

# ROH Ontology Classes, Object Properties and DataType Properties

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## 1. Ontologies used

Prefix	Ontology name	Ontology namespace	Ontology website
bibo	Bibliographic Ontology	<a href="http://purl.org/roh/mirror/bibo#">http://purl.org/roh/mirror/bibo#</a>	<a href="http://bibliontology.com/">http://bibliontology.com/</a>
cito	CITO, the Citation Typing Ontology	<a href="http://purl.org/spar/cito#">http://purl.org/spar/cito#</a>	<a href="https://sparontologies.github.io/cito/current/cito.html">https://sparontologies.github.io/cito/current/cito.html</a>
foaf	FOAF: Friend of a Friend Ontology	<a href="http://purl.org/roh/mirror/foaf#">http://purl.org/roh/mirror/foaf#</a>	<a href="http://xmlns.com/foaf/spec/">http://xmlns.com/foaf/spec/</a>
gn	GeoNames Ontology	<a href="http://purl.org/roh/mirror/geonames#">http://purl.org/roh/mirror/geonames#</a>	<a href="http://www.geonames.org/ontology/documentation.html">http://www.geonames.org/ontology/documentation.html</a>
obo-bfo	OBO Foundry, Basic Formal Ontology	<a href="http://purl.org/roh/mirror/obo/bfo#">http://purl.org/roh/mirror/obo/bfo#</a>	<a href="http://www.obofoundry.org/ontology/bfo.html">http://www.obofoundry.org/ontology/bfo.html</a>
obo-ero	OBO Foundry, eagle-i Research Resource Ontology (ERO)	<a href="http://purl.org/roh/mirror/obo/ero#">http://purl.org/roh/mirror/obo/ero#</a>	<a href="https://open.csi.cmc.harvard.edu/wiki/Display/EagleiOntology">https://open.csi.cmc.harvard.edu/wiki/Display/EagleiOntology</a>
obo-iao	OBO Foundry, Information Artifact Ontology	<a href="http://purl.org/roh/mirror/obo/iao#">http://purl.org/roh/mirror/obo/iao#</a>	<a href="https://github.com/information-artifact-ontology/iao">https://github.com/information-artifact-ontology/iao</a>
obo-ro	OBO Foundry, Relations Ontology	<a href="http://purl.org/roh/mirror/obo/ro#">http://purl.org/roh/mirror/obo/ro#</a>	<a href="http://www.obofoundry.org/ontology/ro.html">http://www.obofoundry.org/ontology/ro.html</a>
owl	OWL Web Ontology Language	<a href="http://www.w3.org/2002/07/owl#">http://www.w3.org/2002/07/owl#</a>	<a href="https://www.w3.org/TR/owl-features/">https://www.w3.org/TR/owl-features/</a>

