

Supplemental Table 6. Biological functions of mammary tumor transcripts that might later serve as biomarkers of human breast cancer metastasis risk. The gene expression data from individual mammary tumor samples were ordered such that 25% (33 samples) of the total samples came from mice with no surface- or section- metastatic lesions and the longest tumor onset. Gene expression data from these 33 samples served as the reference group when paired with the gene expression data of 33 mammary tumor samples from mice that had the most sectional metastatic lesions detected (AMD66), and when paired with the gene expression data of 33 mammary tumor samples from mice that had the most superficial metastatic lesions detected (MET66). The differential expression of genes ( $Q < 0.05$ ) common to both the AMD66 and MET66 analyses was further restricted to genes expressed in human adipose or breast to define the set of metastasis virulence biomarkers.

\*categories of biological functions as defined by Ingenuity Pathway Analysis Knowledge Base

†P-value describing the probability that the molecules of the biomarker list associate with a biological function category due to chance

‡Number of molecules associated with function

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
2	experimentally-induced diabetes	3.66E-08	9
3	diabetes	1.54E-07	15
4	atherosclerosis	6.62E-07	10
5	developmental process of bone	1.33E-06	11
6	metabolic disorder	2.43E-06	23
7	hematological disorder	2.67E-06	22
8	respiratory disorder	3.8E-06	17
9	development of bone	4.09E-06	8
10	systemic sclerosis	6.1E-06	5
11	developmental process of connective tissue	6.65E-06	11
12	death of animal	8.42E-06	23
13	cardiovascular disorder	1.08E-05	20
14	death of mice	1.28E-05	22
15	genetic disorder	1.55E-05	34
16	release of nitric oxide	0.000016	6
17	migration of endothelial cells	1.63E-05	9
18	endocrine system disorder	1.65E-05	16
19	death of rodents	1.73E-05	22
20	angiogenesis of blood vessel	1.95E-05	9
21	vascular lesion	2.05E-05	7
22	death of mammalia	2.09E-05	22
23	cardiovascular process of blood vessel	3.06E-05	10
24	development of connective tissue	3.32E-05	8
25	formation of vascular lesion	4.23E-05	4
26	neovascularization of eye	4.53E-05	3
27	skeletal and muscular disorder	4.68E-05	21
28	angiogenesis	0.000047	11
29	inflammatory disorder	5.38E-05	25
30	connective tissue disorder	6.33E-05	18
31	aneurysm	6.43E-05	3
32	contraction of fibroblasts	6.43E-05	3
33	vascularization of eye	6.43E-05	3
34	deposition of granulation tissue	6.85E-05	2
35	formation of cord blood	6.85E-05	2
36	morphology of collagen fibrils	6.85E-05	2
37	nonproliferative diabetic retinopathy with macular edema	6.85E-05	2
38	quantity of cobblestone area-forming cells	6.85E-05	2
39	development of blood vessel	8.97E-05	12
40	development of vessel	9.41E-05	12
41	neovascularization	9.55E-05	6
42	formation of filaments	9.89E-05	10
43	dermatological disorder	0.000108	15
44	migration of breast cancer cell lines	0.000108	6
45	movement of breast cancer cell lines	0.000115	6
46	immunological disorder	0.000126	20
47	contraction of connective tissue cells	0.000151	3
48	neovascularization of organ	0.000151	3
49	migration of tumor cells	0.000187	5
50	movement of tumor cells	0.000201	5
51	activation of chondrocytes	0.000204	2
52	adhesion of hOB cells	0.000204	2
53	morphology of fibrils	0.000204	2
54	renal and urological disorder	0.000209	11
55	developmental process of tissue	0.000229	18
56	formation of actin filaments	0.000234	8
57	neurological disorder	0.000275	28

