

Anticipating Disruption: A Data- Driven Approach

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Chris Townsend
CMO



Wellspring

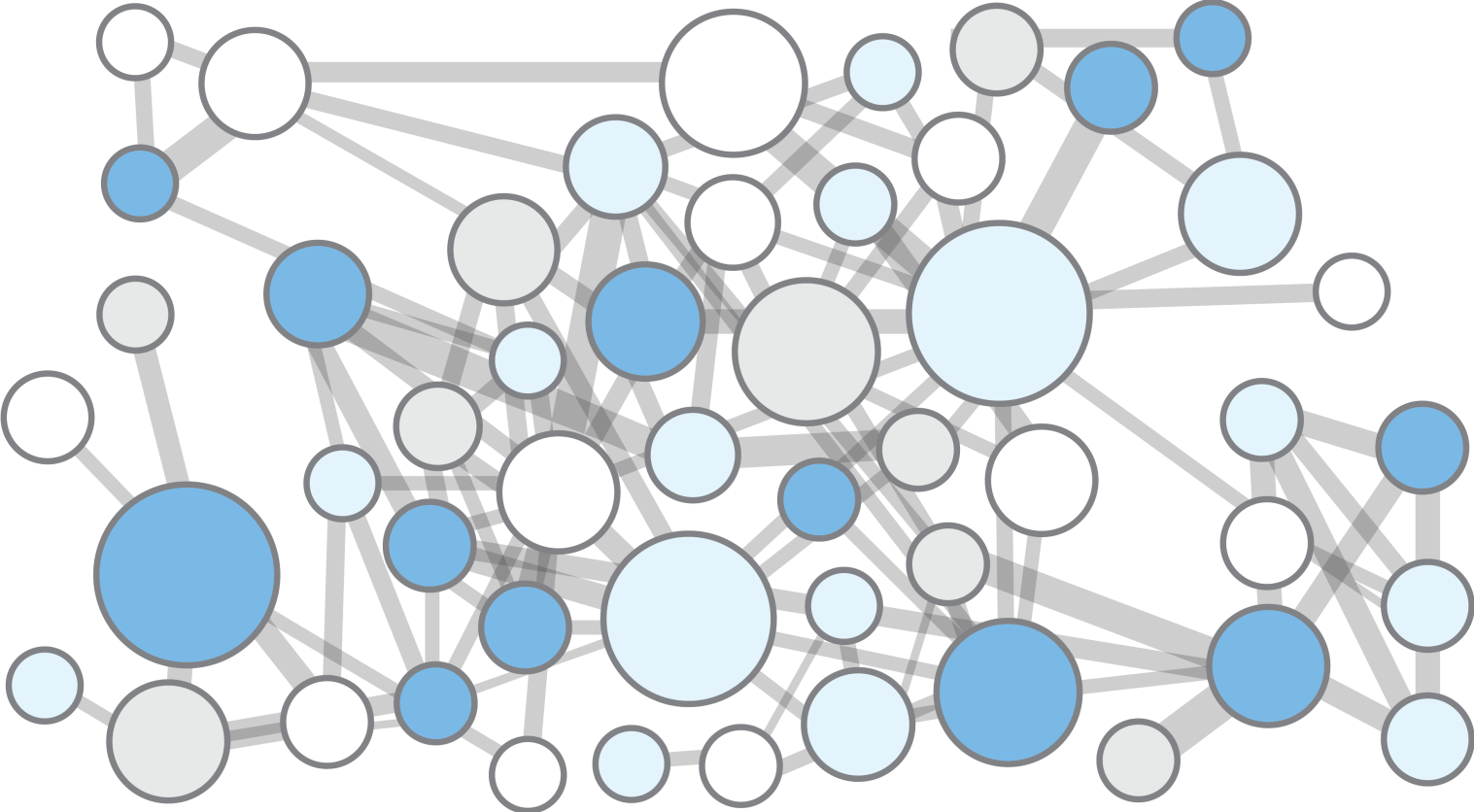
Knowledge In Sight™

About Wellspring

INNOVATION OPS for the modern enterprise

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The new innovation game is global, distributed, and accelerating. Every half hour, **720 patents** are filed, **150 research articles** are filed, and **70 new startups** are founded.

