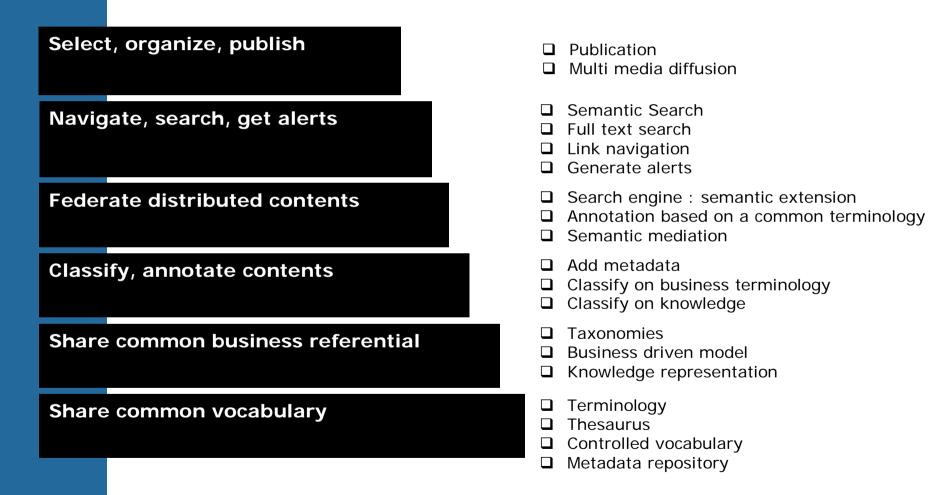


The new generation of Semantic Web based solutions for the organization of corporate knowledge

Charles Huot
CEO



Concepts





Topic Management



- Thesauri and knowledge bases management
 - Annotation and classification with thesauri and KB
 - Consistency with thesauri and KB ensured
- Search and retrieval
 - Advanced search capabilities
 - Visual components for navigation
- Collaboration
 - Different workspaces are available
 - User profile management and push profile
 - Information life cycle management
- Standards







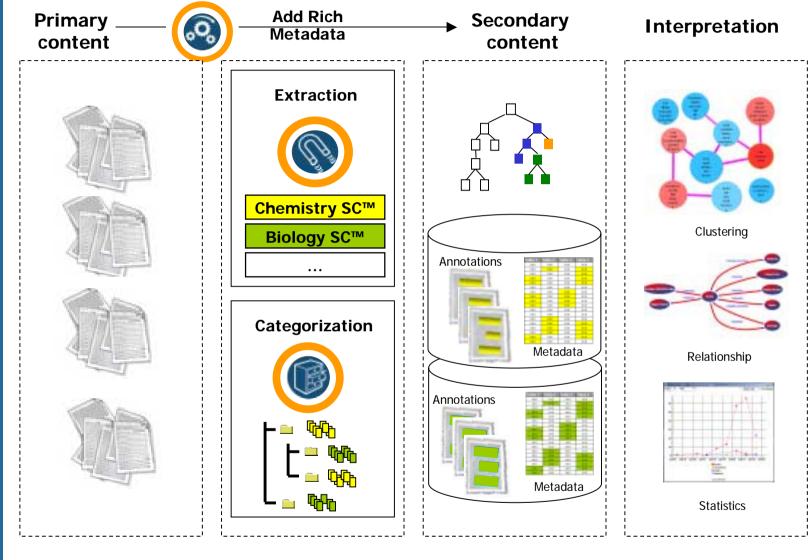








The big picture



Sources Management

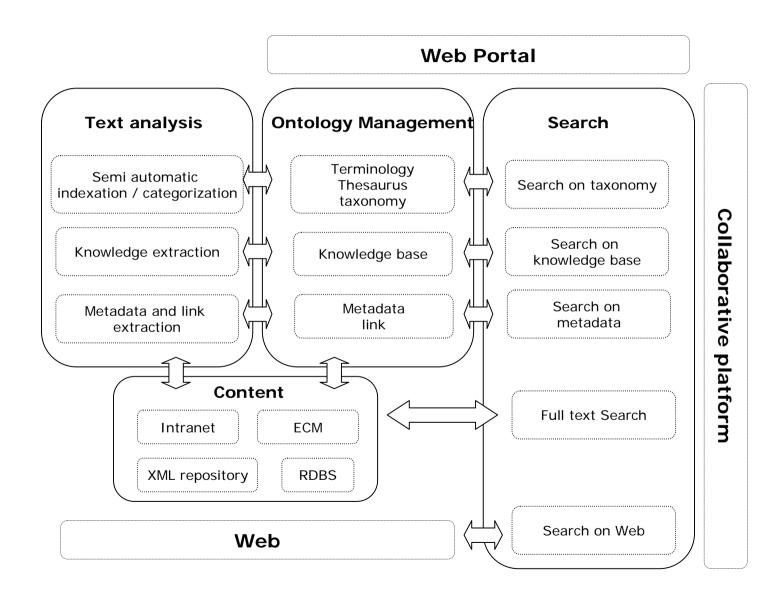
Annotation On-Demand

Topic Maps Structuring

Visualization Services



General architecture





Information Extraction - overview

Input sentence:

Immunoprecipitation with anti-bcl2 antibody, followed by immunoblotting with anti-bax antibody, showed that both the 21-kDa bax protein and the 18-kDa protein heterodimerized with bcl-2 protein.

Extracted Information:

the 21-kDa bax protein and the 18-kDa protein heterodimerized with bcl-2 protein.



Labelling

Input text

Here we show that BARF1-transfected, EBV-negative Akata cells activated Bcl2 expression and induced tumor formation when they were injected into SCID mice.

Labelled text

Here we show that BARF1-transfected, EBV-negative Akata cells activated [{{Bcl2|||ExtProtein|||596@LOCUSLINK@HUMAN@BCL2}}] expression and induced tumor formation when they were injected into SCID mice.

