

Appendix table 5-52

**S&E articles in other life sciences, by coauthorship attribute and selected country/economy: 1997–2012**

Country/economy and coauthorship attribute	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>World</b>																
Total articles	4,907	5,041	4,880	5,114	5,424	5,199	5,546	5,061	6,865	7,723	8,027	10,328	9,796	9,240	9,566	10,429
with multiple institutions	2,239	2,291	2,271	2,588	2,690	2,790	3,047	2,849	3,973	4,418	4,844	6,348	6,468	6,231	6,550	7,461
with domestic institutions only	4,685	4,762	4,629	4,786	5,083	4,827	5,036	4,567	6,170	6,994	7,073	8,987	8,349	7,857	8,115	8,676
with international institutions	222	279	251	328	341	372	510	494	695	729	954	1,341	1,447	1,383	1,451	1,753
<b>Canada</b>																
Total articles	275	249	265	280	263	344	384	330	480	520	605	646	784	701	742	720
with multiple institutions	162	138	152	183	167	230	250	229	331	350	429	458	587	519	584	591
with domestic institutions only	215	179	212	210	196	264	287	231	349	403	421	446	523	490	519	462
with international institutions	60	70	53	70	67	80	97	99	131	117	184	200	261	211	223	258
<b>Mexico</b>																
Total articles	53	56	59	49	54	77	61	88	61	52	87	83	104	88	41	112
with multiple institutions	29	31	36	32	32	54	47	61	46	38	67	66	77	56	36	93
with domestic institutions only	47	48	49	38	46	69	51	68	46	41	60	42	73	65	20	66
with international institutions	6	8	10	11	8	8	10	20	15	11	27	41	31	23	21	46
<b>United States</b>																
Total articles	3,079	3,082	2,942	3,036	3,243	3,051	3,095	2,832	3,851	4,654	4,190	5,054	5,091	4,739	4,787	5,138
with multiple institutions	1,477	1,467	1,451	1,569	1,647	1,623	1,718	1,575	2,227	2,637	2,562	3,110	3,318	3,082	3,175	3,602
with domestic institutions only	2,936	2,932	2,804	2,848	3,050	2,864	2,828	2,572	3,492	4,251	3,710	4,380	4,370	4,077	4,102	4,262
with international institutions	143	150	138	188	193	187	267	260	359	403	480	674	721	662	685	876
<b>Argentina</b>																
Total articles	4	2	4	2	3	2	3	2	5	3	5	14	11	11	7	20
with multiple institutions	-	1	-	1	2	-	1	1	4	2	5	11	9	11	6	19
with domestic institutions only	4	2	4	2	2	2	2	2	1	1	2	6	2	1	1	8
with international institutions	-	-	-	-	1	-	1	-	4	2	3	8	9	10	6	12
<b>Brazil</b>																
Total articles	5	9	8	10	11	12	16	16	24	28	58	506	67	64	86	103
with multiple institutions	3	9	5	9	8	8	13	12	17	22	38	325	54	48	72	87
with domestic institutions only	4	1	4	8	9	8	11	9	15	18	36	448	37	39	48	59
with international institutions	1	8	4	2	2	4	5	7	9	10	22	58	30	25	38	44
<b>Chile</b>																
Total articles	3	1	3	3	4	2	3	3	1	5	6	27	14	7	9	9
with multiple institutions	-	1	2	2	2	2	1	3	1	5	4	11	12	6	8	8
with domestic institutions only	3	-	1	3	3	1	2	2	-	2	3	17	5	3	1	2
with international institutions	-	1	2	-	1	1	1	1	1	3	3	10	9	4	8	7
<b>Austria</b>																
Total articles	4	2	4	7	5	10	13	10	14	11	8	22	27	17	23	28
with multiple institutions	3	1	1	5	2	5	9	8	12	9	6	18	25	15	19	26
with domestic institutions only	1	2	3	3	3	9	8	5	5	7	5	6	8	3	7	5
with international institutions	3	-	1	4	2	1	5	5	9	4	3	16	19	14	16	23

