Top 20 translational researchers of 2015

Brady Huggett & Kathryn Paisner

Our annual ranking of faculty (Table 1) on the basis of patent grants research from IP Checkups and publications (via H index) shows many of the same faces as 2014. New entrants include investigators from the Mainz University Medical Center, Osaka University, Harvard College, California Institute of Technology, University of

Southern California, Icahn School of Medicine at Mount Sinai, the Sloan Kettering Institute and the University of Pennsylvania. Table 2 lists the most-cited patents overall for 2011–2015. In Figure 1, peptide/protein therapy has surpassed genotyping/sequencing as the category with the most-cited patents.

Table 1 Top 20 translational researchers in 2015

Inventor/first assignee	Patents granted 2015	Number and title of most-cited patent for 2011–2015 (no. of citations, as of 8/22/2016)	H index ^a
Carlo M. Croce/Ohio State University; Thomas Jefferson University	32	US 8,084,199 Method of diagnosing poor survival prognosis colon cancer using microRNA-21 (12)	200
George A. Calin/Ohio State University; Thomas Jefferson University	20	US 8,389,210 MicroRNA expression abnormalities in pancreatic endocrine and acinar tumors (4)	91
Richard D. DiMarchi/Indiana University; Istituto di Ricerche di Biologia Molecolare P. Angeletti	17	US 8,507,428 Glucagon analogs exhibiting GIP receptor activity (5)	48
Ugur Sahin and Özlem Türeci/BioNTech; Mainz University Medical Center; University of Mainz; Ganymed	17 and 16	US 8,168,427 Monoclonal antibodies against claudin-18 for treatment of cancer (6)	47 and 31
Robert S. Langer/Massachusetts Institute of Technology; Children's Medical Center Corp.; Harvard College; Brigham & Women's Hospital; Technische Universität München; National Tsing Hua University; Dynamic Biosensors	16	US 8,450,298 Amino alcohol lipidoids and uses thereof (49)	228
Haruo Sugiyama/International Institute of Cancer Immunology; Osaka University	15	EP 1,988,163B1 Hla-a*3303-restricted wt1 peptide and pharmaceutical composition comprising the same (5)	83
James M. Wilson/University of Pennsylvania	12	US 7,906,111 Adeno-associated virus (AAV) clades, sequences, vectors containing same, and uses therefor (21)	113
David R. Liu/Harvard College; Scripps Research Institute; University of California	12	US 7,998,904 Evolving new molecular function (20)	51
Peter G. Schultz/Scripps Research Institute; University of California; IRM LLC	12	US 7,951,592 Compositions and methods for inducing cell dedifferentiation (3)	115
Shinya Yamanaka/Kyoto University; National Institute of Advanced Industrial Science and Technology (Japan); Japan Biological Informatics Consortium	11	US 8,048,999 Nuclear reprogramming factor (59)	71
Karl Deisseroth/Stanford University	10	US 8,398,692 System for optical stimulation of target cells (40)	99
Thomas H. Tuschl/University of Massachusetts; Max Planck Institute; Whitehead Institute; M.I.T.; Rockefeller University	10	US 8,362,231 RNA interference mediating small RNA molecules (11)	85
Feng Zhang/Broad Institute; M.I.T.; Harvard; Stanford	10	US 8,697,359 CRISPR-Cas systems and methods for altering expression of gene products (74)	53
Michael Koslowski/University of Mainz; Ganymed Pharmaceuticals	10	US 9,216,218; US 8,975,375; US 8,961,980 Monoclonal antibodies for treatment of cancer; Identification of tumor-associated antigens for diagnosis and therapy; Monoclonal antibodies for treatment of cancer (1)	26
Axel Scherer/CalTech; University of Southern California; Boeing; APIC Corp.	9	US 7,887,753 Apparatus and methods for conducting assays and high throughput screening (19)	74
Peter Palese and Adolfo Garcia-Sastre/Icahn School of Medicine at Mount Sinai; St. Jude's; Sloan Kettering Institute	9 and 9	US 8,591,881 Chimeric Newcastle disease viruses and uses thereof (10)	96 and 101
David B. Weiner/University of Pennsylvania; Inovio Pharmaceuticals	9	US 8,183,352; US 8,178,660 Attenuated vif DNA immunization cassettes for genetic vaccines & vaccines and immunotherapeutics using codon optimized IL-15 and methods for using the same (30)	69

^aH index is supplied by researcher, pulled from Google Scholar or calculated through Thomson Reuters Web of Science; it is calculated to measure the impact of a scientist's body of published work, the higher the number the greater the impact. Seven researchers tied with eight patents granted in 2015.

Table 2 Most-cited patents, 2011–2015

Patent no. and title	Inventor/assignee(s)/applicant(s)	Publication year	Patent citations, as of 8/22/2016
US 8,112,142B2/USRE 43282E1 Assessing the condition of a joint and devising treatment	Eugene J. Alexander, Thomas P. Andriacchi, Philipp Lang, Daniel Steines/Stanford University	2012	156
US 8,298,677B2 Fluorescent silica-based nanoparticles	Ulrich Weisner, Hooisweng Ow, Daniel R. Larson and Watt W. Webb/Cornell University	2012	119
US 7,932,034B2 Heat and pH measurement for sequencing of DNA	Hesam Esfandiyarpour and Mostafa Ronaghi/Stanford University	2011	106
US 7,888,013B2 Method of analyzing DNA sequence using field-effect device, and base sequence analyzer	Yuji Miyahara, Toshiya Sakata/National Institute for Materials Science (Japan)	2011	105
US 7,888,017B2 Non-invasive fetal genetic screening by digital analysis	Stephen Quake and Hei-Mun Christina Fan/Stanford University	2011	92

Figure 1 Focus area for 50 most-cited patents, 2011–2015. Source: IP Checkups. Some patents fit more than one category; total equals more than 50.

First Rounders Podcast:

Nancy J Kelley

Nancy J Kelley is the founder and chief executive of Nancy J Kelley + Associates, a consultancy creating and developing projects and institutions for science and medicine. She also is the founding executive director of the New York Genome Center. Her conversation with *Nature Biotechnology* touches on establishing the East River Science Park, excelling at Yale as a young mother of three and why one must take risks in life. <http://www.nature.com/nbt/podcast/archive.html>

Corrected after print 11 October 2016.

Erratum: Top 20 translational researchers of 2015

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In the version of this article initially published, in Table 1, the H indexes for several authors were incorrect. Author names, correct index (incorrect index): Calin, 91 (69); DiMarchi, 48 (36); Sahin, 47 (6); Langer, 228 (225); Liu, 51 (34); Deisseroth, 99 (98); Zhang, 53 (42); Palese, 96 (49); and Garcia-Sastre, 101 (61). The errors have been corrected in the HTML and PDF versions of the article.