Labels

Unique identifier

Normalized name

Standard label

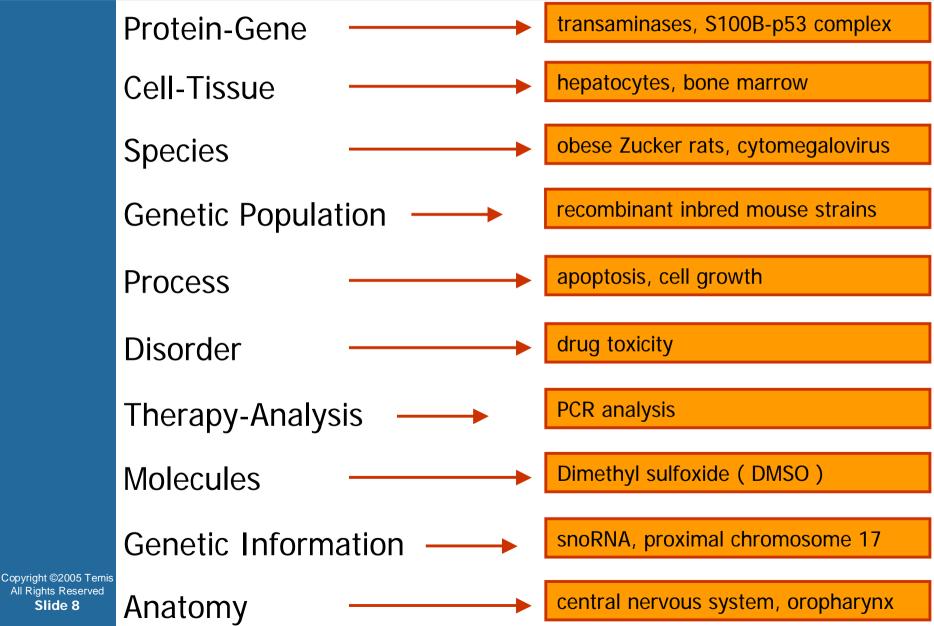
Form in text

Species



Slide 8

Biological Entities

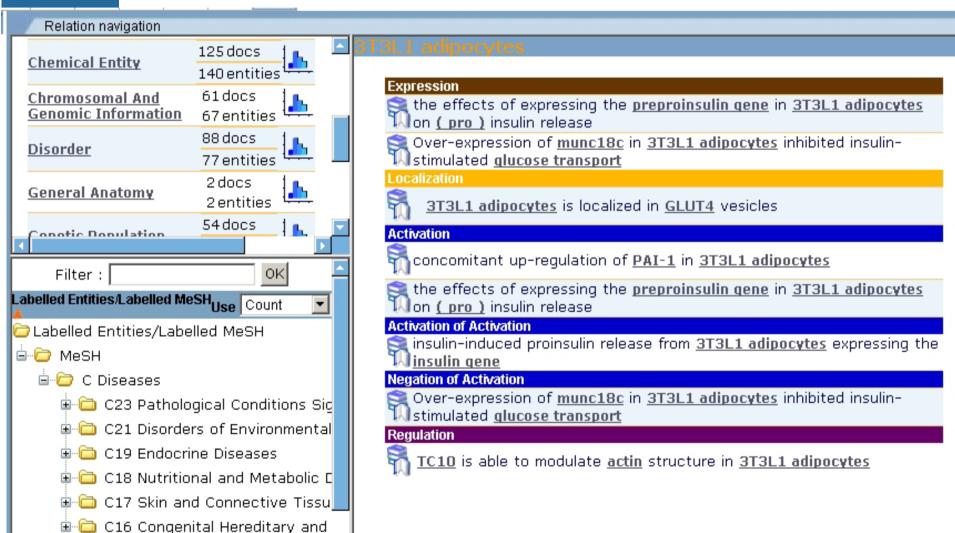




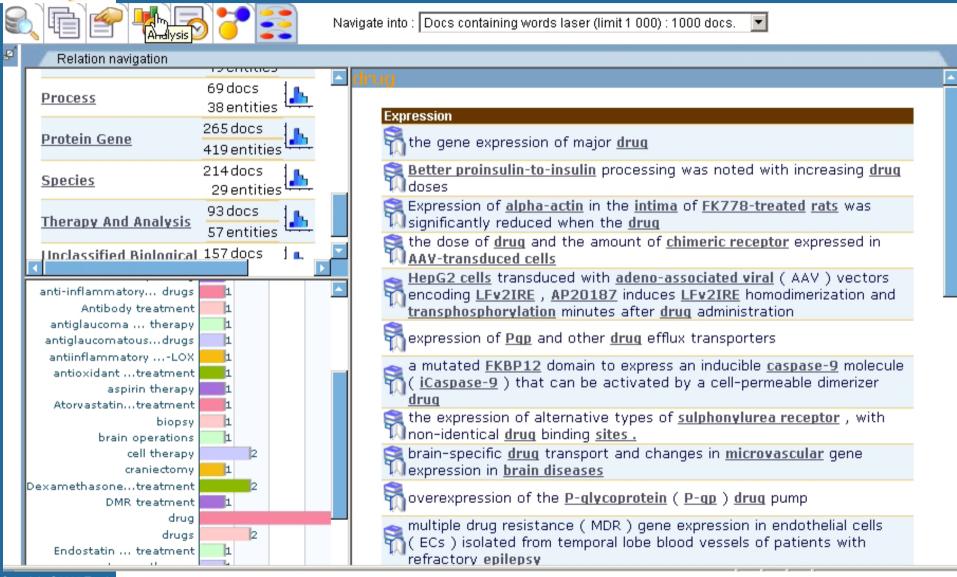
Relationships types

activation Apoptosis is induced by depsipeptide inhibition the suppression of cell growth Depsipeptide-mediated apoptosis regulation the translocation of Bax localizationthe CD95/Fas expression level in expression tumor cells the p53 binding site on S100B binding interaction the phosphorylation of RB1











Docs of cluster /1/ (Analytics) dans (Docs of cluster /1/ (Analytics) dans (Docs containing words diabetes, containing concept (s) (/...

1/39

Date: Aug 25, 2003 Source: J Autoimmun

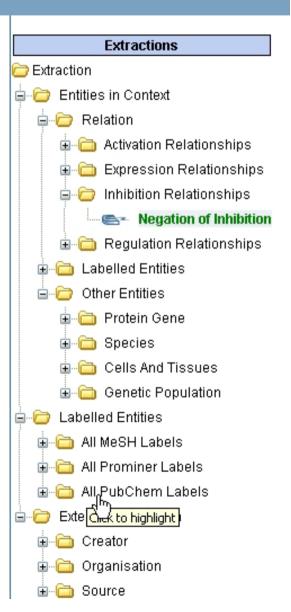
Medline ID: Pubmed-12935783

Author(s): Roberts Samantha A, Barbour Gene, Matarrese Marissa R, Mason David L, Leiter

Edward H, Haskins Kathryn, Hanson Matthew S

Adoptive transfer of islet antigen-autoreactive T cell clones to transgenic NOD.Ea(d)mice induces diabetes indicating a lack of I-E mediated protection against activated effector T cells.

