

SECONDARY RESEARCH SERVICES

Pharma / Biotech Experience



*Scientists powered by **ML & Deep Web** tools*

www.patent-art.com

ABOUT SCITECH PATENT ART (SPA)

- Established in 2002...one of India's leading technology intelligence firms for more than 17 years
- Maintaining confidentiality is core to our business
- Serve Fortune 500, universities and law firms
- 95+ advanced degree scientists and technologists



Our Difference

Human experts powered by data engineering & AI / ML tools

Client advantages: Cost, Turnaround Time & Quality

TEAM BACKGROUND: R&D, IP & COMMERCIALIZATION



Dr. Srin Achanta

Founder & Managing Director

- ◆ 25+ years in technology commercialization
- ◆ Technology & business strategy expertise
- ◆ Past affiliations: P&G, Booz & Co., Honeywell



Ms. Linda Perucca

Representative, USA

- ◆ 25+ years in R&D and Quality
- ◆ Knowledge Management & Training
- ◆ Past affiliations: Mondelez International



Mr. Hitoshi Yoshino

Representative, Japan

- ◆ 25+ years in technology transfer / licensing
- ◆ Large JP network – universities, companies, etc.
- ◆ Past affiliations: BTG, QED, JPO



Mrs. Uma Parameswaran

Executive Advisor

- ◆ 25+ years in R&D, Indian patent agent
- ◆ 12 years in technology analytics
- ◆ Past affiliation: R&D team lead at ACC, Mumbai



Mrs. Harita Achanta

Director

- ◆ 15+ years in engineering and IP analytics
- ◆ U.S. patent agent
- ◆ Past affiliations: Convergys, Sherwin Williams



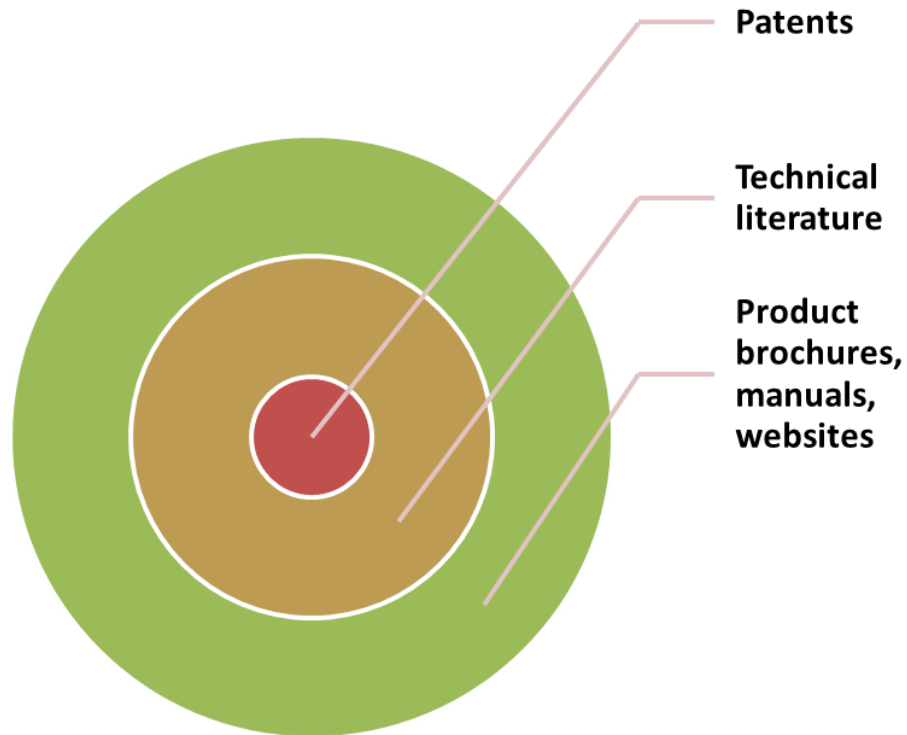
Mr. Mark Kline

Consultant, USA

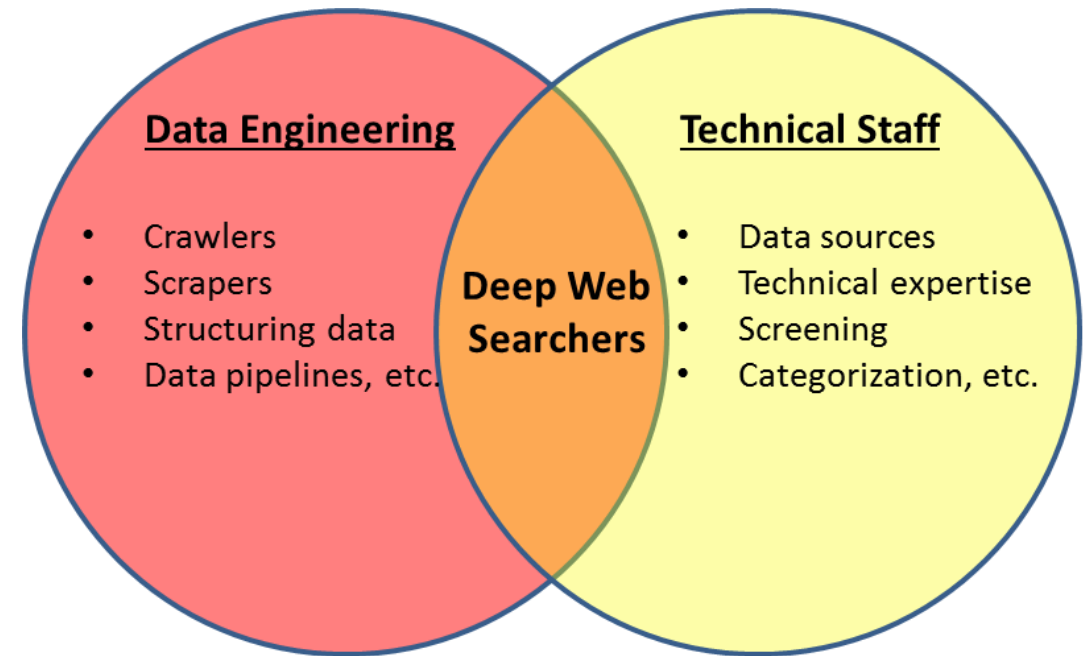
- ◆ 35+ years in research and open innovation
- ◆ Over 125 patents
- ◆ Patent strategy, patent prosecutions, patent litigations and training for inventors

OUR EVOLUTION

Patent research ➡ *Technology research*



Capability migration



SERVICES & TOOLS – AN OVERVIEW

R&D SERVICES

- Technology trends
- Patent landscape
- Non-patent landscape
- Product landscape
- One-page summaries
- White-space analysis
- Problem-solution analysis
- Open innovation partner identification
- Start-up tracking
- Competitor monitoring
- ...other custom R&D requests

