BIOSIS® Toxicology

Date revised: 29 July 2021

Description

BIOSIS® Toxicology is a subset of BIOSIS® Previews, with a focus on toxicology and related topics. Records are drawn from journal articles, conference papers, monographs and book chapters, notes, letters, and reports, as well as original research. U.S. patent records are also included.

Abstracts are available for records beginning in 1976.

Subject Coverage

All aspects of toxicology are covered, as they relate to:

- Agriculture
- Bacteriology
- Biochemistry
- Biophysics
- Biotechnology
- Botany
- Cell Biology
- Clinical Medicine
- Drugs
- Environmental Biology
- Environmental Science
- Experimental Medicine
- Genetics
- Immunology
- Microbiology
- Nutrition
- Occupational Health
- Parasitology
- Pathology
- Pharmacology
- Physiology
- Public Health
- Radiation Biology
- Systematic Biology
- Veterinary Science
- Virology

Date Coverage

1969–present

Update Frequency

Weekly

Geographic Coverage

International

Document Types

- Books and Monographs
- Conferences, Symposia, Meetings
- Journal Articles
- Patents

Publisher

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Sample document

ProQuest Dialog | BIOSIS® Toxicology

Basic Search | Advanced | Command Line

Citation/Abstract « Back to results

Add to selected items | Save to My Research | Em

TI Improved Insecticidal Toxicity by Fusing Cry1Ac of Bacillus thuringiensis with Av3 of Anemonia viridis

AU,AUFN,AULN PUB Yan, Fu; Cheng, Xing; Ding, Xuezhi; Yao, Ting; Chen, Hanna; et al. **Current Microbiology** 68.5 (May 2014): 604-609.

Show duplicate items from other databases

AB

Abstract (summary) Translate

Av3, a neurotoxin of Anemonia viridis, is toxic to crustaceans and cockroaches but inactive in mammals. In the present study, Av3 was expressed in Escherichia coli Origami B (DE3) and purified by reversed-phase liquid chromatography. The purified Av3 was injected into the hemocoel of Helicoverpa armigera, rendering the worm paralyzed. Then, Av3 was expressed alone or fusion expressed with the Cry1Ac in acrystalliferous strain Cry(-)B of Bacillus thuringiensis. The shape of Cry1Ac was changed by fusion with Av3. The expressed fusion protein, Cry1AcAv3, formed irregular rhombus- or crescent-shaped crystalline inclusions, which is quite different from the shape of original Cry1Ac crystals. The toxicity of Cry1Ac was improved by fused expression. Compared with original Cry1Ac expressed in Cry(-)B, the oral toxicity of Cry1AcAv3 to H. armigera was elevated about 2.6-fold. No toxicity was detected when Av3 was expressed in Cry(-)B alone. The present study confirmed that marine toxins could be used in bio-control and implied that fused expression with other insecticidal proteins could be an efficient way for their application.

Indexing (details) Cite

SU

Subject

Anemonia viridis -- species;
Anemonia viridis -- Cnidaria [41000];
Anemonia viridis -- Invertebrata;
Anemonia viridis -- Animalia;
Anemonia viridis -- Animals;
Anemonia viridis -- Invertebrates;
crustacean -- common;
crustacean -- Crustacea [75100];
crustacean -- Arthropoda;
crustacean -- Invertebrata;
crustacean -- Animalia;
crustacean -- Animals;
crustacean -- Arthropods;
crustacean -- Crustaceans;
crustacean -- Invertebrates;
Bacillus thuringiensis -- species;
Bacillus thuringiensis -- strain-Cry B;
Bacillus thuringiensis -- Endospore-forming Gram-Positives [07810];
Bacillus thuringiensis -- Eubacteria;
Bacillus thuringiensis -- Bacteria;
Bacillus thuringiensis -- Microorganisms;
Escherichia coli -- species;
Escherichia coli -- expression system;
Escherichia coli -- strain-Origami B;
Escherichia coli -- Enterobacteriaceae [06702];
Escherichia coli -- Facultatively Anaerobic Gram-Negative Rods;
Escherichia coli -- Eubacteria;
Escherichia coli -- Bacteria;
Escherichia coli -- Microorganisms;
Helicoverpa armigera -- species;
Helicoverpa armigera -- pest;
Helicoverpa armigera -- Invertebrata;
Helicoverpa armigera -- Animalia;
Helicoverpa armigera -- Animals;
Helicoverpa armigera -- Arthropods;
Helicoverpa armigera -- Insects;
Helicoverpa armigera -- Invertebrates;
cockroach -- common;
cockroach -- Orthoptera [75340];
cockroach -- Insecta;
cockroach -- Arthropoda;

cockroach -- Invertebrata;
cockroach -- Animalia;
cockroach -- Animals;
cockroach -- Arthropods;
cockroach -- Insects;
cockroach -- Invertebrates;
hemocoel -- circulatory system;
reversed-phase liquid chromatography -- laboratory techniques;
reversed-phase liquid chromatography -- chromatographic techniques

