


Surfing the Pipeline:

Tracking Changes in Drugs-In-Development Databases

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Surfing the Pipeline

Comparing pipeline databases



- First case study "Amgen" done in 2000.
- Follow-on case studies: epilepsy, COX-2 inhibitors, TAP.
- Will present an updated look at epilepsy and TAP case studies.
- And look specifically at tracking updates in the TAP case study.


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Drug Pipeline Databases

- Provide information on drug compounds in development worldwide
- Include scientific, clinical and commercial data
- Focus on compounds in discovery and clinical phases
- Also include launched and discontinued products.

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Drug Pipeline Databases

The leading players

- **Pharmaprojects** – Informa (PJB)
- **R&D Focus** -- IMS Health
- **R&D Insight** – Wolters Kluwer Health (Adis)
- **IDdb** – Thomson Scientific (Current Drugs)
- **Integrity** – Prous Science


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Case study: Epilepsy coverage

- First done in September 2002.
- **Search strategy:** "Therapeutic activity code =N3A" (PP, RDF, RDI)
- "Indication = epilepsy" (IDdb)
- "Therapeutic class = antiepileptic drugs" (Prous)
- Revisited in November 2006.

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Case study: Epilepsy coverage

Search results

| ■ <i>Records retrieved</i> | <i>2002</i> | <i>2006</i> |
|----------------------------|-------------|-------------|
| ■ Pharmaprojects | 407 | 460 |
| ■ R&D Focus | 202 | 229 |
| ■ R&D Insight | 201 | 228 |
| ■ IDdb | 250 | 271 |
| ■ Prous | 2880 | 1199 |

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Case study: Epilepsy coverage

Identifying unique compounds

| | Product | Common Drug Name | Synonyms | Database |
|-----|---------------------|------------------|--|-----------------------|
| 294 | Diastat | Diastat | | Current Drugs IDdb |
| 295 | Diazepam rectal gel | Diastat | Diastat | Adis R&D Insight |
| 296 | diazepam, Elan | Diastat | Diastat diazepam rectal gel, Elan diazepam rectal gel, Draxis | PJB Pharmaprojects |

“Generate Common Drug Names” tool automatically matches product names and synonyms