Transgenic insertion of the MHC class II Ea(d)gene in NOD mice restores I-E expression and prevents T-cell-mediated autoimmune diabetes (IDDM). The specific molecular and cellular mechanisms responsible for the diabetes resistance of transgenic NOD.Ea(d)mice remain unclear. We adoptively transferred islet antigen-specific T cell clones into NOD and transgenic NOD.Ea(d)mice to evaluate the level of protection provided by I-E expression against activated effector T cells. We have found that neither neonatal or 3-5-week-old I-E-expressing NOD.Ea(d)mice can completely inhibit the diabetogenic activities of activated islet antigen-specific T cell clones. These data indicate that Ealpha protein expression in NOD antigen presenting cells (APC) does not reduce islet autoantigen presentation in the context of I-A(g7)below the threshold required for stimulation of effector/memory diabetogenic T cells. Our results suggest that the mechanism of Ealpha protein-mediated diabetes resistance in NOD mice may be "antigen ignorance," in which the quantity of islet autoantigens presented in the context of I-A(g7)by APC is reduced below the threshold required to activate nai;ve islet antigen-specific T cells.





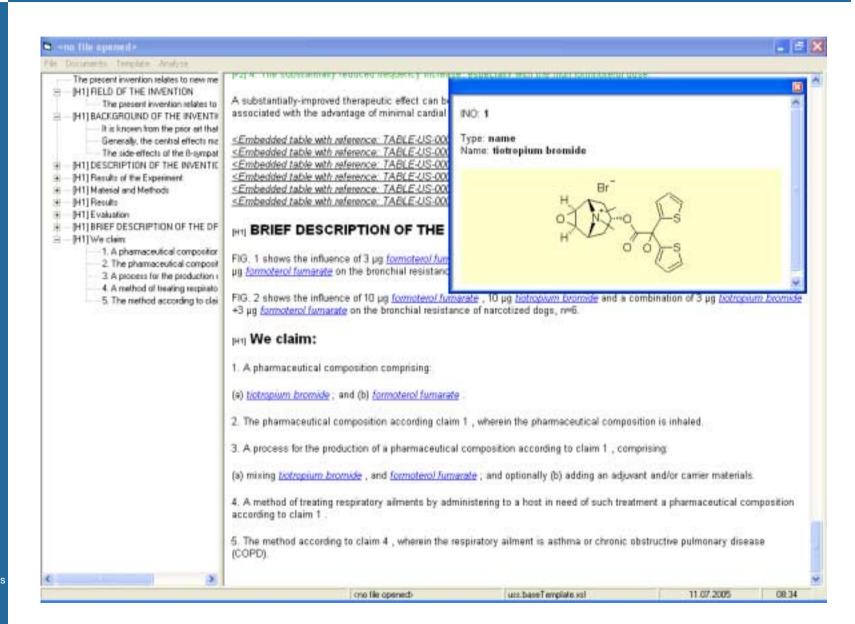


Copyright ©2005 Temis All Rights Reserved **Slide 13**

Information Extraction

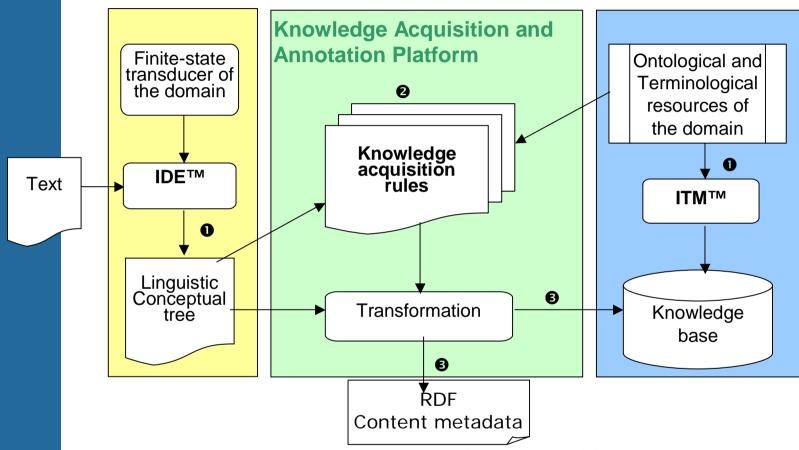
80 th ce 100 100	Summarize : Docs containing Activation Relationships dans (Docs containing words diabetes, containing concept(: 20 docs. 💌			
Parameter 3	Summary			
Extractions : Entities in Context Sections : [all]	Does containing Activation Relationships dans Summarize Does containing words diabetes, containing concept(s) (Genetic Population and Activation of Localization) Does containing Activation Relationships and Using extraction Entities in Context Using only feature Localization Relationships			
Radius 1				
Summarize	PKC-(varepsilon)-dependent survival signals in diabetic hearts.			
음o <u>트</u>	Role of the insulin-regulated aminopeptidase IRAP in insulin action and diabetes.			
Concepts	Investigations are underway to determine the in vivo substrates for IRAP and to measure the effect of insulin on the cleavage of			
⊞- 🗀 🔲 Labelled Entities (82×,351×	identified substrates. In individuals with type 2 diabetes the insulin-stimulated translocation of IRAP to the cell surface of muscle and fat cells is impaired. This defect may lead to decreased cleavage and consequently increased action of peptide hormones that are			
	substrates for IRAP.			
⊕ i Relation (104K,405K)	Control of arterial pressure by angiotensin II and nitric oxide at the onset of diabetes.			
	Aberrant insulin-induced GLUT4 translocation predicts glucose intolerance in the offspring of a diabetic mother.			
⊕ 🛅 🔲 Binding and Interaction	Aberrant insulin-induced GLUT4 translocation predicts glucose intolerance in the offspring of a diabetic mother. Peptide and major histocompatibility complex-specific breaking of humoral tolerance to native insulin with the 89-23 peptide in diabetes-prone			
	and normal mice.			
inhibition Relationship:	Impairment of glucokinase translocation in cultured hepatocytes from OLETF and GK rats, animal models of type 2 diabetes.			
☐ ☐ Interaction Relationship	We examined sugar-induced translocation of glucokinase in cultured hepatocytes from Otsuka Long-Evans Tokushima Fatty and			
□ □ □ □ □ □ □	Goto-Kakizaki rats, animal models of type 2 diabetes, and compared this with that in Long-Evans Tokushima Otsuka and Wistar rats, respectively, as control strains. When hepatocytes from the four strains were incubated with 5 mM glucose, glucokinase was present predominantly in the nuclei. Higher concentrations of glucose, 5 mM glucose plus 1 mM fructose, and 5 mM glucose plus 1 mM			
Regulation Relationshi				
E □ Unclassified Informa	sorbitol all induced the translocation of glucokinase from the nucleus to the cytoplasm in hepatocytes from these rats. The extent of glucokinase translocation under these conditions, however, was less marked in both diabetic rat types than in the control rats. The extent of the phosphorylation of glucose as estimated by the release of 3H2O from [2-3H] glucose is significantly lower in Goto-Kakizaki rats than in Wistar rats. The results indicate that the translocation of glucokinase is impaired in the hepatocytes of diabetic rats. They also suggest that the impaired translocation of glucokinase is associated with abnormal hepatic glucose metabolism in type 2 diabetes.			
I D				
Summarize	Impairment of glucokinase translocation in cultured hepatocytes from OLETF and GK rats, animal models of type 2 diabetes.			