IP/NON-IP SEARCH SERVICES

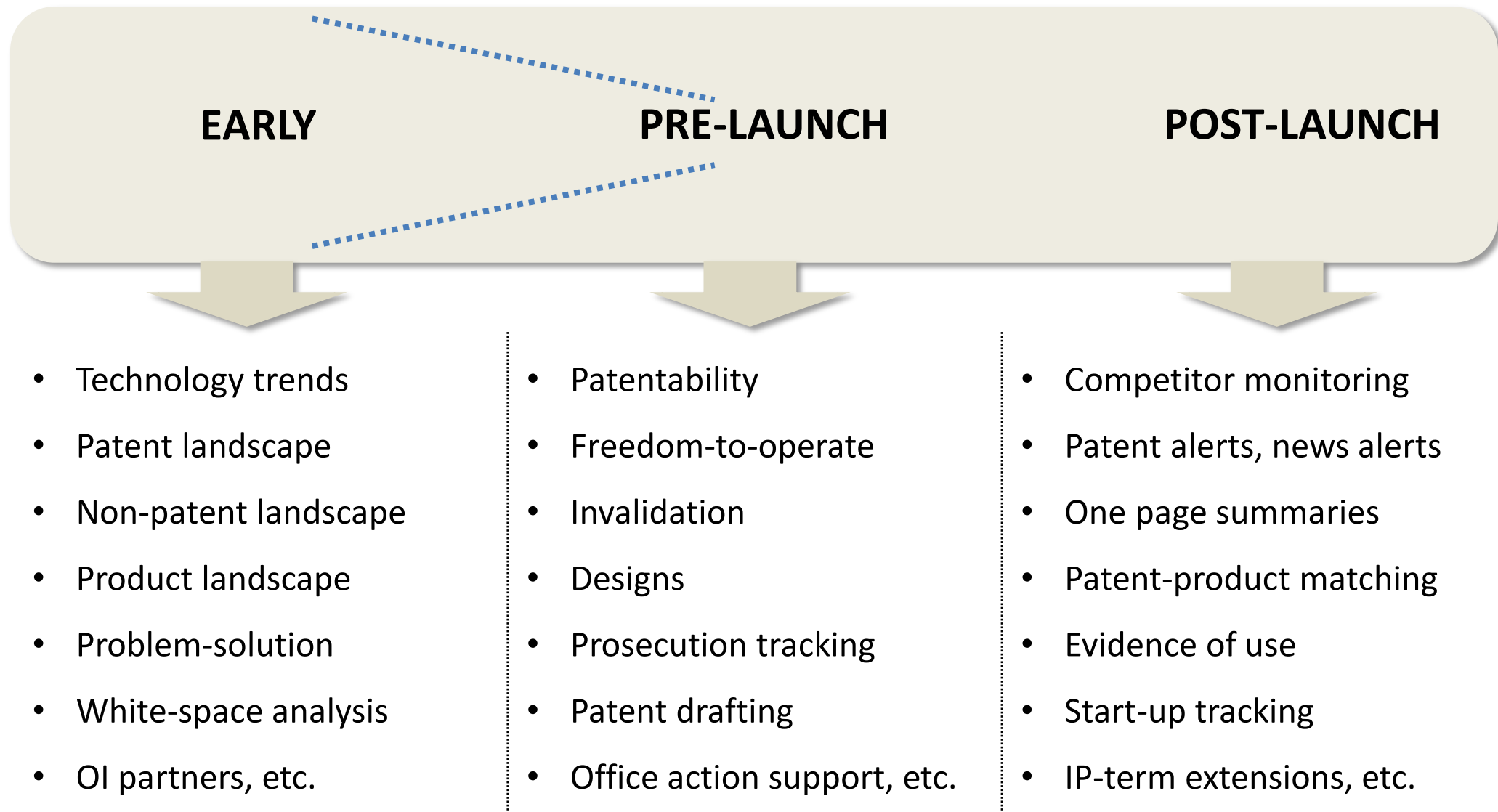
- Prior art / State of the art
- Patentability assessment
- Freedom-to-operate
- Validity/Invalidity searches
- Evidence-of-use searches / patent-product matching
- Patent term extension
- Design searches
- Customized patent alerts
- Patent drafting/office action support
- Prosecution tracking

TOOLS/PORTALS

- Alerts portal
- Patent portfolio analysis portal
- Bloom of ideas portal
- Non-patent literature portal
- Auto-labeling tool
- Prosecution-tracking portal
- Start-up/Incubator/Accelerator tracker portal
- Deep Web search tool
- Subject-specific AI agents
- Screening/analysis assistant
- ...other custom tools by request



SERVICE FUNNEL



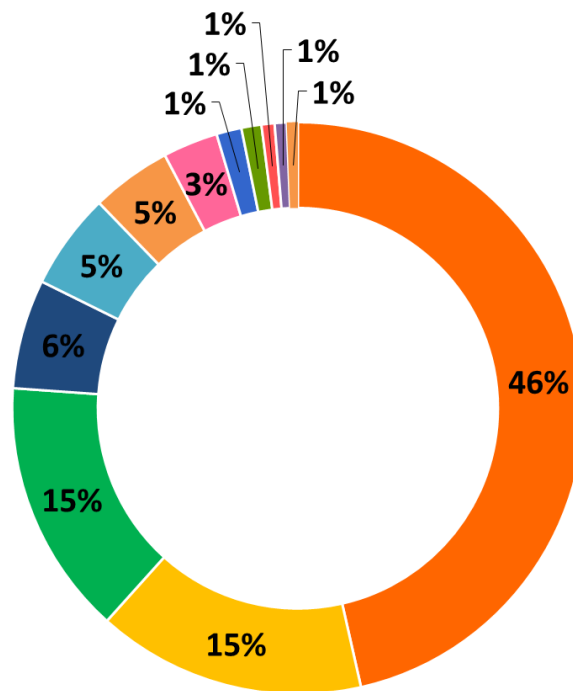
PHARMA / BIOTECH EXPERIENCE

- **Technically qualified staff – most of SPA's work is inter-disciplinary**
 - Ph.D. in Material Science [2 staff members]
 - Master's / Ph.D. Pharmaceutical Sciences [2]
 - Master's in Biotechnology [6]
 - Master's/Ph.D. in Chemistry [12]
 - Master's/Ph.D. in Chemical Engineering [6]
- **Data sources used in research**
 - PubMed, ScienceDirect, Wiley, GoogleScholar
 - NIH Grants
 - STTR/SBIR/European funding agencies
 - US FDA and EMA (regulatory filings, product labels,...)
 - Product IFU's
 - Patents (TI, Orbit, Patbase, STN, Pacer,...)
 - Start-ups (Crunchbase, Pitchbook, Deep Web)
 - Web-sites, annual reports

RECENT WHITEPAPERS

- *Cepheid, Inc. Company Profile*
- *Serology Testing – Competitive Report*
- *Covid-19 Vaccines - Update*