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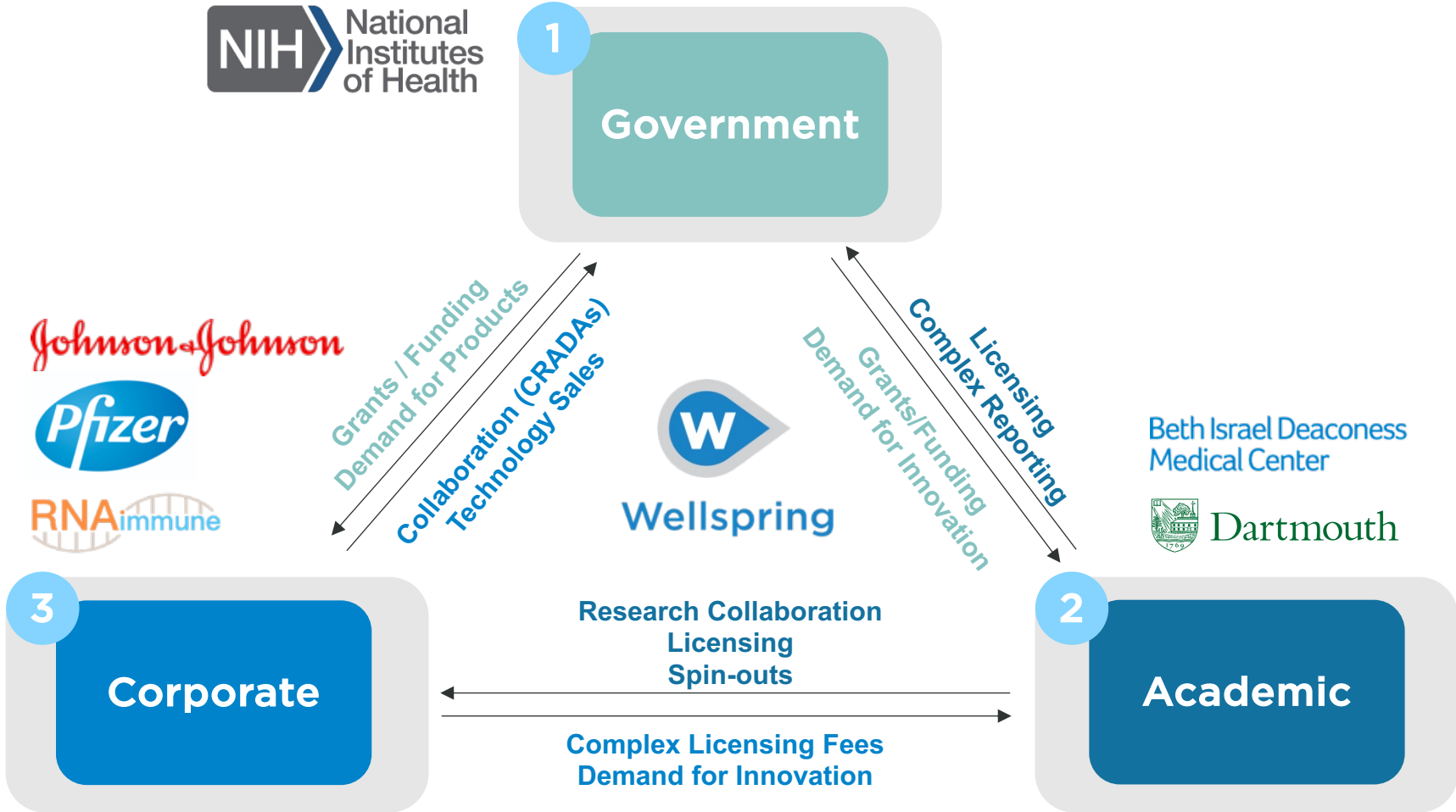
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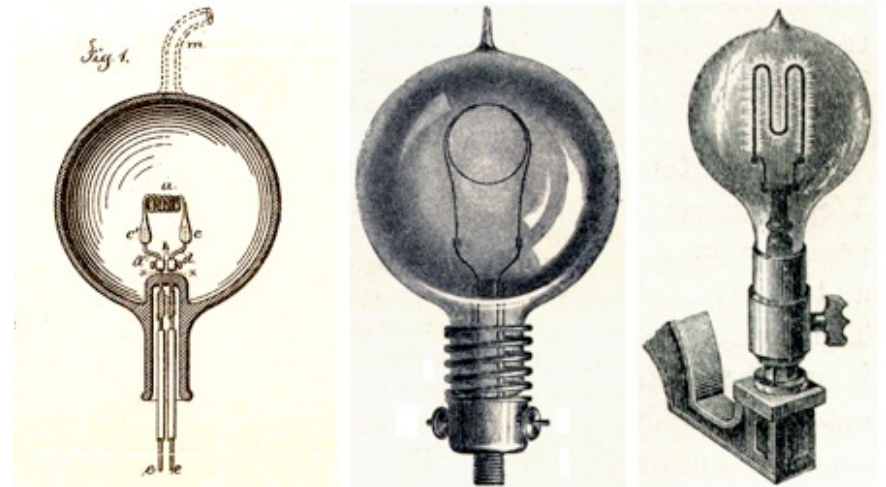
We Help the World Innovate

Anticipating Disruption: A Data-Driven Approach

Simultaneous discovery: innovations come in waves

“The procession of technological discoveries is inevitable. When the conditions are right — when the necessary web of supporting technology needed for every invention is established — then the next adjacent technological step will emerge as if on cue.”