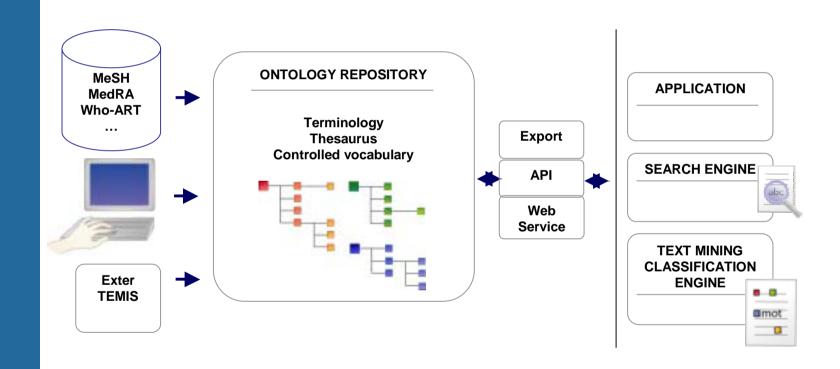
Semi-automatic ontology population and content annotation process



- Information extraction by the IDE™ and ontology modeling in ITM™
- Mapping of the extracted semantic tags with the concepts and relations modeled in the ontology
- If any mapping between a semantic tag and a concept, then creation of new instances of this concept, its properties and its relations in the knowledge base and/or of a RDF annotation if pertinent in the context of the application



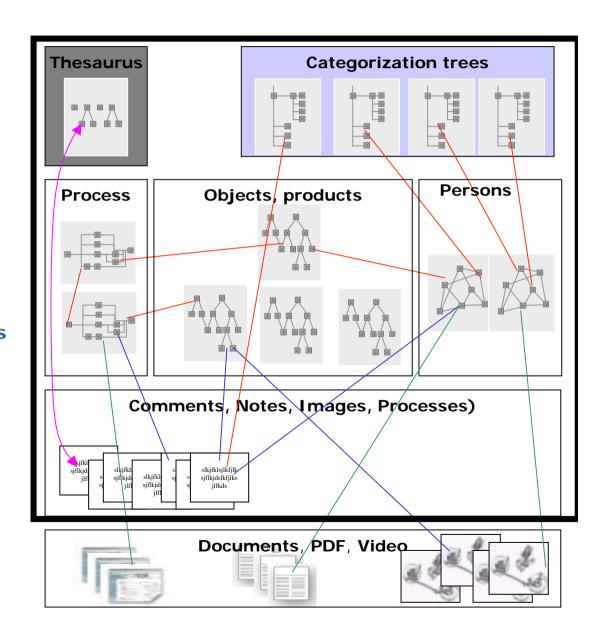
Terminology, Controlled vocabulary, Metadata repository