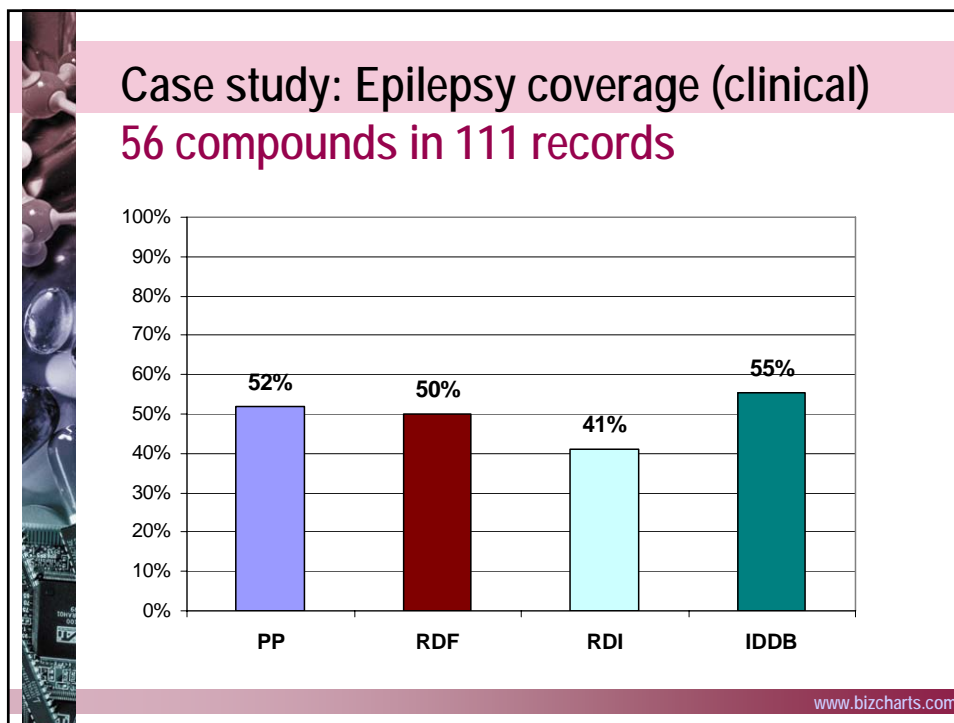
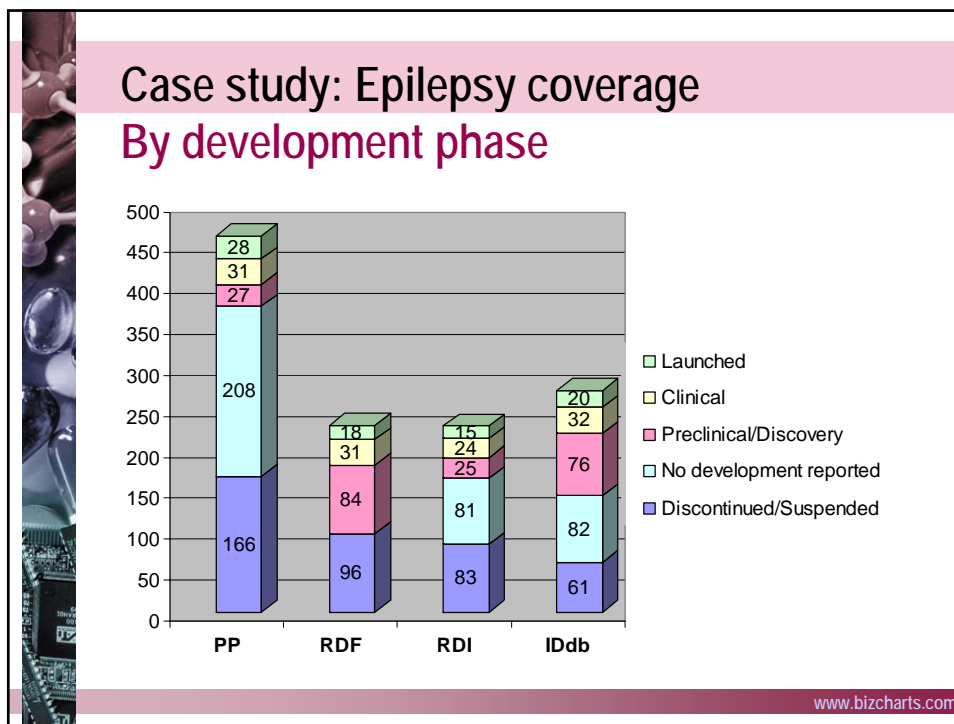
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