

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 4

**ORGANIZATIONAL DUNS\*:** 0770900660000

**Budget Type\*:**  Project  Subaward/Consortium

**Organization:** EcoHealth Alliance

**Start Date\*:** 03-01-2023

**End Date\*:** 02-29-2024

**Budget Period:** 4

F. Other Direct Costs	Funds Requested (\$)*
1. Materials and Supplies	7,917.50
2. Publication Costs	
3. Consultant Services	15,000.00
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	708,280.27
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Shipping	27,000.00
<b>Total Other Direct Costs</b>	<b>758,197.77</b>

G. Direct Costs	Funds Requested (\$)*
<b>Total Direct Costs (A thru F)</b>	<b>1,199,988.26</b>

H. Indirect Costs			
Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)*
1. EcoHealth Alliance IDC	32.0	491,708.01	157,346.56
2. Foreign Subcontractual & Consortium IDC	8.0	708,280.27	40,662.42
3. Henry Jackson IDC	52.0	74,999.99	39,372.03
4. University of North Carolina IDC	55.5	125,000.00	69,375.00
<b>Total Indirect Costs</b>			<b>306,756.01</b>
<b>Cognizant Federal Agency</b>		DOD Dept. of Navy, Shea Kersey, +1.703.696.2055	
<small>(Agency Name, POC Name, and POC Phone Number)</small>			

I. Total Direct and Indirect Costs	Funds Requested (\$)*
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>1,506,744.27</b>

J. Fee	Funds Requested (\$)*

K. Total Costs and Fee	Funds Requested (\$)*
	<b>1,506,744.27</b>

L. Budget Justification*
File Name: EHA_EIDRC_2019_budget_Justification_FINAL.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 5

ORGANIZATIONAL DUNS\*: 0770900660000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: EcoHealth Alliance

Start Date\*: 03-01-2024

End Date\*: 02-28-2025

Budget Period: 5

A. Senior/Key Person												
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*
1 .	Dr.	Peter	Daszak	Ph.D	PD/PI							(b) (4), (b) (6)
2 .	Dr.	Kevin	Olival	Ph.D	Co-Investigator							
3 .	Dr.	Carlos	Zambrana-Torrello		Co-Investigator							
4 .	Dr.	Alice	Latinne		Bioinformatician							
5 .	Dr.	Kendra	Phelps		Field Scientist							
6 .	Dr.	Patrick	Dawson		Epidemiologist							
7 .	Ms.	Hongying	Li		Epidemiologist							
8 .	Dr.	Aleksei	Chmura		Senior Program Manager							
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>												
<b>Additional Senior Key Persons:</b>											File Name:	
											<b>Total Senior/Key Person</b>	<b>256,075.51</b>

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Data Scientist						(b) (4), (b) (6)
1	Epidemiologist						
1	Program Manager						
<b>3</b>	<b>Total Number Other Personnel</b>					<b>Total Other Personnel</b>	<b>113,489.98</b>
						<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	<b>369,565.49</b>

RESEARCH & RELATED Budget (A-B) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 5

**ORGANIZATIONAL DUNS\*:** 0770900660000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** EcoHealth Alliance

**Start Date\*:** 03-01-2024

**End Date\*:** 02-28-2025

**Budget Period:** 5

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	15,592.00
2. Foreign Travel Costs	56,633.00
<b>Total Travel Cost</b>	<b>72,225.00</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 5

**ORGANIZATIONAL DUNS\*:** 0770900660000

**Budget Type\*:**   ● Project   ○ Subaward/Consortium

**Organization:** EcoHealth Alliance

**Start Date\*:** 03-01-2024

**End Date\*:** 02-28-2025

**Budget Period:** 5

F. Other Direct Costs	Funds Requested (\$)*
1. Materials and Supplies	7,917.50
2. Publication Costs	
3. Consultant Services	15,000.00
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	708,280.27
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Shipping	27,000.00
<b>Total Other Direct Costs</b>	<b>758,197.77</b>

G. Direct Costs	Funds Requested (\$)*
<b>Total Direct Costs (A thru F)</b>	<b>1,199,988.26</b>

H. Indirect Costs			
Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)*
1. EcoHealth Alliance IDC	32.0	491,708.01	157,346.56
2. Foreign Subcontractual & Consortium IDC	8.0	708,280.27	40,662.42
3. Henry Jackson IDC	52.0	74,999.99	39,372.03
4. University of North Carolina IDC	55.5	125,000.00	69,375.00
<b>Total Indirect Costs</b>			<b>306,756.01</b>
<b>Cognizant Federal Agency</b>		DOD Dept. of Navy, Shea Kersey, +1.703.696.2055	
<small>(Agency Name, POC Name, and POC Phone Number)</small>			

