THOMSON REUTERS INTEGRITY

QUICK GUIDE SERIES: No. 22

FINDING SUITABLE EXPERIMENTAL MODELS FOR YOUR COMPOUND WITHIN THOMSON REUTERS INTEGRITY

Are you interested in finding comprehensive information on validated *in vivo* preclinical models of human diseases, toxicity, or target efficacy studies that can be used in testing your compound?

The **Experimental Model** record in Thomson Reuters Integrity[SM] contains information that allows scientists to reproduce a model of human disease and understand a model's performance in previous assays/drug tests. It also **links** to related **Drugs**, **Biomarkers**, **Targets**, **Genomics**, **Experimental Pharmacology**, **Literature**, and **Patents** where available.

This step-by-step guide will show you how to:

* Find suitable Experimental Models for use in testing your compound

* Link to All Related Information via Quick Search within Integrity to retrieve associated experimental pharmacology data and reference information for the model of your interest

EXAMPLE SCENARIO: Experimental Models within INTEGRITY

A team of pharmacologists at a university is collaborating with a large Pharma company. They have identified a cannabinoid agonist for the treatment of pain with a dual mechanism of action. The team would like to start preclinical trials in an animal model. They want to use Integrity to identify other compounds that have a dual cannabinoid agonist mechanism and review the models the drugs were tested on.

1. FIND SUITABLE EXPERIMENTAL MODELS FOR USE IN TESTING YOUR COMPOUND

* In Integrity you can set up a search to find compounds that have a dual mechanism of action. In the **Drugs & Biologics Knowledge Area** run a search using the **Mechanism of Action** field and select terms from the index. In this example we want to see compounds that are Cannabinoid CB1 Agonists and Cannabinoid CB2 Agonists. Use the term **AND** between the mechanism terms in the field. It will automatically appear as **OR** and you will need to change it manually to "Cannabinoid CB1 Agonists" and "Cannabinoid CB2 Agonists." (FIGURE 1)

* The results show those compounds that have been shown to act as both Cannabinoid CB1 Agonists and Cannabinoid CB2 Agonists. You can sort the results by the **Highest Phase** by clicking on the column heading. (FIGURE 2)

* To see the Experimental Models that have been used in testing these compounds, open the **Options** menu and then select **All Related Information via Quick Search**. (FIGURE 3)

* Clicking the link to the **Experimental Models Knowledge Area** (FIGURE 4) displays a table of the models used in tests with the cannabinoid CB1/CB2 agonists. To see only those models for pain, you should select the **Condition Filter by Statistics chart** (FIGURE 5) and from the chart select the categories that are for Pain. (FIGURE 6)

FIGURE 1

FIGURE 2

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2. WORKING WITH YOUR DATA

• To see the full records, open the **Options** pulldown menu and select **Full Records**. The full record display contains information about the model and its characteristics. (FIGURE 7)

• Some records contain a link in the **Characteristic Details** that opens a popup window with further information about, for example, the Inducer: (FIGURE 8)

• The **Experimental Model** record shows the **Application information** at the top. Applications are classified as Target, Condition, or Toxicity by the entry in the Study Type field: Pharmacodynamic studies, Measure drug efficacy, and Measure drug toxicity, respectively. You can link to the **Experimental Pharmacology** records, **References**, and **Patents** associated with the **Application**. At the bottom of the record you can see which drugs have been tested in the model and link through to the **Drugs & Biologics**, **Experimental Pharmacology**, **Reference**, and **Patent** records. (FIGURE 9)

• By clicking on the **Experimental Pharmacology** links you will see the associated data values displayed in a table. (FIGURE 10)
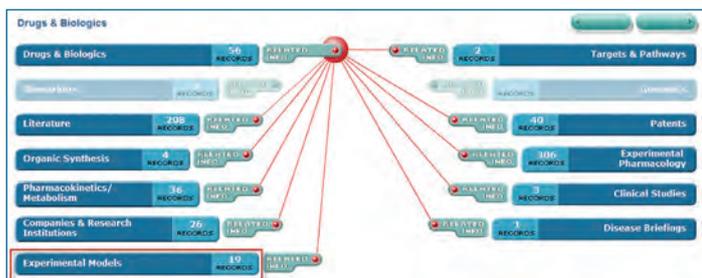