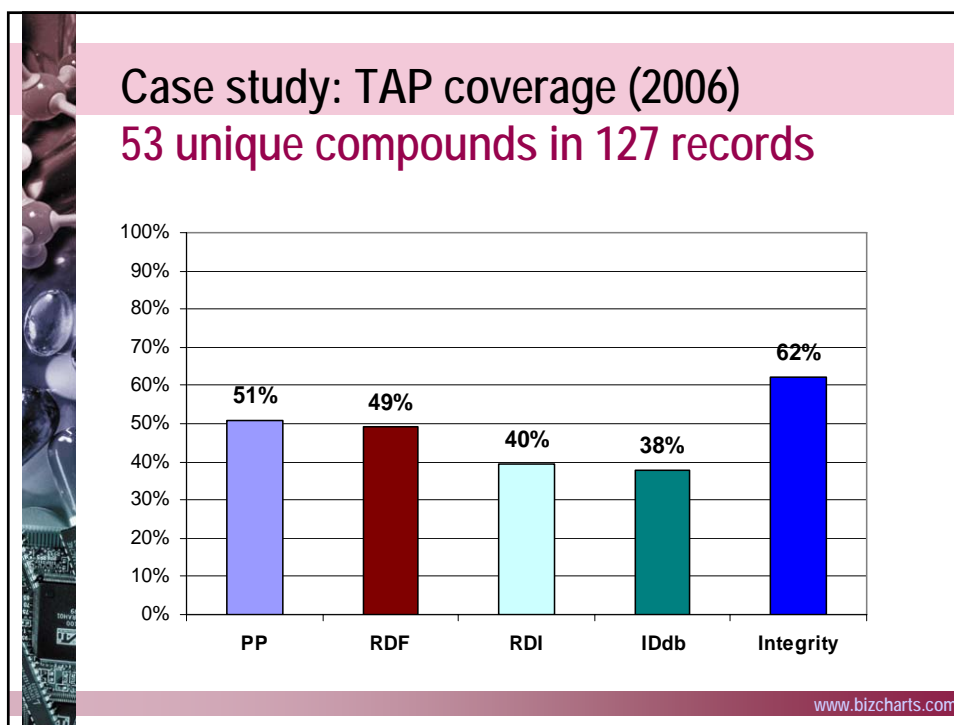
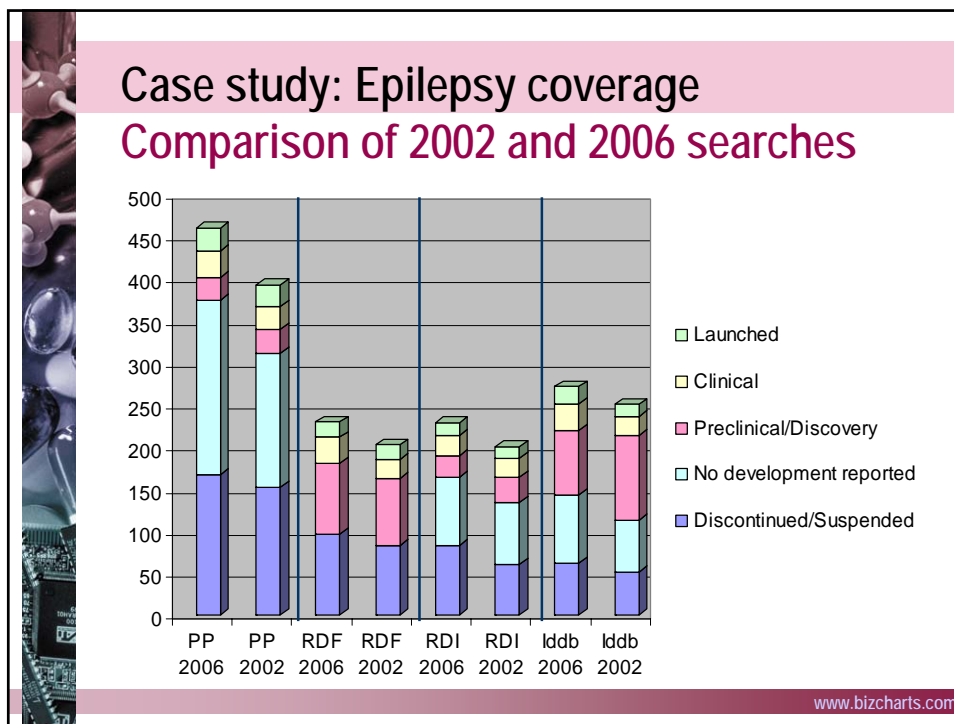
Case study: Epilepsy coverage


