```xml
<?xml version="1.0"?>


<!DOCTYPE rdf:RDF [
    <!ENTITY owl "http://www.w3.org/2002/07/owl#" >
    <!ENTITY dc "http://purl.org/dc/elements/1.1/" >
    <!ENTITY xsd "http://www.w3.org/2001/XMLSchema#" >
    <!ENTITY owl2xml "http://www.w3.org/2006/12/owl2-xml#" >
    <!ENTITY BioRDFMicroarray "http://purl.org/BioRDFMicroarray.owl#" >
    <!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#" >
    <!ENTITY biordfmicroarray "http://purl.org/net/biordfmicroarray.owl#" >
    <!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#" >
]>


<rdf:RDF xmlns="http://purl.org/net/biordfmicroarray.owl#"
     xml:base="http://purl.org/net/biordfmicroarray.owl"
     xmlns:dc="http://purl.org/dc/elements/1.1/"
     xmlns:BioRDFMicroarray="http://purl.org/BioRDFMicroarray.owl#"
     xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
     xmlns:owl2xml="http://www.w3.org/2006/12/owl2-xml#"
     xmlns:biordfmicroarray="http://purl.org/net/biordfmicroarray.owl#"
     xmlns:owl="http://www.w3.org/2002/07/owl#"
     xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
     xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
    <owl:Ontology rdf:about="">
        <dc:creator rdf:datatype="&xsd;string"
            >Satya S. Sahoo, Kei Cheung, Jun Zhao</dc:creator>
    </owl:Ontology>



    <!--
    ///////////////////////////////////////////////////////////////////////////////////////
    //
    // Annotation properties
    //
    ///////////////////////////////////////////////////////////////////////////////////////
     -->

    <owl:AnnotationProperty rdf:about="&dc;creator"/>



    <!--
    ///////////////////////////////////////////////////////////////////////////////////////
    //
```

```
    // Object Properties
    //
    ///////////////////////////////////////////////////////////////////
/////////////
     -->



    <!-- http://purl.org/net/biordfmicroarray.owl#derives_from -->

    <owl:ObjectProperty rdf:about="#derives_from">
        <rdfs:range rdf:resource="&BioRDFMicroarray;Detection"/>
        <rdfs:range rdf:resource="&BioRDFMicroarray;Entorhinal_Cortex"/>
        <rdfs:domain rdf:resource="&BioRDFMicroarray;expression_value"/>
        <rdfs:domain rdf:resource="&BioRDFMicroarray;sample"/>
        <rdfs:range rdf:resource="&BioRDFMicroarray;signal"/>
    </owl:ObjectProperty>



    <!-- http://purl.org/net/biordfmicroarray.owl#expressed_in -->

    <owl:ObjectProperty rdf:about="#expressed_in">
        <rdfs:domain rdf:resource="&BioRDFMicroarray;gene"/>
        <rdfs:range rdf:resource="&BioRDFMicroarray;sample"/>
    </owl:ObjectProperty>



    <!-- http://purl.org/net/biordfmicroarray.owl#has_disease_state -->

    <owl:ObjectProperty rdf:about="#has_disease_state">
        <rdfs:range rdf:resource="&BioRDFMicroarray;Alzheimers_disease"/>
        <rdfs:domain rdf:resource="&BioRDFMicroarray;Organism"/>
    </owl:ObjectProperty>



    <!-- http://purl.org/net/biordfmicroarray.owl#has_input_value -->

    <owl:ObjectProperty rdf:about="#has_input_value">
        <rdfs:range rdf:resource="&BioRDFMicroarray;gene"/>
        <rdfs:domain
rdf:resource="&BioRDFMicroarray;microarray_expression_experiment"/>
        <rdfs:range rdf:resource="&BioRDFMicroarray;sample"/>
        <rdfs:range rdf:resource="#probeID"/>
    </owl:ObjectProperty>
```

```xml
<!-- http://purl.org/net/biordfmicroarray.owl#has_output_value -->

<owl:ObjectProperty rdf:about="#has_output_value">
    <rdfs:range rdf:resource="&BioRDFMicroarray;Detection"/>
    <rdfs:domain
rdf:resource="&BioRDFMicroarray;microarray_expression_experiment"/>
    <rdfs:range rdf:resource="&BioRDFMicroarray;signal"/>
</owl:ObjectProperty>




<!-- http://purl.org/net/biordfmicroarray.owl#part_of -->

<owl:ObjectProperty rdf:about="#part_of">
    <rdfs:domain rdf:resource="&BioRDFMicroarray;Entorhinal_Cortex"/>
    <rdfs:range rdf:resource="&BioRDFMicroarray;Organism"/>
</owl:ObjectProperty>




<!--
///////////////////////////////////////////////////////////////////
//////////////
//
// Classes
//
///////////////////////////////////////////////////////////////////
//////////////
    -->




<!-- http://purl.org/BioRDFMicroarray.owl#Alzheimers_disease -->