rdf	The RDF Concepts Vocabulary (RDF)	<a href="http://www.w3.org/1999/02/22-rdf-syntax-ns#">http://www.w3.org/1999/02/22-rdf-syntax-ns#</a>	<a href="https://www.w3.org/TR/rdf-concepts/">https://www.w3.org/TR/rdf-concepts/</a>
rdfs	RDF Schema 1.1	<a href="http://www.w3.org/2000/01/rdf-schema#">http://www.w3.org/2000/01/rdf-schema#</a>	<a href="https://www.w3.org/TR/rdf-schema/">https://www.w3.org/TR/rdf-schema/</a>
roh	Red de Ontologías Hércules / Hercules Network of Ontologies	<a href="http://purl.org/roh#">http://purl.org/roh#</a>	<a href="https://github.com/HerculesCRUE/GnossDeustoOnto/tree/master/Documentation">https://github.com/HerculesCRUE/GnossDeustoOnto/tree/master/Documentation</a>
rohes	Red de Ontologías Hércules / Hercules Network of Ontologies, Spanish specialization	<a href="http://purl.org/rohes#">http://purl.org/rohes#</a>	<a href="https://github.com/HerculesCRUE/GnossDeustoOnto/tree/master/Documentation">https://github.com/HerculesCRUE/GnossDeustoOnto/tree/master/Documentation</a>
rohum	Red de Ontologías Hércules / Hercules Network of Ontologies – University of Murcia Specialization	<a href="http://purl.org/rohum#">http://purl.org/rohum#</a>	<a href="https://github.com/HerculesCRUE/GnossDeustoOnto/tree/master/Documentation">https://github.com/HerculesCRUE/GnossDeustoOnto/tree/master/Documentation</a>
skos	SKOS Simple Knowledge Organization System	<a href="http://www.w3.org/2004/02/skos/core#">http://www.w3.org/2004/02/skos/core#</a>	<a href="https://www.w3.org/TR/2008/WD-skos-reference-20080829/skos.html">https://www.w3.org/TR/2008/WD-skos-reference-20080829/skos.html</a>
uneskos	SKOS UNESCO Thesaurus	<a href="http://purl.org/umu/uneskos#">http://purl.org/umu/uneskos#</a>	<a href="https://skos.um.es/unescothes/downloads.php">https://skos.um.es/unescothes/downloads.php</a>
vcad	vCard Ontology - for describing People and Organizations	<a href="http://purl.org/roh/mirror/vcard#">http://purl.org/roh/mirror/vcard#</a>	<a href="https://www.w3.org/TR/vcard-rdf/">https://www.w3.org/TR/vcard-rdf/</a>
vivo	VIVO core ontology	<a href="http://purl.org/roh/mirror/vivo#">http://purl.org/roh/mirror/vivo#</a>	<a href="https://wiki.lyrasis.org/display/VIVO/The+core+ontology+and+its+annotations">https://wiki.lyrasis.org/display/VIVO/The+core+ontology+and+its+annotations</a>

## 2. Concepts modelled

### 2.1. vivo:AcademicDegree

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
vivo	AcademicDegree				vivo	abbreviation	rdfs:Literal	
					roh	title	xsd:string	

### 2.2. roh:Accreditation

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	Accreditation	vivo	hasGoverningActivity	foaf:Organization	roh	title	xsd:string	
		vivo	hasSubjectArea	owl:Thing	vivo	description	xsd:string	
		roh	accreditationOf	foaf:Agent				
		roh	issuedBy	roh:AccreditationIssuer				
		vivo	dateIssued	vivo:DateTimeValue				
	roh AcademicAccreditation				roh	title	xsd:string	
	rohes AyudanteDoctor							
	rohes CatedráticoUniversidad							
	rohes ContratadoDoctor							
	rohes ProfesorUniversidadPrivada							
	rohes TitularUniversidad							
	roh Certificate				roh	title	xsd:string	
	roh Award							
	roh CourseCertificate							
	roh LanguageCertificate				roh	language	xsd:string	
					roh	listeningSkill	xsd:string	{"A1", "A2", "B1", "B2", "C1", "C2"}
					roh	readingSkill	xsd:string	{"A1", "A2", "B1", "B2", "C1", "C2"}
					roh	speakingSkill	xsd:string	{"A1", "A2", "B1", "B2", "C1", "C2"}

							roh	spokenInteractionSkill	xsd:string	{"A1", "A2", "B1", "B2", "C1", "C2"}
	roh	DegreeHomologation	vivo	relates	vivo:AwardedDegree					
	roh	License								
	roh	ResearchAccreditation								
		rohes Sexenio	vivo	dateTimeInterval	vivo:DateTimeInterval					

### 2.3. rohes:Account

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
rohes	Account	rohes	charges	roh:Expense				
	rohes ActivoNoCorriente							
	rohes InmovilizacionesIntangibles							
	...							
	rohes ComprasYGastosPorNaturaleza							
	rohes Perdidas							
	rohes ServiciosExteriores							
	...							
	rohes Suministros							
	...							