729 unique compounds in 1188 records

| Database | Percentage of Unique Compounds |
|----------|--------------------------------|
| PP | 63% |
| RDF | 31% |
| RDI | 31% |
| IDDB | 37% |

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Conclusions on coverage

- Based on several case studies (Amgen, Epilepsy, COX-2 inhibitors, TAP)
- A search of any single database will retrieve about 40% of the unique compounds.
- Different compounds are retrieved from each database because of differences in **indexing**.

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Case study: TAP 2004-2006

Updating drug pipeline reports

- Searched TAP as originator or licensee.
- All five databases searched.
- Sept 2004: 112 records, 47 compounds
Oct 2006: 127 records, 53 compounds
- Combined these two sets, replacing old rows with updated versions.
- Update compares results row-by-row.

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Classifying rows in the update

| TAP Pipeline – PP, RDF, RDI, IDdb, Integrity - Sept 2004 + Oct 2006 | | | | | | |
|---|-------------------------------|---------------------------|------------------------------|-----------------|------------------|--|
| | Drug | Database | Row Status | Company | Status | Indication |
| 16 | Famciclovir | Prous Integrity Compounds | Added | GlaxoSmithKline | Launched-1994 | Hepatitis B Herpes genitalis Herpes labialis Infection, herpes simplex virus Infection, herpes virus Infection, viral |
| 17 | famciclovir | PJB Pharmacoprojects | Not in Added Results Updated | | Launched | Infection, gynaecological Infection, varicella zoster virus Infection, herpes simplex virus |
| 18 | Testosterone-topical - Unimed | Adis R&D Insight | Not in Added Results Updated | | Launched | Hypogonadism |
| 19 | TAK-390MR | Thomson Scientific IDdb | Not in Added Results Updated | | Phase 3 Clinical | Gastroesophageal reflux Gastrointestinal disease Stomach ulcer Duodenal ulcer |
| 20 | TAK 603 | IMS R&D Focus | Not in Added Results Updated | | Discontinued | rheumatoid arthritis |
| 21 | cefusulodin (INN) | IMS R&D Focus | Not in Added Results Updated | | Marketed | bacterial infection |
| 22 | Lestaurtinib | Prous Integrity Compounds | Unchanged | | Phase II | |
| 23 | A 76154 | IMS R&D Focus | Unchanged | | Preclinical | cancer solid tumor genitourinary cancer |

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Case study: TAP 2004-2006

| Database | Added | Updated | Unchanged | Not in Added Results |
|-----------|-------|---------|-----------|----------------------|
| Integrity | 2 | 15 | 18 | 1 |
| IDdb | 2 | 18 | 10 | 0 |
| RDI | 12 | 8 | 3 | 0 |
| RDF | 6 | 10 | 12 | 0 |
| PP | 2 | 13 | 15 | 0 |

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Case study: TAP 2004-2006

Not in Added Results - Lestaurtinib

- Integrity: not in 2006 search results
- Records from PP, RDF, IDdb were updated
- Integrity (from milestone history):
2003: License agreement terminated - TAP, Schwarz Pharma
- IDdb (from record full text):
while lestaurtinib appeared on an Abbott pipeline in late June 2001, it was no longer shown on the same pipeline in November 2001; no development has since been reported by TAP.