TYPES OF PROJECTS EXECUTED



- Patent Alerts
- Prior Art
- IP Landscape
- Novelty Assessment
- Freedom to Operate
- Patent Prosecution History
- Validity Search
- Scientific Literature Search
- Company Portfolio
- Competitor Intelligence
- Patent Drafting and Filing
- Quick/Swift Search

EXAMPLE: PROSECUTION TRACKING TOOL

SmartView

Patents

	#	Patent Number...	Title	Priority Date E...	Publication Dat...	Abstract	Inventor	Assignee Own...	Uspto Assignm...	Corporate Tree...	Application I
	253	US8883146B2	Protein formulatio...	2007-11-30	2014-11-11	The invention prov...	Fraunhofer, Wolfga...	Abbvie Biotechnolo...	ABBVIE BIOTECHN...	AbbVie Inc	US13774735A
	254	US908519B2	Anti-TNF antibody ...	2007-11-30	2015-07-21	The invention prov...	Fraunhofer, Wolfga...	Abbvie Biotechnolo...	ABBVIE BIOTECHN...	AbbVie Inc	US14506576A
	255	US2017143828A1	PROTE								
	256	US2016122101A1	PROTE								
	257	US2015161170A1	PROTE								
	258	US201515888A1	ULTRA								
	259	EP22311144	PROTE								
	260	US84211182	Antibo								
	261	EP2561111	Antibo								
	262	EP2211111	ANTIE								
	263	EP2511111	Antibo								
	264	US20151135A1	ANTIE								
	265	US8111111	Antibo								
	266	US2015113A1	ANTIE								
	267	EP2111111	METH								

Patent List

Patent Search

Patent Number : US20120251535A1

History

Claim Name	Description	Edited By	Prosecution Date	Comments
DC-8	8. (New) The method of claim 6, wherein the duration of the infusions in (b) is from 3.3 to 3.5 hours. EDIT	Sandeep E	2013-03-27	New
IC-1	1. (Original) A method of extending median time to progression for resp... refractory, low-grade or follicular, CD20-positive, B-cell non-Hodgkin's l... mg/m ² of rituximab to the patients. Cancelled EDIT	Prema	2013-03-27 2014-03-21	
DC-2	2. (Original) A method according to claim 1, wherein the patients exhibit an over... 48%. Cancelled EDIT	Latha	27 2014-03-21	
IC-3	3. (Original)(Currently Amended) A method of treating an adult patient with relapsed or refractory, low-grade or follicular non-Hodgkin's CD20-positive B-cell lymphoma in a human patient comprising administering to the patient four weekly infusions of rituximab, each at a dose of 375 mg/m ² , wherein the initial infusion rate for the first dose is 50 mg/h, with a subsequent infusion rate increase if no toxicity is seen in the patient, and wherein the second, third, and fourth doses are administered at an infusion rate of more than 50 mg/h. EDIT	Prema Latha	2013-03-27 2014-03-21	Currently Amended
DC-4	4. (Original) The method of claim 3, wherein the infusion is interrupted if an infusion-related toxicity reaction is seen in the patient. EDIT	Prema Latha	2013-03-27 2014-03-21	Original
DC-5	5. (Original) The method of claim 4, wherein the infusion is resumed once the infusion-related toxicity reaction subsides. EDIT	Prema Latha	2013-03-27 2014-03-21	Original

Select Prosecution Date : 2014-03-21

Database of patents of specific Biologics

Comparison with family members

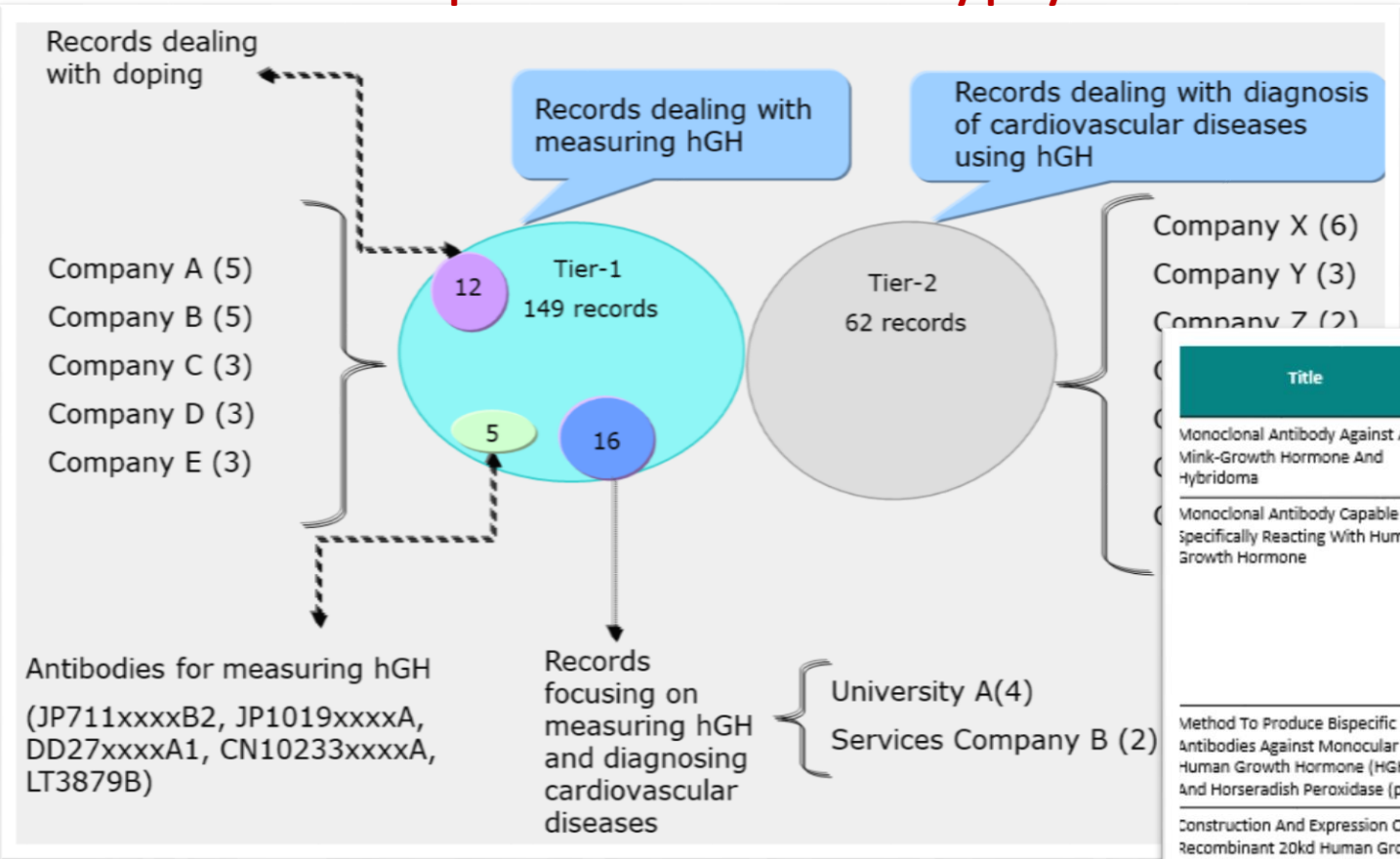
Claim amendments displayed in "Track changes" format

