Release Notes for BAO version 2.8.10

Contact: Stephan Schurer (sschurer at med dot miami dot edu)

Release Date:October 20, 2023

### About BAO

The BioAssay Ontology (BAO) has been developed to formally describe biological screening assays and their results including high-throughput screening (HTS) data; specifically in the domain of small molecule drug and probe development. BAO enables categorization of assays and results by based on several concepts that are important to interpret and analyze screening data with the goal to infer the mechanism of action of small molecules based on the known aggregate screening results from many assays.

### Changes in BAO v 2.8.10

**Add external class**

<http://purl.obolibrary.org/obo/CHEBI_9590>  
<http://purl.obolibrary.org/obo/CHEBI_50275>  
<http://purl.obolibrary.org/obo/CHEBI_7936>

**Add axioms**

|  |  |  |  |
| --- | --- | --- | --- |
| **BioAssay label** | **BAO property** | **Restriction** | **ChEBI Name** |
| BCRP inhibition assay | has substrate | only | rosuvastatin |
| CYP induction assay | has substrate | some | phenacetin |
| CYP induction assay | has substrate | some | bupropion |
| CYP induction assay | has substrate | some | midazolam |
| CYP inhibition assay | has substrate | some | phenacetin |
| CYP inhibition assay | has substrate | some | s-mephenytoin |
| CYP inhibition assay | has substrate | some | bupropion |
| CYP inhibition assay | has substrate | some | amodiaquine |
| CYP inhibition assay | has substrate | some | diclofenac |
| CYP inhibition assay | has substrate | some | nifedipine |
| CYP metabolite formation kinetics | has substrate | some | sulfaphenazole |
| CYP metabolite formation kinetics | has substrate | some | furafylline |
| CYP metabolite formation kinetics | has substrate | some | quinidine |
| CYP metabolite formation kinetics | has substrate | some | montelukast |
| CYP metabolite formation kinetics | has substrate | some | troleandomycin |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | phenacetin |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | s-mephenytoin |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | bupropion |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | amodiaquine |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | diclofenac |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | dextromethorphan |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | midazolam |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | testosterone |
| CYP time dependent inhibition IC50 shift assay | has substrate | some | nifedipine |
| CYP time dependent inhibition Ki/kinact | has substrate | some | phenacetin |
| CYP time dependent inhibition Ki/kinact | has substrate | some | bupropion |
| CYP time dependent inhibition Ki/kinact | has substrate | some | amodiaquine |
| CYP time dependent inhibition Ki/kinact | has substrate | some | s-mephenytoin |
| CYP time dependent inhibition Ki/kinact | has substrate | some | diclofenac |
| CYP time dependent inhibition Ki/kinact | has substrate | some | dextromethorphan |
| CYP time dependent inhibition Ki/kinact | has substrate | some | midazolam |
| CYP time dependent inhibition Ki/kinact | has substrate | some | testosterone |
| CYP time-dependent inhibition assay | has substrate | some | phenacetin |
| CYP time-dependent inhibition assay | has substrate | some | s-mephenytoin |
| CYP time-dependent inhibition assay | has substrate | some | bupropion |
| CYP time-dependent inhibition assay | has substrate | some | amodiaquine |
| CYP time-dependent inhibition assay | has substrate | some | diclofenac |
| CYP time-dependent inhibition assay | has substrate | some | dextromethorphan |
| CYP time-dependent inhibition assay | has substrate | some | midazolam |
| CYP time-dependent inhibition assay | has substrate | some | testosterone |
| CYP time-dependent inhibition assay | has substrate | some | nifedipine |
| CYP1A2 induction assay | has substrate | some | phenacetin |
| CYP1A2 inhibition assay | has substrate | some | phenacetin |
| CYP2B6 induction assay | has substrate | some | bupropion |
| CYP2B6 inhibition assay | has substrate | some | bupropion |
| CYP2C8 inhibition assay | has substrate | some | amodiaquine |
| CYP2C9 inhibition assay | has substrate | some | diclofenac |
| CYP2C19 inhibition assay | has substrate | some | s-mephenytoin |
| CYP3A4 induction assay | has substrate | some | midazolam |
| CYP3A4 inhibition assay | has substrate | some | nifedipine |
| CYP3A4 inhibition assay | has substrate | some | midazolam |
| CYP3A4 inhibition assay | has substrate | some | testosterone |
| definitive CYP IC50 | has substrate | some | phenacetin |
