BioCreative VII

Track 1 - Text mining drug and chemical-protein interactions (DrugProt)

Training set - version 1.0 - June 15th

URL: https://biocreative.bioinformatics.udel.edu/tasks/biocreative-vii/track-1/

This directory contains the BioCreative VII DrugProt track training set abstracts and manual annotations.

1. Training set abstracts

File: drugprot_training_abstracts.tsv

This file contains plain-text, UTF8-encoded, NFC normalized DrugProt training set PubMed records in a tab-separated format with the following three columns:

- 1. Article identifier (PMID, PubMedidentifier)
- 2. Title of the article
- 3. Abstract of the article

In total 3500 records are provided in this training set, where each line contains a single PMID, title and abstract separated by tabulators.

2. Entity mention annotations

File: drugprot_training_entities.tsv

This file contains the manually labeled mention annotations of chemical compounds and genes/proteins (so-called gene and protein-related objects as defined during BioCreative V) generated for the training set records. Tab-separated format:

- 1. Article identifier (PMID)
- 2. Entity or term number (for this record)
- 3. Type of entity mention (CHEMICAL, GENE-Y, GENE-N)*
- 4. Start character offset of the entity mention**
- 5. End character offset of the entity mention**

6. Text string of the entity mention

*CHEMICAL: Chemical entity mention type; GENE-Y: gene/protein mention type that can be normalized or associated to a biological database identifier; GENE-N: gene/protein mention type that cannot be normalized to a database identifier.

**IMPORTANT: Character offsets are in relation to the complete PubMed record. That is, the string composed of: title, a single blankspace and abstract body. The equivalent Python one-liner to obtain it would be:

complete = '\t'.join(title, abstract)

Example DrugProt entity mention annotations:

11808879	T12	GENE-Y	1860	1866	KIR6.2
11808879	T13	GENE-N	1993	2016	glutamate dehydrogenase
11808879	T14	GENE-Y	2242	2253	glucokinase
23017395	T1	CHEMICAL	216	223	HMG-CoA
23017395	T2	CHEMICAL	258	261	EPA

3. DRUGPROT detailed relation annotations

o File: drugprot training relations.tsv

This file contains the detailed chemical-protein relation annotations prepared for the DrugProt training set. It consists of tab-separated columns containing:

- 1. Article identifier (PMID)
- 2. DrugProt relation
- 3. Interactor argument 1 (Arg1: followed by the interactor term identifier)
- 4. Interactor argument 2 (Arg2: followed by the interactor term identifier)

For the DrugProt track a very granular chemical-protein relation annotation was carried out, with the aim to cover most of the relations that are of importance from the point of view of biochemical and pharmacological/biomedical perspective.

Example DrugProt entity relation annotations:

12488248	INHIBITOR	Arg1:T1	Arg2:	T52	
12488248	INHIBITOR	Arg1:T2	Arg2:	T52	
23220562	ACTIVATOR	Arg1:T12	Arg2:	T42	
23220562	ACTIVATOR	Arg1:T12	Arg2:	T43	
23220562	INDIRECT-DO	DWNREGUL/	ATOR	Arg1:T1	Arg2:T14

Important: For the test set only the abstracts and the entity mentions will be provided. Participating teams have to return the automatically predicted DrugProt relations in the same format as provided for the training set predictions.