Collaborative workflow features for internal users

Patent prosecution monitored every week

EXAMPLE: IP ACTIVITY IN HUMAN GROWTH HORMONE

Overview of patent distribution and key players



Collaborations

Title	Collaborating Assignees	Focus
Triazine Based Ligands And Use Thereof	Novo Nordisk A/S ProMetic Life Sciences Inc	Affinity ligand-support matrices in the separation, isolation, purification, quantification, identification and characterisation of proteinaceous materials
Strain Of Hybridous Cultured Mammalian Cells Mus Musculus L - A Producer Of Monoclonal Antibodies To The Human Somatotropin	V Endokrinologicheskij Nauchnyj Tsentr Amn Sssr Nii Morfologii Cheloveka Amn Sssr	Cultivated hybrid musculus L. cell strain used as producer of monoclonal antibodies for human somatotropin.
Lyophilized Ligand-Receptor Complexes For Assays And Sensors	US Drug Testing Inc US Secretary of the Navy	Lyophilized ligand-receptor complexes, which are useful for assays and sensors, and processes for preparing such lyophilized ligand-receptor complexes
		Antibodies or fragments thereof used as targeting moieties and receptor mediated transport for a controlled drug release system
		Albumin fusion protein is useful for preparing a composition for treating diabetes mellitus
		Liposome useful as drug delivery vehicle for the production of a medicament.
		Monoclonal antibody specifically recognizes and combined 20kD GH
		Method for the control of doping

Title	Type of assay/Detection method	Composition of matter	Assignee/Applicant
Monoclonal Antibody Against Anti-Mink-Growth Hormone And Hybridoma	ELISA	Monoclonal antibodies	Rhone-Poulenc Chimie Rhone-Poulenc Ind
Monoclonal Antibody Capable Of Specifically Reacting With Human Growth Hormone	Immunoassay - enzyme immunoassay (sandwich enzyme immunoassay); radioimmunoassay, fluorescence immunoassay, luminescent immunoassay	Monoclonal antibody (hybridoma FERM P-monoclonal antibody)	Mitsui Chem Inc
Method To Produce Bispecific Antibodies Against Monoclonal Human Growth Hormone (HGH) And Horseradish Peroxidase (pod)	Unspecified	Monoclonal bispecific antibodies (Ab)	Akad Wissenschaften Ddr
Construction And Expression Of Recombinant 20kd Human Growth Hormone Expression Vector, Preparation Of Monoclonal Antibody, And Cell Strain Secreting The Monoclonal Antibody	ELISA, surface plasma resonance (SPR) analysis	Monoclonal antibody	Beijing Yihongang Technology Co., Ltd. Anti-Doping General Administration Of Sport Of China, China
Hybridoma Producing Murine Monoclonal Antibodies Against Human Growth Hormone	Unspecified	Monoclonal antibodies	Fermentas Biotech Inc

Patent analysis of key players

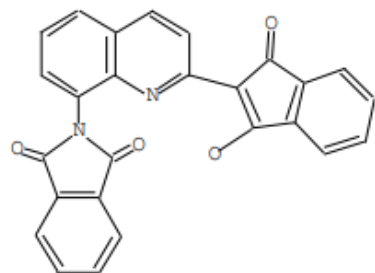
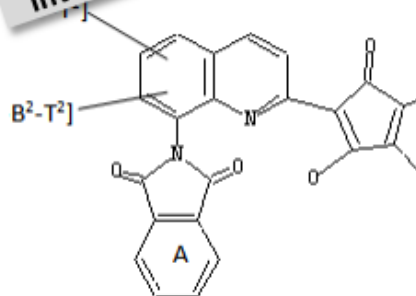
EXAMPLE: WHITE SPACE ANALYSIS - BIOMARKERS

<div>Application</div> <div>Type of probe</div>	Detection/ Diagnosis/ Bioassays	Cell tracking	Bioimaging	Biomarkers	Biosensors
Fluorescent compounds	213	3	47	2	12
Fluorescent labelling	157	1	32	3	6
Radio labelling	110		10	2	
Fluorescent nanoparticles	37		17	1	3
Fluorescent proteins	31		8		1
Quantum dots	20	4	19	1	1

Potential areas
for future
research and
protection

EXAMPLE: STRUCTURE SEARCH OF MOLECULES

Example of an invalidity search



Objective - To search for literature disclosing the structure as show on the left
Wherein

- A and A' are identical or different rings which may each be substituted by from 1 to 4 chlorine and/or fluorine atoms ;
- T¹ and T² are independently a chemical bond, -CONR¹- or -SO₂NR¹-;
- B¹ and B² are independently a chemical bond, C₁-C₈-alkylene or phenylene;
- X and Y
- R¹ is hydrogen; C₁-C₆-alkyl; or C₁-C₅-alkyl-substituted naphthyl;
- R², R³, R⁴ and R⁵ are independently hydrogen; C₁-C₃₀-alkyl; or C₂-C₂₄-alkenyl-substituted phenyl; unsubstituted or C₁-C₁₀-alkyl- or C₂-C₂₄-alkenyl-substituted
- R⁶, R⁷ and R⁸ are independently
- x is an integer ≥ 1,

Search Methodology -

Date of search: mm dd, yyyy

Database Used: Database Used: Regi

Period of search: From 1907 till April

Methodology:

- A sub-structure search was performed
- Another search was conducted in
- XX patents and YY non-patent references
- A sub-structure search was also performed
- Finally, a sub-structure search was conducted generically. This resulted in six additional
- A search was conducted in the name
- A citation search for highly relevant

Summary of search results

The search resulted in total 6 relevant hits. Out of total 6 hits only two patent records and one non-patent record (tier 1) are disclosing a sulphonated quinophthalone including the product patent assigned to company X ([WO 20020xxxxx](#)). All identified prior art references are listed below in a table as per International Search Report

Ref #	Citation of document, with indication, where appropriate, of the relevant passages	Category*
1	WO 20020xxxxx (Assignee X), DD January YYYY, Abstract, Claim 1, 7, 8, 16, 17	X
2	JP 20040xxxxx (Assignee Y), DD May YYYY, Abstract, Claim 1, 3, 4, 5, Description	X
3	Author et al. " Title " Organic Electronics, YYYY, Vol (issue), pp (Page XXX, Fig 3(d))	Y

* Special categories of cited documents:

"X" document of particular relevance; the invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"A" document defining the general state of the art which is not considered to be of particular relevance

EXAMPLE: GENE SEQUENCE SEARCH

I. Objective

- A) To find all documents containing Sequence A or sequences with more than 60% identity to Sequence A
- B) To provide additional documents describing Cel61A of xxxx not already covered by the sequence search.