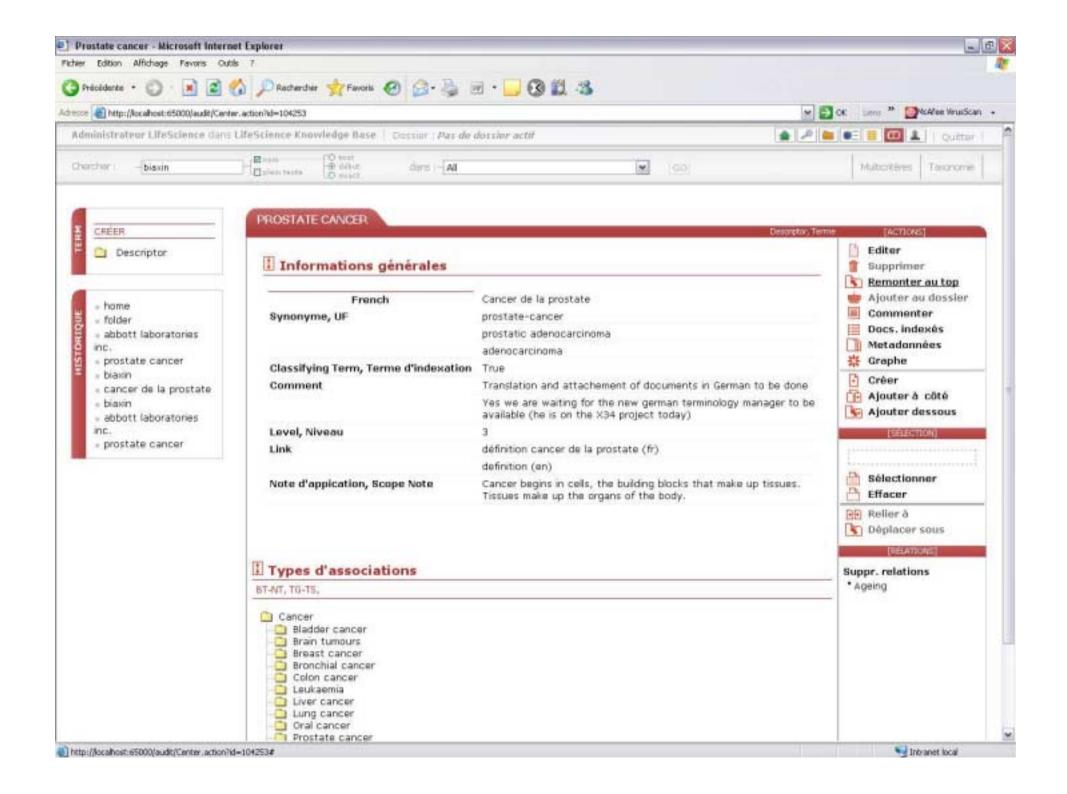


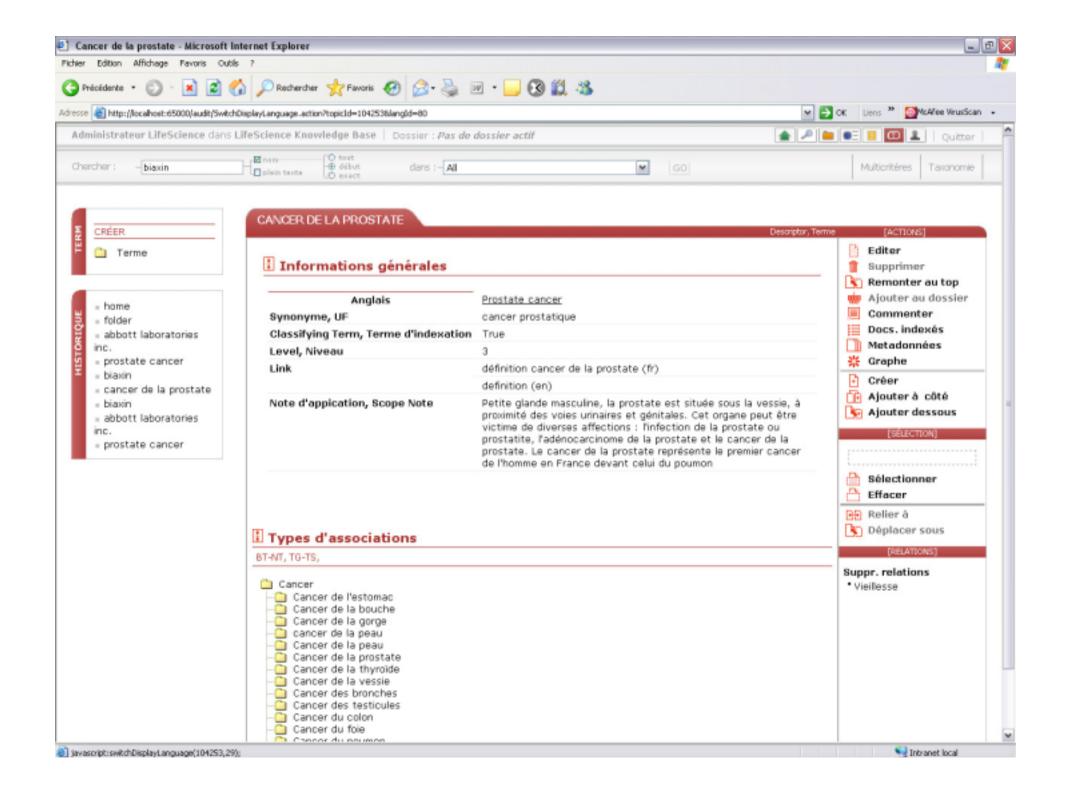


Topic Maps Structuring

- **☒** Classifications
- **➣** Thesaurus et glossaries
- **Business** vocabularies
- **X** Taxonomies
- **Subject Matters**
- **⋈** Knowledge Links
- **Processes**
- **Relations**
- **⋉** Files
- **⋈** Publications







Tunis said the final ICD coverage decision will have relatively few changes. He explained that although Medicare is establishing a registry of patients who receive the devices, physicians will not be required to explain why a particular device is used in order to receive reimbursement, as was suggested under the preliminary decision. The registry will allow Medicare and researchers to track how well the devices perform in various groups of patients over time.

ICDs vary in type and cost. Medtronic Inc. (MDT), Guidant Corp. (GDT) and St. Jude Medical Inc. (STJ), the three biggest device makers, stand to benefit from the decision.

Johnson & Johnson (JNJ) has announced plans to acquire Guidant.

▶ plans to

trust level

regulation event



▶ Egea Biosciences Inc.

▶ Guidant

organism tr

Alias J&J

The study was primarily funded by the National Institutes of Health. Medtronic and Wyeth (WYE) also contributed to the study's funding.

Association types: CoMarketing, Company Acquisition, Financial Revenue, Regulation Pending

•	member in CoMarketing, CoMarketi	ng		
	member	partnership event	partnership event	
۲	▶ lcagen	▶ Icagen and Johnson & Johnson comarket		
acquired in Acquisition/Vente d'une société, Company Acquisition				
	acquiring	acquisition event	trust level	
•	▶ GlaxoSmithKline PLC (GSK)	▶ GlaxoSmithKline PLC (GSK) acquires Johnson &	▶ reported last month that	
		Johnson (reported last month that)	▶ Expected	
•	acquiring in Acquisition/Vente d'une société, Company Acquisition			
	acquired	acquisition event	trust level	
•	▶ Guidant Corp.	▶ Johnson & Johnson acquires Guidant Corp.		

Johnson & Johnson acquires Egea Biosciences Inc.

▶ Johnson & Johnson acquires Guidant (plans to)

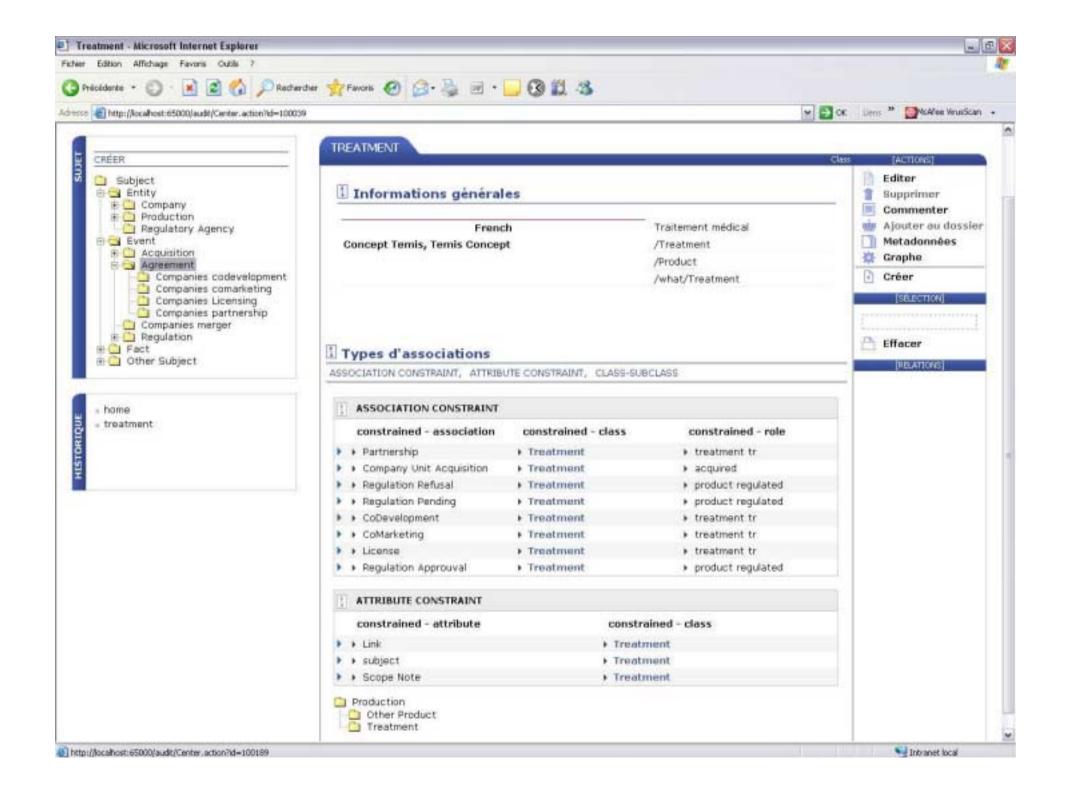
company tr in Financial Revenue, Revenus Financiers amount tr financial fact