### 2.4. roh:Activity

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	Activity	roh	participatedBy	foaf:Agent	vivo	identifier	xsd:string	
		bibo	presents	bibo:Document	roh	description	xsd:string	
		vivo	relates	roh:Expense or obo-bfo:Role	vivo	freeTextKeyword	xsd:string	
		obo-bfo	realizes	obo-bfo:Role	vivo	contactInformation	rdfs:Literal	
		vivo	hasSubjectArea	skos:Concept	roh	title	xsd:string	
		vivo	dateTimeInterval	vivo:DateTimeInterval				
		gn	locatedIn	gn:Feature				
	vivo Competition							
	bibo Conference				vivo	abbreviation	rdfs:Literal	
	vivo Course	obo-ro	partOf	vivo:AcademicDegree	vivo	courseCredits	xsd:int	
					vivo	courseHours	xsd:string	
	vivo Exhibit							
	bibo Hearing							
	vivo Internship							
	vivo Interview							
	vivo Meeting							
	bibo Performance							
	vivo Presentation							
	vivo InvitedTalk							
	roh PanelTalk							

	roh	ThesisViva							
	bibo	Workshop							

## 2.5. foaf:Agent

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
foaf	Agent		roh	<b>hasContactInfo</b>	vcard:Organization	vivo	freeTextKeyword	xsd:string	
			roh	<b>hasAccreditation</b>	roh:Accreditation				
			roh	<b>hasRole</b>	obo-bfo:Role				
			foaf	<b>mBox</b>	owl:Thing				
			vivo	<b>relatedBy</b>	vivo:Relationship				
	foaf	Organization	roh	<b>hasKnowledgeArea</b>	skos:Concept	vivo	<b>identifier</b>	xsd:string	
			vivo	<b>affiliatedOrganization</b>	foaf:Organization	vivo	<b>abbreviation</b>	rdfs:Literal	
			vivo	<b>hasSuccessorOrganization</b>	foaf:Organization	roh	<b>description</b>	xsd:string	
			vivo	<b>hasPredecessorOrganization</b>	foaf:Organization	roh	<b>researchLine</b>	xsd:string	
			obo-ro	<b>hasPart</b>	foaf:Organization	roh	<b>foundationDate</b>	xsd:string	
			roh	<b>hasInfrastructure</b>	roh:Infrastructure				
			foaf	<b>homePage</b>	foaf:Document				
			roh	<b>participates</b>	roh:Activity				
			roh	<b>produces</b>	roh:ResearchObject				
			roh	<b>grantedBy</b>	roh:FundingAmount				
			vivo	<b>dateTimeInterval</b>	vivo:DateTimeInterval				
			gn	<b>locatedIn</b>	gn:Feature				
	roh	AccreditationIssuer	roh	<b>issues</b>	roh:Accreditation				
	roh	FundingOrganization	roh	<b>promotes</b>	roh:FundingProgram or roh:FundingSource				
			roh	<b>funds</b>	roh:Funding				
	roh	ResearchGroup				roh	<b>excellenceLabel</b>	xsd:boolean	
	vivo	University	roh	<b>awards</b>	vivo:AwardedDegree				
	foaf	Person	roh	<b>hasKnowledgeArea</b>	skos:Concept	vivo	<b>identifier</b>	xsd:string	
			vivo	<b>relates</b>	vivo:AwardedDegree	vivo	<b>researcherId</b>		
			roh	<b>spends</b>	roh:PersonExpense	roh	<b>birthdate</b>	xsd:string	
			roh	<b>hasContract</b>	roh:PersonContract	vivo	<b>eRACommonsId</b>		
			roh	<b>hasCV</b>	roh:CurriculumVitae	roh	<b>description</b>	xsd:string	
			roh	<b>hasPosition</b>	vivo:Position	roh	<b>firstName</b>	xsd:string	
			roh	<b>participates</b>	roh:Activity	roh	<b>gender</b>	xsd:string	
			roh	<b>elegibleFor</b>	roh:Accreditation	roh	<b>researchLine</b>	xsd:string	
			foaf	<b>homePage</b>	foaf:Document	foaf	<b>surname</b>	xsd:string	
			foaf	<b>image</b>	foaf:Image	foaf	<b>name</b>	xsd:string	
			roh	<b>correspondingAuthor</b>		foaf	<b>nickname</b>	xsd:string	
			roh	<b>supervisorOf</b>	bibo:Thesis	roh	<b>taxID</b>	xsd:string	
						roh	<b>title</b>	xsd:string	
						roh	<b>ORCID</b>	xsd:string	
						vivo	<b>scopusId</b>		
						rohes	<b>secondFamilyName</b>	xsd:string	

