

House District 23
Senate District 11

THE TWENTY-EIGHTH LEGISLATURE
APPLICATION FOR GRANTS
CHAPTER 42F, HAWAII REVISED STATUTES

Log No: _____

For Legislature's Use Only

Type of Grant Request:

GRANT REQUEST - OPERATING

GRANT REQUEST - CAPITAL

"Grant" means an award of state funds by the legislature, by an appropriation to a specified recipient, to support the activities of the recipient and permit the community to benefit from those activities.

"Recipient" means any organization or person receiving a grant.

STATE DEPARTMENT OR AGENCY RELATED TO THIS REQUEST (LEAVE BLANK IF UNKNOWN): _____

STATE PROGRAM I.D. NO. (LEAVE BLANK IF UNKNOWN): _____

1. APPLICANT INFORMATION:

Legal Name of Requesting Organization or Individual:

Dbas:
Dr. Angel Yanagihara, Cnidaria Research Lab, University of Hawaii

Street Address: 1993 East West Road
Honolulu, HI 96822

Mailing Address: same as above

2. CONTACT PERSON FOR MATTERS INVOLVING THIS APPLICATION:

Name DR. ANGEL YANAGIHARA

Title DIRECTOR CNIDARIA RESEARCH LAB AND ASST RES PROF

Phone # 808 349 8549

Fax # 808 956 6984

E-mail ayanaqih@hawaii.edu

3. TYPE OF BUSINESS ENTITY:

- NON PROFIT CORPORATION INCORPORATED IN HAWAII
 FOR PROFIT CORPORATION INCORPORATED IN HAWAII
 LIMITED LIABILITY COMPANY
 OTHER
 SOLE PROPRIETORSHIP/INDIVIDUAL

6. DESCRIPTIVE TITLE OF APPLICANT'S REQUEST:

BOX JELLYFISH TASKFORCE COMMUNITY PROJECT

4. FEDERAL TAX ID # _____

5. STATE TAX ID # _____

7. AMOUNT OF STATE FUNDS REQUESTED:

FISCAL YEAR 2016: \$ 150,000

8. STATUS OF SERVICE DESCRIBED IN THIS REQUEST:

- NEW SERVICE (PRESENTLY DOES NOT EXIST)
 EXISTING SERVICE (PRESENTLY IN OPERATION)

SPECIFY THE AMOUNT BY SOURCES OF FUNDS AVAILABLE
AT THE TIME OF THIS REQUEST:

STATE \$ _____
FEDERAL \$ 320,800
COUNTY \$ _____
PRIVATE/OTHER \$ 14,740

TYPE NAME & TITLE OF AUTHORIZED REPRESENTATIVE

AUTHORIZED SIGNATURE

DR. ANGEL YANAGIHARA, ASSISTANT RESEARCH PROFESSOR DIRECTOR JAN 30, 2015

NAME & TITLE

DATE SIGNED



RECEIVED
1-30-15

✓

Application for Grants

If any item is not applicable to the request, the applicant should enter "not applicable".

I. Background and Summary

This section shall clearly and concisely summarize and highlight the contents of the request in such a way as to provide the State Legislature with a broad understanding of the request. Include the following:

1. A brief description of the applicant's background;

Founded in 1998, the Cnidaria Research Laboratory at the University of Hawaii at Manoa is directed by Dr. Angel Yanagihara, an Assistant Research Professor in the Pacific Biosciences Research Center and the Department of Tropical Medicine of the John A. Burns School of Medicine. Dr. Yanagihara is a recognized world leader and expert on box jellyfish behavior, venom biochemistry and sting treatment. During the past 17 years, her dedicated research effort has focused on the multidisciplinary study of the Hawaiian Box Jellyfish or *Alatina alata*. <https://manoa-hawaii.academia.edu/AngelYanagihara>

2. The goals and objectives related to the request;

The goal of the **Box Jellyfish Taskforce Community Project** is to manage and reduce the public health and economic impacts of monthly box jellyfish leeward shoreline spawning aggregations through effective box jelly surveillance, public education, task force focused efforts on prevention, and improved access to effective treatments.

