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"structured\_name": "HCV1a [taxonomy:$taxonomy] mutation detection",

"version": "1.1",

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"review": [

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"status": "approved",

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"reviewer": {"type": "orcid", "orcid": "0000-0003-1409-4549" }

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"type": "entity",

"entity": {

"name": "Erick Donaldson",

"affiliation": "FDA",

"email": "Eric.Donaldson@fda.hhs.gov"

}

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"name": "Erick Donaldson",

"affiliation": "FDA",

"email": "Eric.Donaldson@fda.hhs.gov"

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"Identify baseline single nucleotide polymorphisms SNPs [SO:0000694], insertions [SO:0000667], and deletions [SO:0000045] that correlate with reduced ledipasvir [PubChem:67505836] antiviral drug efficacy in Hepatitis C virus subtype 1 [taxID:31646]",

"Identify treatment emergent amino acid substitutions [SO:0000048] that correlate with antiviral drug treatment failure",

"Determine whether the treatment emergent amino acid substitutions [SO:0000048] identified correlate with treatment failure involving other drugs against the same virus",

"GitHub CWL example: https://github.com/mr-c/hive-cwl-examples/blob/master/workflow/hive-viral-mutation-detection.cwl#L20"

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"description\_domain": {

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"SNP",

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"source": "pubchem.compound",

"db": "PubChem-compound",

"id": "67505836",

"access\_time": "2018-13-02T10:15-05:00"

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"source": "pubmed",

"db": "PubMed",

"id": "26508693",

"access\_time": "2018-13-02T10:15-05:00"

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"source": "so",

"db": "Sequence Ontology",

"id": "0000048",

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"id": "31646",

"access\_time": "2018-13-02T10:15-05:00"

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"address": "https://github.com/common-workflow-language/hive-cwl-examples/blob/master/workflow/hive-viral-mutation-detection.cwl",

"access\_time": "2018-03-06T15:20:37-0500"

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"name": "Hepatitis C virus genotype 1",

"URI": {

"address": "http://www.ncbi.nlm.nih.gov/nuccore/22129792",

"access\_time": "2017-01-24T09:40:17-0500"

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"name": "Hepatitis C virus type 1b complete genome",

"URI": {

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"access\_time": "2017-01-24T09:40:17-0500"

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"name": "Hepatitis C virus (isolate JFH-1) genomic RNA",

"URI": {

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"access\_time": "2017-01-24T09:40:17-0500"

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"name": "Hepatitis C virus clone J8CF, complete genome",

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"access\_time": "2017-01-24T09:40:17-0500"

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"access\_time": "2017-01-24T09:40:17-0500"

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"access\_time": "2017-01-24T09:40:17-0500"

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"version": "1.3",

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"access\_time": "2017-01-24T09:40:17-0500"

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"script\_driver": "shell",

"pipeline\_version": "2.0",

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"name": "HIVE-hexagon",

"version": "1.3"

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"name": "HIVE-heptagon",

"version": "1.3"

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"name": "generic name",

"url": "protocol://domain:port/application/path"

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"name": "access to ftp",

"url": "ftp://:22/"

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"name": "access to e-utils",

"url": "http://eutils.ncbi.nlm.nih.gov/entrez/eutils/"

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"URI": {

"address": "http://www.ncbi.nlm.nih.gov/nuccore/22129792",

"access\_time": "2017-01-24T09:40:17-0500"

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"name": "Hepatitis C virus type 1b complete genome",

"URI": {

"address": "http://www.ncbi.nlm.nih.gov/nuccore/5420376",

"access\_time": "2017-01-24T09:40:17-0500"

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"name": "Hepatitis C virus (isolate JFH-1) genomic RNA",

"URI": {

"address": "http://www.ncbi.nlm.nih.gov/nuccore/13122261",

"access\_time": "2017-01-24T09:40:17-0500"

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"name": "Hepatitis C virus clone J8CF, complete genome",

"URI": {

"address": "http://www.ncbi.nlm.nih.gov/nuccore/386646758",

"access\_time": "2017-01-24T09:40:17-0500"

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{

"name": "Hepatitis C virus S52 polyprotein gene",

"URI": {

"address": "http://www.ncbi.nlm.nih.gov/nuccore/295311559",

"access\_time": "2017-01-24T09:40:17-0500"

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"name": "HCV1a\_drug\_resistant\_sample0001-01",

"URI": {

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"access\_time": "2017-01-24T09:40:17-0500"

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"URI": {

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"access\_time": "2017-01-24T09:40:17-0500"

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"false discovery": "<0.05"

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"algorithmic\_error": {

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