

# Top 20 translational researchers of 2014

Brady Huggett & Kathryn Paisner

Our ranking of biotech's top translational researchers (**Table 1**) is based on patent analytics firm IP Checkups examination of 2014's most active scientists for patenting. The table also includes each researcher's most-cited patent from the prior five years and their H index (calculated to measure the impact of a scientist's body of

published work; higher = more impact). **Table 2** lists the most-cited patents overall from the 2010–2014 period, with inventor. **Figure 1** breaks the 50 most-cited patents from 2010–2014 into area of focus, revealing, in particular, the rising interest in genotyping and sequencing technologies.

**Table 1 Top 20 researchers in 2014**

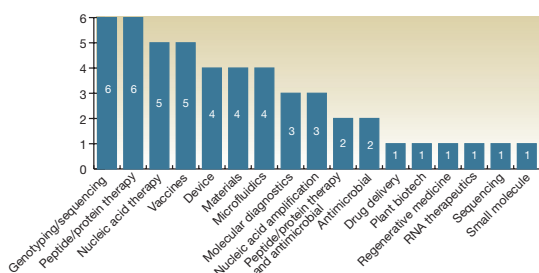
Inventor/first assignee	Patents granted 2014	Most-cited patent for 2010–2014 (no. of citations)	H index <sup>a</sup>
Carlo M. Croce/Ohio State University	29	US7670840B2: Micro-RNA expression abnormalities of pancreatic, endocrine and acinar tumors (34)	187
George Calin/Ohio State University	18	US7670840B2: Micro-RNA expression abnormalities of pancreatic, endocrine and acinar tumors (34)	83
Thomas H. Tuschl/Rockefeller University; University of Massachusetts; Whitehead Institute; Massachusetts Institute of Technology; Max-Planck-Gesellschaft	17	US7772389B2: Anti-microRNA oligonucleotide molecules (3)	85
Richard D. DiMarchi/Indiana University	15	US8454971B2: Glucagon/GLP-1 receptor co-agonists (3)	44
Peter G. Schultz/Scripps Research Institute	15	US7642085B2: Protein arrays (11)	113
Feng Zhang/Broad Institute	13	US8697359B1: CRISPR-Cas systems and methods for altering expression of gene products (14)	42
Said M. Sebti/University of South Florida	11	US8435959B2: Effective treatment of tumors and cancer with triciribine and related compounds (3)	61
Stefano Volinia/Ohio State University	11	US8148069B2: MicroRNA-based methods and compositions for the diagnosis, prognosis and treatment of solid cancers (2)	74
Stephen R. Quake/University of North Carolina, Chapel Hill	10	US7833708B2: Nucleic acid amplification using microfluidic devices (61)	65
<b>Surinder Pal Singh/CSIRO</b>	<b>10</b>	<b>US7807849B2: Synthesis of long-chain polyunsaturated fatty acids by recombinant cells (23)</b>	26
Jin Q. Cheng/University of South Florida	10	US8435959B2: Effective treatment of tumors and cancer with triciribine and related compounds (3)	60
Phillip D. Zamore/University of Massachusetts; Whitehead Institute; Massachusetts Institute of Technology; Max-Planck-Gesellschaft	10	US7691995B2: <i>In vivo</i> production of small interfering RNAs that mediate gene silencing (42)	68
Bert Vogelstein/Johns Hopkins University	10	US7824889B2: Digital amplification (19)	216
Kenneth W. Kinzler/Johns Hopkins University	10	US7824889B2: Digital amplification (19)	165
Sang Yup Lee/KAIST	10	US7670831B2: Conductive carbon nanotubes dotted with metal and method for fabricating a biosensor using the same (8)	81
David Baltimore/CalTech	10	US7737124B2: Method for expression of small antiviral RNA molecules with reduced cytotoxicity within a cell (6)	170
James M. Wilson/ University of Pennsylvania	10	US7790449B2: Adeno-associated virus (AAV) serotype 8 sequences, vectors containing the same and uses (11)	125
Robert S. Langer/Children's Medical Center Corp.; Harvard	8	US7727969B2: Controlled release nanoparticle having bound oligonucleotide for targeted delivery (27)	213
David L. Kaplan/Tufts University	8	US7842780B2: Silk fibroin materials and use thereof (33)	93
Karl Deisseroth/Stanford University	8	US8398692B2: System for optical stimulation of target cells (12)	88

<sup>a</sup>H index supplied by researcher, pulled from Google Scholar or calculated through Thomson Reuters Web of Science. CSIRO, Commonwealth Scientific and Industrial Research Organisation, Australia; KAIST, formerly Korea Advanced Institute of Science and Technology, South Korea.

**Table 2 Most-cited patents, 2010–2014**

Patent no.: title	Inventor/assignee(s)/applicant(s)	Publication year	Patent citations, end of 2014
US7785790B1: Replica amplification of nucleic acid arrays	Church, George M.; Mitra, Robi D./Harvard University	2010	96
US8112142B2/USRE43282E1 <sup>a</sup> : Assessing the condition of a joint and devising treatment	Alexander, Eugene J.; Andriacchi, Thomas P.; Lang, Philipp; Steines, Daniel/Stanford University	2012	95
US7932034B2: Heat and pH measurement for sequencing of DNA	Esfandyarpour, Hesaam; Ronaghi, Mostafa/Stanford University	2011	86
US7888013B2: Method of analyzing DNA sequence using field-effect device, and base sequence analyzer	Miyahara, Yuji; Sakata, Toshiya/National Institute for Materials Science (Japan)	2011	85
US7833708B2: Nucleic acid amplification using microfluidic devices	Enzelberger, Markus M.; Hansen, Carl L.; Liu, Jian; Quake, Stephen R.; Ma, Chiem/California Institute of Technology	2010	61

<sup>a</sup>Patent reexamination.



**Figure 1** Focus area for 50 most-cited patents, 2010–2014.

## First Rounders Podcast: Stanley Crooke

Stan Crooke is the founder, chairman and CEO of Isis Pharmaceuticals. *Nature Biotechnology* spoke with Crooke about his troubled youth, the crests and valleys of antisense, and the skills needed to be a good leader.



<http://www.nature.com/nbt/podcast/index.html>

*Brady Huggett is business editor at Nature Biotechnology. Kathryn Paisner is director of research and analytics at IP Checkups, Berkeley, California, USA. e-mail: [kpaisner@ipcheckups.com](mailto:kpaisner@ipcheckups.com)*

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