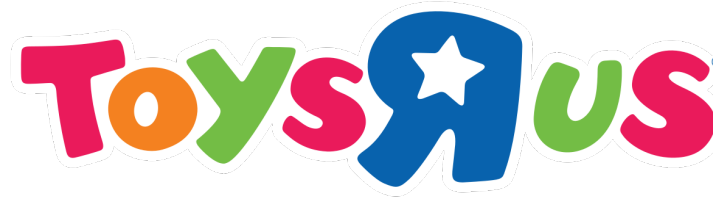
- Bell and Gray file competing telephone patents on the same day in 1876.
- HP (in US) and Canon (in Japan) file independent patents for the inkjet printer in 1977.
- **23 independent inventors of light bulbs (before Edison).**
- 6 different inventors of the thermometer.
- 5 independent discoveries of vaccination.
- 6 different inventors of electric trains.
- ...and much (much) more



Source: Kevin Kelly, [The Progression of the Inevitable](#), August 6, 2009

If it were easy...

Even when the **broad strokes** are clear, it's hard to anticipate the **specific point of attack**.



palm



Aol.



Woolworth



Anticipating disruption – keys to success

Technologies

How do we identify tomorrow's value-creation platforms, ahead of the curve?

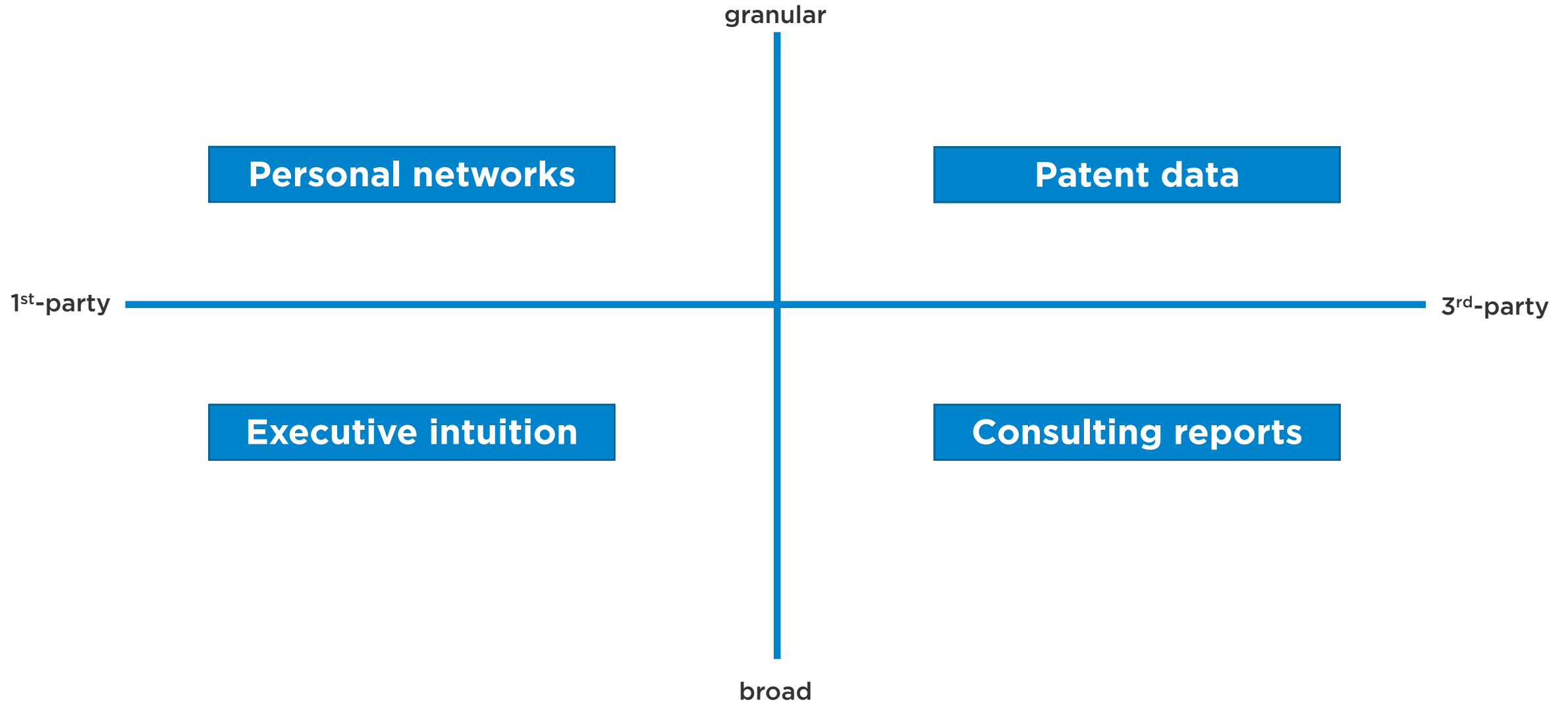
Capabilities

How do we find the best levers to translate emerging technologies into core advantage?