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
58	formation of actin stress fibers	0.000307	7
59	quantity of muscle cells	0.000326	5
60	developmental process of endothelial cells	0.000337	6
61	invasion of eukaryotic cells	0.00034	12
62	infiltration of eukaryotic cells	0.00036	9
63	growth of tumor	0.000372	7
64	disruption of focal adhesions	0.000407	2
65	fusion of secretory granules	0.000407	2
66	release of polysaccharide	0.000407	2
67	replication of human herpesvirus 5	0.000407	2
68	vascularization of lesion	0.000407	2
69	migration of microvascular endothelial cells	0.000417	3
70	migration of stem cells	0.000492	3
71	infiltration of cells	0.000497	9
72	invasion of cells	0.000504	12
73	cell division process of endothelial cells	0.000575	3
74	choroidal neovascularization	0.000575	3
75	hydrocephalus of mice	0.000575	3
76	heart failure	0.000581	6
77	migration of cancer cells	0.000613	4
78	apoptosis of epithelial cells	0.000636	7
79	genital tumor	0.000637	11
80	movement of cancer cells	0.000664	4
81	acinar-cell carcinoma	0.000667	3
82	morphology of bone	0.000667	3
83	cell death of cell lines	0.000668	25
84	entry into G1 phase of eukaryotic cells	0.000674	2
85	formation of epoprostenol	0.000674	2
86	joining of protein	0.000674	2
87	migration of mesenchymal stem cells	0.000674	2
88	migration of skin cell lines	0.000674	2
89	mobilization of intracellular stores	0.000674	2
90	synovial sarcoma	0.000674	2
91	transformation of endocardial cells	0.000674	2
92	developmental disorder of animal	0.000681	7
93	atherosclerotic lesion	0.000701	5
94	aggregation of fibroblast cell lines	0.000768	3
95	hydrocephalus	0.000768	3
96	cell movement of cells	0.000768	18
97	development of lung	0.000779	5
98	cardiovascular disorder of mice	0.000824	8
99	proliferation of muscle cells	0.000829	7
100	neoplasia	0.000842	35
101	morphology of blood vessel	0.000877	3
102	neovascularization of cornea	0.000877	3
103	release of granules	0.000877	3
104	cell death of epithelial cells	0.000941	7
105	acute allergic pulmonary eosinophilia	0.000997	3
106	fibrosarcoma	0.000997	3
107	quantity of tumor cells	0.000997	3
108	arrest in cell division process of endothelial cells	0.00101	2
109	cell spreading of brain cancer cell lines	0.00101	2
110	formation of bodily fluid	0.00101	2
111	formation of collagen fibrils	0.00101	2
112	lysis of endothelial cell lines	0.00101	2
113	papillary renal cell carcinoma	0.00101	2

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
114	quantity of glucocorticoid	0.00101	2
115	quantity of lamellipodia	0.00101	2
116	transition of mesenchymal cells	0.00101	2
117	transport of cystine	0.00101	2
118	cell movement	0.00108	18
119	development of endothelial cell lines	0.00113	3
120	morphology of vessel	0.00113	3
121	binding of cell lines	0.00113	9
122	vascularization	0.00114	6
123	cell death	0.00118	36
124	proliferation of brain cancer cell lines	0.00119	4
125	binding of tumor cell lines	0.0012	7
126	survival of mice	0.00121	10
127	developmental process of tumor	0.00122	8
128	adenocarcinoma	0.00138	8
129	benign tumor	0.00139	10
130	Kawasaki's disease	0.0014	2
131	arrest in G0/G1 phase transition of breast cancer cell lines	0.0014	2
132	growth of pituitary cells	0.0014	2
133	proliferation of microvascular endothelial cells	0.0014	2
134	dilation of left ventricle	0.00141	3
135	morphology of connective tissue	0.00141	3
136	vascularization of cornea	0.00141	3
137	rheumatic disease	0.00142	14
138	survival of rodents	0.00145	10
139	proliferation of endothelial cells	0.00146	6
140	development of tissue	0.00146	14
141	cell death of eukaryotic cells	0.00146	31
142	cancer	0.00151	33
143	digestive organ tumor	0.00153	12
144	G1 phase of bone cancer cell lines	0.00157	3
145	tubulation of endothelial cells	0.00157	3
146	chemotaxis of eukaryotic cells	0.00162	10
147	binding of cells	0.00166	12
148	formation of focal adhesions	0.00166	5
149	proliferation of smooth muscle cells	0.00167	6
150	cleft palate syndrome	0.00175	3
151	proliferation of mesangial cells	0.00175	3
152	ovarian cancer	0.00178	9
153	assembly of actin filaments	0.00185	4
154	binding of Egr-1 binding site	0.00186	2
155	choroidal neovascularization of eye	0.00186	2
156	formation of aneurysm	0.00186	2
157	formation of prostaglandin	0.00186	2
158	gap junctional intercellular communication of eukaryotic cells	0.00186	2
159	glycolysis of cells	0.00186	2
160	migration of neuroblasts	0.00186	2
161	morphology of artery	0.00186	2
162	stress response of cells	0.00186	2
163	tumorigenesis	0.00189	36
164	proliferation of glomerular cells	0.00193	3
165	cardiovascular disorder of rodents	0.00193	8
166	uterine tumor	0.00194	7
167	survival of mammalia	0.00199	10
168	proliferation of cells	0.00202	32
169	renal cancer	0.00203	6