## 2.6. skos:Concept

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
skos	Concept		roh	knowledgeAreaOf					
	roh	KnowledgeArea							
		roh	UNESCOKnowledgeArea						
		rohes	FECYTKnowledgeArea						
	roh	ProjectClassification							
		roh	European						
		roh	International						
		roh	National						
		rohes	PlanEstatad2017-2020						
		roh	Own						
		roh	Regional						

## 2.7. roh:CurriculumVitae

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	CurriculumVitae		roh	CVOf	foaf:Person	roh	cites	xsd:string	
						roh	factorH	xsd:string	
						roh	summary	xsd:string	

## 2.8. roh:Expense

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	Expense		roh	spentBy		roh	currency	xsd:string	
			vivo	dateTimeValue	vivo:DateTimeValue	vivo	description	xsd:string	
						roh	monetaryAmount	xsd:float	
						roh	title	xsd:string	
	roh	PersonExpense				roh	expenseModality		
	roh	ProjectExpense							
	roh	ResearchObjectExpense							
		rohum	GastosCorrientesBienesYServicios						
		rohum	ArrendamientosYCanones						
		rohum	IndemnizacionesServicio						
		rohum	MaterialSuministrosOtros						
		rohum	ReparacionesMantenimientoConservación						
		rohum	InversionesReales						

## 2.9. gn:Feature

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
gn	Feature	gn	<b>featureClass</b>		gn	geonamesID	rdfs:Literal	
		gn	featureCode	gn:Code	gn	countryCode	rdfs:Literal	
		gn	parentAMD1	gn:featureCode	gn	name	xsd:string	
		gn	parentAMD2	gn:featureCode	gn	population	xsd:integer	
		gn	parentAMD3	gn:featureCode				
		gn	parentAMD4	gn:featureCode				

## 2.10. roh:Funding, roh:FundingAmount, roh:FundingProgram & roh:FundingSource

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	Funding	obo-ro	<b>hasPart</b>	roh:FundingAmount	vivo	identifier	xsd:string	
		roh	<b>fundedBy</b>	roh:FundingProgram	vivo	description		
		vivo	dateTimeInterval	vivo:DateTimeInterval	vivo	freeTextKeyword		
		roh	<b>financedBy</b>	roh:FundingSource	roh	<b>publicFunding</b>	xsd:boolean	
		roh	hasContract	vivo:Contract				
		roh	<b>supports</b>	roh:PersonContract or roh:Project				
		roh	hasKnowledgeArea	skos:Concept				
		vivo	dateTimeInterval	vivo:DateTimeInterval				
	roh	Grant						
	roh	Loan						
	roh	Outsourcing						
	roh	RefundableAdvance						
roh	FundingAmount	roh	<b>grants</b>	foaf:Organization	roh	currency	xsd:string	
		obo-ro	<b>partOf</b>	roh:Funding	roh	monetaryAmount	xsd:float	
		vivo	dateTimeInterval	vivo:DateTimeInterval				
roh	FundingProgram	roh	<b>promotedBy</b>	roh:FundingSource	vivo	identifier	xsd:string	
		gn	locatedIn	gn:Feature	roh	title	xsd:string	
		vivo	dateTimeInterval	vivo:DateTimeInterval	vivo	description	xsd:string	
roh	FundingSource	roh	<b>promotedBy</b>	vivo:FundingOrganization				
		roh	funds	roh:FundingProgram				