Timing

How can we tell when is the right time to invest? In what sequence? And how fast?

Traditional methods – still good enough?

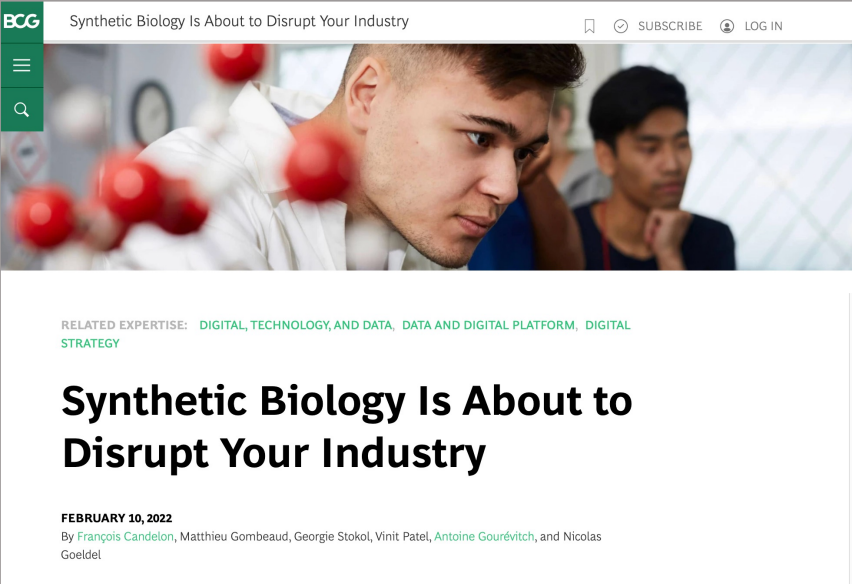


Critical questions to ask

- Which technology spaces should we be watching?
- When will a given technology space reach maturity?
- Which technology approach will prove foundational?
- Who among the emerging players will dominate?
- What can we learn from the investor ecosystem?

Which technology spaces should we be watching?

Personal Insights



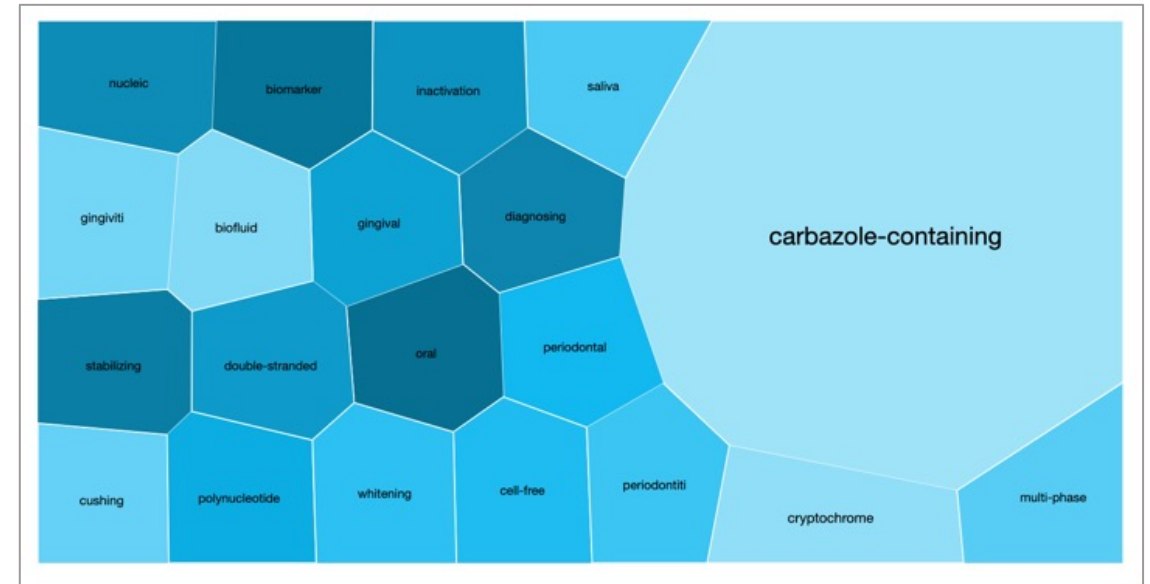
BCG Synthetic Biology Is About to Disrupt Your Industry