The specific objectives are to:

- A. Assess and Rapidly Communicate the Monthly Threat Level
 - i. Conduct box jellyfish beach counts (Waikiki, Hanauma, Pokai)
 - ii. Determine offshore predictors of jellyfish influx
 - iii. Improve signage and achieve a real-time communications network of box jellyfish numbers
 - B. Educate the General Public and Specific Intervention Groups
 - i. Produce informational brochures and videos
 - ii. Create an interactive dynamic website
 - iii. Give presentations to school children and hotel beach staff
 - iv. Brief first responders, ER physicians, Ocean Safety Personnel
 - C. Develop and Deploy Treatments for Sting Victims
 - i. Provide treatment technology to Ocean Safety Personnel
 - ii. Continue laboratory and ecological research efforts
3. The public purpose and need to be served;

The purpose of the Box Jellyfish Taskforce Community Project is to reduce number and public health impacts of monthly box jellyfish stings throughout Hawaii and especially in the heavily impacted Waikiki and Hanauma Bay sites on Oahu through increased integration of Ocean Safety personnel, dedicated researchers and the public. Each month, hundreds to thousands of visitors and local residents are stung by box jellyfish. There are hundreds of ambulance calls per month related to box jellyfish stings (over 1000 calls in July 1997 alone). Improvements are needed to provide accurate early-warning announcements, evidence-based educational materials, and effective treatment options. Recently, the Cnidaria Research Laboratory (CRL) at the University of Hawaii has developed a highly effective and rapid-acting topical treatment. This technology has been contracted by the Department of Defense and is being manufactured and packaged by University of Hawaii at Hilo College of Pharmacy. It is FDA compliant and labeled per FTC regulations. It is market ready but not yet commercially available. 100 units were shipped Dec 10, 2014 to US Special Forces combat divers. Hot water immersion has also been shown to be an effective first response approach yet Hanauma Bay, a prime location of serious stings, lacks beach side hot water facilities for immersion treatments. Effective beachside treatment options could save the State millions of dollars in ambulance calls.

4. Describe the target population to be served;

The target populations include beach-going Hawaii residents and tourists, as well as first responders and Ocean Safety personnel.

5. Describe the geographic coverage.

The efforts of the Box Jellyfish Taskforce Community Project will address the acute needs along the leeward coast of Oahu as well as initiate better surveillance on the outer Islands. Additionally, our Pacific Island neighbors including Micronesia share in this increasingly prevalent challenge. Saipan reported the death of a Japanese tourist last summer due to the same species of box jellyfish, *Alatina alata*. Efforts and materials developed by the Box Jellyfish Taskforce Community Project will be shared with other affected Pacific Island governments and medical establishments.

II. Service Summary and Outcomes

The Service Summary shall include a detailed discussion of the applicant's approach to the request. The applicant shall clearly and concisely specify the results, outcomes, and measures of effectiveness from this request. The applicant shall:

1. Describe the scope of work, tasks and responsibilities;

Scope	Tasks	Responsible Party	Deliverables
A. Assess and Effectively Communicate the Monthly Threat Level	i. Conduct jellyfish beach counts	CRL/ Ocean Safety	Live time jellyfish counts
	ii. Conduct off shore survey of jellyfish	CRL	Counts and life cycle information
	iii. Achieve real-time communication network of box jellyfish numbers	CRL/ Ocean Safety/HTB	Develop modern LED signage and App alerts to issue live warning levels
B. Educate the General Public and Specific Intervention Groups	i. Produce brochures, videos, web site information	CRL/Ocean Safety	Publicly useful resources for accurate information
	ii. Give school presentations	CRL/ BJTCP	Public education
	iii. Brief first responders, ER physicians, OceanSafety	CRL	Dissemination of best practices information
C. Develop and Deploy Treatments for Sting Victims	i. Provide hot water immersion options	Contractor	Hot water plumbing, drainage, for immersion pools
	ii. Provide treatment technology	CRL/Alatalab Solutions, LLC	Safe and effective treatment

