

Supplementary information file

	Country	Papers	Citations by sci	Av citations by sci	Citations by pat	Av citations by pat	Linked patents	Ext prov/use balance
0	United States	5583.37	470722	84.308	8619.64	1.54381	3655.75	0.584243
1	China	2994.99	84321.8	28.1543	498.247	0.16636	49.5	2.60242
2	Japan	2697.56	133215	49.3834	3046.22	1.12925	458.5	2.83716
3	Germany	1160.03	91812.5	79.1468	1313.1	1.13195	388	1.02367
4	France	1090.42	76576.3	70.2262	753.572	0.691082	66.3333	4.15407
5	Canada	967.296	63657.3	65.8095	1221.42	1.26272	179.75	1.74136
6	United Kingdom	936.389	68064.9	72.6887	755.151	0.80645	363.333	0.648943
7	Spain	888.163	42311.8	47.6396	281.974	0.31748	18.6667	6.08826
8	Australia	690.535	44389	64.282	801.874	1.16124	138.833	0.64074
9	South Korea	689.185	17323.4	25.1361	190.728	0.276744	123.5	0.228937
10	Italy	582.501	26277.2	45.111	205.641	0.353031	11.5	7.70214
11	Norway	442.024	25234.5	57.0884	273.937	0.619733	32.6667	2.03519
12	Taiwan	355.017	11845.8	33.3668	110.537	0.311357	55	0.300821
13	India	314.534	10031.6	31.8935	78.5	0.249576	22.5	0.495671
14	Sweden	248.448	17930.5	72.1698	232.393	0.935378	18.8333	4.35799
15	Brazil	231.384	7936.05	34.2982	42.4742	0.183566	1	25.1994
16	Portugal	222.044	8695.97	39.1632	21.8205	0.0982709	2	4.31538
17	Netherlands	192.477	14291.2	74.2487	681.548	3.54093	170.333	0.359817
18	Russia	182.662	8615.15	47.1643	713.65	3.90694	13	19.1458
19	Switzerland	166.85	12676.9	75.9779	279.204	1.67339	149.25	0.623755

Table S1. Top 20 countries in publishing marine genetic research.

	Papers	Av citations by sci	Av citations by pat	Patents
Papers	1.0***	0.27*	0.13	0.84***
Av citations by sci	0.27*	1.0***	0.36**	0.37*
Av citations by pat	0.13	0.36**	1.0***	0.17
Patents	0.84***	0.37*	0.17	1.0***

Table S2. Pearson correlation coefficient (r) for a subset of countries with more than 5 papers (N = 70). * equals p<.001. Countries were excluded as the observed relationships would otherwise be driven by a few outlier cases with very few publications but with very high or low average values.**

Affiliation	Papers	Country	Econ Group
Chinese Academy of Sciences	536.748	CN	BRICS
University of Tokyo	315.072	JP	OECD
Centre national de la recherche scientifique	276.47	FR	OECD
Spanish National Research Council	263.008	ES	OECD
Ocean University of China	242.993	CN	BRICS
Max Planck Society	189.7	DE	OECD
Chinese Academy of Fishery Sciences	185.004	CN	BRICS
Kyoto University	173.675	JP	OECD
University of California, San Diego	154.211	US	OECD
Sun Yat-sen University	149.035	CN	BRICS
Xiamen University	139.335	CN	BRICS
University of Bergen	124.45	NO	OECD
Hokkaido University	123.186	JP	OECD
University of Washington	111.938	US	OECD
Harvard University	102.686	US	OECD
University of Queensland	101.091	AU	OECD
University of British Columbia	97.2021	CA	OECD
Zhejiang Ocean University	96.5833	CN	BRICS
Tokyo University of Marine Science and Technology	94.7274	JP	OECD
Jeju National University	90.8762	KR	OECD

Table S3. Publication counts at institutional level.