Sequence A (Query = 323 letters)

HGHINDIVINGVWYQAYDPTTFPYESNPPIV...ATNAKGHASVKAGDTILFQ
WVPVPWPHPGPIVDYLANCNGDCETVDKT...LVLSNNNTWVVKIPDNLAPGNYVL
RHEIIALHSAGQANGAQNYPCFNIAVSGSGS...LDLYHATDPGVLINIYTSPLNYIIPGPTVVSGLPTSVAQGS
SAATATASATVPGGSGPTSRTTTTARTTQASS...STPPATTSAPAGGPTQTLYGQCGSGSGSPTRCAPPATCSTLN
PYYAQLN

Search approach

II. Search Methodology

Date of final search: July 03, 2014

Databases used: USGENE; DGENE; PCTGEN; REGISTRY; CAPLUS; NCBI, Thomson Innovation, Pubmed and other web sources

Period of search: From 1907 onwards (Coverage of Chemical Abstract)

A protein blast search for sequence A was conducted in USGENE; DGENE; PCTGEN; REGISTRY/CAPLUS databases with percentage identity above or equal to 60%. A total of 41 records (17 families) were retrieved which had identity ranging from 90 - 100%; and are listed below.

A protein blast search was also conducted in NCBI – pblast.

A search was also conducted using keywords pertaining to Cel61A and XXXX in patent databases (Thomson Innovation, HCAPLUS) and in freely available databases for non-patent literature.

Finally a citation search was conducted for Refs 1-17 but no additional document was retrieved.

III. Search Results

Search results related to sequence A are provided in section A. There are 17 patent records and three non-patent records related to the given sequence. The key patent filer with eight patent records in this section followed by...

Summary of results

Additional documents related to Cel61A are provided in section B (page 22). There are seven patents and six non-patent references in this section.

Reference 11

Note: Green colour indicates "mismatch";

WO201409XXXXA2

Red colour indicates "Gap" in the sequence

Title: Methods for enhancing the degradation or conversion of cellulosic material

Applicant(S): Company A

Inventor(s): Schnorr Kirk; Shaghasi Tarana; Mcbrayer Brett

Patent Family: WO2014092832A2

Score = 612 bits (1577), Expect = e-180; Identity

Positives = 310/325 (95%), Gaps = 7/325

Abstract: The present invention relates to processes for degrading a cellulosic material and for producing substances from the cellulosic material.

Sequence length from patent = 346

HGHINDIVINGVWYQAYDPTTFPYESNPPIVVGWTAADLDNGFVSPDAYGSPDIICHKNATNAKGHASVKAGDTVL
FQWVPWPWPHPGPIVDYLANCNGDCETVDKTGLEFFKIDGVGLSGGDPGNWASDVLIANNNTWVVKIPDNLAPG
NYVLRHEIIALHSAGQANGAQNYPCFNIAVSGSGSLKPSGVKGTALYHATDPGVLINIYTSPLNYIIPGPTVVSGLPT
SVAQRSSAATATASATLPGGGSPPGGPTSRTTTARTTQASSSTPPATTSAPAGGPTQTLYGQCG
GSGYSGPTRCAPPATVSTLNPYYAR

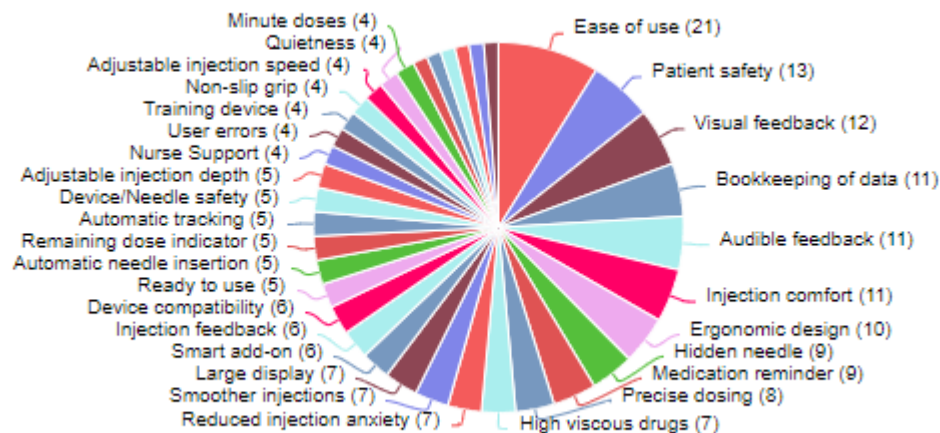
Excerpts from references

EXAMPLE: SUB-CUTANEOUS DELIVERY SYSTEMS FOR XXX

Methodology:

- Comprehensive search was conducted to identify various approaches/delivery systems for oral delivery of XXX drugs using online databases (US FDA, PubMed, ScienceDirect, clinicaltrials.gov, EMA) and news items. These delivery systems were further assessed based on product features, product journey, commercialization aspects, clinical/regulatory compliance, end user perspective, major challenges, etc.
- Created a searchable database to understand the trends for device challenges, to compare different devices to understand the unique features, etc.

USER/HEALTH CARE PROVIDER CHALLENGES



Devices (100)

☐ Select All

1) Betacconnect autoinjector

Company :Bayer HealthCare

2) Ypsomed smart-pilot

Company :Ypsomed Delivery Systems

3) Rebismart

Company :Merck KGaA

4) UCB Cimzia Autoclicks

Company :UCB Inc

5) Penlet

Company :Hasselmeier GmbH

6) ESYSTA Pen

Company :Esysa

Overview

Technical Information

Issues/Pain points/Needs

Product Journey

End user Information and Training

Regulatory/Clinical Trials/Human Factors

Commercial

Betacconnect autoinjector

Company :Bayer HealthCare

Overview

Main features

BETACONNECT delivers the proven efficacy of BETASERON and automatically captures your injection data—every time you inject. This includes your injection date, time, speed, and depth. When you pair and sync your BETACONNECT with myBETAapp, this information is sent wirelessly to the app so you can organize and track your progress. And when you share your injection information, your BETA Nurse can support your care, when and if needed. By providing an in-depth view of your injection information and trends, you can have more

Digital Feature:	BETACONNECT Auto-injector
Connected App Name:	myBETAapp
HCP Portal:	BETAPLUS

PRODUCT SUMMARY

BETACONNECT™

INJECTOR:

DEVICE IFU: Manual is provided ([Source](#))

KEY DESIGN FEATURES: Ergonomic design, visible and audible indicators, injection reminder, adjustable injection depth, adjustable injection speed, hidden needle, ready for injection indicator, automatic needle retraction once injection is complete, end of dose indication, uses Bluetooth® technology to pair with myBETAapp

NEEDLE GUAGE: Only use the syringe and 30-gauge needle that come with your BETASERON.