Abbreviations: CRL: Cnidaria Research Laboratory, HTB: Hawaii Tourism Bureau, BJTCP:Box Jellyfish Taskforce Community Project

2. Provide a projected annual timeline for accomplishing the results or outcomes of the service;

Timeline and Deliverables		Yr1		Yr2				Yr3			
Task	Activity	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A. Assess and Communicate	i. Beach counts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ii. Off shore survey		✓		✓		✓		✓		✓
	iii. Live time reporting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B. Educate	i. Produce brochures, videos, web site information	✓		✓		✓		✓		✓	
	ii. Lay presentations	✓		✓		✓		✓		✓	
	iii. Professional presentations		✓		✓		✓		✓		✓
C. Treat	i. Hot water immersion	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ii. Treatment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

3. Describe its quality assurance and evaluation plans for the request. Specify how the applicant plans to monitor, evaluate, and improve their results;

The Box Jellyfish Taskforce Community Project will meet quarterly during the first year, then biannually during the second and third years, to review, evaluate and discuss improvements to the planned coordinated efforts.

4. List the measure(s) of effectiveness that will be reported to the State agency through which grant funds are appropriated (the expending agency). The measure(s) will provide a standard and objective way for the State to assess the program's achievement or accomplishment. Please note that if the level of appropriation differs from the amount included in this application that the measure(s) of effectiveness will need to be updated and transmitted to the expending agency.

Overall effectiveness assessments will be requested from Sen. Green in his capacity as Chairman of the Senate Committee on Health and James Howe as director of Honolulu City and County Ocean Safety. Surveys will be prepared to assess the effectiveness of the project. Specifically, surveys will be prepared to assess the effectiveness of public presentations, brochures and web materials. In addition, informal interviews will be conducted of beach staff and beach goers give to members of the public and served populations to query levels of satisfaction as well as to ask for suggestions.

III. Financial

Budget

1. The applicant shall submit a budget utilizing the enclosed budget forms as applicable, to detail the cost of the request.
2. The applicant shall provide its anticipated quarterly funding requests for the fiscal year 2016.

Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total Grant
\$25,000	\$25,000	\$75,000	\$25,000	\$150,000

3. The applicant shall provide a listing of all other sources of funding that they are seeking for fiscal year 2016.

1. NIH/NIAMS, R01	01/10/2016-12/31/2020
Irukandji Syndrome: Mechanism of Pathogenesis and Treatment	\$1,464,000
2. USSOCOM DOD	7/1/2015-6/30/2018
Cubozoan Envenomation Syndromes Mechanism and Treatment	\$380,000

4. The applicant shall provide a listing of all state and federal tax credits it has been granted within the prior three years. Additionally, the applicant shall provide a listing of all state and federal tax credits they have applied for or anticipate applying for pertaining to any capital project, if applicable.

N/A

IV. Experience and Capability

A. Necessary Skills and Experience

The applicant shall demonstrate that it has the necessary skills, abilities, knowledge of, and experience relating to the request. State your experience and appropriateness for providing the service proposed in this application.