RELATED EXPERTISE: DIGITAL, TECHNOLOGY, AND DATA, DATA AND DIGITAL PLATFORM, DIGITAL STRATEGY

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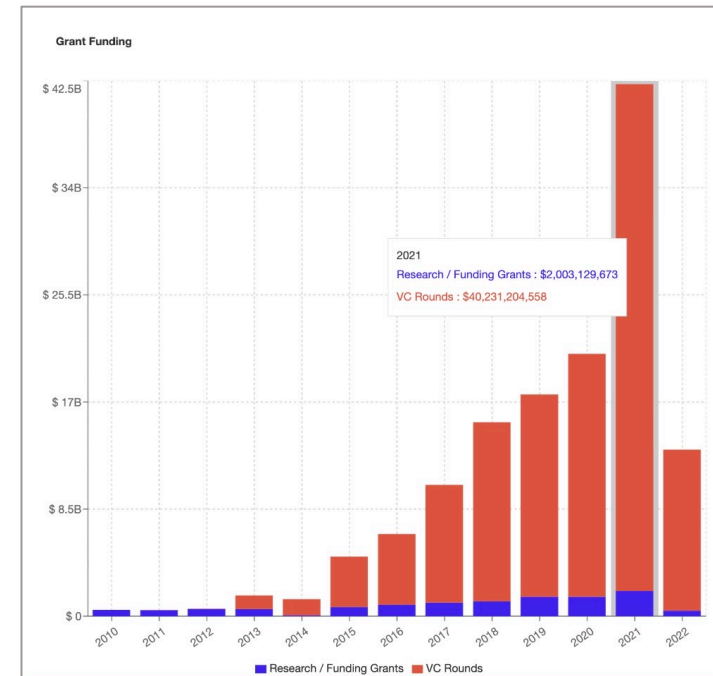
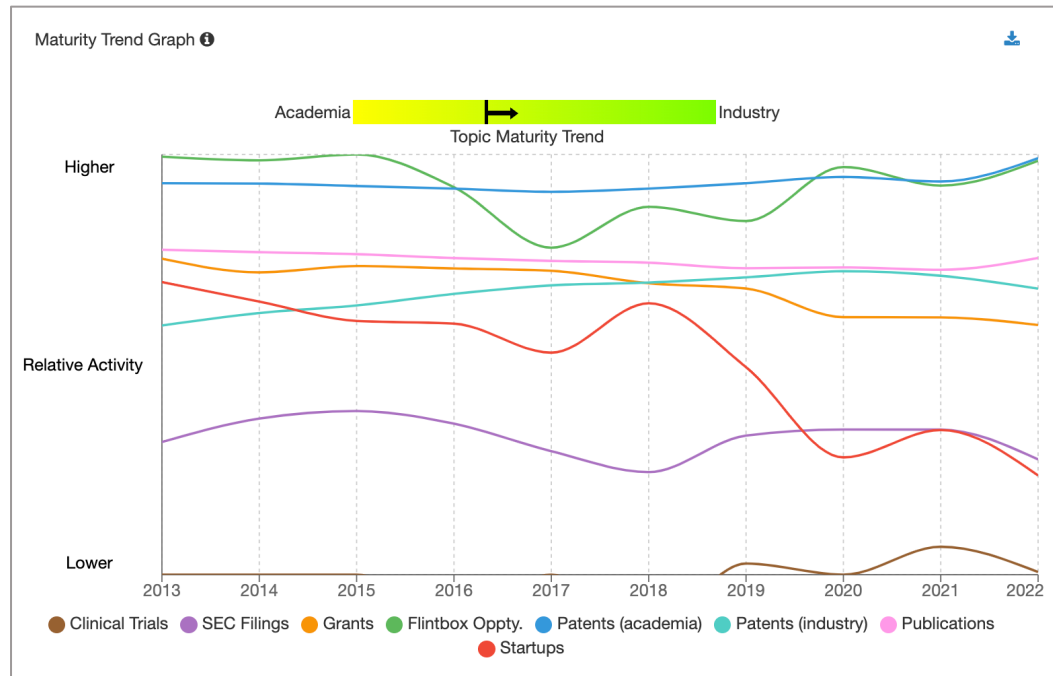
FEBRUARY 10, 2022
By François Candelon, Matthieu Gombeaud, Georgie Stokol, Vinit Patel, Antoine Gourévitch, and Nicolas Goeldel

Analytics Insights



Source: François Candelon et al, [Synthetic Biology is About to Disrupt Your Industry](#), February 10, 2022

When will a given technology space reach maturity?




Which technology approach will prove foundational?