Classification

03506: Genetics - Animal
10060: Biochemistry studies - General
10064: Biochemistry studies - Proteins, peptides and amino acids
14504: Cardiovascular system - Physiology and biochemistry
20506: Nervous system - Pathology
22501: Toxicology - General and methods
31000: Physiology and biochemistry of bacteria
31500: Genetics of bacteria and viruses
54600: Pest control: general, pesticides and herbicides
60016: Economic entomology - Chemical control and apparatus
64008: Invertebrata: comparative, experimental morphology, physiology and pathology - Cnidaria
64054: Invertebrata:comparative, experimental morphology, physiology and pathology - Arthropoda: crustacea
64076: Invertebrata: comparative, experimental morphology, physiology and pathology - Insecta: physiology

Major concept

Biochemistry and Molecular Biophysics, Toxicology, Pesticides

Biological organism

Organism:	Anemonia viridis, species
Supertaxa:	Invertebrata, Animalia
Taxonomic notes:	Animals, Invertebrates
Biosystematic class:	Cnidaria [41000];

Organism:	crustacean, common
Supertaxa:	Arthropoda, Invertebrata, Animalia
Taxonomic notes:	Animals, Arthropods, Crustaceans, Invertebrates
Biosystematic class:	Crustacea [75100];

Organism:	Bacillus thuringiensis, species
Detail:	strain-Cry B
Supertaxa:	Eubacteria, Bacteria, Microorganisms
Taxonomic notes:	Bacteria, Eubacteria, Microorganisms
Biosystematic class:	Endospore-forming Gram-Positives [07810];

Organism:	Escherichia coli, species
Detail:	strain-Origami B
Role:	expression system
Supertaxa:	Facultatively Anaerobic Gram-Negative Rods, Eubacteria, Bacteria, Microorganisms
Taxonomic notes:	Bacteria, Eubacteria, Microorganisms
Biosystematic class:	Enterobacteriaceae [06702];

Organism:	Helicoverpa armigera, species
Role:	pest
Supertaxa:	Insecta, Arthropoda, Invertebrata, Animalia
Taxonomic notes:	Animals, Arthropods, Insects, Invertebrates
Biosystematic class:	Lepidoptera [75330];

Organism:	cockroach, common
Supertaxa:	Insecta, Arthropoda, Invertebrata, Animalia
Taxonomic notes:	Animals, Arthropods, Insects, Invertebrates
Biosystematic class:	Orthoptera [75340]

GQ, SU **Genetic sequence**

Sequence:	P01535
Detail:	amino acid sequence
Databank:	UniProt

MQ, SU **Method and equipment**

reversed-phase liquid chromatography -- laboratory techniques,
reversed-phase liquid chromatography -- chromatographic techniques

IF, SU **Identifier (keyword)**

crystal structure

Generic name

Av3, Cry1Ac

TI	Title	Improved Insecticidal Toxicity by Fusing Cry1Ac of Bacillus thuringiensis with Av3 of Anemonia viridis
AU,AUFN,AULN FAU	Author	Yan, Fu; Cheng, Xing; Ding, Xuezhi; Yao, Ting; Chen, Hanna; Li, Wenping; Hu, Shengbiao; Yu, Ziquan; Sun, Yunjun; Zhang, Youming; Xia, Liqiu
	Correspondence author	Xia, Liqiu Hunan Normal Univ, State Key Lab Breeding Base Microbial Mol Biol, Hunan Prov Key Lab Microbial Mol Biol, Changsha 410081, Hunan, Peoples R China.
LA	Language	English
SL	Language of abstract	English
DTYPE	Document type	Article
PUB	Publication title	Current Microbiology
VO	Volume	68
ISS	Issue	5
PG	Pagination	604-609
ISSN	ISSN	0343-8651
	Electronic ISSN	1432-0991
PSTYPE	Publication type	Article
DOI	DOI	http://dx.doi.org/10.1007/s00284-013-0516-1
	URL	http://www.springerlink.com/content/100355/
PD,YR	Publication date	May 2014
DCRE	Date created	2014-04-14
DSTAT	Document status	New
	Source attribution	BIOSIS Toxicology, © Publisher specific
AN	Accession number	TOXB201400031332
	Document URL	http://search.proquest.com/professional/docview/1516493980?accountid=137296
	Copyright	Copyright Thomson 2014
	First available	2014-04-16
FAV	Updates	2014-04-16
UD	Database	BIOSIS® Toxicology (1969 - current)

Search fields

You can use field codes on the Basic Search, Advanced Search, and Command Line Search pages to limit searches to specific fields. The table below lists the field codes for this database.