Appendix table 5-52

**S&E articles in other life sciences, by coauthorship attribute and selected country/economy: 1997–2012**

Country/economy and coauthorship attribute	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Belgium</b>																
Total articles	24	28	23	30	33	32	45	42	69	71	74	97	114	125	144	165
with multiple institutions	11	16	10	17	17	27	25	34	43	57	54	75	81	106	125	144
with domestic institutions only	17	18	14	17	21	9	27	23	36	31	36	46	53	59	64	55
with international institutions	7	10	9	13	12	23	18	19	33	40	38	51	61	66	80	110
<b>Czech Republic</b>																
Total articles	2	2	1	-	-	2	-	-	5	1	8	5	5	11	9	10
with multiple institutions	2	2	1	-	-	1	-	-	3	1	4	4	5	11	6	8
with domestic institutions only	-	-	-	-	-	1	-	-	4	-	5	3	1	-	4	3
with international institutions	2	2	1	-	-	1	-	-	1	1	3	2	4	11	5	7
<b>Denmark</b>																
Total articles	8	24	11	12	22	19	23	26	39	28	36	61	70	66	72	117
with multiple institutions	2	15	6	6	15	8	14	16	19	24	25	45	57	53	58	103
with domestic institutions only	7	12	6	9	13	14	10	15	31	16	20	39	43	39	44	63
with international institutions	1	12	5	3	9	5	13	11	8	12	16	22	27	27	28	54
<b>Finland</b>																
Total articles	47	61	59	61	67	67	87	60	56	61	90	98	124	101	102	133
with multiple institutions	25	33	35	44	40	45	65	48	38	48	62	69	111	80	89	121
with domestic institutions only	38	54	51	49	54	52	66	45	44	41	71	67	82	62	69	73
with international institutions	9	7	8	12	13	15	21	15	12	20	19	31	42	39	33	60
<b>France</b>																
Total articles	62	50	51	60	42	44	58	51	74	75	88	124	111	104	124	150
with multiple institutions	33	22	20	34	19	28	27	36	38	57	64	104	79	83	96	122
with domestic institutions only	46	38	38	44	31	29	44	33	49	41	50	61	59	55	69	85
with international institutions	16	12	13	16	11	15	14	18	25	34	38	63	52	49	55	65
<b>Germany</b>																
Total articles	36	61	37	49	66	71	90	72	101	89	130	191	181	197	221	213
with multiple institutions	18	30	26	26	36	44	54	41	73	62	80	129	142	156	175	162
with domestic institutions only	31	41	19	28	43	37	55	45	50	47	74	105	78	92	91	108
with international institutions	5	20	18	21	23	34	35	27	51	42	56	86	103	105	130	105
<b>Greece</b>																
Total articles	6	9	6	4	12	15	12	11	24	27	27	46	38	25	41	43
with multiple institutions	3	5	4	4	9	11	7	6	14	20	18	34	28	17	27	35
with domestic institutions only	5	6	4	1	7	9	8	8	15	12	17	32	24	16	25	22
with international institutions	1	3	2	3	5	6	4	3	9	15	10	14	14	9	16	21
<b>Hungary</b>																
Total articles	5	1	1	-	2	2	4	6	3	5	28	10	11	8	13	23
with multiple institutions	4	1	1	-	2	2	3	5	1	4	17	8	10	5	12	22
with domestic institutions only	3	-	-	-	-	2	2	2	2	2	23	3	3	5	7	12
with international institutions	2	1	1	-	2	-	2	4	1	3	5	7	8	3	6	11