## 2.11. roh:Infrastructure

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	Infrastructure	roh	<b>infrastructureOf</b>	foaf:Agent	roh	title	xsd:string	
					vivo	description	xsd:string	
	roh	Equipment			vivo	freeTextKeyword	xsd:string	
	roh	Facility	obo-ro <b>hasPart</b>	roh:Facility				
	roh	Software	vivo <b>hasSubjectArea</b>	skos:Concept				
			roh <b>correspondingAuthor</b>	foaf:Person				

## 2.12. roh:Metric

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	<b>Metric</b>	roh	<b>metricOf</b>	roh:ResearchObject	roh	<b>metricName</b>	xsd:string	
	roh <b>DegreeMetric</b>							
	roh <b>ThesisMetric</b>				roh	<b>cumLaude</b>	xsd:boolean	
					roh	<b>mark</b>	xsd:string	
		rohes	<b>PhDThesisMetric</b>		rohes	<b>doctoradoEuropeo</b>	xsd:boolean	
					rohes	<b>doctoradoInternacional</b>	xsd:boolean	
					rohes	<b>mencionCalidad</b>	xsd:boolean	
					rohes	<b>premioExtraordinarioDoctorado</b>	xsd:boolean	
	roh <b>PublicationMetric</b>				roh	<b>impactFactor</b>	xsd:float	
					roh	<b>quartile</b>	xsd:string	{"Q1", "Q2", "Q3", "Q4"}
					roh	<b>ranking</b>	xsd:string	

## 2.13. vivo:Project

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
vivo	<b>Project</b>	roh	<b>hasKnowledgeArea</b>	skos:Concept	vivo	<b>identifier</b>	xsd:string	
		vivo	<b>relates</b>	roh:Audit or obo-bfo:Role	vivo	<b>abbreviation</b>	rdfs:LITERAL	
		roh	<b>hasContract</b>	vivo:ProjectContract	vivo	<b>description</b>	rdfs:LITERAL	
		obo-ro	<b>hasPart</b>	vivo:Project	roh	<b>title</b>	xsd:string	
		vivo	<b>participates</b>	roh:Activity	roh	<b>projectStatus</b>	xsd:string	{"CLOSED", "OPEN", "PROPOSAL_SUBMITTED", "REJECTED"}
		roh	<b>spends</b>	roh:ProjectExpense	vivo	<b>freeTextKeyword</b>	xsd:string	
		roh	<b>produces</b>	roh:ResearchObject	roh	<b>modality</b>	xsd:string	
		vivo	<b>relatedBy</b>	roh:Dossier or roh:Justification or obo-bfo:Role	roh	<b>foreseenJustificationDate</b>	xsd:dateTime	
		roh	<b>isSupportedBy</b>	roh:Funding	roh	<b>needsEthicalValidation</b>	xsd:boolean	
		gn	<b>locatedIn</b>	gn:Feature				
		vivo	<b>dateTimeInterval</b>	vivo:DateTimeInterval				
		roh	<b>hasProjectCategorization</b>	roh:ProjectClassification				

## 2.14. vivo:Relationship

Prefix	Class	Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
vivo	<b>Relationship</b>							
	vivo <b>AdvisingRelationship</b>	vivo	<b>dateTimeInterval</b>	vivo:DateTimeInterval				
		vivo	<b>hasSubjectArea</b>	skos:Concept				
		vivo	<b>relates</b>	vivo:AdvisorRole or vivo:AdviseeRole or foaf:Person				
		vivo	<b>degreeCandidacy</b>	vivo:AcademicDegree				
	vivo <b>AwardedDegree</b>	roh	<b>awardedBy</b>	vivo:University				