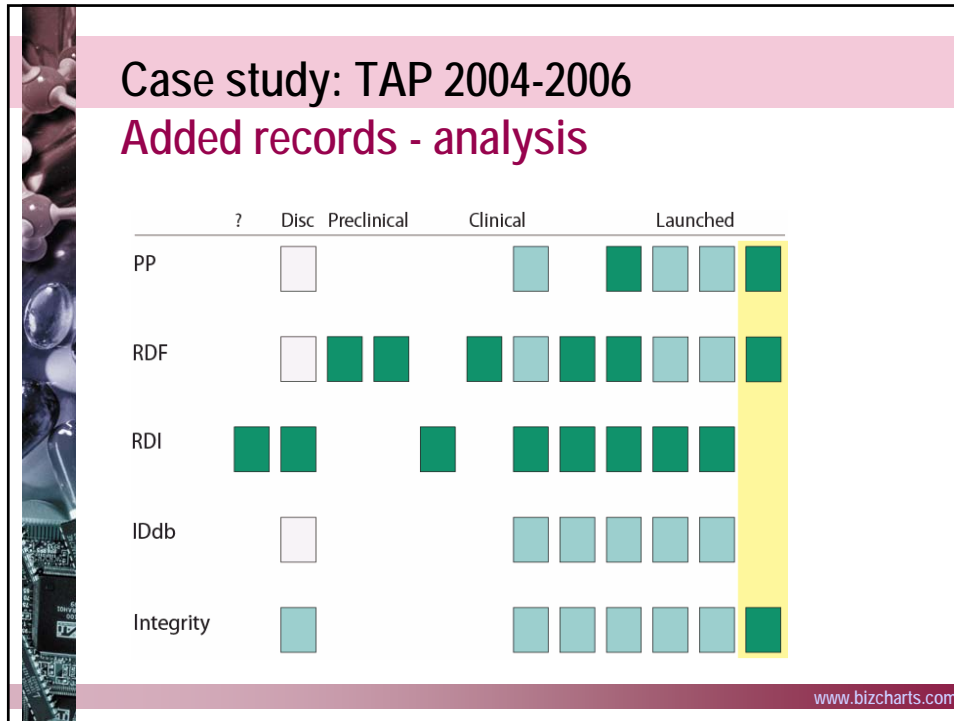
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Case study: TAP 2004-2006

Added records - analysis

| | ? | Disc | Preclinical | Clinical | Launched |
|-----------|---|------|-------------|----------|----------|
| PP | | | | | |
| RDF | | | | | |
| RDI | | | | | |
| IDdb | | | | | |
| Integrity | | | | | |

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Case study: TAP 2004-2006

Added - famciclovir

- Added by RDF, PP, Integrity since 2004
- IMS R&D Focus (in Latest Update):
On 29 September 2006 TAP reported that it has signed a copromotional agreement with Novartis for famciclovir (FAMVIR) in the USA.
- IDdb (in record full text):
by September 2006, Novartis signed a copromotion agreement with TAP Pharmaceuticals