Citation analysis



World Patent Information
Volume 19, Issue 4, December 1997, Pages 269-272



Patent citation analysis: A policy analysis tool

M.M.S. Karki

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[https://doi.org/10.1016/S0172-2190\(97\)00033-1](https://doi.org/10.1016/S0172-2190(97)00033-1) [Get rights and content](#)

Abstract

Patent citation analysis is a recent development which uses bibliometric techniques to analyse the wealth of patent citation information. This paper describes the various facets of patent citations and patent citation studies, and their important applications. Construction of technology indicators being an important use of patent citations, various patent citation based technological indicators and their applications are also described.

Basic score





Enzyme combinations for destroying proliferative cells

★ Star Tag Share Queue

Publication Number	Assignees	Filing Status	Application Number	Filing Date	Publication Date
US 6518062	Aventis Pharma S.A.	Issued Patent	09/125576	Sep. 10, 1998	Feb. 11, 2003

US PAIR Status
Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362 Mar. 14, 2007

Inventors Francis Blanche, Batrice Cameron, Michel Couder, Jol Crouzet

Organizations  Sanofi-Aventis  Rhône-Poulenc Rorer


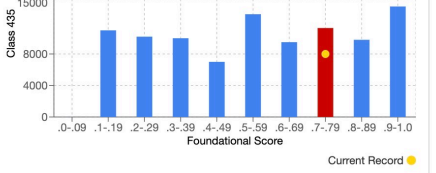
Also Published As
AU732432B2, BR9708194A, CA2248629A1, CZ291398A3, EP00910654A1, FR2746016B1, HU9902320A2, IL126154D0, JP2000507814A, KR20000064581A and 4 more

Links
[USPTO](#), [Assignment History](#), [Google Patents](#)

Abstract
Enzyme combinations useful for destroying cells, particularly proliferative cells, are disclosed. In particular, a combination of the following enzymes has been found to enhance the toxicity of nucleoside analogues to proliferating cells: an enzyme that phosphorylates the non-toxic nucleoside analogue to generate a monophosphate analogue, an enzyme that phosphorylates the monophosphate analogue to generate a diphosphate analogue, and an enzyme that phosphorylates the diphosphate analogue to generate a toxic triphosphate analogue. Vectors enabling the intracellular expression and transfer of the enzyme combinations, as well as their therapeutic use, particularly in anti-cancer gene therapy, are also disclosed.

Claims
1. A composition of three nucleic acid vectors, comprising: (a) a first vector that comprises a nucleic acid that encodes a first enzyme that phosphorylates a nucleoside analogue to generate a monophosphate analog, wherein said nucleic acid is under the control of a transcriptional promoter; (b) a second vector that comprises a nucleic acid that encodes a second enzyme that phosphorylates the monophosphate analogue to generate a diphosphate analogue, wherein said nucleic acid is under the control of a transcriptional promoter; and (c) a third vector that comprises a nucleic acid that encodes third enzyme that phosphorylates the diphosphate analogue to generate a toxic triphosphate analogue, wherein said nucleic acid is under the control of a transcriptional promoter.
2. the composition according to claim 1, wherein said first enzyme is thymidine kinase.
3. The composition according to claim 1, wherein said second enzyme is a guanylate kinase.

Citations
Patent References: 4
Non-Patent References: 11
Scientific References: 73.3%
Backward Self References: 0
Forward Self References: 0
[Explore Citations](#)

Basic Score 


Foundational Score	Basic Score
0-09	~1000
1-19	~1200
2-29	~1100
3-39	~1000
4-49	~800
5-59	~1300
6-69	~1100
7-79	~1400 (Current Record)
8-89	~1100
9-10	~1500

U.S.
435/320100, 424/093200, 424/093600, 435/069100, 435/069700, 435/194000, 435/325000, 435/455000, 514/04400R, 536/023200, 536/023400, 536/023500

International
A61K 31/00, A61K 35/76, A61K 38/45, A61K 38/46, A61K 48/00, C12N 15/09, A61P 9/00, A61P 35/00, C07K 19/00, C12N 9/12, C12N 15/00, C12N 15/55, C12R 1/85, C12R 1/92

Who among the emerging players will dominate?

Trade Shows



Emergent Organizations

Emergent Organization Ranking ⓘ ⬇

ⓘ Organization	Focus	Activity	Impact	Total Funding ⓘ	Rank ⬆
⬇ Pronutria Biosciences, Inc.	85.2%	23	0.768		1
⬇ SNIPR Technologies	75.9%	44	1.06		2
⬇ Synlogic	28.8%	34	0.394		3
⬇ Advanced Elemental Technologies	41.2%	14	5.44		4
⬇ Intelligent Synthetic Biology Center	41.3%	26	0.0502		5
⬇ Synlogic Operating	26.7%	36	0.313		6
⬇ Pronutria	26.9%	21	0.734		7
⬇ Bio Architecture Lab	24.4%	11	1.40		8
⬇ Evolva	10.7%	75	0.417		9
⬇ Autonomous Medical Devices	13.9%	5	0.166	\$141,495,154	10
⬇ Manus Bio, Inc.	20.0%	7	0.203		11

What can we learn from the investor ecosystem?

