Science and engineering profile: Alabama

State	U.S.	Rank	Characteristic	State	U.S.	Rank
5,040	542,940	28	Total R&D performance, 2002 (millions of dollars)	2,323	255,707	27
1,340	112,760	26	Industry R&D, 2002 (millions of dollars)	846	182,403	32
307	24,558	25	Academic R&D, 2002 (millions of dollars)	503	36,314	23
34	27	na	life sciences (percent)	69	59	na
22	21	na	engineering (percent)	16	15	na
13	13	na	physical sciences (percent)	6	8	na
			Public higher education current-fund			
329	45,171	25	expenditures, 2001 (millions of dollars)	3,508	170,024	16
			Number of SBIR awards, 1999-2002	347	19,383	16
7,159	482,211	22	Utility patents issued to state residents, 2002	398	86,971	35
4,501	294,688	23	Gross state product, 2001 (billions of dollars)	121	10,206	25
2,147	147,569	23	agriculture (percent)	2	1	na
			manufacturing, mining, construction (percent)	24	20	na
26,338	31,632	41	transportation, communication, utilities (percent)	9	8	na
			wholesale and retail trade (percent)	17	16	na
			finance, insurance, real estate (percent)	15	20	na
34,291	1,896,317	19	services (percent)	18	22	na
2,705	83,764	10	government (percent)	16	12	na
_	State 5,040 1,340 307 34 22 13 329 7,159 4,501 2,147 26,338 34,291 2,705	State U.S. 5,040 542,940 1,340 112,760 307 24,558 34 27 22 21 13 13 329 45,171 7,159 482,211 4,501 294,688 2,147 147,569 26,338 31,632 34,291 1,896,317 2,705 83,764	State U.S. Rank 5,040 542,940 28 1,340 112,760 26 307 24,558 25 34 27 na 22 21 na 13 13 na 329 45,171 25 7,159 482,211 22 4,501 294,688 23 2,147 147,569 23 26,338 31,632 41 34,291 1,896,317 19 2,705 83,764 10	State U.S. Rank Characteristic 5,040 542,940 28 Total R&D performance, 2002 (millions of dollars) 1,340 112,760 26 Industry R&D, 2002 (millions of dollars) 307 24,558 25 Academic R&D, 2002 (millions of dollars) 34 27 na life sciences (percent) 22 21 na mile sciences (percent) 13 13 na physical sciences (percent) 329 45,171 25 expenditures, 2001 (millions of dollars) Number of SBIR awards, 1999-2002 Vitilty patents issued to state residents, 2002 7,159 482,211 22 Utilty patents issued to state residents, 2002 4,501 294,688 23 Gross state product, 2001 (billions of dollars) 2,147 147,569 23 agriculture (percent) 26,338 31,632 41 transportation, communication, utilities (percent) wholesale and retail rade (percent) finance, insurance, real estate (percent) finance, insurance, real estate (percent) 34,291 1,896,317 <td< td=""><td>State U.S. Rank Characteristic State 5,040 542,940 28 Total R&D performance, 2002 (millions of dollars) 2,323 1,340 112,760 26 Industry R&D, 2002 (millions of dollars) 846 307 24,558 25 Academic R&D, 2002 (millions of dollars) 503 34 27 na life sciences (percent) 69 22 21 na na physical sciences (percent) 16 13 13 na physical sciences (percent) 6 6 2329 45,171 25 expenditures, 2001 (millions of dollars) 3,508 Number of SBIR awards, 1999-2002 347 147 147,569 23 4,501 294,688 23 Gross state product, 2001 (billions of dollars) 121 2,147 147,569 23 agriculture (percent) 24 26,338 31,632 41 transportation, communication, utilities (percent) 9 wholesale and retail trade (percent) 17 17 f</td><td>State U.S. Rank Characteristic State U.S. 5,040 542,940 28 Total R&D performance, 2002 (millions of dollars) 2,323 255,707 1,340 112,760 26 Industry R&D, 2002 (millions of dollars) 846 182,403 307 24,558 25 Academic R&D, 2002 (millions of dollars) 503 36,314 34 27 na life sciences (percent) 69 59 22 21 na engineering (percent) 16 15 13 13 na physical sciences (percent) 6 8 Public higher education current-fund expenditures, 2001 (millions of dollars) 3,508 170.024 Number of SBIR awards, 1999-2002 347 19,383 19,383 121 10,026 2,147 147,569 23 Gross state product, 2001 (billions of dollars) 121 10,206 2,6338 31,632 41 transportation, communication, utilities (percent) 9 8 wholesale and retalit tade (percent)</td></td<>	State U.S. Rank Characteristic State 5,040 542,940 28 Total R&D performance, 2002 (millions of dollars) 2,323 1,340 112,760 26 Industry R&D, 2002 (millions of dollars) 846 307 24,558 25 Academic R&D, 2002 (millions of dollars) 503 34 27 na life sciences (percent) 69 22 21 na na physical sciences (percent) 16 13 13 na physical sciences (percent) 6 6 2329 45,171 25 expenditures, 2001 (millions of dollars) 3,508 Number of SBIR awards, 1999-2002 347 147 147,569 23 4,501 294,688 23 Gross state product, 2001 (billions of dollars) 121 2,147 147,569 23 agriculture (percent) 24 26,338 31,632 41 transportation, communication, utilities (percent) 9 wholesale and retail trade (percent) 17 17 f	State U.S. Rank Characteristic State U.S. 5,040 542,940 28 Total R&D performance, 2002 (millions of dollars) 2,323 255,707 1,340 112,760 26 Industry R&D, 2002 (millions of dollars) 846 182,403 307 24,558 25 Academic R&D, 2002 (millions of dollars) 503 36,314 34 27 na life sciences (percent) 69 59 22 21 na engineering (percent) 16 15 13 13 na physical sciences (percent) 6 8 Public higher education current-fund expenditures, 2001 (millions of dollars) 3,508 170.024 Number of SBIR awards, 1999-2002 347 19,383 19,383 121 10,026 2,147 147,569 23 Gross state product, 2001 (billions of dollars) 121 10,206 2,6338 31,632 41 transportation, communication, utilities (percent) 9 8 wholesale and retalit tade (percent)