In addition to academic training in biochemistry and heading an independent and federally funded research laboratory since 1997, and as an avid ocean swimmer, free diver and SCUBA diver (PADI, NAUI, AAUS, TDI), Dr. Yanagihara is capable of coastal and open-ocean field research as a tool of exploration and discovery. Box jellyfish have been increasingly a public safety concern and Dr. Yanagihara has developed both treatment technologies as well as expertise in box jellyfish life cycle and habitat (electronic link to publications <https://manoa-hawaii.academia.edu/AngelYanagihara>). With more deaths due to box jellies than shark attacks over the past 40 years, the importance of increasing our understanding about the range and habitats of this 600 million year old life form takes on new urgency. Recent jellyfish-associated loss of life in coastal resorts in Thailand and Saipan underscores the tragic consequences of our lack of knowledge and also put at risk Hawaii's attraction as a tourist destination. Over the past four years, Dr. Yanagihara has conducted seminal studies in: Key West Fleming Bay, FL at the invitation of the Special Forces Underwater Operations (SFUWO) after critical stings of combat trainees left the Dive Medical Officer to suspect the presence of box jelly stingers; Bonaire, Netherlands Antilles at the invitation of Dutch researchers there with the discovery of box jellies causing Irukandji Syndrome; in Saipan, CNMI, after the death of a tourist subsequent to a box jellyfish sting; and in Ponce, Aguadilla and Magueyes Puerto Rico with SeaGrant funding after over a dozen Irukandji cases have been documented due to *Alatina alata* (same box jellyfish species that affects Waikiki). These projects have all resulted in remarkable steps forward in our understanding of the box jellyfish species present, their field ecology, habitats and in increasing public understanding, as well as instituting improved prevention and treatment approaches. Additionally, Dr. Yanagihara was asked to advise and lead box jellyfish-related surveillance and mitigation efforts for Diana Nyad, an open-ocean endurance swimmer, in 2012 and in 2013 during her 110-mile swim efforts crossing the Florida Straits from Cuba to Key West. Nyad credits her success in 2013 to the expertise of her assembled team, which included Dr. Yanagihara.

The applicant shall also provide a listing of verifiable experience of related projects or contracts for the most recent three years that are pertinent to the request.

1. NIH/NIAMS, R01AR059388	01/10/2011-12/31/2015
Early Metazoan Nano-collagens for Promotion of Wound Healing	\$317,283
2. Pew Foundation Education Award	03/01/2013 to 09/01/2013
Educational Video "Science of the Sting" http://vimeo.com/79364811	\$3000
3. Sea Grant	02/01/2012-01/31/2014
Biological and Physical Coupling in Māmalā Bay: Completing our Understanding Of the Field Ecology of <i>Alatina moseri</i> in Hawaiian Waters	\$10,166
4. Hawaii Community Foundation HCF 47031	06/08/2010-12/08/2012
Inflammatory Cytokines in Box Jellyfish Envenomation	\$50,000
5. NIH/NCRR RMATRIX	06/12/2011-08/01/2011

Identification and Characterization of Cryptic Fleming Bay Marine Stingers	\$20,548
6. Special Operations Command	09/04/2014-9/03/2015
Developing Treatments for Box Jellyfish Sting Induced Inflammation	\$181,000
7. Sea Grant Hawaii and Sea Grant Puerto Rico at Mayagüez	06/01/2014-01/31/2015
Coastal Ecosystem Assessment: Identification and Characterization of Cubozoans in Puerto Rico that Pose a Threat to Human Health	\$7,440

B. Facilities

The applicant shall provide a description of its facilities and demonstrate its adequacy in relation to the request. If facilities are not presently available, describe plans to secure facilities.

Performance Site: Cnidaria Research Laboratory,
1960 East West Road, Room A204,
University of Hawaii
Honolulu, Hawaii 96822

Laboratory:

Dr. Angel Yanagihara's laboratory occupies 2,200 sq ft of space on the second floor of the Biomedical Sciences Building and is well equipped with a broad range of modern instrumentation to execute biochemical separation techniques, cell assays, cell culture and histology, as well as enzyme kinetic assays. The laboratory maintains three HPLC platforms, a Fourier transform infrared spectrometer and an array of solvent extraction, rotary evaporation and chromatographic equipment. Monthly jellyfish capture is followed by routine crude venom preparations as well as analytical and preparative venom fraction separations. The laboratory maintains an archive of frozen and lyophilized tentacular material, crude and 96-plate fractionated samples spanning 10 years for collections from Hawaii. The laboratory has gas lines, vacuum and air systems, liquid nitrogen, as well as ample refrigeration and freezer space (-20 °C and -80°C). The laboratory is fully compliant with ADA requirements.