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
170	uterine cancer	0.00204	7
171	survival of animal	0.00206	10
172	survival of organism	0.00206	10
173	migration of neurons	0.0021	6
174	Dupuytren contracture	0.00212	3
175	hypertension of mice	0.00212	3
176	cell death of central nervous system cells	0.00215	7
177	contraction of eukaryotic cells	0.00219	4
178	healing of lesion	0.00219	4
179	neuropathy	0.00222	9
180	renal-cell carcinoma	0.00222	5
181	growth of tumor cells	0.00224	6
182	movement of neurons	0.00224	6
183	damage of cartilage tissue	0.00237	2
184	diabetic retinopathy	0.00237	2
185	endothelial dysfunction	0.00237	2
186	replication of cytomegalovirus	0.00237	2
187	morphology of tissue	0.0024	5
188	eosinophilia	0.00245	4
189	cardiovascular disorder of mammalia	0.00247	8
190	cell death of cardiomyocytes	0.0025	5
191	developmental disorder of mice	0.00253	6
192	homing of eukaryotic cells	0.00254	10
193	cell death of embryonic stem cells	0.00255	3
194	cholangiocarcinoma	0.00255	3
195	differentiation of endothelial cells	0.00255	3
196	hypoxia of organism	0.00258	4
197	cell death of heart cells	0.0026	5
198	ovarian tumor	0.00264	7
199	apoptosis of cell lines	0.00272	21
200	dilation of heart ventricle	0.00277	3
201	proliferation of kidney cells	0.00277	3
202	chemotaxis of cells	0.00287	10
203	proliferation of endothelial cell lines	0.00287	4
204	developmental disorder of rodents	0.00293	6
205	G0/G1 phase transition of breast cancer cell lines	0.00295	2
206	G1/S phase transition of bone cancer cell lines	0.00295	2
207	cell stage of endothelial cells	0.00295	2
208	deposition of connective tissue	0.00295	2
209	deposition of extracellular matrix	0.00295	2
210	development of skull bone	0.00295	2
211	gap junctional intercellular communication of cells	0.00295	2
212	growth of brain cells	0.00295	2
213	growth of neuroendocrine cells	0.00295	2
214	growth of skin cancer cell lines	0.00295	2
215	maturation of blood vessel	0.00295	2
216	permeability of endothelial tissue	0.00295	2
217	quantity of cellular protrusions	0.00295	2
218	quantity of lysophosphatidylcholine	0.00295	2
219	stimulation of endothelial cells	0.00295	2
220	transformation of endothelial cells	0.00295	2
221	ophthalmic disorder	0.00296	9
222	apoptosis	0.00301	31
223	contraction of cells	0.00302	4
224	biliary tract tumor	0.00302	3
225	ossification of bone	0.00302	3

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
226	proteinuria of mice	0.00302	3
227	retinopathy	0.00302	3
228	vascularization of organ	0.00302	3
229	binding of eukaryotic cells	0.00307	11
230	migration of bone marrow cells	0.00312	5
231	quantity of connective tissue cells	0.00312	5
232	severe acute respiratory syndrome	0.00312	5
233	cell death of lymphatic system cells	0.00322	10
234	movement of bone marrow cells	0.00324	5
235	interphase of bone cancer cell lines	0.00327	3
236	skeletal and muscular process of bone	0.00327	3
237	gonadal tumor	0.00345	7
238	cell death of muscle cells	0.00348	6
239	biliary tract cancer	0.00354	3
240	dilation of heart chamber	0.00354	3
241	ossification of connective tissue	0.00354	3
242	re-entry into cell stage of cells	0.00354	3
243	autoimmune disease	0.00358	13
244	developmental process of skin cancer cell lines	0.00359	2
245	formation of nucleus	0.00359	2
246	morphology of filaments	0.00359	2
247	hypoxia	0.00367	4
248	quantity of nitric oxide	0.00382	3
249	quantity of stem cells	0.00382	3
250	re-entry into cell stage	0.00382	3
251	migration of fibroblast cell lines	0.00384	4
252	tumor	0.00386	27
253	renal tumor	0.00386	5
254	migration of cells	0.00395	19
255	apoptosis of central nervous system cells	0.00399	5
256	migration of eukaryotic cells	0.00401	18
257	amyotrophic lateral sclerosis	0.00402	4
258	ossification of tissue	0.00411	3
259	release of carbohydrate	0.00411	3
260	coronary artery disease	0.00421	4
261	movement of fibroblast cell lines	0.00421	4
262	Ehlers-Danlos syndrome	0.00428	2
263	adrenal cortex carcinoma	0.00428	2
264	attachment of fibroblasts	0.00428	2
265	cell movement of hepatoma cell lines	0.00428	2
266	chronic renal allograft rejection	0.00428	2
267	communication of eukaryotic cells	0.00428	2
268	degradation of tissue	0.00428	2
269	developmental process of skull bone	0.00428	2
270	formation of atherosclerotic lesion	0.00428	2
271	permeability of epithelial tissue	0.00428	2
272	quantity of essential amino acids	0.00428	2
273	shape change of brain cancer cell lines	0.00428	2
274	thickening of tissue	0.00428	2
275	von Hippel-Lindau syndrome	0.00428	2
276	developmental process of tumor cells	0.00433	6
277	chemotaxis	0.00436	10
278	invasion of cell lines	0.00438	9
279	formation of lesion	0.00441	4
280	formation of benign tumor	0.00442	3
281	quantity of smooth muscle cells	0.00442	3

