

The following SPARQL script is used to query the IDOBRU: “What Brucella virulence factors are also protective antigens?”

```
select distinct ?s, ?l

from <http://purl.obolibrary.org/obo/ido/brucellosis.owl>

where
{
{
?s rdfs:label ?l .
?s rdfs:subClassOf ?s1.

?s1 owl:onProperty <http://purl.org/obo/owl/OBO_REL#bearer_of>.
?s1 owl:someValuesFrom <http://purl.obolibrary.org/obo/IDO_0100119>.

?s rdfs:subClassOf ?s2.
?s2 owl:onProperty <http://purl.org/obo/owl/OBO_REL#bearer_of>.
?s2 owl:someValuesFrom <http://purl.obolibrary.org/obo/IDO_0100116>

}

UNION
{
?s rdfs:label ?l .
?s rdfs:subClassOf ?s0.
?s0 rdfs:subClassOf ?s1.

?s1 owl:onProperty <http://purl.org/obo/owl/OBO_REL#bearer_of>.
?s1 owl:someValuesFrom <http://purl.obolibrary.org/obo/IDO_0100119>.

?s0 rdfs:subClassOf ?s2.
?s2 owl:onProperty <http://purl.org/obo/owl/OBO_REL#bearer_of>.
?s2 owl:someValuesFrom <http://purl.obolibrary.org/obo/IDO_0100116>

}

}
```