| definitive CYP IC50 | has substrate | some | bupropion |
| definitive CYP IC50 | has substrate | some | amodiaquine |
| definitive CYP IC50 | has substrate | some | s-mephenytoin |
| definitive CYP IC50 | has substrate | some | diclofenac |
| definitive CYP IC50 | has substrate | some | dextromethorphan |
| definitive CYP IC50 | has substrate | some | midazolam |
| definitive CYP IC50 | has substrate | some | testosterone |
| definitive CYP IC50 | has substrate | some | nifedipine |
| efflux transporter inhibition assay | has substrate | some | rosuvastatin |
| efflux transporter inhibition assay | has substrate | some | metformin |
| efflux transporter inhibition assay | has substrate | some | taurocholate |
| MATE1 inhibition assay | has substrate | some | metformin |
| MATE2 inhibition assay | has substrate | some | metformin |
| monoamine oxidase inhibition assay | has substrate | some | kynuramine |
| OATP1B1 inhibition assay | has substrate | some | rosuvastatin |
| OATP1B3 inhibition assay | has substrate | some | rosuvastatin |
| OCT1 inhibition assay | has substrate | some | metformin |
| OCT2 inhibition assay | has substrate | some | metformin |
| P-gp inhibition assay | has substrate | some | taurocholate |
| transporter inhibition assay | has substrate | some | rosuvastatin |
| transporter inhibition assay | has substrate | some | taurocholate |
| transporter inhibition assay | has substrate | some | metformin |
| UGT inhibition assay | has substrate | some | estradiol |
| UGT inhibition assay | has substrate | some | trifluoperazine |
| UGT inhibition assay | has substrate | some | propofol |
| UGT inhibition assay | has substrate | some | oxazepam |
| UGT inhibition assay | has substrate | some | zidovudine |
| UGT1A1 with BSA assay | has substrate | some | estradiol |
| UGT1A1 without BSA assay | has substrate | some | estradiol |
| UGT1A4 with BSA assay | has substrate | some | trifluoperazine |
| UGT1A4 without BSA assay | has substrate | some | trifluoperazine |
| UGT1A9 with BSA assay | has substrate | some | propofol |
| UGT1A9 without BSA assay | has substrate | some | propofol |
| UGT2B15 with BSA assay | has substrate | some | oxazepam |
| UGT2B15 without BSA assay | has substrate | some | oxazepam |
| UGT2B7 with BSA assay | has substrate | some | zidovudine |
| UGT2B7 without BSA assay | has substrate | some | zidovudine |
| uptake transporter inhibition assay | has substrate | some | rosuvastatin |
| uptake transporter inhibition assay | has substrate | some | estropipate |
| uptake transporter inhibition assay | has substrate | some | metformin |
| CYP chemical inhibition | has substrate | some | tienilic acid |
| CYP chemical inhibition | has substrate | some | esomeprazole |
| CYP chemical inhibition | has substrate | some | paroxetine |
| BCRP inhibition assay | has\_organism | some | Homo sapiens |
| BCRP substrate assay | has\_organism | some | Homo sapiens |
| BCRP substrate assay | has\_organism | some | Canis lupus familiaris |
| blood to plasma ratio assay | has\_organism | some | Homo sapiens |
| blood to plasma ratio assay | has\_organism | some | Rattus norvegicus |
| blood to plasma ratio assay | has\_organism | some | Mus musculus |
| blood to plasma ratio assay | has\_organism | some | Canis lupus familiaris |
| BSEP inhibition assay | has\_organism | some | Homo sapiens |
| CYP chemical inhibition assay | has\_organism | only | Homo sapiens |
| CYP induction assay | has\_organism | only | Homo sapiens |
| CYP inhibition assay | has\_organism | only | Homo sapiens |
| CYP metabolite formation kinetics assay | has\_organism | only | Homo sapiens |
| CYP reaction phenotyping assay | has\_organism | only | Homo sapiens |
| CYP time dependent inhibition IC50 assay | has\_organism | only | Homo sapiens |
| CYP time dependent inhibition Ki/kinact assay | has\_organism | only | Homo sapiens |
| CYP time-dependent inhibition assay | has\_organism | only | Homo sapiens |
| CYP1A2 induction assay | has\_organism | only | Homo sapiens |
| CYP1A2 inhibition assay | has\_organism | only | Homo sapiens |
| CYP2B6 induction assay | has\_organism | only | Homo sapiens |
| CYP2B6 inhibition assay | has\_organism | only | Homo sapiens |
| CYP2C19 induction assay | has\_organism | only | Homo sapiens |
| CYP2C19 inhibition assay | has\_organism | only | Homo sapiens |
| CYP2C8 induction assay | has\_organism | only | Homo sapiens |
| CYP2C8 inhibition assay | has\_organism | only | Homo sapiens |
| CYP2C9 induction assay | has\_organism | only | Homo sapiens |
| CYP2C9 inhibition assay | has\_organism | only | Homo sapiens |
| CYP3A4 induction assay | has\_organism | only | Homo sapiens |