Appendix table 5-52

**S&E articles in other life sciences, by coauthorship attribute and selected country/economy: 1997–2012**

Country/economy and coauthorship attribute	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Ireland</b>																
Total articles	14	19	16	22	36	27	24	32	48	66	84	98	104	96	94	116
with multiple institutions	6	7	8	12	27	17	12	15	31	32	46	52	67	62	66	85
with domestic institutions only	9	13	9	13	15	15	16	21	28	43	53	65	60	61	59	69
with international institutions	5	6	7	9	21	12	8	11	20	23	31	33	44	35	35	47
<b>Italy</b>																
Total articles	24	42	24	37	36	38	41	50	61	73	98	166	125	157	163	163
with multiple institutions	19	30	18	23	28	27	30	34	46	57	70	128	104	128	126	138
with domestic institutions only	14	25	14	24	23	28	24	29	39	36	59	99	61	94	104	99
with international institutions	10	17	10	13	13	10	17	21	22	37	39	67	64	63	59	64
<b>Netherlands</b>																
Total articles	114	120	125	133	138	120	164	156	217	230	244	298	408	378	407	432
with multiple institutions	69	74	72	88	98	86	118	117	158	180	195	232	337	324	350	377
with domestic institutions only	91	94	100	102	103	80	113	113	154	150	150	203	238	241	253	240
with international institutions	23	26	25	31	35	40	51	43	63	80	94	95	170	137	154	192
<b>Poland</b>																
Total articles	4	1	-	1	3	4	2	7	5	11	27	12	17	15	20	38
with multiple institutions	3	1	-	1	1	2	2	5	2	8	18	8	8	13	16	29
with domestic institutions only	2	-	-	-	2	4	1	6	4	6	16	7	12	6	12	20
with international institutions	2	1	-	1	1	-	1	1	1	5	11	5	5	9	8	18
<b>Portugal</b>																
Total articles	1	3	3	2	3	4	2	4	8	6	11	20	12	25	36	36
with multiple institutions	1	2	3	2	2	3	-	3	5	6	9	17	11	22	29	28
with domestic institutions only	1	1	-	-	1	1	2	2	3	2	3	11	3	12	15	23
with international institutions	-	2	3	2	2	3	-	2	5	4	8	9	9	13	21	13
<b>Spain</b>																
Total articles	30	30	37	34	44	43	48	33	51	50	75	128	99	127	150	158
with multiple institutions	20	17	18	23	28	26	32	25	37	34	56	89	71	106	127	137
with domestic institutions only	21	21	27	22	34	29	26	22	27	37	43	84	56	61	78	93
with international institutions	9	9	10	12	10	14	22	11	24	13	32	44	43	66	72	65
<b>Sweden</b>																
Total articles	102	113	127	163	197	173	207	192	225	242	325	357	372	353	337	360
with multiple institutions	64	75	80	118	143	131	152	145	162	172	250	271	299	291	289	296
with domestic institutions only	86	92	103	132	160	138	165	156	177	202	248	255	264	231	213	235
with international institutions	16	21	24	31	37	35	42	36	48	40	77	102	108	122	124	125
<b>United Kingdom</b>																
Total articles	705	741	728	783	789	697	809	718	801	866	1,069	1,199	1,192	1,069	1,220	1,328
with multiple institutions	253	300	306	364	377	397	450	402	497	500	651	778	813	747	849	935
with domestic institutions only	658	663	659	688	682	585	651	569	606	665	820	851	808	721	815	877
with international institutions	47	78	69	95	107	112	158	149	195	201	249	348	384	348	405	451

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**S&E articles in other life sciences, by coauthorship attribute and selected country/economy: 1997–2012**