I. Total Direct and Indirect Costs	Funds Requested (\$)*
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>1,506,744.27</b>

J. Fee	Funds Requested (\$)*

K. Total Costs and Fee	Funds Requested (\$)*
	<b>1,506,744.27</b>

L. Budget Justification*
File Name: EHA_EIDRC_2019_budget_Justification_FINAL.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)



## **ECOHEALTH ALLIANCE BUDGET JUSTIFICATION**

### **A. Senior/Key Personnel:**

The PD/PI, Dr. Peter Daszak, will commit (b) (4), (b) (6) per year in each year of this budget. Dr. Daszak has over 20 years of experience in building international collaborations and leading emerging infectious disease surveillance work in southeast Asia. PI Daszak will meet with Co-PIs, Key Personnel, and senior governmental officials to initiate the project work. He will then work with the Co-PIs to coordinate the wide array of partners involved in this collaboration and promote stakeholder engagement. He will be primarily responsible for overseeing the project, general management, communication and collaboration with subaward partners, as well as contributing to data analysis and manuscript writing.

Co-Investigator, Dr. Kevin Olival, will commit (b) (4), (b) (6) per year in each year of this budget. Dr. Olival has more than 10 years of experience managing international multidisciplinary field and lab-based research projects focused on the dynamics of high consequence (e.g. select agent) zoonotic viruses in wildlife reservoirs and spillover into human populations. He will work on the management team to coordinate field and team training, sampling methodology, study implementation, and data management. Dr. Olival will oversee the analysis, field, and lab teams and lead the design and implementation of the sampling fieldwork; facilitate overall project management; and train and oversee field teams. Dr. Olival will also oversee modeling and analyses, participate in regular conference calls, and help write manuscripts and reports.

Co-Investigator, Dr. Carlos Zambrana-Torrel, will commit (b) (4), (b) (6) per year in each year of this budget. Dr. Zambrana-Torrel has more than 8 years of experience leading international teams analyzing emerging infectious disease emergence. He will oversee the Data Analytics team lead modeling and data analysis work, and assist with manuscript writing.

Bioinformatician, Dr. Alice Latinne, will commit (b) (4), (b) (6) per year in each year of this budget. Dr. Latinne will assist in with phylogenetic and phylogeographic analyses and manuscript writing.

Field Scientist, Dr. Kendra Phelps, will commit (b) (4), (b) (6) per year in each year of this budget. Dr. Phelps is a disease biologist with a strong field-based research and expertise in vector-borne diseases and eco-epidemiology. Dr. Phelps will manage study implementation, coordinate fieldwork in Thailand and Malaysia, and assist in training field work teams. Dr. Phelps will be responsible for wildlife surveillance and sampling.

Epidemiologist, Dr. Patrick Dawson, will commit (b) (4), (b) (6) per year in each year of this budget. Dr. Dawson will oversee epidemiological work in Thailand and Malaysia, design the human surveillance study in coordination with partners, and conduct epidemiologic analysis and biostatistical modeling. He will assist with the development of human data collection instruments, testing, and implementation; advise on data storage, data analyses, and manuscript writing. He will also provide training for field teams conducting human subjects research. He will assist in managing permissions for human subjects, including IRB.

Epidemiologist, Ms. Hongying Li, will commit (b) (4), (b) (6) per year in each year of this budget. Ms. Li will assist with the development of human data collection instruments, testing, and implementation, and advise on data storage, data analyses, and manuscript writing. Ms. Li will participate in human sampling and field work in Malaysia and Thailand.

Dr. Aleksei Chmura, Senior Program Manager, will commit (b) (4), (b) (6) per year in each year of this budget. Dr. Chmura has over 13 years of experience managing international research projects in Asia. He will maintain EcoHealth Alliance and subaward contracts, budgets, project reporting, and financial reporting as well as advise field activities and assist with data analysis and manuscript drafting.

