

Lemelson-MIT Prize 2014

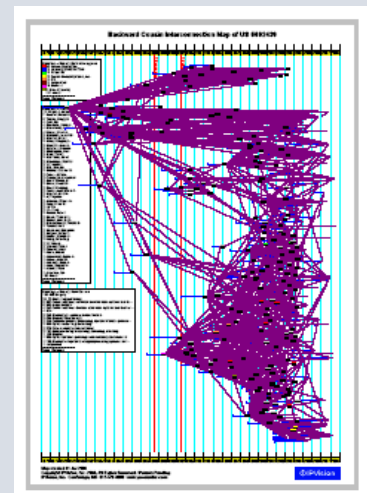
Patent Portfolio of Sangeeta Bhatia - 2014

Lemelson MIT Prize Winner

For: Lemelson-MIT Program

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IPVision
Patent Interconnection Map

Patent Portfolio of Sangeeta Bhatia - 2014 Lemelson MIT Prize Winner

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Important Note About Data. The analyses presented in this Report were based on data as of May 8, 2014 – i.e., the patents listed for a given company represent patents owned of record as shown at the U.S. Patent and Trademark Office databases as of that date. Patents issued to, acquired by or disposed of by such a company after May 8, 2014 will not appear in the list of patents shown in this Report or on IPVision See-The-Forest.com™. However, patents that issue after May 8, 2014 that cite a patent shown in an analysis in this Report will appear in any citation analysis run after May 8, 2014 on the information stored on IPVision See-The-Forest.com™. In such as case there will be an inconsistency between the results presented in this Report (which is a snapshot in time) and the results shown on IPVision See-The-Forest.com™.

Patent Portfolio of Sangeeta Bhatia - 2014 Lemelson MIT Prize Winner

1. SANGEETA N. BHATIA

[Dr. Sangeeta N. Bhatia](#) is a Howard Hughes Medical Institute Investigator and the John J. and Dorothy Wilson Professor of Health Sciences and Technology (HST), Electrical Engineering and Computer Science (EECS) and Institute for Medical Engineering and Science (IMES) at the Massachusetts Institute of Technology. She is a member of the Koch Institute for Integrative Cancer Research and the Harvard Stem Cell Institute, a Senior Associate member of the Broad Institute, and a Biomedical Engineer at the Brigham & Women's Hospital. The research in her laboratory is focused on the applications of micro- and nanotechnology for tissue repair and regeneration. She holds the following degrees: Ph.D. Biomedical Engineering, MIT; M.D., Harvard Medical School; M.S. Mechanical Engineering, MIT; B.S., Biomedical Engineering, Brown University.

Dr. Bhatia has 11 issued U.S. patents and 27 published pending U.S. patent applications as of the date of this report (the "Bhatia Patent Properties"). The 11 issued Bhatia Patents are:

U.S. Patents of Sangeeta Bhatia				
Patent #	Inventors	Title	Citations By (BCs)	Citations To (FCs)
8617815	Khetani, Salman R.;Bhatia, Sangeeta N.	Molecules with effects on cellular development and function	1	0
8377147	Sailor, Michael J.;Park, Ji-Ho;Derfus, Austin;Segal, Ester;Vecchio, Kenneth S.;Bhatia, Sangeeta N.	Control of materials and porous magnetic particles	13	0
7903239	Sailor, Michael J.;Schwartz, Michael P.;Alvarez, Sara;Bhatia, Sangeeta;Derfus, Austin;Migliori, Benjamin;Chao, Lin;Li, Yang Yang;Campbell, Rebecca;Dorvee, Jason;Rang, Ulla Camilla	Porous photonic crystal with light scattering domains and methods of synthesis and use thereof	32	0
7510637	Barlow, Carolee;Bhatia, Sangeeta N.;Ozkan, Mihrimah;Esener, Sadik C.	Microelectronic arrays for cell-based functional genomics/high throughput phenotyping by electrokinetic assembly	6	1
7433811	Gao, Jun;Sailor, Michael J.;Bhatia, Sangeeta;Flaim, Christopher	Direct patterning of silicon by photoelectrochemical etching	7	1
7312046	Chin, Vicki I.;Bhatia, Sangeeta N.;Sailor, Michael J.;Collins, Boyce E.	Method of screening compounds using a nanoporous silicon support containing macrowells for cells	6	7
6734000	Chin, Vicki I.;Bhatia, Sangeeta N.;Sailor, Michael J.;Collins, Boyce E.	Nanoporous silicon support containing macropores for use as a bioreactor	5	18