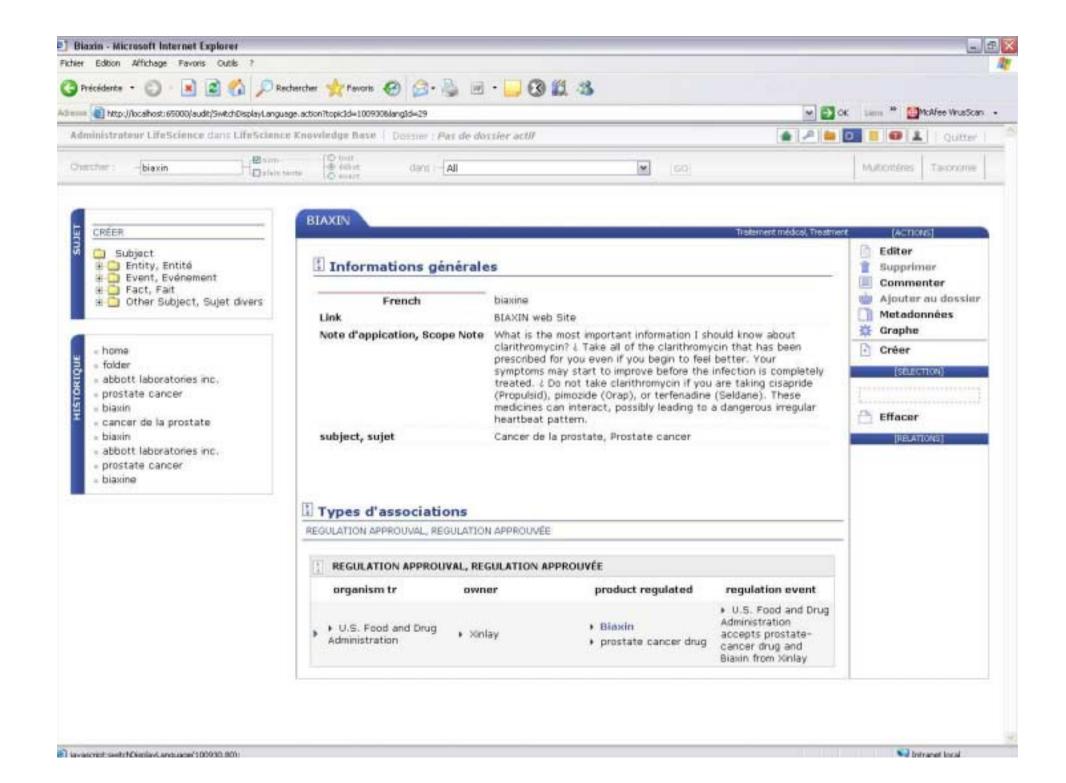
•	D 044 1-30	▶ Johnson & Johnson announces revenues of \$11 billion	b
	▶ \$11 billion	(would)	▶ would

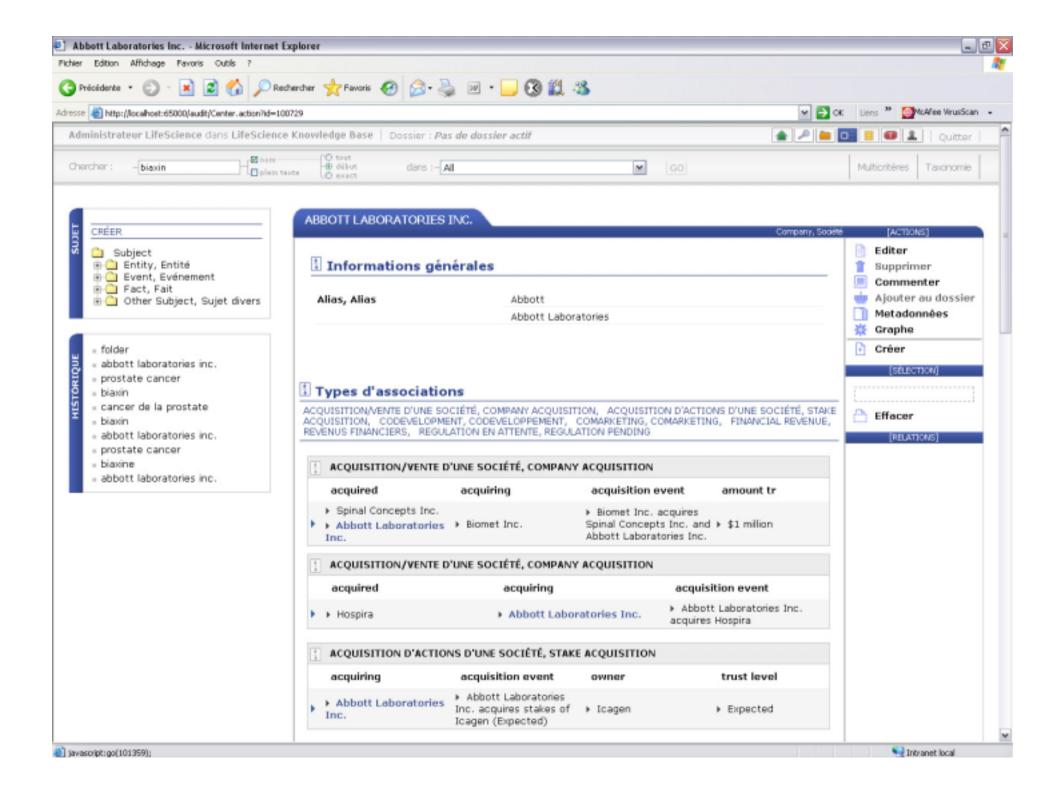
owner in Regulation en attente, Regulation Pending