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
282	homing of cells	0.00443	10
283	primary tumor	0.00445	25
284	movement of cells	0.00452	19
285	apoptosis of eukaryotic cells	0.00457	26
286	movement of eukaryotic cells	0.00458	18
287	inflammatory disorder of rodents	0.00461	9
288	maturation of cells	0.00464	8
289	arrest in G0/G1 phase transition of cell lines	0.00474	3
290	hypertension of rodents	0.00474	3
291	attachment of connective tissue cells	0.00503	2
292	cell spreading of endothelial cell lines	0.00503	2
293	clear-cell adenocarcinoma	0.00503	2
294	clearance of lipid	0.00503	2
295	development of rib	0.00503	2
296	ophthalmic disorder of eye	0.00503	2
297	proliferation of granulosa cells	0.00503	2
298	secretion of corticosterone	0.00503	2
299	skeletal and muscular disorder of rats	0.00503	2
300	hypertension	0.00505	6
301	glioblastoma	0.00507	3
302	proteinuria of rodents	0.00507	3
303	size of atherosclerotic lesion	0.00507	3
304	skeletal and muscular process of connective tissue	0.00507	3
305	apoptosis of lymphatic system cells	0.00509	9
306	developmental disorder	0.00514	15
307	contraction of muscle	0.00518	6
308	generation of reactive oxygen species	0.00524	4
309	size of lesion	0.00524	4
310	malignant tumor	0.00533	24
311	inflammatory disorder of mammalia	0.00535	9
312	arrest in G0 phase of cell lines	0.00542	3
313	mucoepidermoid carcinoma	0.00542	3
314	migration of smooth muscle cells	0.00547	4
315	invasion of tumor cell lines	0.00549	8
316	infiltration of blood cells	0.0056	7
317	ossification	0.00568	5
318	cell death of stem cells	0.00578	3
319	migration of leukemia cell lines	0.00578	3
320	adhesion of bone cell lines	0.00584	2
321	adrenal cortex tumor	0.00584	2
322	angiogenesis of endothelial cell lines	0.00584	2
323	apoptosis of mesangial cells	0.00584	2
324	arrest in interphase of cancer cells	0.00584	2
325	cardiovascular process of endothelial cell lines	0.00584	2
326	cell death of mesangial cells	0.00584	2
327	disease process of eye	0.00584	2
328	formation of fibrils	0.00584	2
329	generation of prostaglandin D2	0.00584	2
330	growth of endocrine cells	0.00584	2
331	interphase of breast cell lines	0.00584	2
332	proliferation of myoblasts	0.00584	2
333	quantity of lysophospholipids	0.00584	2
334	thrombocytosis	0.00584	2
335	developmental process of muscle	0.00584	7
336	tumorigenesis of cell lines	0.00586	5
337	cell death of brain cells	0.00587	6

