

## NAME

FAStr - Fatty Acyls (FA) structure generation methods

## SYNOPSIS

```
use FASTr;
```

```
use FASTr qw(:all);
```

## DESCRIPTION

FAStr module provides these methods:

```
GenerateCmpdOntologyData - Generate ontology data
GenerateCmpdOntologySDDataLines - Generate ontology data lines for SD file
GenerateFACchainStrData - Generate chain structure data
GenerateSDFile - Generate SD file
IsFAAbbrevSupported - Is it a supported FA abbreviation
ParseFAAbbrev - Parse FA abbreviation
SetupFACmpdAbbrevTemplateDataMap - Setup template structure data map
ValidateFAAbbrev - Validate FA abbreviation
```

## METHODS

### GenerateCmpdOntologyData

```
$DataHashRef = GenerateCmpdOntologyData($CmpdDataRef);
```

Return a reference to a hash containing ontology data with hash keys and values corresponding to property names and values.

### GenerateCmpdOntologySDDataLines

```
$DataLinesArrayRef = GenerateCmpdOntologySDDataLines($CmpdDataRef);
```

Return a reference to an array containing ontology data lines suitable for generate SD file data block.

### GenerateFACchainStrData

```
($AtomLinesArrayRef, $BondLinesArrayRef) =
    GenerateFACchainStrData($ChainType, $CmpdDataRef);
```

Return array references containing atom and bond data lines for SD file. Appropriate atom and bond data lines are generated using chain type and abbreviation template data.

### GenerateSDFile

```
GenerateSDFile($SDFileName, $CmdAbbrevsRef);
```

Generate a SD file for compound abbreviations. Structure data for specified abbreviation is generated sequentially and written to SD file.

### IsFAAbbrevSupported

```
$Status = IsFAAbbrevSupported($Abbrev, $PrintWarning);
```

Return 1 or 0 based on whether FA abbreviated is supported. For unsupported FA abbreviations, a warning is printed unless PrintWarning flag is set.

**ParseFAAbbrev**

```
($ChainAbbrev, $AbbrevModifier) = ParseFAAbbrev($Abbrev);
```

Parse FA abbreviation and return these values: ChainsAbbrev and AbbrevModifier.

**ProcessFACmpdAbbrevs**

```
ProcessFACmpdAbbrevs($CmpdAbbrevsRef, $WriteSDFile, $SDFileName);
```

Process specified FA abbreviations to generate structures and write them out either a SD file or simply report number of valid abbreviations.

**SetupFACmpdAbbrevTemplateDataMap**

```
$AbbrevTemplateDataMapRef =  
  SetupFACmpdAbbrevTemplateDataMap($Abbrev);
```

Return a reference to a hash containing template data for compound abbreviation. The template data is used to generate SD file for compound abbreviation.

**ValidateFAAbbrev**

```
$Status = ValidateFAAbbrev($Abbrev);
```

Return 1 or 0 based on whether a FA abbreviation is valid.

**AUTHOR**

Manish Sud

**CONTRIBUTOR**

Eoin Fahy

**SEE ALSO**

ChainAbbrev.pm, ChainStr.pm, LMAPSStr.pm

**COPYRIGHT**

Copyright (C) 2006-2012. The Regents of the University of California. All Rights Reserved.

**LICENSE**

Modified BSD License