V. Personnel: Project Organization and Staffing

A. Proposed Staffing, Staff Qualifications, Supervision and Training

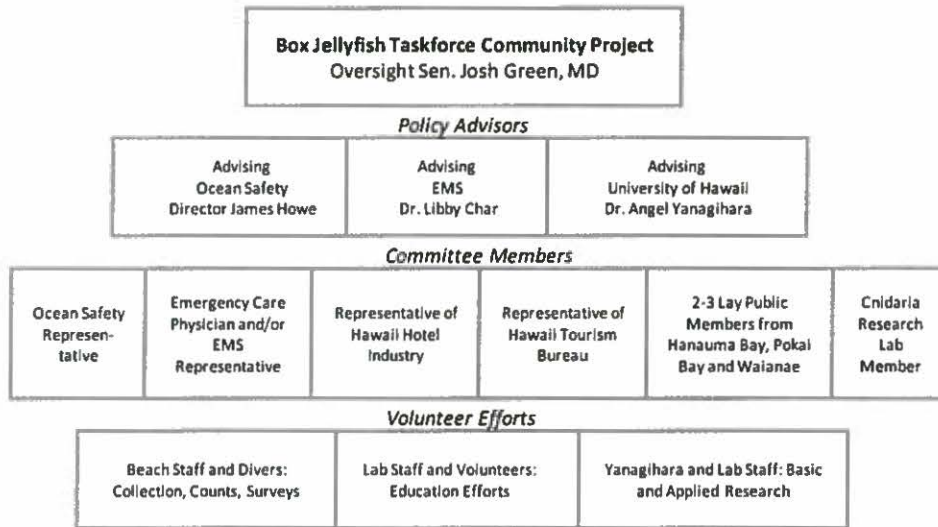
The applicant shall describe the proposed staffing pattern and proposed service capacity appropriate for the viability of the request. The applicant shall provide the qualifications and experience of personnel for the request and shall describe its ability to supervise, train and provide administrative direction relative to the request.

As director of the Cnidaria Research Laboratory (CRL) at the University of Hawaii at Manoa, Dr. Yanagihara has trained and supervised technicians, post-doctoral students, graduate students, undergraduate student workers and volunteers for 17 years. Her lab is well staffed and recruitment is well organized to fill positions when turnover occurs. Standing capacity exists to accomplish monthly beach counts and collections from 2 am to 6 am each night during the influx window of 7-11 days after each full moon along Waikiki at the sea wall protected beaches designated 2C and 2D ewa of the Kapahulu groin. Funding will allow expansion of this effort to other impacted leeward areas where

there is no advance warning in place. The CRL also has established capacity in the production of educational outreach materials, brochures and public presentations and briefings (e.g. <http://vimeo.com/79364811>). Finally, Dr. Yanagihara’s lab has been a world leader in “translational research” or the development of improved treatment technologies to address box jellyfish stings. A newly developed technology includes a rapid acting topical agent to immediately treat box jellyfish stings as well as IV therapeutic protocols now in use by US Special forces.

B. Organization Chart

The applicant shall illustrate the position of each staff and line of responsibility/supervision. If the request is part of a large, multi-purpose organization, include an organizational chart that illustrates the placement of this request.



VI. Other

A. Litigation

The applicant shall disclose any pending litigation to which they are a party, including the disclosure of any outstanding judgement. If applicable, please explain.

N/A

B. Licensure or Accreditation

The applicant shall specify any special qualifications, including but not limited to licensure or accreditation that applicant possesses relevant to this request.