Country/economy and coauthorship attribute	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Norway</b>																
Total articles	30	25	36	32	39	47	69	50	63	69	77	180	152	151	178	218
with multiple institutions	12	11	18	24	28	23	39	34	51	53	58	139	123	128	144	176
with domestic institutions only	26	19	23	23	22	38	50	37	35	44	38	106	82	80	96	120
with international institutions	4	6	13	9	17	9	19	13	28	25	39	74	70	71	82	98
<b>Russia</b>																
Total articles	2	3	-	2	1	3	10	2	3	5	6	11	4	5	5	8
with multiple institutions	1	2	-	2	1	3	7	2	2	5	5	10	4	5	4	7
with domestic institutions only	2	2	-	1	-	1	4	-	1	-	2	2	-	-	1	1
with international institutions	-	1	-	1	1	2	6	2	2	5	4	9	4	5	4	7
<b>Switzerland</b>																
Total articles	18	18	13	30	30	27	38	30	62	68	67	100	88	106	121	126
with multiple institutions	10	13	9	20	18	19	28	22	50	56	58	83	71	94	105	111
with domestic institutions only	10	10	5	13	19	12	18	12	18	24	18	38	23	29	39	31
with international institutions	8	8	8	17	11	15	20	18	44	44	49	62	65	77	82	95
<b>Iran</b>																
Total articles	1	-	-	1	-	2	-	5	2	17	28	37	45	43	47	69
with multiple institutions	-	-	-	1	-	1	-	2	1	10	21	30	36	38	43	54
with domestic institutions only	1	-	-	1	-	1	-	3	1	12	19	25	33	23	31	51
with international institutions	-	-	-	-	-	1	-	2	1	5	9	12	12	20	16	18
<b>Israel</b>																
Total articles	50	50	44	50	64	57	73	64	68	74	89	76	116	109	108	98
with multiple institutions	25	32	16	28	35	28	40	40	41	56	67	50	70	75	82	74
with domestic institutions only	43	41	39	43	55	49	60	52	58	52	64	62	93	77	77	72
with international institutions	7	9	5	7	9	8	13	12	10	22	25	14	23	32	31	26
<b>Saudi Arabia</b>																
Total articles	-	2	5	4	1	1	1	3	2	4	2	8	5	11	5	4
with multiple institutions	-	1	-	1	-	1	1	3	1	2	2	6	5	6	3	3
with domestic institutions only	-	1	5	3	1	1	-	1	1	3	-	2	1	7	3	1
with international institutions	-	1	-	1	-	-	1	2	1	1	2	6	4	4	2	3
<b>Turkey</b>																
Total articles	5	5	3	13	12	13	32	43	54	63	96	99	115	132	105	126
with multiple institutions	2	1	1	6	6	4	15	22	27	38	44	60	72	94	63	92
with domestic institutions only	4	5	2	9	11	10	27	42	50	53	93	96	105	121	97	114
with international institutions	1	-	1	4	1	3	5	1	4	10	3	3	10	11	8	12
<b>Egypt</b>																
Total articles	1	1	-	1	1	1	1	2	1	1	4	5	12	7	13	19
with multiple institutions	1	-	-	1	-	1	1	2	1	1	4	5	11	6	11	12
with domestic institutions only	1	1	-	1	1	-	-	-	1	-	1	2	5	1	6	8
with international institutions	-	-	-	-	-	1	1	2	-	1	3	3	7	6	7	11

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**S&E articles in other life sciences, by coauthorship attribute and selected country/economy: 1997–2012**