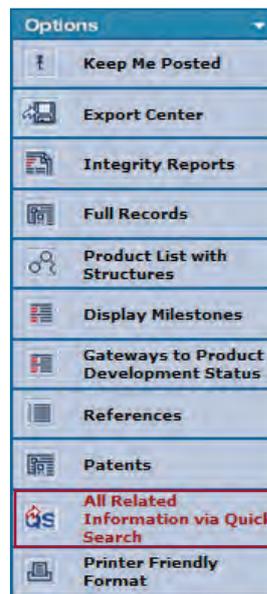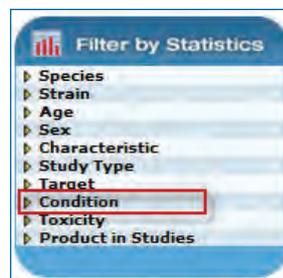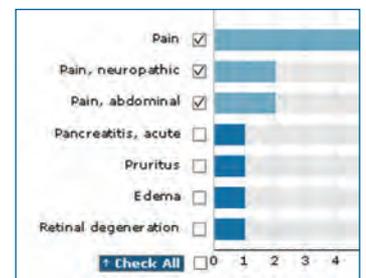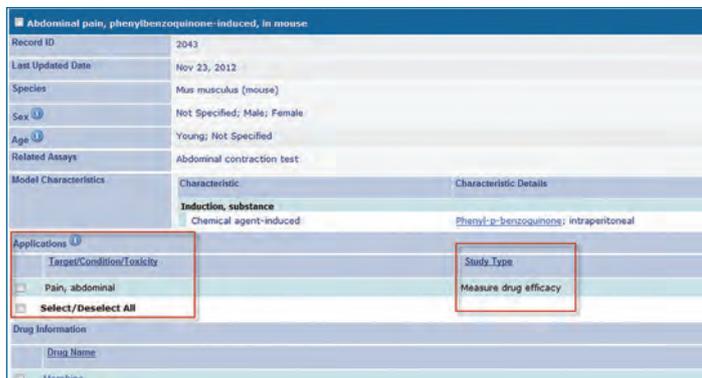FIGURE 3

FIGURE 4

FIGURE 5

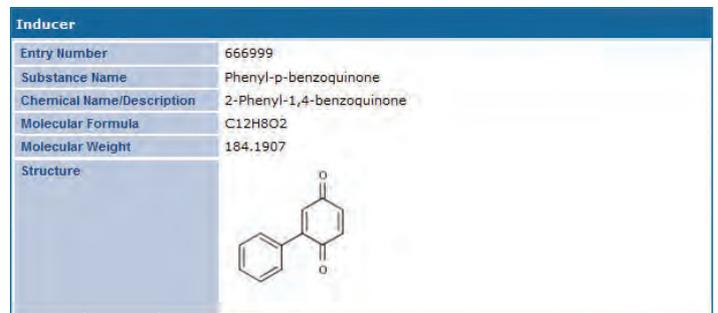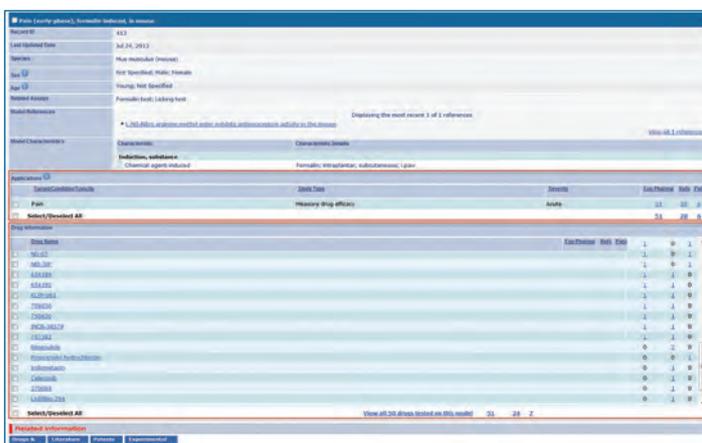

FIGURE 6

FIGURE 7

FIGURE 8

FIGURE 9

FIGURE 10

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