

Innovative startups in 2014

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2014 saw a stronger presence of non-US companies on our list of innovative startups receiving the largest A rounds (Table 1). Although Cambridge, Massachusetts, continues to be well represented (four startups on the list), four financings went to non-US firms, up from just one in 2013. The United States continues to dominate the

global startup scene (Fig. 1), although the United Kingdom, with 14 A rounds, is resurgent (4 companies in 2012; 10 in 2013). The average size of an A round in Switzerland (~\$21 million) is greater than anywhere else in the world, including the United States (Table 2).

Table 1 Top 10 A rounds in 2014 for innovative startups (as of Dec. 15). Human Longevity (San Diego) raised \$70 million in March but was not spun out of university.

Company	Amount raised (millions); date; investors	Scientific founders	Other founders	Technology
Voyager Therapeutics (Cambridge, Massachusetts)	\$45; Feb. 12; Third Rock Ventures	Krystof Bankiewicz, University of California, San Francisco; Guangping Gao and Phillip Zamore, University of Massachusetts Medical School (UMMS); Mark Kay, Stanford University School of Medicine	Not applicable	Adeno-associated virus (AAV) gene therapies for neurological disease
Anokion (Lausanne, Switzerland)	\$37.6; May 5; Novartis Venture Funds, Novo Ventures, Versant Ventures and private investors	Jeffrey Hubbell and Melody Swartz, Ecole Polytechnique Fédérale de Lausanne (EPFL) and University of Chicago; Stephan Kontos, Oscar Buset and Kristen Lorentz, EPFL	David Lowin, intellectual property attorney and in-house counsel	Technology that piggybacks off tolerizing capacity of erythrocytes by hooking autoimmune and allergic antigens to erythrocyte glycoprotein A, creating tolerizing therapies
Piqur Therapeutics (Basel, Switzerland)	\$35.6; April 8; existing investors, new investors and Versant Ventures	Bernd Giese, Vladimir Crmiljanovic and Matthias Wymann, University of Basel	Andreas Emmenegger, Molecular Partners AG	Dual-acting small molecules that strongly inhibit phosphoinositol 3-kinase while downregulating mammalian target of rapamycin for cancer
Cidara Therapeutics (San Diego)	\$32; June 30; 5AM Ventures, Aisling Capital, Frazier Healthcare, InterWest Partners and institutional investors	H. Shaw Warren, Harvard University and Massachusetts General Hospital (MGH)	Kevin Forrest, 5AM Ventures; Kevin Judice, former CEO of Achaogen Pharmaceuticals	Antimicrobial peptide fusions to neutrophil-targeting moieties for use as antifungals
Dimension Therapeutics (Cambridge, Massachusetts)	\$30; June 23; Fidelity Biosciences and OrbiMed Advisors	James Wilson, University of Pennsylvania	Ben Auspitz, Fidelity Biosciences; Allan Fox, Foxkiser	AAV gene therapies against hemophilias and rare diseases
Synlogic (Cambridge, Massachusetts)	\$30; Oct. 7; Atlas Venture, New Enterprise Associates and the Bill and Melinda Gates Foundation	Jim Collins, Boston University; Timothy Lu, Massachusetts Institute of Technology (MIT)	Ankit Mahadevia, Atlas Venture	Bacterial treatments engineered to respond to gut environment for gastrointestinal disorders and beyond
PMV Pharmaceuticals (Redwood City, California)	\$30; Dec. 12; OrbiMed Advisors, Osage University Partners, InterWest Partners	Arnold Levine, Institute for Advanced Study and the Cancer Institute of New Jersey; Thomas Shenk, Princeton	David Mack, previously with Alta Partners	p53-MDM2 targeting small molecules from diversified libraries for treatment of cancer and infectious diseases
Inotrem (Nancy, France)	\$25.01; March 13; Edmond de Rothschild Investment Partners, Sofinnova Partners, BioMedPartners and Inserm Transfert Initiative	Sebastien Gibot and Marc Derive, University of Lorraine Medical School in Nancy	Jean-Jacques Garaud, former head of research and early development at Roche	Triggering receptor expressed on myeloid cells 1 pathway, targeting sepsis
CRISPR Therapeutics (Basel, Switzerland)	\$25; April 24; Versant Ventures	Emmanuelle Charpentier, Hannover Medical School and Umeå University; Craig Mello, UMMS; Chad Cowan, Harvard; Matthew Porteus, Stanford University School of Medicine; Daniel Anderson, MIT	Rodger Novak, formerly global head of anti-infectives R&D at Sanofi; Shaun Foy, formerly of Nomura Phase4 Ventures	CRISPR-Cas9 for genome editing
Raze Therapeutics (Cambridge, Massachusetts)	\$24; Oct. 14; Atlas Venture, MPM Capital, MS Ventures, Partners Innovation Fund, Astellas Venture and Novartis	Vamsi Mootha, MGH and Harvard Medical School; Joshua Rabinowitz, Princeton University; David Sabatini, MIT	Adam Friedman, Atlas Venture	Small molecules targeting mitochondrial one-carbon metabolism in cancer

Source: BCIQ, BioCentury Online Intelligence; company material.

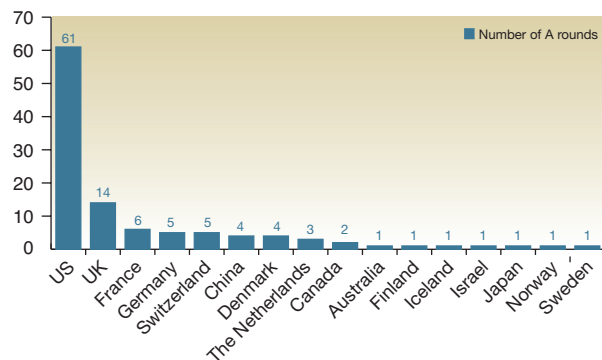


Figure 1 Number of startups by country in 2014. Source: BCIQ; BioCentury Online Intelligence.

Table 2 Total and average A round amounts by country in 2014.

Country (number of rounds)	Total amount raised (millions)	Average raised per round (millions) ^a
Switzerland (5)	\$104.1	\$20.8
United Kingdom (14) ^a	\$230.0	\$19.2
United States (61) ^a	\$961.6	\$17.5
Canada (2)	\$35.0	\$17.5
China (4) ^a	\$49.4	\$16.5
Israel (1)	\$14.0	\$14.0
France (6)	\$74.1	\$12.4
Denmark (4)	\$32.1	\$8.0
Japan (1)	\$8.0	\$8.0
Germany (5)	\$34.4	\$6.9
Sweden (1)	\$5.7	\$5.7
The Netherlands (3) ^a	\$5.2	\$5.2
Finland (1)	\$3.8	\$3.8
Iceland (1)	\$2.0	\$2.0
Australia (1)	\$0.9	\$0.9
Norway (1)	\$0.7	\$0.7

^aA rounds of nondisclosed amounts left out of average calculation. Source: BCIQ; BioCentury Online Intelligence.

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