

Re-profile a drug using Clarivate Analytics Integrity

Does your company have technology that could support repurposing of known drugs, including those that didn't make it to the market because they were not efficacious enough?

Clarivate Analytics Integrity can accelerate your drug re-profiling research by pinpointing potential products of interest. Benefit from intuitive filtering tools within Integrity to narrow down your research results and identify products that may be suitable for re-profiling. You can also use Integrity to gather All Related Information associated with your potential product in different Knowledge Areas to try to understand why development hasn't advanced and what recent activity there has been around the drug. **Example Scenario:** your company has a new platform technology to improve bioavailability of compounds formulated in capsules. As a biochemist, you would like to search Integrity for known drugs developed with capsule formulation that did not make it to the market because of poor efficacy due to low bioavailability in plasma.

Search for drugs with pharmacokinetic values indicating potential bioavailability issues:

Records Retrieved: 256 in Pharmacokinetics/ Metabolism

Pharmacokinetics/Metabolism Search Results

Query > Formulation = "Capsules" AND Value = LESS THAN 50 AND Model = "Humans" AND Parameter = F AND Unit = %

| Administered Product | Measured Product | Biomarker | Model | Condition | Source |
|--|---------------------------------------|-----------|-----------------|-----------|--------|
| (297827) (Capsules) 10·10 ⁻³ g p.o. s.d. | 5-Hydroxyrofecoxib F 14.9 % HPLC-F | | Humans Adult | | Ref. 1 |
| (297827) (Capsules) 25·10 ⁻³ g p.o. s.d. | 5-Hydroxyrofecoxib F 14 % HPLC-F | | Humans Adult | | Ref. 1 |
| (722572) (Capsules) 15·10 ⁻³ g p.o. o.d. | 722572 F Plasma 30 % | | Humans Adult | Cancer | Ref. 3 |
| (722572) (Capsules) 22.5·10 ⁻³ g p.o. o.d. | 722572 F Plasma 30 % | | Humans Adult | Cancer | Ref. 3 |
| (722572) (Capsules) 30·10 ⁻³ g p.o. o.d. | 722572 F Plasma 30 % | | Humans Adult | Cancer | Ref. 3 |

To search for compounds with specific pharmacokinetics values for a certain parameter you should start with a search in the **Pharmacokinetics/Metabolism** Knowledge area.

In the **advanced search** form you can select **Administrated Product** and then the **Formulation** field; in this case we are interested in the bioavailability of compounds formulated in capsules.

Using the search field called **Value**, in the **Measured Product** submenu, you can search for low PK values for a particular parameter. Select bioavailability (F), and add units, in this case percentage, and define the **values** you wish to find, in this example less than 50%.

You can search for PK/M results for drugs tested in humans by selecting the field **Model** and **Humans**.

Tip:

- To find a list of parameter abbreviations and definitions, click **Frequently Asked Questions** either on the bottom left-hand side of the *Integrity* home page or under the Support/Help tab on the navigator bar.
- Use the **Browse Indexes** (**Index** button to the right of the search field) to select and copy search terms to the from.

Click **Start** to launch your search and display results.

Administered Product (297827)
 10-10⁻³ g p.o. s.d.
Measured Product
 5-Hydroxyrofecoxib
 HPLC-F F 14.9 %
Biomarker Model
 Humans; Adult
Title
 The disposition and metabolism of rofecoxib, a potent and selective cyclooxygenase-2 inhibitor, in human subjects
 PubMed >> WEB OF SCIENCE RECORD >> WEB OF SCIENCE CITING RECORDS >> WEB OF SCIENCE RELATED RECORDS
 OpenURL Full Text
Reference
 Drug Metab Dispos 2002, 30(6): 684
Authors
 Halpin, R.A.; et al.

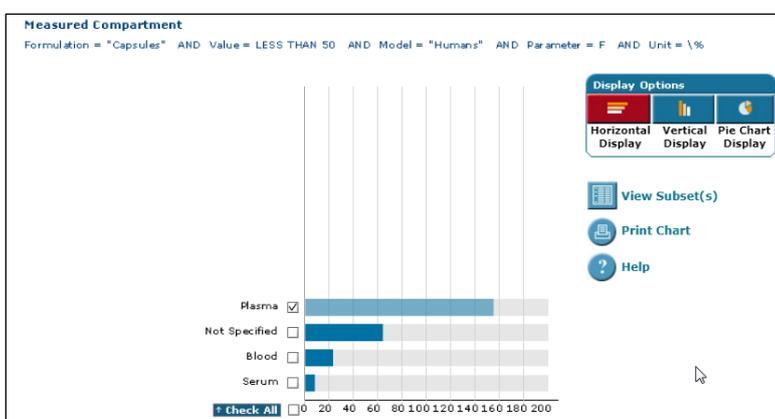
To view the associated references, click the **reference link** in the source column on the right.

In the popup window, you will find the reference information and links to PubMed and Web of Knowledge where available.

Now use **Filter by Statistics** to the right of the results list to narrow down your results.

Select **Measured Compartment** and in this case, select **Plasma**.

Click **View Subset(s)** to see the results.



Find compounds of potential interest for your research:

Drugs & Biologics 55 RECORDS
 Biomarkers 0 RECORDS
Literature 49 RECORDS
 Organic Synthesis 0 RECORDS
Pharmacokinetics/ Metabolism 155 RECORDS
 Companies & Research Institutions 0 RECORDS
 Experimental Models 0 RECORDS
 Targets & Pathways 0 RECORDS
 Genomics 0 RECORDS
 Patents 0 RECORDS
 Experimental Pharmacology 0 RECORDS
 Clinical Studies 0 RECORDS
 Disease Briefings 0 RECORDS

To review further information associated with these results, you can open the **Options** pull-down menu and click **All Related Information via Quick Search**.

To review the drug records to pinpoint potential product suitable for reprofiling, click the **Drugs & Biologics** link.

To see the full product records, open the **Options** pull-down menu and select **Full Records**.

If you have any questions please contact us at: DTStraining@clarivate.com

To find products that did not make it to the market you can use **Filter by Statistics** and select **Development Status**. From the chart select products that are not launched.

You can also select **Under Active Development/No development Reported** and select only product with no development reported.

Once you have identified an interesting product, you can get background information before contacting the company to offer your technology.

For example, look at the **Experimental Pharmacology** data to see the activity levels and at the **Literature** references to try to understand why development hasn't advanced and what recent activity there has been around the drug.

Tip: Some Pharmacokinetics/Metabolism records have an associated metabolic scheme. This is indicated by a button labelled "Metab" in the results table display. Click on this button to open a popup window with a metabolism scheme, text description and related references.

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