

Academic partnerships 2016

Brady Huggett

Preclinical deals between industry and academia dipped in 2016 to 207, down from 236 the year prior, continuing the long slide since 395 deals were formed in 2012. Industry remains interested in academic research but has gotten more selective about why and how it forms deals. The school systems of California and Texas again are in this list as the

most active schools, but it is the University of Pennsylvania that made a large jump: nine deals in 2016 versus four in 2015 (Table 1). AstraZeneca and Johnson & Johnson are atop the list of most-active pharmas and big biotechs in 2016 (Fig. 1), with Johnson & Johnson moving from 3 deals in 2015 to 11 last year.

Table 1 Academic partnerships 2016

University	Partners	Terms
University of Texas (12)	MD Anderson Cancer Center (MDACC), many others from academia and industry	Tumor neoantigen selection alliance (TESLA) of 30 leading cancer neoantigen research groups to test algorithms for predicting tumor markers from DNA for personalized cancer treatments
	University of Texas Health Science Center, Purdue Pharma	Develop drugs and promote, develop and expand research and education in pain, neuroscience and other chronic diseases
	MDACC, Adaptimmune Therapeutics	Multi-year alliance on immunotherapies targeting multiple types of cancer
	MDACC, Golden Meditech	Create Houston-based startup Cellenkos to develop regulatory T-cell-based therapies; initial funding of \$10 million
	MDACC's Oncology Research for Biologics and Immunotherapy Translation (ORBIT), MorphoSys	Develop novel anti-cancer monoclonal antibodies through clinical proof of concept
	MDACC, Ionis	Create alliance on cancer therapeutics
	MDACC, Jiangsu Hengrui Medicine	Three-year agreement to develop rational combination therapies and personalized medicines, especially in immuno-oncology
	MDACC, AbbVie	Three-year collaboration on preclinical and clinical studies in immuno-oncology
	MDACC, Novocure	Use Novocure's 'in vitro' laboratory research system to study tumor-treating-fields therapy
	MDACC, Tesaro	Discover and develop small-molecule candidates against undisclosed immuno-oncology targets
	MDACC's ORBIT, Kymab	Discover and develop novel anticancer antibodies
	MDACC, X-Chem	Multi-target agreement to identify and develop cancer treatments
University of Pennsylvania (9)	Biogen	Three-to-five-year collaboration on gene therapy and gene editing technologies for the eye, skeletal muscle and CNS; up to \$2 billion in research funding, options and milestone payments, with \$20 million up-front and \$62.5 million committed to R&D
	Dimension Therapeutics	Collaboration and expansion of inherited metabolic disease portfolio
	NeuroVive Therapeutics	Collaboration to provide more data on NeuroVive's drug for traumatic brain injury, NeuroSTAT
	PennCHOP ^a Microbiome Program, Intercept Pharmaceuticals	Evaluate obeticholic acid and other candidates on the microbiome in chronic liver diseases, including nonalcoholic steatohepatitis
	Many	TESLA alliance
	Johnson & Johnson, Castleman Disease (CD) Collaborative Network	Form ACCELERATE (accelerating Castleman care with electronic longitudinal registry, e-repository and treatment effectiveness research)
	Many	National Cell Manufacturing Consortium (NCMC) to develop a national roadmap and chart the path to large-scale manufacturing of cell-based therapeutics for cancer, neuro-degenerative diseases, blood and vision disorders, and organ regeneration and repair
	Blueprint Bio, Emerald Logic	Co-found BluePen Biomarkers for biomarker research and identification
	Celgene, Abramson Cancer Center at the University of Pennsylvania, The Herbert Irving Comprehensive Cancer Center at Columbia University Medical Center, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Tisch Cancer Institute at the Icahn School of Medicine at Mount Sinai	Consortium aligning Celgene and four academic institutions on cancer; Celgene also providing \$12.5 million to each institution
University of California (UC; 8)	UC Los Angeles, UC San Francisco, UC Santa Cruz, many others	TESLA alliance
	UC San Francisco, Selvita	Focus on neurodegenerative disease, with Selvita doing the chemical synthesis, purification, structure determination and purity analysis of small molecules
	UC Berkeley, many others	NCMC
	UC San Francisco, many others	National Cancer Institute (NCI) renews the Chemical Biology Consortium, the discovery engine for the NCI Experimental Therapeutics (NExT) Program
	UC Berkeley, Aduro Biotech	Work on cancer, infectious disease and autoimmune disease via UC-Berkeley's Immunotherapeutics and Vaccine Research Initiative
	UC San Diego, Samsara/Organovo	Advance liver tissue models
	UC San Francisco, MedImmune/AstraZeneca	Focus on respiratory, inflammation and autoimmunity area with an emphasis on basic research and translational sciences
	UC San Diego, Johnson & Johnson	Collaboration to identify targets for Chagas disease

^aPennCHOP, U Penn and Children's Hospital of Philadelphia. Other universities with deals: Harvard (7), and another three deals formed by the Broad Institute of MIT and Harvard; Stanford (6); University of Chicago, University of Oxford, Baylor College of Medicine, Weill Cornell, each with four deals. Source: BCIQ: BioCentury Online Intelligence.

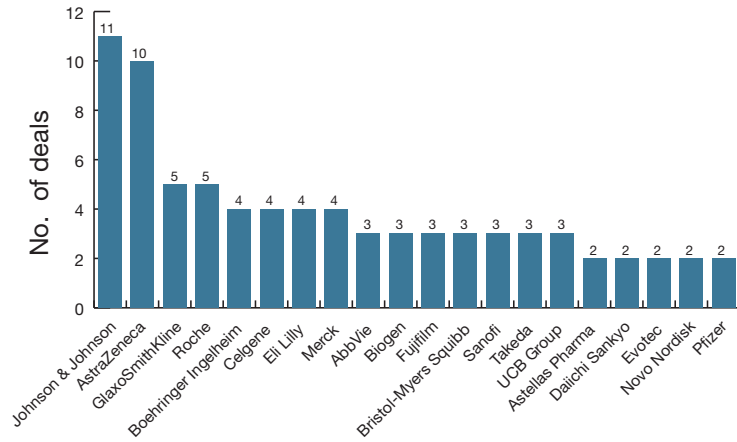


Figure 1 The most-active pharmas and big biotechs with academic or research institute partners in 2016. Source: BCIQ: BioCentury Online Intelligence.

Brady Huggett is Business Editor at Nature Biotechnology.

PODCAST

First rounders: Rachel Haurwitz

Rachel Haurwitz is co-founder, president and CEO of Caribou Biosciences. In her discussion with *Nature Biotechnology*, she explains what drew her into the sciences, how her father's journalism career brought their family to Austin, Texas, and how she found herself at the cutting edge of CRISPR technology. <http://www.nature.com/nbt/podcast/index.html>