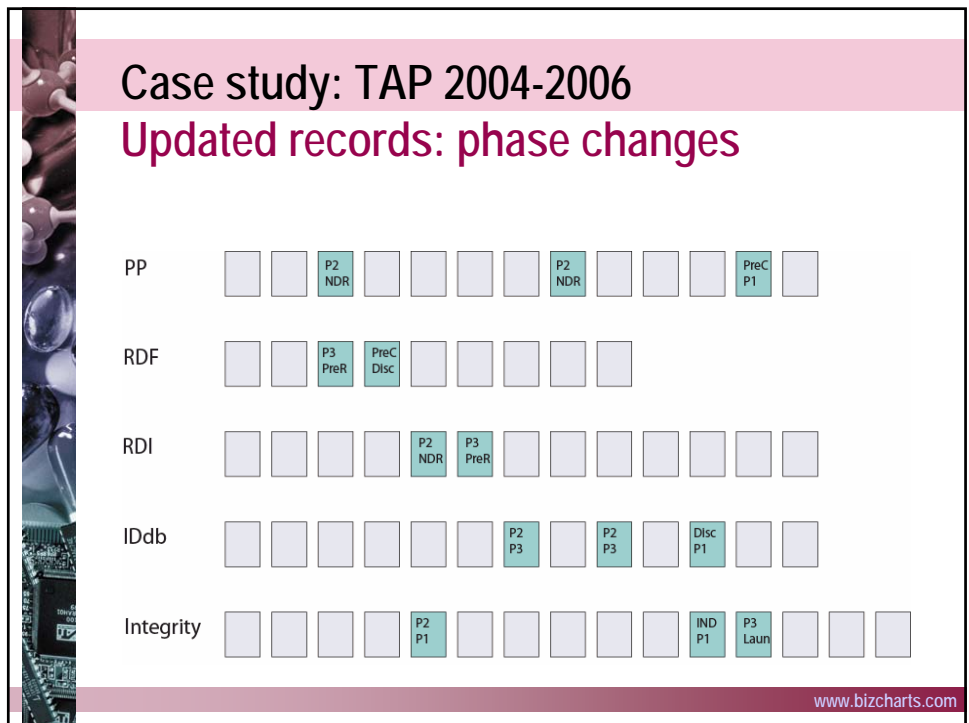
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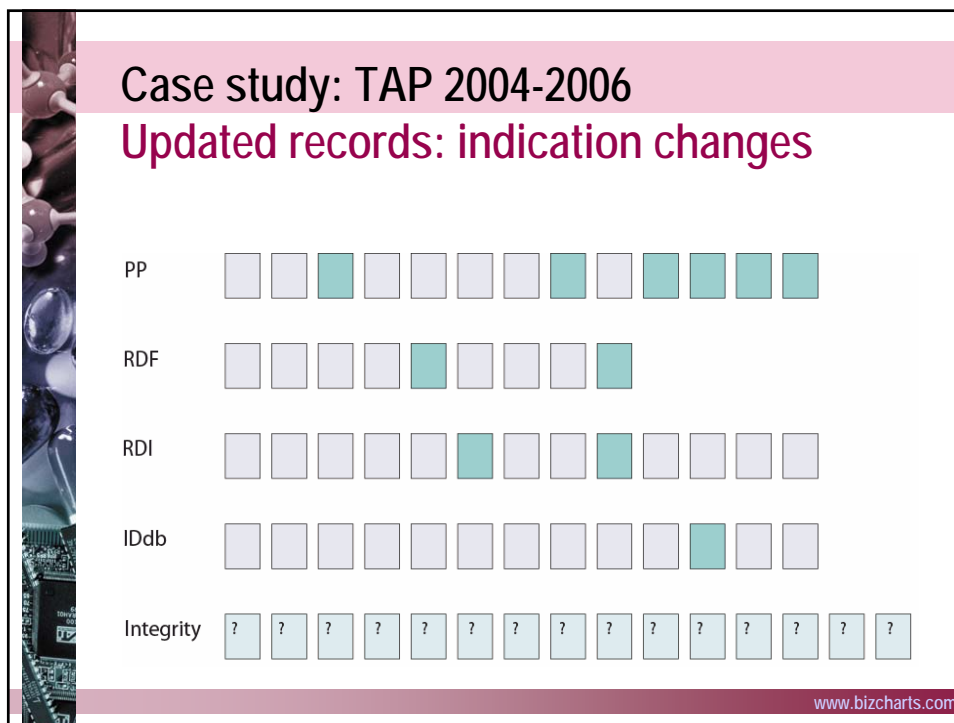
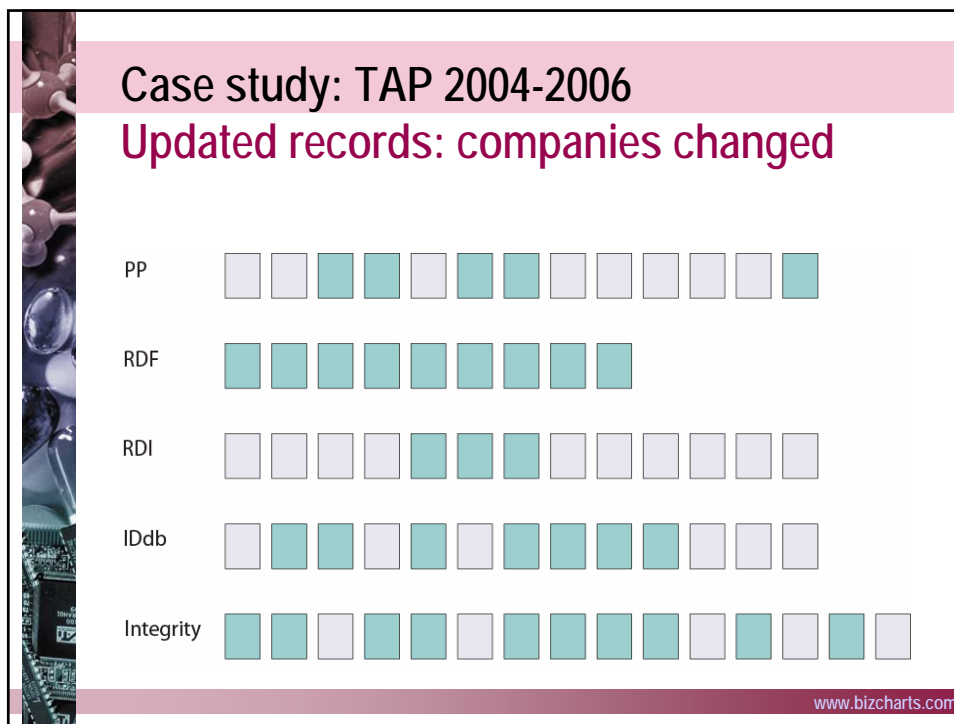
Marking changed cells