N/A

BUDGET REQUEST BY SOURCE OF FUNDS

Period: July 1, 2015 to June 30, 2016

Applicant: Cnidaria Research Lab, Yanagihara

BUDGET CATEGORIES	Total State Funds Requested (a)	Total Federal Funds Requested (b)	Total County Funds Requested (c)	Total Private/Other Funds Requested (d)
A. PERSONNEL COST				
1. Salaries	27,500			
2. Payroll Taxes & Assessments				
3. Fringe Benefits	6,610			
TOTAL PERSONNEL COST	34,110			
B. OTHER CURRENT EXPENSES				
1. Airfare, Inter-Island	2,290			
2. Insurance				
3. Lease/Rental of Equipment	3,000			
4. Lease/Rental of Space				
5. Staff Training	3,000			
6. Supplies	23,500			
7. Telecommunication	2,000			
8. Contractor costs (Hanauma Bay)	35,000			
9. Signage	8,000			
10. Printing	4,500			
11. Boat charter (night offshore surveys)	9,600			
12. Topical Treatment (2000 Units)	10,000			
13. Smart Phone App Development	15,000			
14.				
15.				
16.				
17.				
18.				
19.				
20.				
TOTAL OTHER CURRENT EXPENSES	115,890			
C. EQUIPMENT PURCHASES				
D. MOTOR VEHICLE PURCHASES				
E. CAPITAL				
TOTAL (A+B+C+D+E)	150,000			
SOURCES OF FUNDING		Budget Prepared By:		
(a) Total State Funds Requested	153,000	Angel Anne Yanagihara	808 956 8328	
(b) Total Federal Funds Requested		Name (Please type or print)	Phone	
(c) Total County Funds Requested		<div style="background-color: black; width: 150px; height: 15px;"></div>	January 30 2015	
(d) Total Private/Other Funds Requested		Signature of Authorized Official	Date	
TOTAL BUDGET	153,000	Angel Anne Yanagihara, Principal Investigator Name and Title (Please type or print)		

BUDGET JUSTIFICATION - PERSONNEL SALARIES AND WAGES

Period: July 1, 2015 to June 30, 2016

Applicant: _____

POSITION TITLE	FULL TIME EQUIVALENT	ANNUAL SALARY A	% OF TIME ALLOCATED TO GRANT REQUEST B	TOTAL STATE FUNDS REQUESTED (A x B)
Director/Lead Diver Dr. Angel Yanagihara	0.25	\$84,000.00	0.15	\$ 12,600.00
Research Tech Bert Weeks	0.25	\$36,000.00	0.15	\$ 5,400.00
Student Helper Eric Wilcoxon	0.1	\$21,000.00	0.11	\$ 2,310.00
Student Helper Carolyn Wike	0.1	\$21,000.00	0.15	\$ 3,150.00
Student Helper To Be Named	0.1	\$21,000.00	0.15	\$ 3,150.00
Scientific Diver To Be Named	0.11	\$30,000.00	0.1	\$ 3,000.00
Dive Safety Officer Dave Pence, UH DSO	0.07	\$90,000.00	0.05	\$ 4,500.00
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
TOTAL:				34,110.00
JUSTIFICATION/COMMENTS:				
Support is requested for divers and student helpers to do monthly counts of box jellies from 2-6 am in Waikiki and Hanauma Bay				

BUDGET JUSTIFICATION - EQUIPMENT AND MOTOR VEHICLES

Period: July 1, 2015 to June 30, 2016

Applicant: Angel Yanagihara

DESCRIPTION EQUIPMENT	NO. OF ITEMS	COST PER ITEM	TOTAL COST	TOTAL BUDGETED
			\$ -	0
			\$ -	0
			\$ -	0
			\$ -	0
			\$ -	0
TOTAL:				0
JUSTIFICATION/COMMENTS:				

DESCRIPTION OF MOTOR VEHICLE	NO. OF VEHICLES	COST PER VEHICLE	TOTAL COST	TOTAL BUDGETED
			\$ -	0
			\$ -	0
			\$ -	0
			\$ -	0
			\$ -	0
TOTAL:				0
JUSTIFICATION/COMMENTS:				

BUDGET JUSTIFICATION - CAPITAL PROJECT DETAILS

Period: July 1, 2015 to June 30, 2016

Applicant: Angel Anne Yanagihara

FUNDING AMOUNT REQUESTED						
TOTAL PROJECT COST	ALL SOURCES OF FUNDS RECEIVED IN PRIOR YEARS		STATE FUNDS REQUESTED	OF FUNDS REQUESTED	FUNDING REQUIRED IN SUCCEEDING YEARS	
	FY: 2013-2014	FY: 2014-2015	FY:2015-2016	FY:2015-2016	FY:2016-2017	FY:2017-2018
PLANS						
LAND ACQUISITION						
DESIGN						
CONSTRUCTION			35000			
EQUIPMENT						
TOTAL:			35,000			
JUSTIFICATION/COMMENTS:						
Funds are requested for the design and construction of hot water immersion bath near current showers at Hanauma Bay						