			vivo	relates	foaf:Person or roh:AcademicDegree				
			vivo	dateTimeValue	vivo:DateTimeValue				
	vivo	Contract	roh	contractOf		bibo	abstract	xsd:string	
			roh	contractSigningDate	vivo:DateTimeValue	roh	fileURI		
			vivo	assignedBy	foaf:Organization	roh	attachment	owl:Thing	
			vivo	hasSubjectArea	skos:Concept				
			vivo	relates	roh:Funding or bibo:Patent or foaf:Agent or obo-bfo:Role				
			vivo	dateTimeInterval	vivo:DateTimeInterval				
			vivo	supportedInformationResource	obo- iao:InformationContentEntity				
		roh	PersonContract						
		roh	ProjectContract						
	vivo	Position	vivo	relates	foaf:Organization	vivo	rank	xsd:int	
			vivo	relates	foaf:Person	vivo	hrJobTitle		
			vivo	dateTimeInterval	vivo:DateTimeInterval				
		vivo	FacultyAdministrativePosition						
		vivo	FacultyPosition						
			rohes	CuerpoDocente					
				rohes: CatedraticoEscuelaUniversitaria					
				rohes: CatedraticoDeUniversidad					
				rohes: ProfesorTitularDeEscuelaUniversitaria					
				rohes: ProfesorTitularDeUniversidad					
			rohes	PDICContratado					
				rohes: Ayudante					
				rohes: ProfesorAsociado					
				rohes: ProfesorAyudanteDoctor					
				rohes: ProfesorContratadoDoctor					
				rohes: ProfesorEmerito					
				rohes: ProfesorVisitante					
		vivo	LibrarianPosition	roh	produces	roh:DegreeThesis			
		vivo	NonAcademicPosition						
		vivo	NonFacultyAcademicPosition						
		vivo	PrimaryPosition						
		roh	ResearcherPosition						
	roh	SupervisingRelationship	vivo	dateTimeInterval	vivo:DateTimeInterval				
			roh	produces	roh:Thesis				
			vivo	relates	roh:SupervisorRole or roh:SuperviseeRole or foaf:Person				
		roh	DegreeSupervisingRelationship	roh	produces	roh:DegreeThesis			
		roh	MasterSupervisingRelationship	roh	produces	roh:MasterThesis			
		roh	PhDSupervisingRelationship	roh	produces	roh:PhDThesis			



## 2.15. roh:ResearchObject

Prefix	Class			Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
roh	ResearchObject			roh	hasKnowledgeArea	skos:Concept				
				roh	correspondingAuthor	foaf:Person				
				roh	producedBy	roh:Project				
	bibo	Collection					bibo	oclcnum	rdfs:Literal	
		roh	Dossier	vivo	relates	roh:ProjectContract or bibo:Report or roh:Project	vivo	identifier	xsd:string	
				vivo	dateTimeInterval	vivo:DateTimeInterval	roh	title		
							vivo	description		
		bibo	Periodical	vivo	publisher	foaf:Organization	bibo	eissn	rdfs:Literal	
							bibo	issn	rdfs:Literal	
			bibo Journal	vivo	dateIssued	vivo:DateTimeValue	vivo	abbreviation	rdfs:Literal	
			bibo Magazine							
	bibo	Document		vivo	publishedIn	bibo:Collection or bibo:Book	bibo	doi	xsd:string	
				bibo	authorList	rdf:Seq	bibo	abstract	xsd:string	
				vivo	dateIssued	vivo:DateTimeValue	bibo	pageStart		
				bibo	editorList	rdf:Seq	bibo	pageEnd		
							bibo	volume	rdfs:Literal	
		bibo	Abstract							
		bibo	Article				bibo	issue		
			bibo AcademicArticle							
			obo-iao: JournalArticle	roh	hasMetric	roh:PublicationMetric				
			vivo ConferencePaper	bibo	presentedAt	bibo:Conference				
			roh: WorkshopPaper							
			vivo EditorialArticle							
		bibo	Book	vivo	publisher	foaf:Organization	bibo	edition	rdfs:Literal	
							bibo	isbn	rdfs:Literal	
							vivo	placeOfPublication	rdfs:Literal	
							bibo	iccn	rdfs:Literal	
			bibo Proceedings							
		bibo	ConferencePoster							
		bibo	Dataset	cito	isCitedAsDataSourceBy	foaf:Document				
		bibo	DocumentPart	vivo	publisher	foaf:Organization	vivo	placeOfPublication	rdfs:Literal	
			bibo BookSection							
			bibo: Chapter							
		bibo	Patent	vivo	publisher	foaf:Organization	vivo	identifier	xsd:string	
				gn	locatedIn	gn:Feature	roh	modality	xsd:string	
				vivo	dateIssued	vivo:DateTimeValue				
				roh	ownerOrganization	foaf:Organization				
		bibo	Report	vivo	distributor	foaf:Organization	roh	status	xsd:string	{"ACCEPTED", "REJECTED"}
				vivo	publisher	foaf:Organization				
			roh EthicalReport							
			roh: EthicalAudit							
			roh: EthicalValidation							