Country/economy and coauthorship attribute	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>South Africa</b>																
Total articles	9	14	10	12	14	23	27	22	41	40	55	96	81	83	70	77
with multiple institutions	5	7	2	6	5	14	17	14	28	28	34	51	60	71	47	54
with domestic institutions only	6	9	9	9	11	14	17	11	22	22	30	59	33	28	32	40
with international institutions	3	5	1	3	3	9	10	11	19	18	25	37	48	55	38	37
<b>China</b>																
Total articles	38	39	61	59	71	85	89	96	104	103	156	185	196	197	212	259
with multiple institutions	16	16	24	29	25	47	53	62	76	82	116	145	155	152	174	224
with domestic institutions only	30	29	49	46	61	68	59	60	54	60	92	88	112	113	114	130
with international institutions	8	10	12	13	10	17	30	36	50	43	64	97	84	84	98	129
<b>India</b>																
Total articles	8	6	16	13	13	14	19	26	36	33	36	51	43	39	47	66
with multiple institutions	4	3	8	6	6	6	12	11	20	20	26	39	32	29	40	54
with domestic institutions only	5	5	9	11	10	11	9	19	27	20	18	28	28	20	16	27
with international institutions	3	1	7	2	3	3	10	7	9	13	18	23	15	19	31	39
<b>Japan</b>																
Total articles	28	30	52	32	29	58	69	57	72	71	69	143	95	86	104	117
with multiple institutions	16	14	22	24	17	36	50	40	54	44	44	104	69	73	82	98
with domestic institutions only	22	22	39	22	16	44	48	37	50	55	50	111	71	54	75	74
with international institutions	6	8	13	10	13	14	21	20	22	16	19	32	24	32	29	43
<b>Singapore</b>																
Total articles	2	4	4	5	6	7	9	10	10	6	14	30	31	37	43	55
with multiple institutions	-	2	2	1	3	2	6	7	6	5	10	23	23	34	33	46
with domestic institutions only	2	3	2	5	4	7	8	5	7	4	5	10	11	5	14	18
with international institutions	-	1	2	-	2	-	1	5	3	2	9	20	20	32	29	37
<b>South Korea</b>																
Total articles	9	10	10	12	21	22	50	32	49	49	72	178	109	120	110	161
with multiple institutions	7	7	6	7	16	19	31	26	35	38	59	131	84	97	88	131
with domestic institutions only	3	4	5	5	9	11	34	15	34	26	40	123	66	74	72	107
with international institutions	6	6	5	7	12	11	16	17	15	23	32	55	43	46	38	54
<b>Taiwan</b>																
Total articles	12	12	22	30	39	57	52	67	104	97	130	199	235	251	258	269
with multiple institutions	11	10	12	21	25	38	39	51	85	79	112	171	211	236	227	247
with domestic institutions only	6	6	16	18	21	40	36	47	70	72	81	121	153	166	193	200
with international institutions	6	6	6	12	18	17	16	20	34	25	49	78	82	85	65	69
<b>Australia</b>																
Total articles	265	343	283	313	294	249	279	248	570	487	568	803	695	687	692	819
with multiple institutions	144	165	140	166	153	131	174	167	347	284	376	545	518	541	537	665
with domestic institutions only	228	299	256	272	256	212	211	188	464	386	428	605	500	467	471	544
with international institutions	37	44	27	41	38	37	68	60	106	101	140	198	195	220	221	275

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**S&E articles in other life sciences, by coauthorship attribute and selected country/economy: 1997–2012**

Country/economy and coauthorship attribute	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
New Zealand																
Total articles	36	41	27	41	50	28	32	39	68	64	77	99	114	114	121	138
with multiple institutions	14	13	15	15	21	11	18	24	40	36	42	69	86	79	86	108
with domestic institutions only	31	36	21	35	41	24	22	22	46	42	55	57	57	58	65	81
with international institutions	5	5	6	6	9	4	10	17	22	22	22	42	57	56	56	57

NOTES: Article counts are from the set of journals covered by the Science Citation Index (SCI) and Social Sciences Citation Index (SSCI). Articles are classified by the year they entered the database, rather than the year of publication, and are assigned to a country/economy on the basis of the institutional address(es) listed in the article. Articles are credited on a whole-count basis (i.e., each collaborating country/economy is credited with one count). Countries/economies with less than 1% of internationally coauthored articles in 2012 are omitted. Articles with multiple institutions are counts of articles with two or more institutional addresses. Articles with domestic institutions only are counts of articles with one or more institutional addresses all within the country/economy. Articles with international institutions are counts of articles with one or more institutional addresses outside the country/economy.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics, and The Patent Board™, special tabulations (2013) from Thomson Reuters, SCI and SSCI, [http://thomsonreuters.com/products\\_services/science/](http://thomsonreuters.com/products_services/science/).

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