### **B. Other Personnel**

Data Scientist, Ms. Emma Mendelsohn, will commit (b) (4), (b) (6) per year in each year of this budget. Ms. Mendelsohn assist with modeling work and data analyses. She will also advise on data management, statistical approaches, and computational work. Ms. Mendelsohn will also assist in modelling and analytics, manuscript generation, and data cleaning, as well as with the development of project reports.



Epidemiologist, Ms. Stephanie Martinez, will commit (b) (4), (b) (6) per year in each year of this budget. Ms. Martinez will assist with field sampling efforts as well as human data collection and analyses.

Program Manager, Mr. Luke Hamel, will commit (b) (4), (b) (6) per year in each year of this budget. Mr. Hamel will coordinate regular calls, annual meetings, reports, draft subcontracts, and set-up project databases. He will advise field activities, assist with statistical analysis, and manuscript writing.

Fringe benefits for Year 1 are calculated for EcoHealth Alliance's federally approved rate of 35.4% of base salary and is included in all subsequent years.

### **C. Equipment**

No Equipment costing more than \$5,000 will be purchased

### **D. Travel**

#### *Domestic Travel*

Travel support is requested to support eight (8) personnel - PI (Daszak) and Co-Investigators (Olival, Zambrana-Torrel, Dawson, Baric, Sims, Liang, and Broder) - to attend a 1-day kick-off meeting in Year 01 hosted by NIH in the Bethesda Maryland area and annual 2-day meetings in Years 02-05 also to be hosted by NIH. Co-Investigators will stay an extra day after the kick-off meeting in DC to meet and coordinate project planning and roll-out. Travel is estimated at \$10,184 per year and calculated at \$251 for maximum lodging per night and \$76 for MIE per day with \$57 (75%) for first and last days of travel. Round trip train fare from NYC/Boston to Washington DC is estimated at \$361. Taxis to/from train stations are estimated at \$55 per trip. Total costs are estimated as follows: 8 people three days, two nights: lodging (\$251 x 2 nights x 8 people) + MIE (\$76 x 1 day x 8 people + \$57 x 2 days x 8 people) + taxis (\$55 x 4 trips to/from NYC/BOS/WAS train stations x 8 people).

Additional domestic travel support is requested for four (4) personnel - PD (Daszak) and Co-Investigators (Olival, Zambrana-Torrel, and Dawson) to attend and present on research results annually at the annual American Society for Tropical Medicine and Hygiene and the American Public Health Association meetings. 2 night and 3 day travel to Washington, DC is calculated as follows: \$251 for hotels (\$251 x 2 nights x 4 people); \$76 for meals and incidentals with \$57 (75%) for first and last days of travel (\$76 x 1 days x 4 people + \$57 x 2 days x 4 people); \$350 for round-trip airfare (\$350 x 4 people); \$100 for taxis to/from NYC airports and \$55 for taxis to/from Conference venue and airports (\$100 x 2 x 4 people + \$55 x 2 x 4 people).

#### *International Travel*

To facilitate collaboration, present results, ensure quality training, sample collection, and data analyses, annual meetings of the PI, Co-Investigators, and other personnel will be held in Thailand, Singapore, and Malaysia. Respective Consortium budgets include travel and venue expenses to support personnel and lab/field team participation. We request support for round-trip flights from New York to Bangkok to Singapore and to Malaysia (all in one trip) for the annual meetings for 6 Senior/Key Personnel (Daszak, Olival, Zambrana-Torrel, Latinne, Li, and Chmura) at \$1,800 each. Eight (8) nights and nine (9) days of hotels, meals, and incidentals for travel to Bangkok (Thailand), Kuala Lumpur (Peninsular Malaysia), Singapore, Kuching (Malaysia), and Kota Kinabalu (Malaysia) for six (6) Senior/Key Personnel are calculated at \$24,303 per year: hotels at average of \$193 per night and meals and incidentals at \$96 per day. Taxis to/from NYC airport are calculated at \$110 x 2 rides and taxis to/from in-country airports are calculated at \$15 x 2 rides. Daily taxis are estimated at \$20 per day per person.