DIRECTION OF INJECTION: Gently hold the BETACONNECT against the skin at a 90° angle (straight up and down) to activate the safety release. ([Source](#))

LOCATION OF INJECTION: Stomach (abdomen), upper arm, thigh or buttock ([Source](#))

KEY STEPS: Injection steps: Step 1: Clean the injection site; Step 2: Remove the needle cap; Step 3: Place the BETACONNECT auto-injector against the injection site; Step 4: Start the injection; Step 5: Check the injection status; Step 6: When the injection is finished. ([Source](#))

TIME TO GET TO ROOM TEMPERATURE: NA

DRUG FORMULATION INFORMATION: Active ingredient: interferon beta-1b; Inactive ingredients: albumin (human), mannitol; Diluent contains sodium chloride solution (Before mixing, store BETASERON at room temperature between 68°F to 77°F (20°C to 25°C). Before mixing, BETASERON may be stored for up to 3 months between 59°F to 86°F (15°C to 30°C). After mixing, you can refrigerate BETASERON for up to 3 hours before using. Your BETASERON must be used within 3 hours of mixing even if refrigerated.) ([Source](#))

HUMAN FACTORS STUDY INFORMATION: Mentioned in this article (Page 1) of source 1. ([Sources 1, 2](#))

APP:

DATA CAPTURE BY APP: Injection schedules, injection date, injection time, injection site, monitor wellness and create new entries, data transfer to HcP, suggestions from HcP through messages.

([Source](#): Check 'watch in action' tab in this page)

HCP PORTAL:

A BETA Nurse is there right from the start to offer customized support by getting to know you and keeping up with your changing needs.

([Source](#))

TRAINING:

BETA Nurse helps you:

- Get trained on how to properly inject BETASERON (where state laws allow)
- Stay motivated with your treatment
- Guide you to the resources you need
- Get practical information, including tips on managing certain side effects
- Deal with challenges as they arise

([Source](#))

EXAMPLE: TECHNOLOGY OPTIONS FOR INCREASING INJECTABLE DRUG HALF LIFE

Methodology:

- Comprehensive search was conducted to identify various technology options for increasing half life of injectable drugs (XXX drugs) using available online databases (PubMed, clinicaltrials.gov, USFDA, EMA) and company websites.
- These technologies were comprehensively assessed based on TRL details, dosing-frequency, safety, efficacy, regulatory compliance, etc.

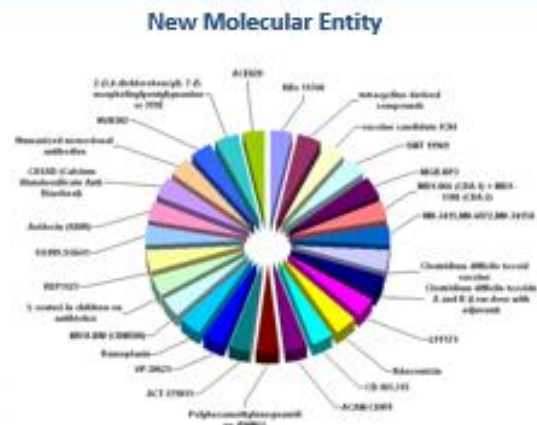
	Company A		Company B		Company C	
Summary	Xgel and Xsol XXXX copolymer drug delivery technology platform developed through the sequential coupling of five biocompatible/biodegradable polymer blocks selected from among XXX, YYY and ZZZ		The long acting release mechanism of drugs with XXXX microspheres are based upon diffusion		XXXX is an advanced injectable gel drug depot system, offering unparalleled retention and release of active pharmaceutical ingredients from a soft, localized drug depot.	
Technology Readiness Level (TRL)	X		X		X	
Technology Bin	XXXX HYDROGEL		XXXX HYDROGEL		XXXX HYDROGEL	
Technology Name	NAME A		NAME B		NAME C	
	Decision	Rationale	Decision	Rationale	Decision	Rationale
Can this technology be used for delivering XXXX	yes	Technology can be used to deliver all types of biologics (no limitation regarding the molecular	yes	Technology can be used to deliver proteins, polypeptides (molecular weight equal to or	yes	Technology can be used for delivering peptides and small molecules, for proteins (in
is YYY dosing achievable by this technology	yes	Extended release of days to weeks and months	yes	Days to months		Weekly dosing achievable
is YYY dosing achievable by this technology	yes	Extended release of days to weeks and months	yes	Release time can be regulated	yes	Release can be tailored from one week to 2-3 months and beyond
is SC dosing achievable by this technology?	yes	The active ingredient retains its	yes	Days to months		Monthly dosing achievable
		Suitable for subcutaneous, intramuscular or intra-articular injection via a ≥27-gauge needle.	yes	Release time can be regulated	yes	Release can be tailored from one week to 2-3 months and beyond
Are excipients GRAS?	yes	Safe excipients XXXgel and YYYsol compositions are easy to	yes	Subcutaneous achievable	yes	SC achievable
Does technology target specific sites for action	TBD	No information available	yes	The XXXX platform can be used	yes	Sustained in vivo release of hydrogels loaded with celecoxib,
				Safe excipients, individual monomers are proved for human applications	yes	Safe excipients XXX-YYY-ZZZ triblock copolymers are safe-to-use
				Site specific delivery is possible		localized drug depot, eyes, brain, joints, muscles and in other organs(2)
				Sustained release technology for	yes	

EXAMPLE: THERAPEUTICS PIPELINE STUDY

Methodology:

A comprehensive search was conducted for information on new chemical entities using freely available online databases (clinicaltrials.gov, www.who.int/ictrp) and news items.. Search was restricted to molecular entities pertaining to the treatment of XXXXX infection. The searches retrieved studies indicating on-going preclinical and clinical studies related to the treatment of XXXXX infection.