Patent Portfolio of Sangeeta Bhatia - 2014 Lemelson MIT Prize Winner

U.S. Patents of Sangeeta Bhatia				
Patent #	Inventors	Title	Citations By (BCs)	Citations To (FCs)
6605453	Ozkan, Mihrimah; Esener, Sadik; Bhatia, Sangeeta	Electric-field-assisted fluidic assembly of inorganic and organic materials, molecules and like small things including living cells	7	40
6221663	Bhatia, Sangeeta; Yarmush, Martin; Toner, Mehmet	Co-cultivation of cells in a micropatterned configuration	7	5
6133030	Bhatia, Sangeeta; Yarmush, Martin; Toner, Mehmet	Co-cultivation of cells in a micropatterned configuration	7	14
5741228	Lambrecht, Gregory H.; Makower, Joshua; Bhatia, Sangeeta N.; McDonald, David; Khera, Ashish; Flaherty, J. Christopher; Plyley, Alan K.; Redmond, Russell J.; Vidal, Claude A.	Implantable access device	17	140

View Bhatia Patents on IPVision See-The-Forest.com™ ► [Link to List](#)

View Full List of Patent Properties on IPVision See-The-Forest.com™ ► [Link to List](#)

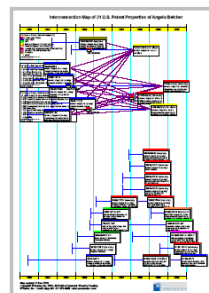
1.1 BHATIA PATENT PORTFOLIO MAP

An IPVision Patent Portfolio Interconnection Map shows all of the U.S. patents and published U.S. patent applications that comprise the patent portfolio of the Nominee. These are displayed as “patent boxes” arrayed in time from left (earliest) to right (more recent). A line connecting a later patent box to an earlier patent box shows that the later patent cited the earlier patent as “prior patent art”. See, [Appendix A – Reading IPVision Maps](#).

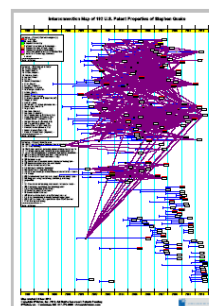
Note: A portfolio with a high degree of self citation is likely to have more commercial potential than a portfolio of individual inventions “scattered about”.

Two examples of patent portfolios are shown to the right. The top portfolio is of Angela Belcher (44 patent properties), the 2013 Lemelson-MIT Prize Winner. The bottom portfolio is that of Stephen Quake (192 patent properties), the 2012 Lemelson-MIT Prize Winner. Not only does Dr. Quake have more patents, they are also more “clustered” than those of Dr. Belcher. Note: in both cases we have included published U.S. patents applications that have issued as U.S. patents.

Dr. Quake’s portfolio is more clustered primarily because of the patents issued to Fluidigm, a leading microfluidics company founded by Dr. Quake.