GOVERNMENT CONTRACTS AND/OR GRANTS

Applicant: Angel Anne Yanagihara

	CONTRACT DESCRIPTION	EFFECTIVE DATES	AGENCY	GOVERNMENT ENTITY (U.S. / State / Haw / Hon / Kau / Mau)	CONTRACT VALUE
1.	Early Metazoan Nano-collagens for Promotion of Wound Healing	01/10/2011-12/31/2015	NIH/NIAMS	US	\$1,462,000
2.	Education Award	03/01/2013 to 09/01/2013	Pew Foundation	Private	\$5,000
3.	Biological and Physical Coupling in Māmala Bay: Completing our Understanding	02/01/2012-01/31/2014	Sea Grant	US	\$10,166
4.	Inflammatory Cytokines in Box Jellyfish Envenomation	06/08/2010-12/08/2012	Hawaii Community Foundation	Private	\$50,000
5.	Identification and Characterization of Cryptic Fleming Bay Marine Stingers	06/12/2011-08/01/2011	RMATRIX	US	\$20,548
6.	Developing Treatments for Box Jellyfish Sting Induced Inflammation	09/04/2014-9/03/2015	USSOCOM	US	\$181,000
7.	Coastal Ecosystem Assessment: Identification and Characterization of Cubozoans in Puerto Rico that Pose a Threat to Human Health	06/01/2014-01/31/2015	Sea Grant	US	\$7,440
8.					
				TOTAL	\$1,736,154

**DECLARATION STATEMENT OF
APPLICANTS FOR GRANTS PURSUANT TO
CHAPTER 42F, HAWAI'I REVISED STATUTES**

The undersigned authorized representative of the applicant certifies the following:

- 1) The applicant meets and will comply with all of the following standards for the award of grants pursuant to Section 42F-103, Hawai'i Revised Statutes:
 - a) Is licensed or accredited, in accordance with federal, state, or county statutes, rules, or ordinances, to conduct the activities or provide the services for which a grant is awarded;
 - b) Complies with all applicable federal and state laws prohibiting discrimination against any person on the basis of race, color, national origin, religion, creed, sex, age, sexual orientation, or disability;
 - c) Agrees not to use state funds for entertainment or lobbying activities; and
 - d) Allows the state agency to which funds for the grant were appropriated for expenditure, legislative committees and their staff, and the auditor full access to their records, reports, files, and other related documents and information for purposes of monitoring, measuring the effectiveness, and ensuring the proper expenditure of the grant.

- 2) If the applicant is an organization, the applicant meets the following requirements pursuant to Section 42F-103, Hawai'i Revised Statutes:
 - a) Is incorporated under the laws of the State; and
 - b) Has bylaws or policies that describe the manner in which the activities or services for which a grant is awarded shall be conducted or provided.

- 3) If the applicant is a non-profit organization, it meets the following requirements pursuant to Section 42F-103, Hawai'i Revised Statutes:
 - a) Is determined and designated to be a non-profit organization by the Internal Revenue Service; and
 - b) Has a governing board whose members have no material conflict of interest and serve without compensation.

Pursuant to Section 42F-103, Hawai'i Revised Statutes, for grants used for the acquisition of land, when the organization discontinues the activities or services on the land acquired for which the grant was awarded and disposes of the land in fee simple or by lease, the organization shall negotiate with the expending agency for a lump sum or installment repayment to the State of the amount of the grant used for the acquisition of the land.

Further, the undersigned authorized representative certifies that this statement is true and correct to the best of the applicant's knowledge.

Dr. Angel Anne Yanagihara
(Typed Name of Individual or Organization)


(Signature)

30 January 2015
(Date)

Dr. Angel Anne Yanagihara Director, Principal Investigator, Cnidaria Research Lab Univ of Hawaii
(Typed Name) (Title)