2aN0M0	IIA
Stomach	71	M	Adenocarcinoma	T3N2M1	IV
Stomach	66	M	Adenocarcinoma	T3N2M0	IIIB
Stomach	52	M	Adenocarcinoma	T3N0M0	II
Pancreas	64	F	Adenocarcinoma	T1N1M0	IIB
Pancreas	69	F	Carcinome	T3N0M0	IIA
Pancreas	58	M	Carcinome	T1N1M0	IIB

Table S1. *Cont.*

Group	Age at Excision	Sex	Clinical Diagnosis (specimen)	AJCC/UICC TNM classification	AJCC/UICC Stage Group
Pancreas	72	F	Adenocarcinoma	T3N0M1	IV
Pancreas	60	M	Adenocarcinoma	T3N0M0	IIA
Pancreas	56	F	Adenocarcinoma	T2N0M0	IB
Pancreas	59	F	Adenocarcinoma	T1N1M1	IV
Pancreas	77	M	Carcinome	T2N0M0	IB
Pancreas	69	F	Carcinome	T3N1M0	IIB
Pancreas	55	M	Carcinome	T1N1M0	IIB
Pancreas	52	F	Carcinome	T2N0M0	IB
Pancreas	75	M	Carcinome	T2N0M0	IB
Pancreas	64	M	Carcinome	T2N0M0	IB
Pancreas	61	F	Carcinome	T2N1M0	IIB
Pancreas	46	M	Carcinome	T2N1M0	IIB
Pancreas	59	F	Carcinome	T3N0M0	IIA
Pancreas	74	M	ADK, benign disease	T2N0M0	IB
Pancreas	52	F	Carcinome	T2N1M0	IIB
Pancreas	67	F	Adenocarcinoma	T2N1M0	IIB
Pancreas	73	F	Adenocarcinoma	T3N1M0	IIB
Pancreas	52	M	Carcinome	T3N0M0	IIA
Pancreas	54	F	Carcinome	T2N1M1	IV
Pancreas	62	F	Carcinome	T2N1M0	IIB
Pancreas	65	M	Adenocarcinoma	T3N0M0	IIA
Pancreas	67	M	Adenocarcinoma	T2N1M0	IIB
Pancreas	57	M	Adenocarcinoma	T2N1M1	IV
Pancreas	45	M	Adenocarcinoma	T2N0M0	IB
Pancreas	67	F	Carcinome	T4N0M0	III
Pancreas	53	M	Adenocarcinoma	T2N1M0	IIB
Pancreas	64	F	Adenocarcinoma	T1N0M0	IA
Pancreas	42	F	Adenocarcinoma	T2N0M0	IB
Pancreas	54	M	Adenocarcinoma	T3N1M0	IIB
Pancreas	59	F	Carcinome	T1N0M0	IA
Pancreas	71	M	Adenocarcinoma	T3N1M0	IIB
Pancreas	54	M	Adenocarcinoma	T3N1M0	IIB
Pancreas	66	F	Adenocarcinoma	T3N1M0	IIB
Pancreas	60	M	Adenocarcinoma	T3N1M0	IIB
Pancreas	60	M	Adenocarcinoma	T3N1M0	IIB
Pancreas	61	M	Adenocarcinoma	T3N1M0	IIB
Pancreas	60	M	Adenocarcinoma	T2N0M0	IB
Pancreas	61	M	Adenocarcinoma	T3N0M0	IIA
Pancreas	53	F	Adenocarcinoma	T2N0M0	IB
Pancreas	71	M	Adenocarcinoma	T3N0M0	IIA
Pancreas	45	M	Adenocarcinoma	T3N0M0	IIA
Pancreas	77	F	Adenocarcinoma	T3N0M0	IIA

Table S1. *Cont.*

Group	Age at Excision	Sex	Clinical Diagnosis (specimen)	AJCC/UICC TNM classification	AJCC/UICC Stage Group
Pancreas	66	F	Carcinome	T2N0M0	IB
Pancreas	72	M	Adenocarcinoma	T3N0M0	IIA
Pancreas	51	M	Adenocarcinoma	T2N0M0	IB
Pancreas	59	M	Adenocarcinoma	T3N1M0	IIB
Pancreas	59	F	Adenocarcinoma	T1N1M1	IIB
Control	65	F			
Control	68	M			
Control	75	M			
Control	65	M			
Control	66	F			
Control	66	M			
Control	66	M			
Control	70	M			
Control	69	F			
Control	67	F			
Control	76	M			
Control	67	F			
Control	71	F			
Control	70	F			
Control	58	M			
Control	69	M			
Control	73	F			
Control	65	M			
Control	72	F			
Control	56	M			
Control	34	F			
Control	28	F			
Control	27	F			
Control	28	M			
Control	27	F			
Control	26	F			
Control	27	M			
Control	31	M			
Control	29	F			
Control	28	F			
Control	19	M			
Control	30	F			
Control	40	M			
Control	32	F			
Control	43	F			
Control	27	F			
Control	26	F			
Control	40	M			
Control	30	M			
Control	28	F			
Control	29	F			

Table S1. *Cont.*

Group	Age at Excision	Sex	Clinical Diagnosis (specimen)	AJCC/UICC TNM classification	AJCC/UICC Stage Group
Control	30	M			
Control	36	F			
Control	30	F			
Control	26	M			
Control	33	M			
Control	29	F			
Control	40	F			
Control	33	F			
Control	26	F			

Figure S1. Representative measurement of %FCR following incubation of healthy donor-serum with chromatic lipid-PDA vesicles in different time points.

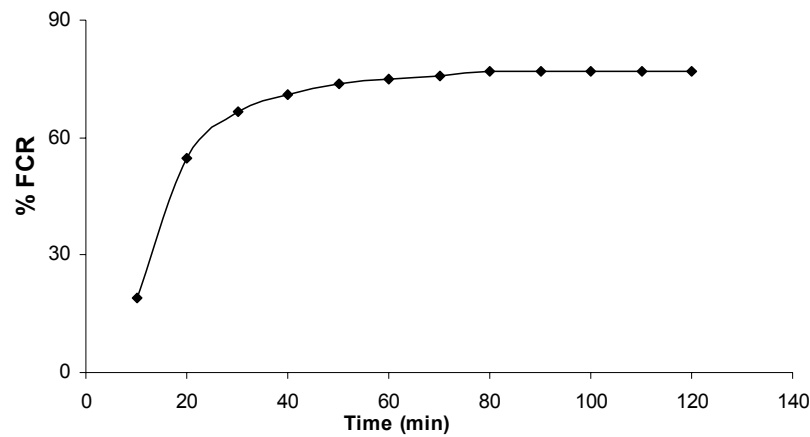


Figure S2. Five control sera (S1 to S5) were tested in a 10-repeat assay for the chromatic response induced by 10 different chromatic lipid-PDA vesicles (X-axis, see Table 1). For each serum and chromatic vesicle, RSD of the 10-repeats is presented and the black line represents the average RSD for the 5 sera.