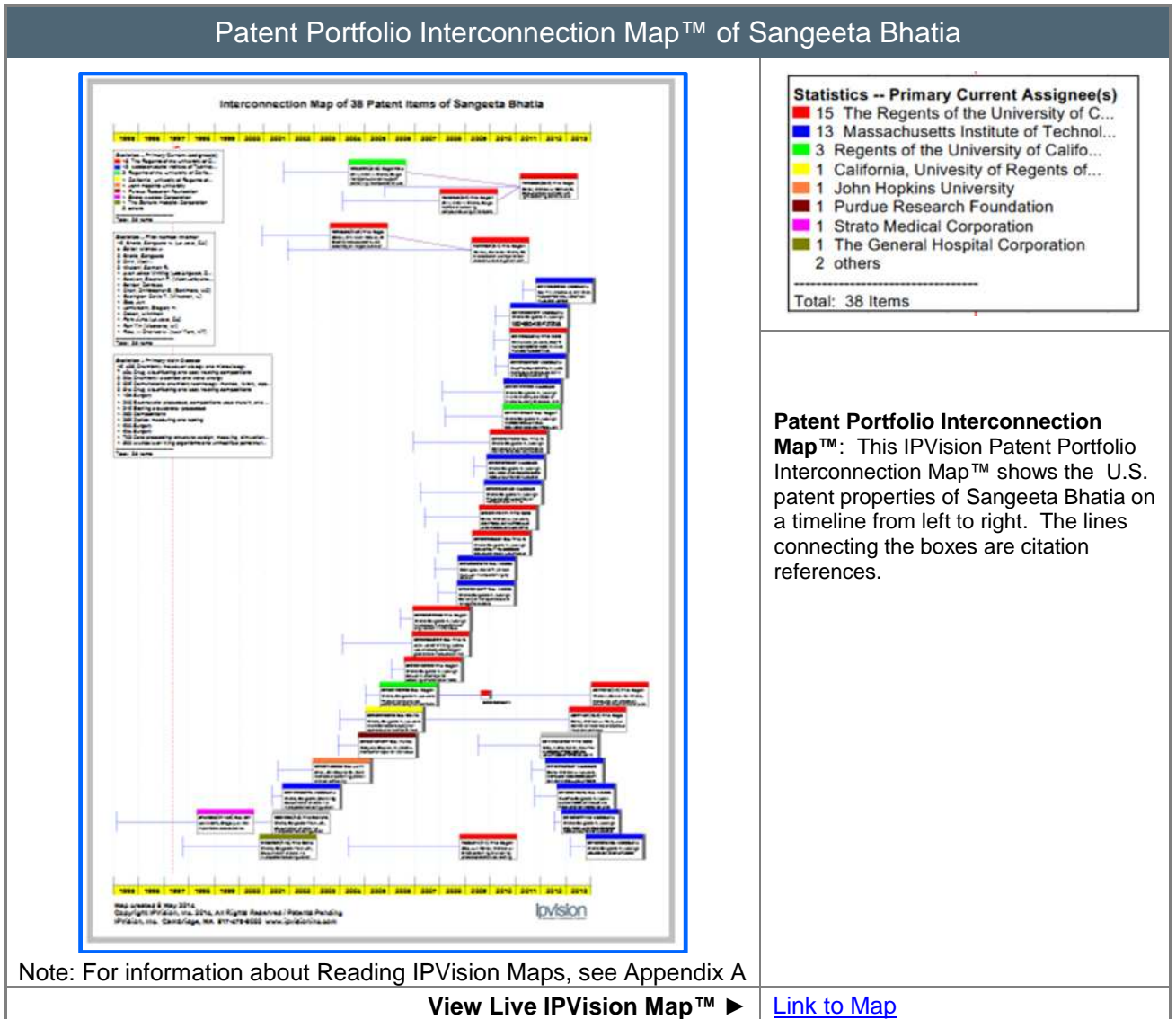
Angela Belcher – 2013 Winner



Stephen Quake – 2012 Winner

Patent Portfolio of Sangeeta Bhatia - 2014 Lemelson MIT Prize Winner

The following is an IPVision Patent Portfolio Interconnection Map™ showing the patent citation relationships among the Bhatia Patent Properties:

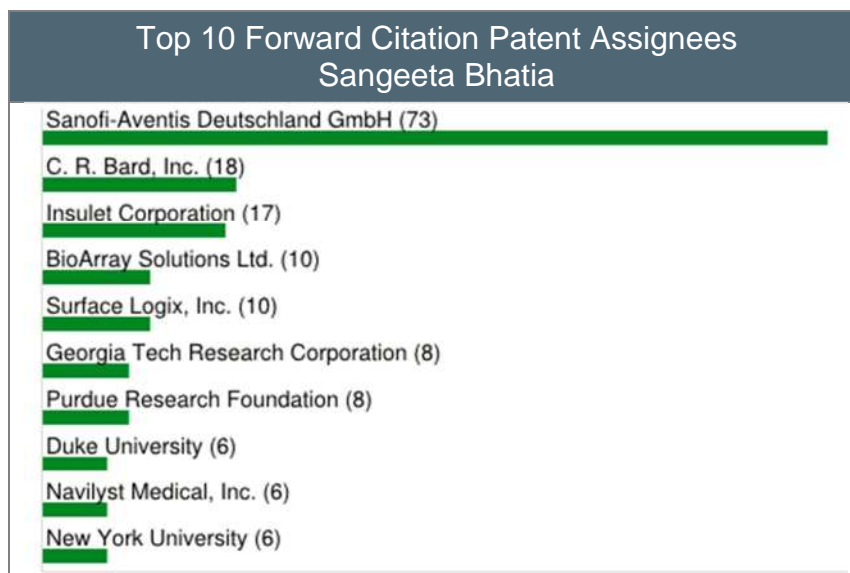


1.2 PATENTS CITING THE BHATIA PATENTS

The Bhatia Patent Properties are cited by 243 other U.S. patents as prior patent art (“Forward Citation Patents”).

View “List of Forward Citation Patents” on IPVision See-The-Forest.com™ ▶ [Link to List](#)

According to the U.S. Patent and Trademark Office records, the Top 10 Current Assignee/Owners of the Forward Citation Patents are:

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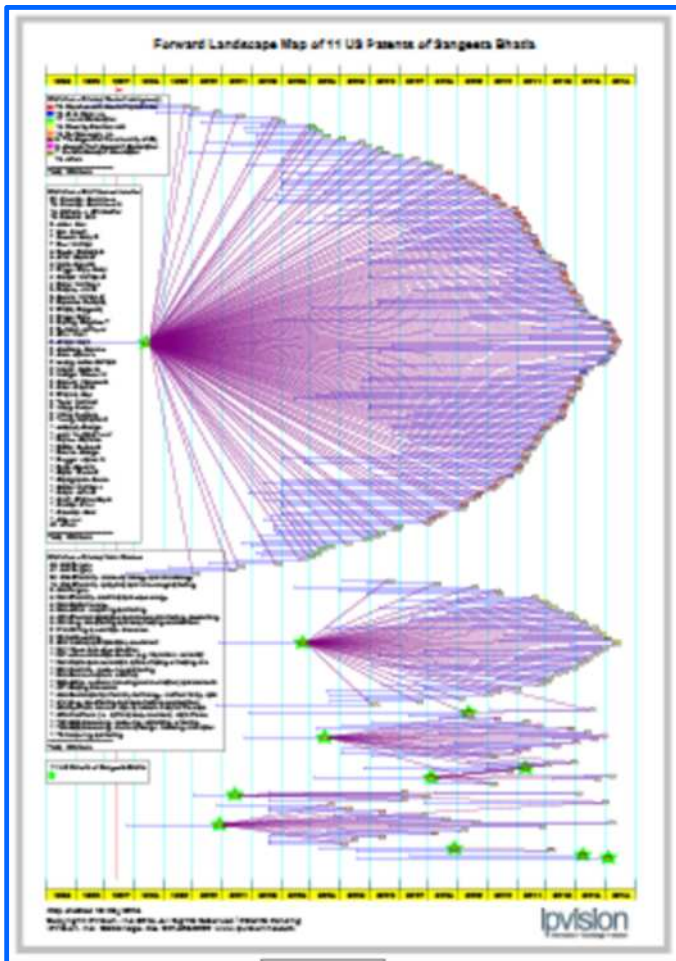
View "Forward Citation Assignee Analysis™" on [See-The-Forest.com™](#) ► [Link to Analysis](#)

1.3 BHATIA PATENT LANDSCAPE MAP

The following is an IPVision Forward Patent Citation Landscape Map™ showing the Bhatia Patents and the Forward Citation Patents (FCs) that cite the Bhatia Patents.

Patent Portfolio of Sangeeta Bhatia - 2014 Lemelson MIT Prize Winner

Forward Patent Citation Landscape Map™ of Bhatia Patents



Statistics -- Primary Current Assignee(s)

- 73 Sanofi-Aventis Deutschland GmbH
- 18 C. R. Bard, Inc.
- 17 Insulet Corporation
- 10 BioArray Solutions Ltd.
- 10 Surface Logix, Inc.
- 9 The Regents of the University of Ca...
- 8 Georgia Tech Research Corporation
- 7 Purdue Research Foundation
- 76 others

Total: 228 Items

Patent Citation Landscape Map™:
 This IPVision Forward Patent Citation Landscape Map™ shows the Bhatia Patents on a timeline from left to right. The Bhatia Patents are shaded in yellow and are marked with a lime green star. To the right of each Bhatia patent are the Forward Citation Patents – i.e., patents that cite the Bhatia Patents as prior patent art.

The patents to the left of the vertical red dotted lines have expired due to the passage of time.

NOTE: The large “forward fan” of citations at the top of the map, showing the high number of citations to the Bhatia 5,741,228 patent “Implantable access device”.

Note: For information about Reading IPVision Maps, see Appendix A

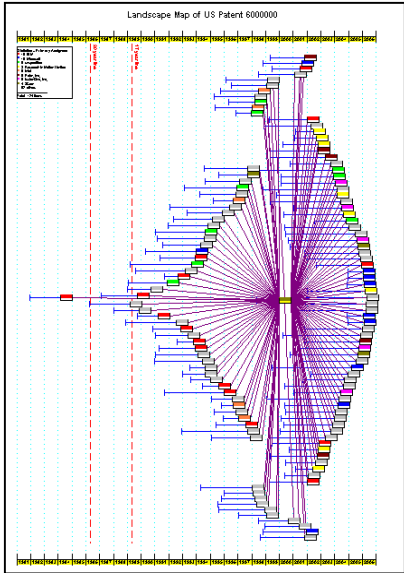
[View Live IPVision Map™ ▶](#)

[Link to Map](#)

APPENDICES AND EXHIBITS

APPENDIX A – HOW TO READ AN IPVISION MAP

An IPVision Map is a visual representation of the relationships between objects. The following is an example of a Landscape Map for a single U.S. Patent:



This Landscape Map is of U.S. Patent 6,000,000 entitled "Extendible method and apparatus for synchronizing multiple files on two different computer systems". It is the basic patent for the Palm Pilot software.

The horizontal X axis is "time"

Patent 6000000 is in the middle of the "fan". The lines going backward (to the left) are the patents cited by Patent 6000000 and the lines going forward (to the right) show the patents which cite Patent 6000000.

The details of an IPVision Map are explained in more detail below. See also a [Guide To Reading IPVision Patent Maps](#).