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
338	adhesion of endothelial cells	0.00593	4
339	growth of cells	0.00596	25
340	pancreatic cancer	0.00601	6
341	growth of neurites	0.00612	8
342	parotid gland tumor	0.00616	3
343	salivary gland tumor	0.00616	3
344	size of vascular lesion	0.00616	3
345	colony formation of blood cells	0.00643	4
346	formation of plasma membrane projections	0.00647	7
347	angiogenesis of cells	0.00655	3
348	arrest in G0/G1 phase transition of eukaryotic cells	0.00655	3
349	initiation of cell division process of cells	0.00655	3
350	developmental process of cancer cells	0.0066	5
351	pancreatic tumor	0.0066	5
352	growth of plasma membrane projections	0.00668	8
353	attachment of eukaryotic cells	0.00668	4
354	healing	0.00668	4
355	adrenal gland tumor	0.0067	2
356	arrest in cell stage of cancer cells	0.0067	2
357	cell stage of breast cell lines	0.0067	2
358	cleavage of Gelatin	0.0067	2
359	invasion of blood cells	0.0067	2
360	proliferation of ovarian cells	0.0067	2
361	pseudoexfoliation syndrome	0.0067	2
362	cell stage of bone cancer cell lines	0.00695	3
363	development of liver	0.00695	3
364	oral cancer	0.00695	3
365	cell movement of blood cells	0.00698	10
366	contraction of tissue	0.00709	6
367	aggregation of cells	0.00714	7
368	quantity of cells	0.00731	18
369	G0/G1 phase transition of cell lines	0.00737	3
370	arrest in G0 phase of eukaryotic cells	0.00737	3
371	proteinuria	0.00737	3
372	synthesis of nitric oxide	0.00737	3
373	morphology of cells	0.00738	10
374	proliferation of connective tissue cells	0.00743	7
375	reorganization of cytoskeleton	0.00749	4
376	activation of mesothelial cells	0.00762	2
377	apoptosis of splenocytes	0.00762	2
378	arrest in interphase of tumor cells	0.00762	2
379	cell death of ventricular myocytes	0.00762	2
380	concentration of hormone	0.00762	2
381	deterioration of tissue	0.00762	2
382	generation of nitric oxide	0.00762	2
383	migration of Schwann cells	0.00762	2
384	removal of lipid	0.00762	2
385	apoptosis of pancreatic cancer cell lines	0.00781	3
386	progressive motor neuropathy	0.00787	7
387	renal and urological disorder of mice	0.00805	5
388	neoplasia of mice	0.00807	4
389	adhesion of breast cancer cell lines	0.00826	3
390	Ehlers-Danlos syndrome, type II	0.00832	1
391	G1 phase of microvascular endothelial cells	0.00832	1
392	G2 phase of carcinoma cells	0.00832	1
393	Schwartz-Jampel syndrome, type 1	0.00832	1



	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
394	Wernicke-Korsakoff syndrome	0.00832	1
395	accumulation of 1-palmitoyl-2-(epoxycyclopentenone)-sn-glycero-3-phosphorylcholine	0.00832	1
396	accumulation of 1-palmitoyl-2-(epoxyisoprostane)-sn-glycero-3-phosphorylcholine	0.00832	1
397	accumulation of chondroitin sulfate B	0.00832	1
398	accumulation of protein fragment	0.00832	1
399	accumulation of sulfoglucuronosyl paragloboside	0.00832	1
400	activation of afferent neurons	0.00832	1
401	activation of astrocytoma cells	0.00832	1
402	activation of atherosclerotic lesion	0.00832	1
403	activation of mucosa cells	0.00832	1
404	activation of myoblasts	0.00832	1
405	activation of neural precursor cells	0.00832	1
406	activation of prostaglandin E2	0.00832	1
407	aggregation of focal adhesions	0.00832	1
408	aggregation of retinoblastoma cells	0.00832	1
409	angiogenesis of embryonic cell lines	0.00832	1
410	arrest in G0 phase of fibroblasts	0.00832	1
411	arrest in G0/G1 phase transition of breast cell lines	0.00832	1
412	arrest in G0/G1 phase transition of epithelial cell lines	0.00832	1
413	arrest in G1/S phase transition of cancer cells	0.00832	1
414	arrest in cell cycle progression of endothelial cells	0.00832	1
415	arrest in cell cycle progression of germ cell tumor cell lines	0.00832	1
416	arrest in cell cycle progression of intestinal cell lines	0.00832	1
417	arrest in cell cycle progression of synovial fibroblasts	0.00832	1
418	arrest in maturation of pro-B lymphocytes	0.00832	1
419	arrest in mid-G1 phase of microvascular endothelial cells	0.00832	1
420	arrest in sub-G1 phase of mesothelioma cells	0.00832	1
421	atherosclerosis of lesion	0.00832	1
422	beta-adrenergic response of heart	0.00832	1
423	binding of Bcl6 binding site	0.00832	1
424	binding of N-box motif	0.00832	1
425	binding of Oct1 binding element	0.00832	1
426	binding of U46619	0.00832	1
427	binding of bacteriophage	0.00832	1
428	binding of microsomal membrane	0.00832	1
429	binding of peroxisome proliferator response element-like binding site	0.00832	1
430	binding of retinoblastoma cell lines	0.00832	1
431	branching of endothelial cells	0.00832	1
432	breakdown of blood-brain barrier	0.00832	1
433	cell cycle progression of colon carcinoma cells	0.00832	1
434	cell spreading of peritoneal macrophages	0.00832	1
435	cell viability of Schwann cells	0.00832	1
436	chaining behavior of mice	0.00832	1
437	chemorepulsion of sensory axons	0.00832	1
438	circulation of embryonic tissue	0.00832	1
439	closure of cephalic tissue	0.00832	1
440	clustering of kidney cell lines	0.00832	1
441	colon sporadic adenocarcinoma	0.00832	1
442	colony formation of RPE cells	0.00832	1
443	conjugation of protein	0.00832	1
444	coupling of granulosa cells	0.00832	1
445	coupling of neuroblastoma cell lines	0.00832	1
446	coupling of proepicardial cells	0.00832	1
447	cystoid macular edema	0.00832	1
448	cytotoxic reaction of colon cancer cell lines	0.00832	1