Investments					crunchbase
Date	Organization	Round	Amount	Other Investors	
May. 20, 2022	Belong	Series C	\$50,000,000	Battery Ventures, Fifth Wall, GGV Capital, Lastseen Ventures	
May. 19, 2022	Azra Games	Seed	\$15,000,000	Coinbase Ventures, Franklin Resources, Gabby Dizon, Joachim Lecrivain, Justin Kan, NFX, Play Ventures, Roham Gharegozlou	
May. 18, 2022	SpotOn	Series F	\$300,000,000	DST Global, Dragoneer Investment Group, Franklin Resources, G Squared, Lastseen Ventures, Mubadala	
May. 18, 2022	Keep Financial	Seed	\$9,000,000	Cambrian Ventures, Launchpad Capital, Thomvest Ventures, Worklife Ventures	
May. 17, 2022	Imply	Series D	\$100,000,000	Bessemer Venture Partners, Khosia Ventures, Lastseen Ventures, OMERS Growth Equity, Thoma Bravo	
May. 16, 2022	Metatheory	Series A	\$24,000,000	8point8 Capital, Breyer Capital, Dragonfly Capital Partners, FTX Ventures, Global Coin Research, Merit Circle, Pantera Capital, Recharge Thematic Ventures, Sfermion	
May. 16, 2022	Locale	Seed	\$14,000,000		
May. 13, 2022	StartPlaying	Seed	\$6,500,000		
May. 12, 2022	TipTop	Series A	\$23,000,000	Andy Mcloughlin, Cyan Banister, Dan Romero, Gokul Rajaram, Jeff Clavier, Jude Gomila, Nabeel Hyatt, Naval Ravikant, Sam Altman, Scott Banister, Sean Plaipe, Vivek Patel	
May. 11, 2022	Material Security	Series C	\$100,000,000	Elad Gill, Founders Fund, Jaws Ventures, La Famiglia	
May. 11, 2022	Deel	Series Unknown	\$50,000,000	Emerson Collective, Lastseen Ventures, Spark Capital, Y Combinator	
May. 11, 2022	Turquoise Health	Series A	\$20,000,000	Bessemer Venture Partners, BoxGroup, Tiger Global Management	
May. 11, 2022	Fanhouse	Series A	\$20,000,000		
May. 10, 2022	Talos	Series B	\$105,000,000	BNY Mellon, CVC Capital Partners, Castle Island Ventures, Citi, DRW, Fidelity Investments Ireland, Fin Capital, General Atlantic, Graticule Asset Management Asia, Illuminate Financial, Initialized Capital, Joachim Lecrivain, LeadBlock Partners, Matrix Capital Management, Notation Capital, PayPal Ventures, SCB 10X, Stripes, Voyager, Wells Fargo	
May. 10, 2022	Co-Create	Seed	\$25,000,000	Amy Wu, Autograph, Fractional, Not Boring Capital, RTFKT, VaynerFund	
May. 9, 2022	Irreverent Labs	Series A	\$40,000,000	Advancit Capital, Capitoria, Infinity Ventures Crypto, Keen Crypto, MANTIS Venture Capital, Michael Ovitz, Solana Ventures, Sonam Kapoor Ahuja, Unlock Venture Partners	
May. 5, 2022	Logseq	Seed	\$4,100,000	Charlie Cheever, Craft Ventures, Dave Winer, Day One Ventures, FJ Labs, Matrix Partners China, Nat Friedman, Naval Ravikant, Patrick Collison, Tobias Lutke, Union Square Ventures, Youbi Capital	
May. 5, 2022	LootRush	Seed	\$12,000,000	Paradigm, Y Combinator	



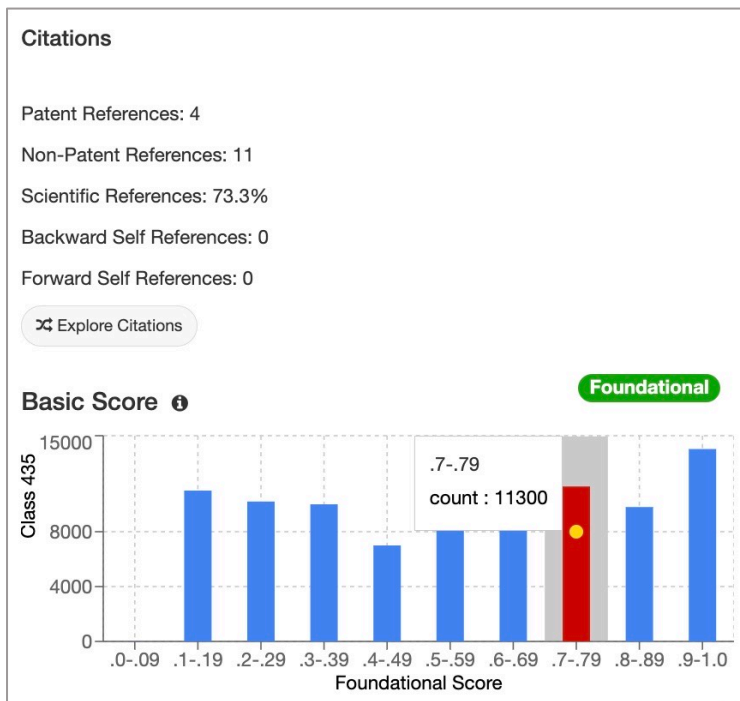
Software is part of an integrated practice