| CYP3A4 inhibition assay | has\_organism | only | Homo sapiens |
| cytosol stability assay | has\_organism | some | Homo sapiens |
| definitive CYP IC50 assay | has\_organism | only | Homo sapiens |
| hepatocyte relay with inhibitors | has\_organism | some | Homo sapiens |
| hepatocyte stability assay | has\_organism | some | Homo sapiens |
| MAO reaction phenotyping | has\_organism | some | Homo sapiens |
| MATE1 inhibition assay | has\_organism | only | Homo sapiens |
| MATE1 substrate assay | has\_organism | only | Homo sapiens |
| MATE2 inhibition assay | has\_organism | only | Homo sapiens |
| MATE2 substrate assay | has\_organism | only | Homo sapiens |
| microsomal binding assay | has\_organism | some | Homo sapiens |
| microsomal stability assay | has\_organism | some | Homo sapiens |
| monoamine oxidase inhibition | has\_organism | some | Homo sapiens |
| MRP2 inhibition assay | has\_organism | some | Homo sapiens |
| OAT1 inhibition assay | has\_organism | only | Homo sapiens |
| OAT1 substrate assay | has\_organism | only | Homo sapiens |
| OAT2 inhibition assay | has\_organism | only | Homo sapiens |
| OAT2 substrate assay | has\_organism | only | Homo sapiens |
| OAT3 inhibition assay | has\_organism | only | Homo sapiens |
| OAT3 substrate assay | has\_organism | only | Homo sapiens |
| OATP1B1 inhibition assay | has\_organism | only | Homo sapiens |
| OATP1B1 substrate assay | has\_organism | only | Homo sapiens |
| OATP1B3 inhibition assay | has\_organism | only | Homo sapiens |
| OATP1B3 substrate assay | has\_organism | only | Homo sapiens |
| OATP2B1 substrate assay | has\_organism | only | Homo sapiens |
| OCT1 inhibition assay | has\_organism | only | Homo sapiens |
| OCT1 substrate assay | has\_organism | only | Homo sapiens |
| OCT2 inhibition assay | has\_organism | only | Homo sapiens |
| OCT2 substrate assay | has\_organism | only | Homo sapiens |
| P-gp inhibition assay | has\_organism | only | Homo sapiens |
| P-gp substrate assay | has\_organism | only | Homo sapiens |
| P-gp substrate assay | has\_organism | only | Canis lupus familiaris |
| plasma protein binding assay | has\_organism | some | Homo sapiens |
| plasma protein binding assay | has\_organism | some | Rattus norvegicus |
| plasma protein binding assay | has\_organism | some | Canis lupus familiaris |
| plasma protein binding assay | has\_organism | some | Mus musculus |
| plasma stability assay | has\_organism | some | Homo sapiens |
| plasma stability assay | has\_organism | some | Rattus norvegicus |
| plasma stability assay | has\_organism | some | Canis lupus familiaris |
| plasma stability assay | has\_organism | some | Mus musculus |
| recombinant CYP reaction phenotyping | has\_organism | only | Homo sapiens |
| recombinant UGT reaction phenotyping | has\_organism | only | Homo sapiens |
| S9 stability assay | has\_organism | only | Homo sapiens |
| tissue binding assay | has\_organism | some | Rattus norvegicus |
| tissue binding assay | has\_organism | some | Mus musculus |
| tissue binding assay | has\_organism | some | Homo sapiens |
| transporter inhibition assay | has\_organism | some | Homo sapiens |
| transporter substrate assay | has\_organism | some | Homo sapiens |
| transporter substrate assay | has\_organism | some | Canis lupus familiaris |
| UGT inhibition assay | has\_organism | only | Homo sapiens |
| UGT1A1 with BSA assay | has\_organism | only | Homo sapiens |
| UGT1A1 without BSA assay | has\_organism | only | Homo sapiens |
| UGT1A4 with BSA assay | has\_organism | only | Homo sapiens |
| UGT1A4 without BSA assay | has\_organism | only | Homo sapiens |
| UGT1A6 with BSA assay | has\_organism | only | Homo sapiens |
| UGT1A6 without BSA assay | has\_organism | only | Homo sapiens |
| UGT1A9 with BSA assay | has\_organism | only | Homo sapiens |
| UGT1A9 without BSA assay | has\_organism | only | Homo sapiens |
| UGT2B15 with BSA assay | has\_organism | only | Homo sapiens |
| UGT2B15 without BSA assay | has\_organism | only | Homo sapiens |
| UGT2B7 with BSA assay | has\_organism | only | Homo sapiens |
| UGT2B7 without BSA assay | has\_organism | only | Homo sapiens |

### Github

### <https://github.com/BioAssayOntology/BAO/issues/112>

<https://github.com/BioAssayOntology/BAO/issues/113>

### Public Location:

[http://www.bioassayontology.org/bao](http://www.bioassayontology.org/bao/bao_complete.owl)

### License/Disclaimer

This document as well as the Reference and OWL ontology document are released under the [Creative Commons Attribution 4.0 International Public License ("Public License")](https://github.com/BioAssayOntology/BAO/blob/master/LICENSE).