SBIR = small business innovation research.

NOTES: Rankings and totals are based on data for the 50 states, District of Columbia, and Puerto Rico. Reliability of the estimates of industry R&D and of doctoral scientists and engineers

varies by state, because the sample allocation was not based on geography. The rankings do not take into account the margin of error of estimates from sample surveys.

Data on graduate students, doctoral scientists, doctoral engineers, and postdoctorates include all graduate degree (except M.D.) candidates and recipients in S&E fields, including health fields. Data on S&E doctorates awarded do not include health fields.

Federal obligations for research and development by agency and performer: Alabama, fiscal year 2002

(Thousands of dollars)

Agency	Performer							
	Total	Federal intramural	All FFRDCs	Industrial firms	Universities and colleges	Other nonprofits	State and local government	Rank
All agencies	2,704,834	945,309	0	1,377,944	341,752	28,964	10,865	10
Department of Agriculture	24,712	9,234	0	0	15,478	0	0	29
Department of Commerce	1,691	63	0	137	1,491	0	0	39
Department of Defense	1,928,172	656,081	0	1,248,224	19,114	4,753	0	4
Department of Energy	18,496	74	0	601	17,723	98	0	24
Department of Health and Human Services	309,013	55,751	0	5,704	234,315	12,460	783	22
Department of the Interior	2,851	2,101	0	61	529	0	160	39
Department of Transportation	8,676	1,089	0	526	1,825	0	5,236	19
Environmental Protection Agency	2,701	0	0	830	1,180	516	175	26
National Aeronautics and Space Administration	393,170	220,916	0	120,607	35,999	11,137	4,511	5
National Science Foundation	15,352	0	0	1,254	14,098	0	0	41
Rank	10	5	na	5	20	30	9	na

FFRDC = federally funded research and development center.

na = not applicable.

NOTES: Federal R&D obligations are as reported by funding agencies. Ranks and totals are based on data for the 50 states, District of Columbia, and Puerto Rico.

SOURCES: Prepared by the National Science Foundation/Division of Science Resources Statistics. Data compiled from numerous sources; see the section, Data Sources for Science and Engineering (S&E) State Profiles.