	A	B	C
1	Function Annotation*	P-value†	# Molecules‡
449	deformation of vertebral column	0.00832	1
450	degeneration of intervertebral disc	0.00832	1
451	degradation of aneurysm	0.00832	1
452	degradation of cartilage matrix	0.00832	1
453	degradation of chondroitin sulfate proteoglycan	0.00832	1
454	delay in G2 phase of colon carcinoma cells	0.00832	1
455	delay in cell cycle progression of colorectal cancer cell lines	0.00832	1
456	delay in cell division process of colorectal cancer cell lines	0.00832	1
457	delay in expansion of melanoma cell lines	0.00832	1
458	delay in maturation of phagosomes	0.00832	1
459	delivery of spermine	0.00832	1
460	depletion of proteoglycan	0.00832	1
461	deposition of elastic fibers	0.00832	1
462	despair behavior of mice	0.00832	1
463	detachment of hematopoietic progenitor cells	0.00832	1
464	deterioration of basement membrane	0.00832	1
465	development of abdomen	0.00832	1
466	development of aberrant crypt foci	0.00832	1
467	development of intestinal tumor	0.00832	1
468	development of ossification zone	0.00832	1
469	development of primary ovarian follicle	0.00832	1
470	development of submandibular gland	0.00832	1
471	developmental process of aberrant crypt foci	0.00832	1
472	differentiation of cobblestone area-forming cells	0.00832	1
473	differentiation of ectodermal cells	0.00832	1
474	differentiation of long-term culture-initiating cells	0.00832	1
475	differentiation of proplatelets	0.00832	1
476	dilation of glomerular capsule	0.00832	1
477	dilation of proximal convoluted tubule	0.00832	1
478	dilation of proximal tubule	0.00832	1
479	disorganization of tight junctions	0.00832	1
480	dysplasia of knee	0.00832	1
481	dyssegmental dysplasia, Silverman-Handmaker type	0.00832	1
482	edema of muscle	0.00832	1
483	entry into G1 phase of fibroblasts	0.00832	1
484	entry into G1/S phase transition of microvascular endothelial cells	0.00832	1
485	erythroblastosis of bone marrow	0.00832	1
486	erythroblastosis of spleen	0.00832	1
487	excitatory postsynaptic potential of pyramidal neurons	0.00832	1
488	exit from cell cycle progression of enterocytes	0.00832	1
489	exit from mitosis of breast cancer cell lines	0.00832	1
490	extension of microvascular endothelial cells	0.00832	1
491	fenestration of capillary vessel	0.00832	1
492	force generation of detrusor muscle	0.00832	1
493	formation of capillary network	0.00832	1
494	formation of colorectal cancer cell lines	0.00832	1
495	formation of glomeruloid body	0.00832	1
496	formation of great vessels	0.00832	1
497	formation of vascular channel	0.00832	1
498	fragmentation of basement membrane	0.00832	1
499	fusion of endoplasmic reticulum	0.00832	1
500	gap junctional intercellular communication of kidney cell lines	0.00832	1
501	glomeruloid body	0.00832	1
502			