List of New Chemical Entity									
S. No.	Company	NCE	Mechanism of action	Phase of development	Parent/ deals/ partnerships/ alliances	Details	Reference 1	Reference 2	Reference 3
1	Daichi Sankyo Life Science Research Centre, India (IAC)	RfX 11760, a novel biaryl oxazolidinone	A potent inhibitor of bacterial protein synthesis. The	Preclinical study	IAC is a part of Daichi Sankyo India Pharma Pvt. Ltd.	Daichi Sankyo Co. Ltd IAC is a part of	http://iac-extension.mak.org/content/16/2/1987	http://www.dsm.org/india.php?aid=79	
2	Paratek Pharmaceuticals	tetracycline derived compounds		Preclinical study		Targeted Antibiotics – a next generation application of	http://www.paratekpharm.com/1st_1st_1/whb.html		
3	Summit Corporation	SMT 2969	The molecule combines potent activity against C.	Preclinical study	Wellcome Trust.	SMT 2969 is a novel antibiotic with an exceptionally	http://www.bioparagene.com/News/Successful-completion-of-		
4	Mpb Biopharma	MOB-BP3	MOB-BP-3 which is a small molecule which belongs to	Preclinical study	The company has been financed by a business angel.	MOB-BP-3 is already in late stage preclinical studies	http://www.mpb-biopharma.com/news.html		
5	Sequella Inc	SQ609, SQ641	which inhibit an essential enzyme present only in	Preclinical study			http://www.sequella.com/pressview/75-erasepilot.html	http://www.eurosearch.ch/index.php?view=documents&id=6000	
6	Axobiotics	Axobion (S88)	proteins represent a new class of highly targeted	Preclinical study		The company is focusing its own development	http://www.axobiotics.com/2002/04/axobiotics-receives-two-	http://www.phynthia.com/news.html	
7	Progenics Pharmaceuticals, Inc	humanized monoclonal antibodies	designed to block the cytotoxic effects of C. difficile toxins	Preclinical study	National Institutes of Health (NIH)	Progenics Pharmaceuticals, Inc. (Nasdaq: PGNY)	http://www.progenics.com/pressreleases/4-14-04/4-14-04-01		
8	Glaxynthes, Inc.	2 (1,4-dichlorobenzyl)- 7- D5-	Strongly inhibited the growth of a wide variety of C.	Preclinical study	Department of Health and Human Services	The compounds appear to be selective for Cdiff	http://www.gsk.com/press/pressdetail/4829	http://www.researchgate.net/publication/51895780_A_Nov	




Parent/ deals/ partnerships/ alliances/ grants

- Merck licensed NMEs MK-3415A, MK-3415A, MK-6072 for CDK treatment, from Mesoclin and Mesarex.
- Sanofi-Aventis obtained the Clostridium difficile toxoid vaccine after the acquisition of the company Acamis.
- Helsinki University started trials for Polyhexamethylene guanidine after seeking funding from Soft Protector, The Finnish Funding Agency for Technology and Innovation (TEKES).
- With support from the National Cancer Institute [NCI], Salient Pharmaceuticals is actively conducting a Phase II clinical trial to test the safety and efficacy of CASAD™. This trial is underway at M.D. Anderson Hospital and other sites with preliminary results expected in 2012. This study is executed in collaboration with Scotts and White Hospital & Clinic Texas, and AMM University.
- Progenics Pharmaceuticals Inc is funded by National Institutes of Health [NIH] to conduct clinical trials for humanized monoclonal antibodies.
- GL Synthesis Inc received grants from Department of Health and Human Services to conduct clinical trials for 2-(1,6-dichlorobenzyl)-7-[5-morpholinyl(spotyl)] guanidine.
- MGB Biopharma has been financed by a business angel syndicate led by Archangel Informal Investments Ltd in association with TriCapital Ltd, Barrwell plc and the Scottish Co-Investment Fund. The UK Government backed the Technology Strategy Board under its Seurat scheme to conduct clinical trials.

CLIENT NEED & OUR SOLUTION

- **Tool for scientists to play in a well-defined sandbox...no noise**
 - Experts extract relevant information and pre-load in the database
 - Information is curated (humans assisted by machine) in a meaningful way
 - Search interface is intuitive and easy-to-use...no need for any searching expertise
- **Many information sources covered and search results linked...easy to “connect-the-dots”**
 - Patents, technical literature, websites, start-up databases, NIH grants, etc.
 - All information is linked across sources using author, affiliation and technology tags
- **Visualizations are meaningful and can be presented in management reviews seamlessly**
 - Many visualizations are available...can be further tailored to users’ requirements
 - Charts can be downloaded, shared, printed, etc. easily



Connect-the-Dots Portal
**to allow scientists to
conduct their own
secondary research
quickly**

BUSINESS MODELS TO ENGAGE SPA

- **Project-by-project model** *Full price*
- **Retainer model (hours consumed in a year)**
 - 1,000 hours *15% discount*
 - 2,000 hours *25% discount*
 - 4,000 hours *30% discount*

INTERESTED?

Contact: info@patent-art.com

www.patent-art.com

We look forward to hearing from you!

EXAMPLE SCREEN-SHOTS OF SPA'S CONNECT-THE-DOTS SOLUTION [1 OF 2]

CLOUD BASED

CLUSTER VISUALIZATION

The screenshot displays the SCITECH PATENT ART portal interface. The top navigation bar includes links for Home, Reference, Document Network, Help, and Admin Astellas. The main content area is divided into three sections:

- Login Section:** Features the SCITECH PATENT ART logo, a login form with fields for email (admin@patent-art.com) and password, a "Remember me" checkbox, a "LOGIN" button, and links for "Register" and "Forgot password?". A large red banner on the right says "Connect the dots portal by SciTech Patent Art".
- Cluster Visualization Section:** Displays a network graph with nodes and edges, color-coded by "Patent" (red) and "Tech Literature" (blue). A "Growing cluster" is highlighted with a red dashed box.
- User-Defined Curation Section:** Shows a "Technology Classification" sidebar with filters for Focus, Target disease, Modality/technology, Biology, Mode of administration, and Target disease Category. A "Patents" chart shows a line graph of article counts from 2015 to 2019. Below the chart, it indicates "Total Analysed Articles: 2717", "Selected: 364", and "Remaining: 2353". A "View Hits" button is also present.

At the bottom, a red dashed box highlights the "Inventor/Author" search section, which includes a search bar, a "Search" button, and a list of authors: Albert Edge, Jeffrey M Karp, and Shaowen Bao. A red text overlay "Option to search by KOL" points to the "KOL" checkbox.