TAP Pipeline – PP, RDF, RDI, IDdb, Integrity - Sept 2004 + Oct 2006

| | Drug | Database | Synonyms | Company | Licensee | Status | Indication |
|----|------------|---------------------------|----------------------------------|-------------------------|---|-------------------------|---|
| 18 | CEP-2563 | Prous Integrity Compounds | KT-8391 | Cephalon Kyowa Hakko | Schwarz Pharma TAP | Phase I | Cancer, prostate |
| 19 | Febuxostat | Adis R&D Insight | TEI 6720 TMX 67 | Teijin Pharma | Ipsern SK Chemicals SK Pharma TAP Pharmaceutical Products | Preregistration | Gout Hyperuricaemia |
| 20 | Febuxostat | IMS R&D Focus | Febuxostat TMX 67 TEI 6720 | Teijin (Japan) | Ipsern (France) SK Pharma (South Korea) B TAP (USA) | Pre-registration | gout |
| 21 | Febuxostat | PJB Pharmaprojects | TEI-6720 TMX-67 | Teijin (Japan) | Abbott (USA) Takeda (Japan) Ipsern (France) SK Chemicals (South Korea) | Pre-registration | Hyperuricaemia |
| 22 | Febuxostat | Thomson Scientific IDdb | TEI-6720 TMX-67 | Teijin Ltd | TAP Pharmaceutical Products Inc Ipsern TAP Pharmaceuticals Inc | Pre-registration | Gout |
| 23 | FR 229934 | Adis R&D Insight | | Astellas Pharma | TAP Pharmaceutical Products | Preclinical | Erectile dysfunction |
| 24 | FR 229934 | IMS R&D Focus | | Astellas (Japan) | B TAP (USA) | Discontinued | erectile dysfunction sexual dysfunction |
| 25 | FR 229934 | PJB Pharmaprojects | | Astellas (Japan) | Abbott (USA) Takeda (Japan) | No Development Reported | Impotence |
| 26 | Ibrolipim | Adis R&D Insight | NO 1886 OPF 009 | Otsuka Pharmaceutical | TAP Pharmaceutical Products | No development reported | Diabetic complications Hypertriglyceridaemia Low HDL cholesterol Nephrotic syndrome Obesity |

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Surfing the Pipeline

Keep in mind...




- Drug pipeline records are not abstracted from a reference document (as with patents)
- Each record is an **editorial view** of the compound based on a range of sources.
- Each publisher has a unique background and focus.
- 10-20 editors at each publisher are maintaining several thousand active compounds.

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Surfing the Pipeline

Keep in mind...



- Data changes are infrequent, but quick.
- New records are rare – most changes are in the record's indexing.
- More sources watched lead to a better chance of spotting developments.
- Comparing results over time can highlight important changes.

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