<owl:Class rdf:about="&BioRDFMicroarray;Alzheimers_disease">
    <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
    <rdfs:comment
        >http://ontology.neuinfo.org/NIF/Dysfunction/NIF-
Dysfunction.owl#birnlex_2092</rdfs:comment>
</owl:Class>




<!-- http://purl.org/BioRDFMicroarray.owl#Detection -->

<owl:Class rdf:about="&BioRDFMicroarray;Detection">
    <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
</owl:Class>
```

```xml
    <!-- http://purl.org/BioRDFMicroarray.owl#Entorhinal_Cortex -->

    <owl:Class rdf:about="&BioRDFMicroarray;Entorhinal_Cortex">
        <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
        <rdfs:comment
            >http://ontology.neuinfo.org/NIF/BiomaterialEntities/NIF-
GrossAnatomy.owl#birnlex_1508</rdfs:comment>
    </owl:Class>




    <!-- http://purl.org/BioRDFMicroarray.owl#Human -->

    <owl:Class rdf:about="&BioRDFMicroarray;Human">
        <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;Organism"/>
        <rdfs:comment
            >http://ontology.neuinfo.org/NIF/BiomaterialEntities/NIF-
Organism.owl#birnlex_516</rdfs:comment>
    </owl:Class>




    <!-- http://purl.org/BioRDFMicroarray.owl#Organism -->

    <owl:Class rdf:about="&BioRDFMicroarray;Organism">
        <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
    </owl:Class>




    <!-- http://purl.org/BioRDFMicroarray.owl#continuant -->

    <owl:Class rdf:about="&BioRDFMicroarray;continuant"/>




    <!-- http://purl.org/BioRDFMicroarray.owl#expression_value -->

    <owl:Class rdf:about="&BioRDFMicroarray;expression_value">
        <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
        <rdfs:subClassOf>
            <owl:Restriction>
                <owl:onProperty rdf:resource="#derives_from"/>
                <owl:allValuesFrom>
                    <owl:Class>
                        <owl:unionOf rdf:parseType="Collection">
                            <rdf:Description
```

```xml
            rdf:about="&BioRDFMicroarray;Detection"/>
                            <rdf:Description
rdf:about="&BioRDFMicroarray;sample"/>
                    </owl:unionOf>
                </owl:Class>
            </owl:allValuesFrom>
        </owl:Restriction>
      </rdfs:subClassOf>
    </owl:Class>




    <!-- http://purl.org/BioRDFMicroarray.owl#gene -->

    <owl:Class rdf:about="&BioRDFMicroarray;gene">
        <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
        <rdfs:comment
            >http://purl.org/obo/owl/SO#SO_0000704</rdfs:comment>
    </owl:Class>




    <!-- http://purl.org/
BioRDFMicroarray.owl#microarray_expression_experiment -->

    <owl:Class
rdf:about="&BioRDFMicroarray;microarray_expression_experiment">
        <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;occurrent"/>
    </owl:Class>




    <!-- http://purl.org/BioRDFMicroarray.owl#occurrent -->

    <owl:Class rdf:about="&BioRDFMicroarray;occurrent"/>




    <!-- http://purl.org/BioRDFMicroarray.owl#sample -->

    <owl:Class rdf:about="&BioRDFMicroarray;sample">
        <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
        <rdfs:subClassOf>
            <owl:Restriction>
                <owl:onProperty rdf:resource="#derives_from"/>
                <owl:allValuesFrom
rdf:resource="&BioRDFMicroarray;Entorhinal_Cortex"/>
            </owl:Restriction>
        </rdfs:subClassOf>
        <rdfs:comment
```

```
                    >http://knoesis.wright.edu/ParasiteExperiment.owl#sample</
rdfs:comment>
        </owl:Class>




        <!-- http://purl.org/BioRDFMicroarray.owl#signal -->

        <owl:Class rdf:about="&BioRDFMicroarray;signal">
            <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
            <rdfs:comment
                >http://ncicb.nci.nih.gov/xml/owl/EVS/Thesaurus.owl#Signal</
rdfs:comment>
        </owl:Class>




        <!-- http://purl.org/net/biordfmicroarray.owl#probeID -->

        <owl:Class rdf:about="#probeID">
            <rdfs:subClassOf rdf:resource="&BioRDFMicroarray;continuant"/>
        </owl:Class>
</rdf:RDF>



<!-- Generated by the OWL API (version 2.2.1.1138) http://
owlapi.sourceforge.net -->
```