- Anticipating disruption...
 - Is a continuous process.
 - Flows from corporate strategy.
 - Informs innovation decisions.

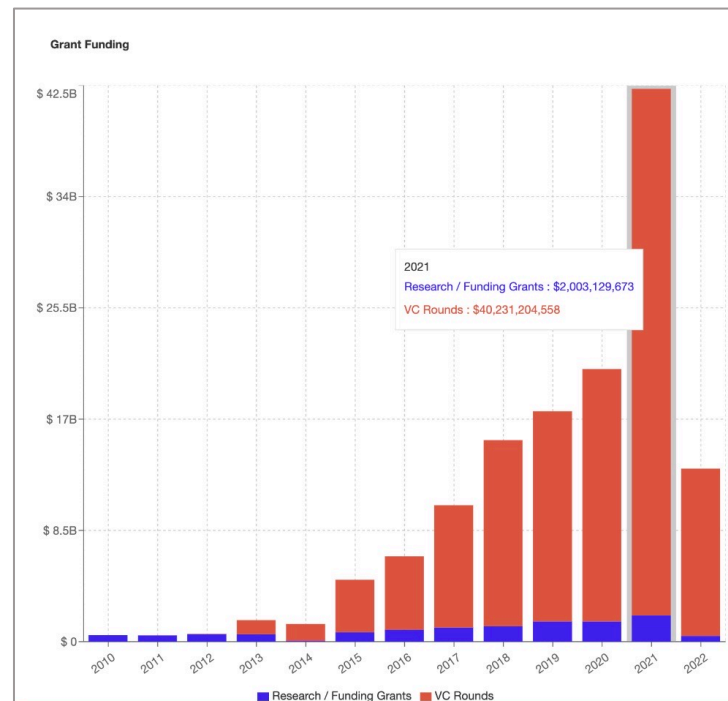
- Comprehensive and unified data...
 - Drives economies of scale.
 - Augments existing practices.
 - Yields insights everywhere.
 - Unlocks new investment options.

Wellspring Scout – spring 2022 release

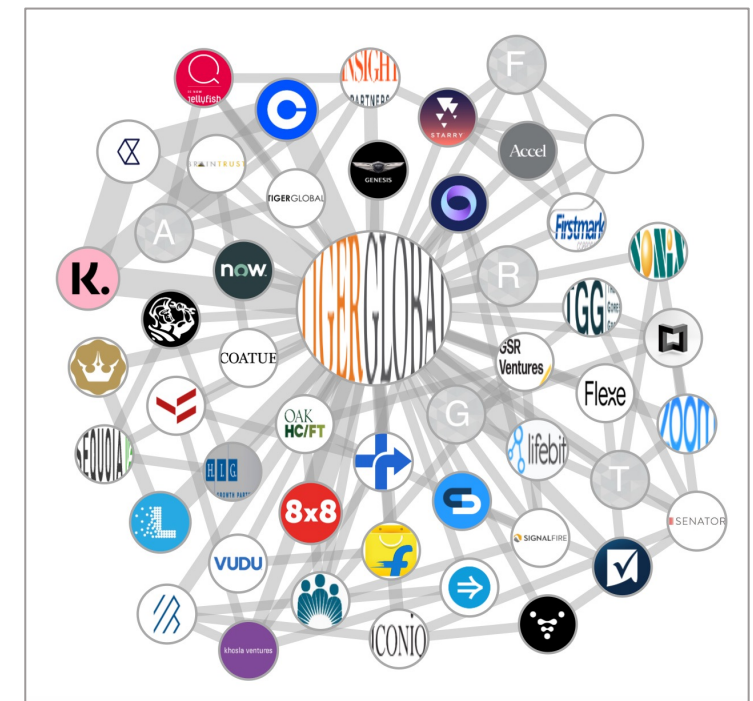
Basic Score



Funding trends



Investor networks



Thank you + Q&A

chris.townsend@wellspring.com