Selected Technology Distribution

Category	Count
Target disease	150
Modality/technology	250
Biology	100

Selected Year Distribution

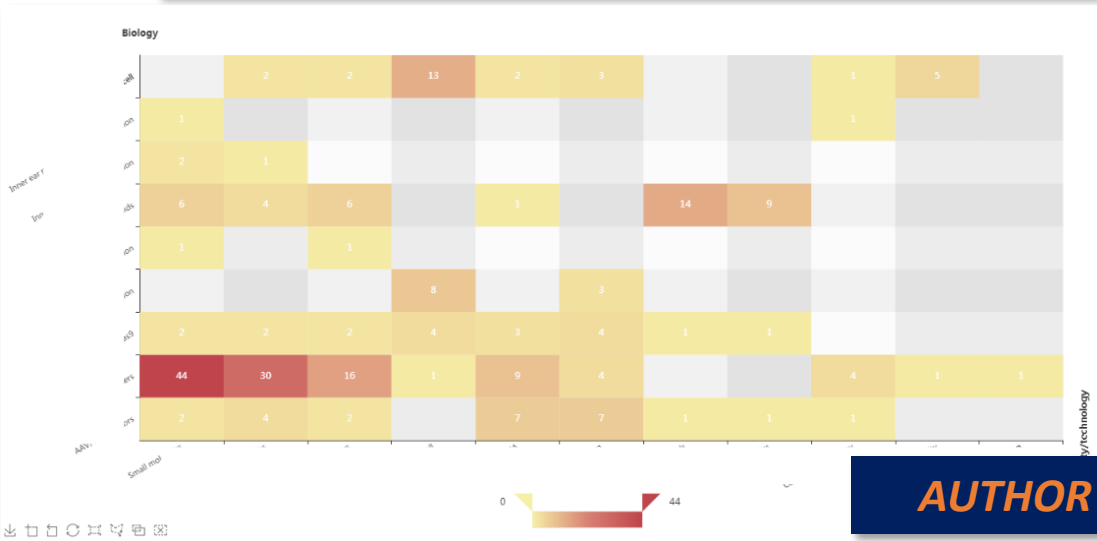
Year	Count
2014	5
2015	10
2016	15
2017	20
2018	25
2019	25

Selected Author Distribution (Top 10)

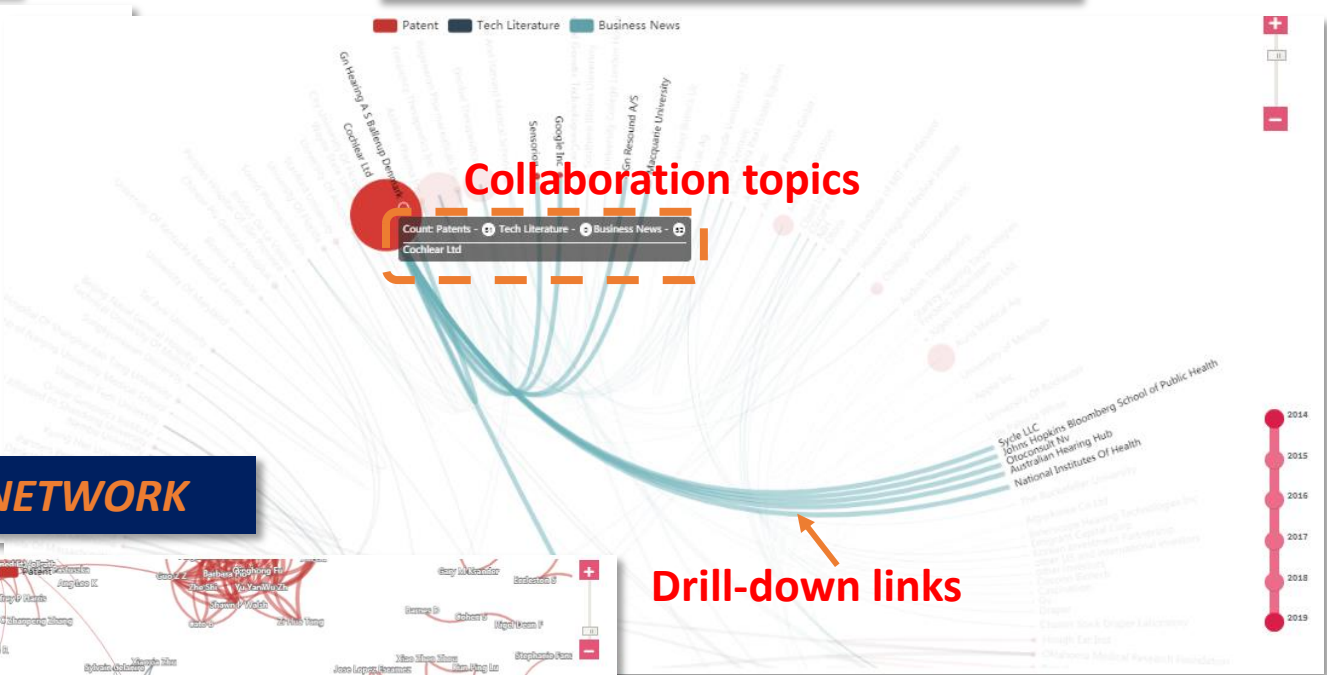
Author	Count
Albert Edge	15

EXAMPLE SCREEN-SHOTS OF SPA'S CONNECT-THE-DOTS SOLUTION [2 OF 2]

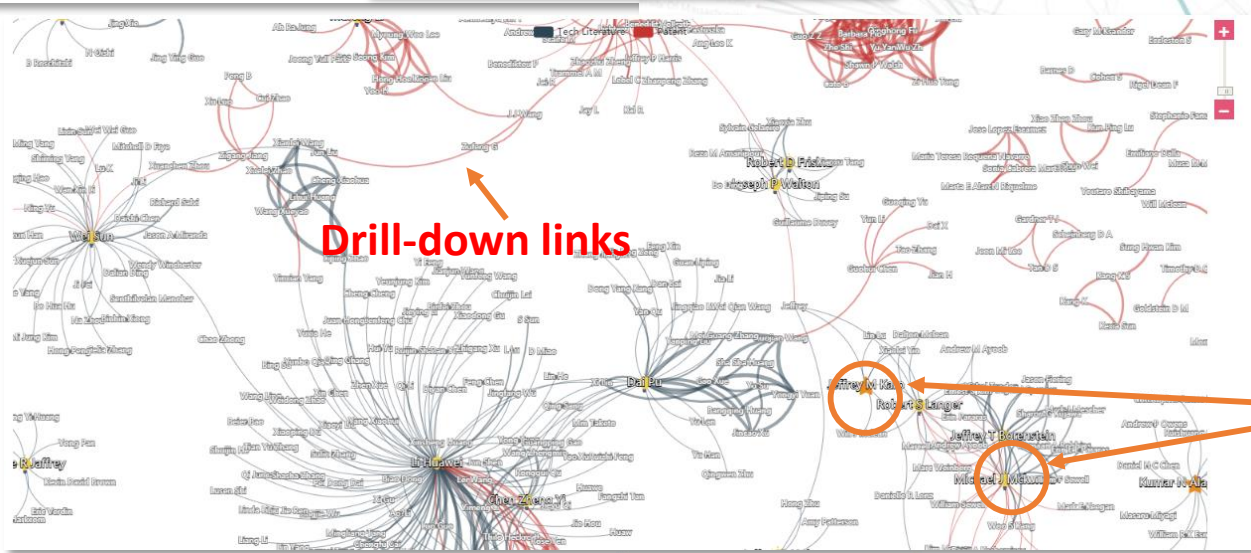
WHITE-SPACE MAP – MODALITY VS. BIOLOGY



ORGANIZATIONAL NETWORK



AUTHOR NETWORK



Drill-down links

KOLs / Rising Stars annotated