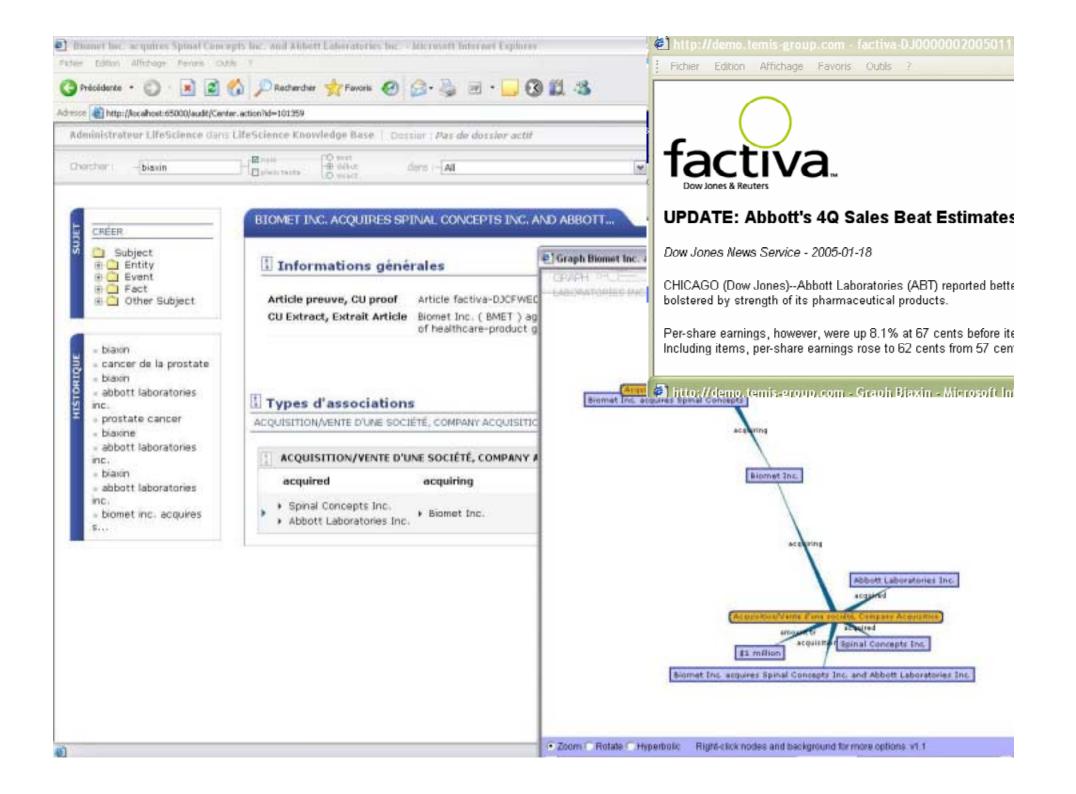
▶ ► U.S. Food and Drug Administration	▶ Ditropan	 U.S. Food and Drug Administration hasn't statued yet on Ditropan from Johnson & Johnson
---------------------------------------	------------	---------------------------------------------------------------------------------------------------------------------