			roh	EvaluationSummary							
			roh	Justification	vivo	relates	roh:Project				
			roh	ResearchProposal	vivo	relates	roh:Justification or roh:ProjectContract or roh:Project or roh:ResearchProposal				
		bibo	Thesis					vivo	abbreviation	rdfs:Literal	
								vivo	placeOfPublication	rdfs:Literal	
			roh	DegreeThesis							
			roh	MasterThesis							
			roh	PhDThesis							
		bibo	Webpage								

## 2.16. obo-bfo:Role

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
obo-bfo	Role		vivo	dateTimeInterval	vivo:DateTimeInterval	roh	dedication	xsd:string	{"PARTIAL", "TOTAL"}
			roh	inheresIn	foaf:Agent	vivo	description	xsd:string	
			vivo	relatedBy	roh:Project or vivo:Relationship				
			roh	hasKnowledgeArea	skos:Concept				
			obo-bfo	realizedIn	roh:Activity				
			roh	roleOf	foaf:Agent				
	vivo	AdministratorRole							
	vivo	AdviseeRole							
	vivo	AdvisorRole							
	vivo	AttendeeRole							
	vivo	AuditeeRole							
	vivo	AuditorRole							
	vivo	EditorRole							
	vivo	EducatorRole							
	vivo	EmployeeRole							
	vivo	ExternalMemberRole							
	vivo	FundingRole							
	vivo	LeaderRole							
	vivo	MemberRole							
	vivo	OrganizerRole							
	vivo	PresenterRole							
	vivo	ResearcherRole							
	vivo	ReviewerRole							
	vivo	StudentRole							
	vivo	SuperviseeRole							
	vivo	SupervisorRole							
	vivo	TeacherRole							
	vivo	ThirdPartyContractorRole							

## 2.17. obo-ero:Service

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
obo-ero	Service		roh	isProvidedBy	foaf:Organization	vivo	identifier	xsd:string	
						roh	title	xsd:string	
						vivo	description	xsd:string	
	vivo	AccessService							
	vivo	AnalysisService							
	roh	ExternalMemberRole							
	vivo	...							

## 2.18. rohes:Tax

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
rohes	Tax					rohes	rate	xsd:float	
	rohes	IVA							
	rohes	IRPF							
	rohes	IRNR							

## 2.19. obo-bfo:TemporalRegion

Prefix	Class		Prefix	Object property (bold indicates explicit Domain, otherwise a Restriction)	Range Class	Prefix	Datatype Property (bold indicates explicit domain; otherwise a restriction)	Range Datatype (if typed)	Range values
obo-bfo	TemporalRegion								
	obo-bfo	OneDimensionalTemporalRegion							
	vivo	DateTimeInterval	vivo	start	vivo:DateTimeValue				
			vivo	end	vivo:DateTimeValue				
	obo-bfo	ZeroDimensionTemporalRegion							
	vivo	DateTimeValue				vivo	dateTime	xsd:dateTime	