Field Name	Field Code	Example	Description and Notes
Abstract	AB	ab(reversed-phase liquid chromatography)	Use adjacency and/or Boolean operators to narrow search results.
Abstract present	ABANY	“Bacillus thuringiensis” AND abany(yes)	Add: *AND ABANY(YES)* to a query to limit retrieval to records with abstracts.
Accession number	AN	an(TOXB201400031332)	A unique document identification number assigned by the information provider.
All fields	ALL	all(“marine toxins” NEAR/4 bio-control)	Searches all fields in bibliographic files. Use adjacency and/or Boolean operators to narrow search results.
All fields + text	--	(“marine toxins” N/4 bio-control)	Same as ALL field code: searches all fields in bibliographic files.
Author[1] Author First Name Author Lanst Name	AU AUFN AULN	au(chen, hanna) au(hanna) or au(h*) au(chen)	Includes all Authors.
First author	FAU	fau(“yan, fu”)	First name listed in Author field. It is included in Author browse, but its position cannot be specified in the Author browse.
Author affiliation	AF	af("Hunan Normal Univ" and china)	Includes as much data as is available in the original document, such as department, organization, address, city, state, country, author email, etc.
CAS® Registry Number	RN, SUBST	rn(1199-18-4)	Also searchable using the Substance field code (SUBST).
Classification[1]	CC, BC	cc(03506) cc("genetics - animal") bc(75326) bc(“hymenoptera”)	BC=Biosystematic Codes CC=Concept Codes.
Conference information	CF	cf("63rd Annual Meeting of the American-Academy-of-Neurology") cf(2009-08-30) cf("amer fisheries soc") cf(nashville, tn, usa)	Includes conference title, date, sponsor, and location.
Conference location	CG	cg(honolulu, hi, usa)	
Conference sponsor	CS	cs("amer acad neurol")	
Conference title	CFTI	cfti("63rd Annual Meeting of the American-Academy-of-Neurology")	
Date created	DCRE	dcre(20160301)	This represents the date BIOSIS created the record and added it to their system. It predates its delivery to ProQuest and has no relation to the ProQuest update date. If a document has been revised by BIOSIS it does NOT have a Date created date; instead a Date revised date is displayed. See also *Document status*.

[1] A Lookup/Browse feature is available for this field in the Advanced Search dropdown or in Browse Fields.

Field Name	Field Code	Example	Description and Notes
			Date range searching is supported.
Date revised	DREV	drev(>20171231)	This represents the date BIOSIS last revised the record. It predates its delivery to ProQuest and has no relation to the ProQuest update date. If a document has never been revised by BIOSIS it does NOT have a Date revised date; only a Date created date is displayed. See also *Document status*. Date range searching is supported.
DOI	DOI	doi(10.1007/s00284-013-0516-1)	Digital Object Identifier. Search the portion of the DOI that follows http://dx.doi.org/.
Disease	DIS	dis("Neurodegenerative Disease")	Also searchable using the Subject field code (SU).
Document status	DSTAT	dstat(new) dstat(revised)	BIOSIS records have a status of *New* OR *Revised*. See also *Date created* and *Date revised*.
Document title	TI	ti("Improved Insecticidal Toxicity by Fusing Cry1Ac of Bacillus thuringiensis")	Includes Alternate Title (OTI), but not Publication Title (PUB).
Alternate title	OTI	oti(phenoxycarbonsaeure -herbizide)	Includes Alternate title, subtitle, and original-language of document title, if available.
Document type	DTYPE	dtype(article)	
First available	FAV	fav(2014-04-16)	Indicates the first time a document was loaded on PQD. It will not change regardless if how many times the document is subsequently reloaded, as long as the Accession Number remains the same.
From database[2]	FDB	"PC12 cell line " AND fdb(biosistoxicology) "PC12 cell line " AND fdb(1008436)	Useful in multi-file searches to isolate records from a single file. FDB cannot be searched on its own; specify at least one search term then AND it with FDB.
Enzyme Commission number	ECN	ecn("1.14.16.4")	Also searchable using the Substance field code (SUBST).
Gene name	GNA	gna("h1n1 influenza virus")	Also searchable using the Subject field code (SU).
Genetic sequence	GQ	gq(UniProt) gq(P01535)	Also searchable using the Subject field code (SU).
ISSN	ISSN	issn(0343-8651) issn(03438651)	Also searchable via the Look Up Citation tool.
Issue	ISS	iss(5) iss(supp)	Also searchable via the Look Up Citation tool.
Language	LA	la(english)	The language in which the document was originally published.
Language of abstract	SL	sl(English)	
Location	LOC	loc(sweden)	Also searchable using the Subject field code (SU).