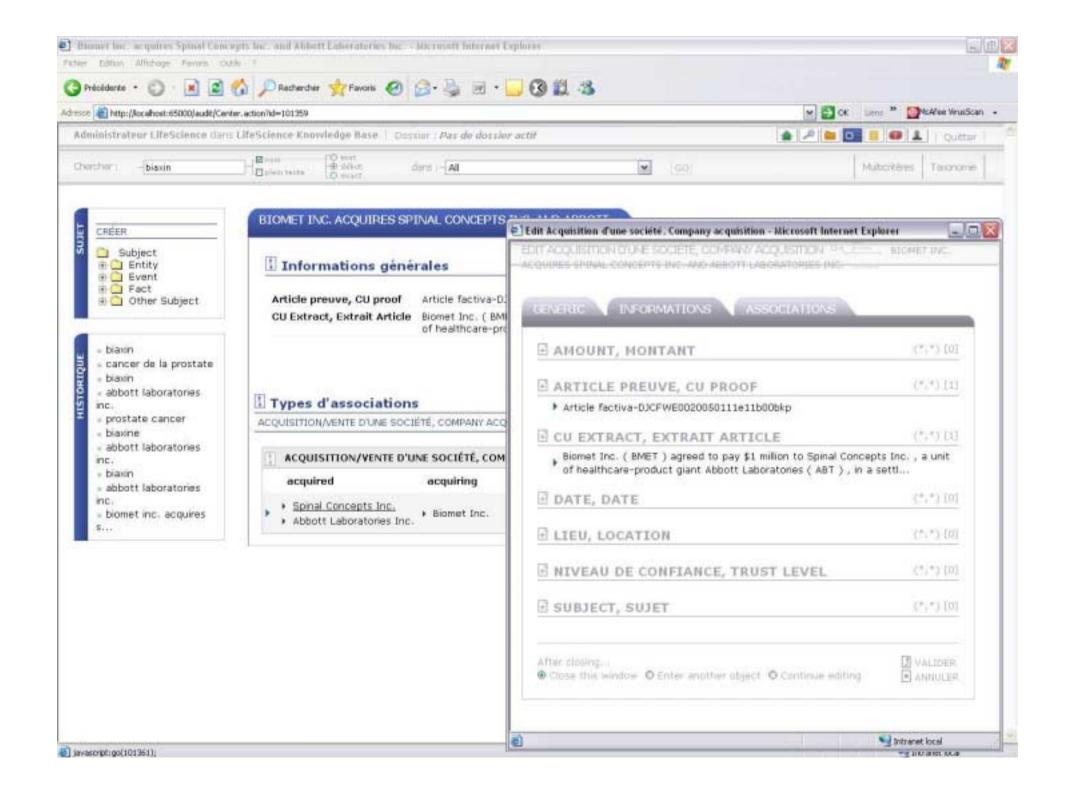
product regulated

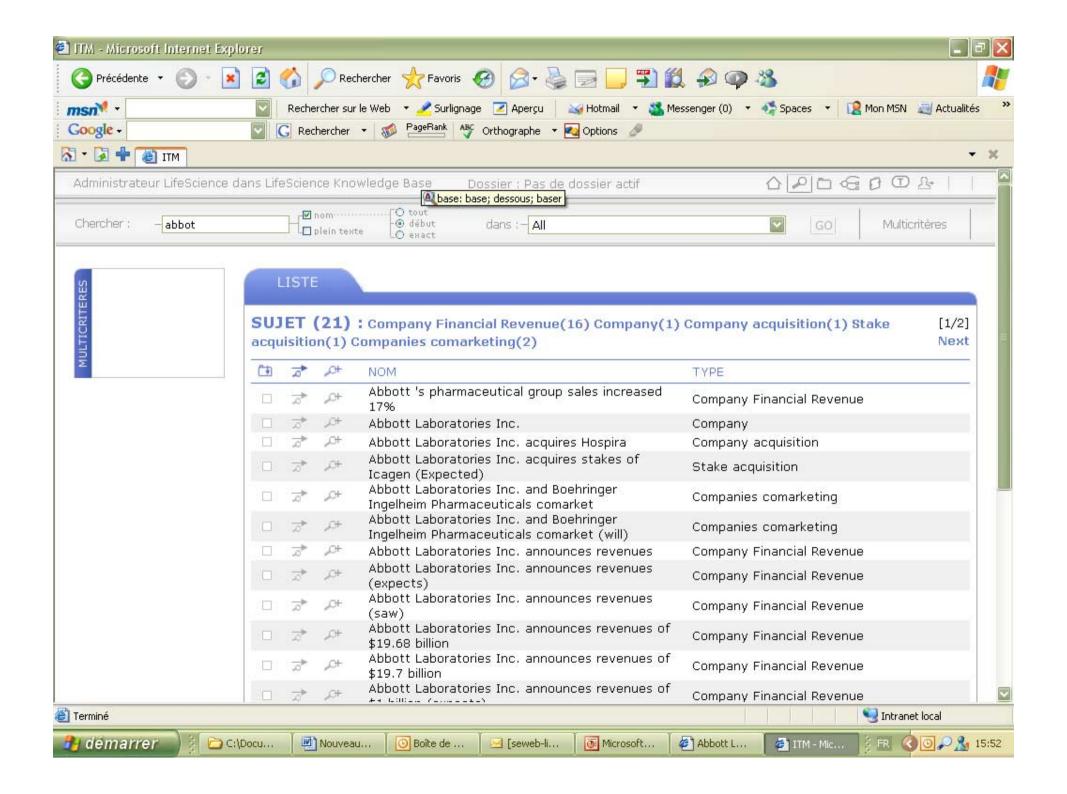


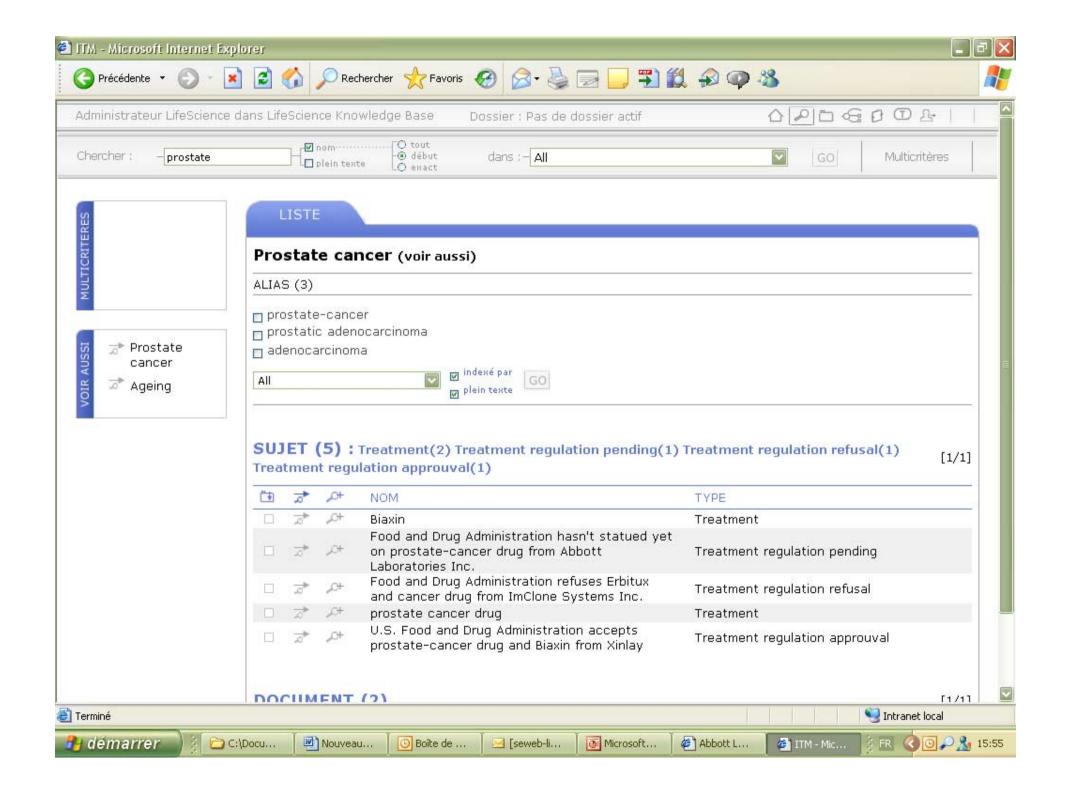










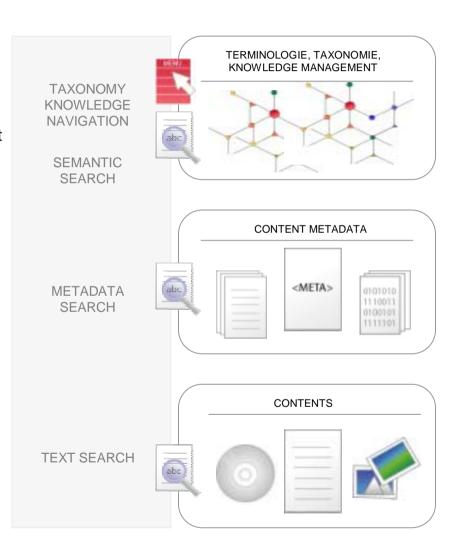




Knowledge driven content access



- Knowledge navigation to access to content
- Multiple views
- Direct access to content from business subject
- Federate distributed content
- Leverage search engine with corporate terminology





Thanks for your attention

Dr. Charles Huot

Charles.Huot@temis-group.com