Affiliation	Patents	Country	Econ Group
UNIVERSITY OF CALIFORNIA	192	US	OECD
DU PONT	170.533	US	OECD
HARVARD UNIVERSITY	114.533	US	OECD
STANFORD UNIVERSITY	109.333	US	OECD
BAYER	105.667	DE	OECD
OPKO	104.833	US	OECD
SMITH & NEPHEW	97.5	GB	OECD
DSM	77	NL	OECD
BASF	75.8333	DE	OECD
PROMEGA	67.5	US	OECD

AMARIN PHARMA	65.5	IE	OECD
MERCK	65.4167	DE	OECD
BECTON DICKINSON AND COMPANY	58	US	OECD
TAKEDA	55.5	JP	OECD
UNIVERSITY OF FLORIDA	55	US	OECD
ROCHE	52.3333	CH	OECD
ABBOTT	50	US	OECD
GENOMATICA	49.5	US	OECD
HOWARD HUGHES MEDICAL INSTITUTE	48.3333	US	OECD
CSIRO	46	AU	OECD

Table S4. Patent counts at institutional level.

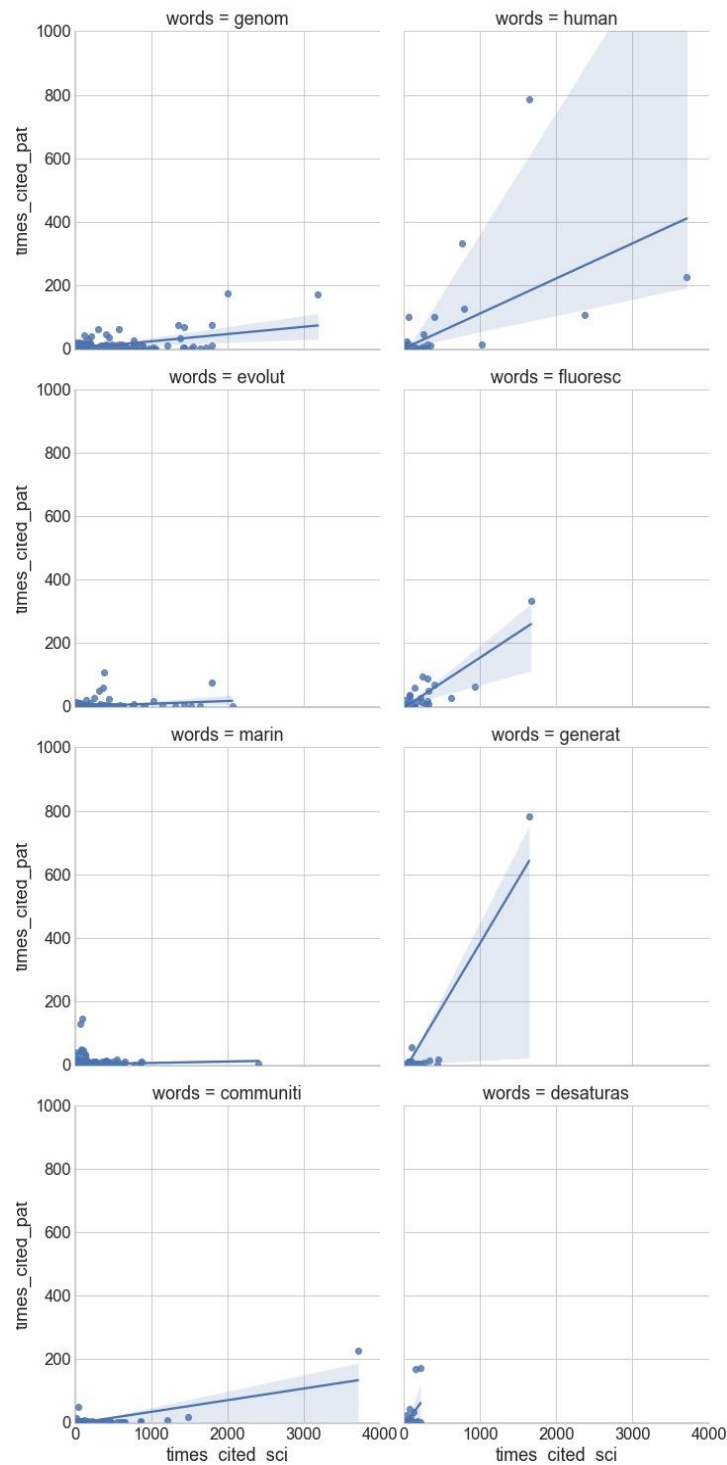


Figure S1. Scatterplots of eight most polarized words and their citation frequencies from science and patents.