[2] Click the "Field codes" hyperlink at the top right of the Advanced Search page. Click "Search syntax and field codes", then click on "FDB command" to get a list of database names and codes that can be searched with FDB.

Field Name	Field Code	Example	Description and Notes
Major concept[1]	MJCN	mjcn(pharmacology)	Also searchable using the Subject field code (SU).
Method and equipment	MQ	mq("reversed-phase liquid chromatography")	Also searchable using the Subject field code (SU).
Organism	ORM	orm("crustacean")	Also searchable using the Subject field code (SU).
Other subject	OSU	osu("systems biology")	Also searchable using the Subject field code (SU).
Patent assignee	PA	pa("du pont" or dupont)	
Patent information	PAT	pat("merck sharp") pat(07902231)	Includes patent assignee and publication number.
Patent number	PN	pn("07902231")	
Pagination	PG	pg(604-609)	Includes: start page (and end page – where available). The start page is searchable on the Look Up Citation page.
Part and structure	POR	por(hemocoel)	Also searchable using the Subject field code (SU).
Publication date	PD	pd(201405) pd(20140501-20140531) pd(>=20131231)	Date range searching is supported.
Publication title	PUB	pub(current microbiology)	Title of publication where document originally appears, commonly a monograph or periodical title.
Publication type	PSTYPE	pstype(article)	
Publication year	YR	yr(2014) yr(>2010)	Date range searching is supported.
Source information	SRC	src(ACS chemical neuroscience)	Includes Publication title, Issue, Volume, ISSN, Publication date, and Pagination.
Start page	PAGE	page(605)	
Subject[1]	SU	su("anemonia viridis")	Includes the majority of descriptor fields.
Substance	SUBST	subst(cry1AC) subst(216864-07-02)	Includes: CAS Registry Number (RN) and Enzyme Commission number (ECN).
Super taxa	STX	stx(invertebrata)	Displays as part of Organism display.
Taxa notes	TXN	txn(animals)	Displays as part of Organism display.
Updated	UD	ud(2014-04-16)	The date(s) the record was loaded as a result of an update provided by the supplier.
Volume of publication	VO	vo(68)	

In addition to ***Search Fields***, other tools available for searching are ***Limit Options***, ***Command Line Common Concepts***, ***Browse Fields***, ***"Narrow Results By" Limiters*** and ***Look Up Citation***. Each is listed separately below. Some data can be searched using more than one tool.

Limit options

Limit options are quick and easy ways of searching certain common concepts**.** Check boxes are available for:

Abstract included, Humans, Animals, Plants, Microorganisms, Females, Males

Short lists of choices are available for:

Document type, Language

Date limiters are available in which you can select single dates or ranges of dates for date of **publication** and **updated**.

Command line common concepts

Find articles on humans:	HUMAN(YES)
Find articles on animals:	ANIMAL(YES)
Find articles on males:	MALE(YES)
Find articles on females:	FEMALE(YES)
Find articles on microorganisms:	MICROORGANISM(YES)
Find articles on plants:	PLANT(YES)
Find review articles:	DTYPE(REVIEW)

Browse fields

You can browse the contents of certain fields by using Look Up lists. These are particularly useful to validate spellings or the presence of specific data. Terms found in the course of browsing may be selected and automatically added to the Advanced Search form. Look Up lists are available in the fields drop-down and in the search options for:

Major concept, Concept code, Biosystematic code, Super taxa, CAS Registry numbers

And in the fields drop-down only for:

Author, Publication title

“Narrow Results By” limiters

When results of a search are presented, the results display is accompanied by a list of “Narrow results by” options shown on the right-hand panel. Click on any of these options and you will see a ranked list showing the most frequently occurring terms in your results. Click on the term to apply it to (“narrow”) your search results. “Narrow results by” limiters in BIOSIS Toxicology include:

Author, Language, Publication title, Subject, Document type, and Publication date

Look up citation

If you need to trace a particular bibliographic reference, use the Look Up Citation feature. Find a link to this toward the top left of the Advanced Search page, or in the drop list under Advanced on any search form; click this and you will go to a form where you can enter any known details of the citation, including document title, author, journal name, volume, issue, page, publication date, ISSN.

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