Field, Wildlife, and Data Management/Analysis Scientists will also participate in annual meetings. These personnel will spend an additional week (7 days and 6 nights) respectively in Malaysia (Peninsular Malaysia, Sabah, and Sarawak) Thailand, and Singapore. We request support for round-trip flights from New York to Bangkok to Singapore and to Malaysia (all in one trip) for the 2 Personnel (Dawson and Phelps or Mendelsohn and Martinez) at \$1,800 each. A total of 28 days and 27 nights of hotels, meals, and incidentals for travel to Bangkok (Thailand), Kuala Lumpur (Peninsular Malaysia), Singapore, Kuching (Malaysia), and Kota Kinabalu (Malaysia) for six (6) Senior/Key Personnel are calculated at \$26,350 per year. Per diems and other costs are



well below US Government per diem rates to save costs and as these locations will be outside urban centers. We calculate average hotel nightly costs at \$92 per night and meals and incidentals at \$65 per day. Taxis to/from NYC airport are calculated at \$110 x 2 rides and taxis to/from in-country airports are calculated at \$15 x 2 rides. Daily taxis are estimated at \$20 per day per person.

Additional travel support is requested for four (2) personnel - PD (Daszak) and Co-Investigator (Olival) to attend and present on research results annually at the IMED Vienna or other international meetings. 3 night and 4 day international travel to the conference venue is calculated as follows: \$221 for hotels (\$221 x 3 nights x 2 people); \$122 for meals and incidentals with \$92 (75%) for first and last days of travel (\$122 x 2 days x 2 people + \$92 x 2 days x 2 people); \$1,500 for round-trip airfare (\$1,500 x 2 people); \$110 for taxis to/from NYC airports and \$55 for taxis to/from Conference venue and airports (\$110 x 2 x 2 people + \$55 x 2 x 2 people).

#### **E. Participant/Trainee Support Costs**

There are no participant/trainee support costs.

#### **F. Other Direct Costs**

##### *Materials & Supplies*

We request \$7,000 in Year 1 for two (2) laptops for the Program Manager (TBD) and Epidemiologist (Li). Costs for Apple MacBook Pros are estimated at \$3,500 including MS Office licenses, adaptor cables, and AppleCare/insurance. We also request \$917.50 per year in each year to cover software and reference materials, and acquisition of datasets.

##### *Consultant Services*

We request (b) (4), (b) (6) in each year of this proposed project to engage Senior Veterinary Officer and Epidemiologist Dr. Hume Field. Dr. Field has over 20 years of experience working in Southeast Asia on wildlife disease surveillance. Most recently he was the Principal Research Scientist at the Australian Queensland Centre for Emerging Infectious Diseases where he was co-PI on numerous international government and university-funded projects which sought to elaborate zoonotic disease infections. He works closely with the US Centers for Disease Control, the World Health Organization, and the UN Food and Agriculture Organization. His work directly resulted in the finding of the origins of Nipah virus in Malaysia, SARS in China, and Reston ebolavirus in the Philippines. Dr. Field will participate in training field teams, provide support and recommendation on project evaluation and consultation on drafting high-impact, quality peer-review scientific manuscripts based upon project findings.

##### *Publication Costs*

We request \$7,000 per year for only Years 2 to 5 for open access fees required to publish research findings in peer-reviewed journals such as *Nature*, *Public Library of Science*, and other journals. We estimate two publications per year at \$3,500 in open access fees each.

##### *Subawards/Consortium/Contractual Costs*

We are requesting consortium/contractual support for our five partners in all years of our proposed project: Chulalongkorn University Hospital Thailand, Conservation Medicine Malaysia, Duke-National University Singapore Medical School, Uniformed Services University (via Henry M. Jackson Foundation), and the University of North Carolina at Chapel Hill. We have fully detailed these direct and indirect costs in their respective sub-award budgets.

##### *Shipping*

We will be shipping biological samples from Thailand and Malaysia to our collaborators at the National Emerging Infectious Diseases Laboratories (NEIDL) in Boston USA. Shipping box and all taxes are estimated at \$3,000 per shipment. We estimate 3 shipments of samples (\$3,000 x 3 = \$9,000) will be sent every year from each country (Singapore, Thailand, and Malaysia: \$9,000 x 3 = \$27,000) throughout the duration of our project.

#### **H. Indirect Costs**

We are requesting the EcoHealth Alliance federally approved indirect cost rate of 32% on all applicable direct costs. The cognizant agency is the US Department of Defense Department of the Navy. Our Indirect is also applied only on the first \$25,000 for each consortium/contractual agreement in each year. As there are 5 consortium/contractual agreements, a total of \$40,000 is requested as indirect costs on consortium/subaward agreements only in Year 1. This and all consortium indirect costs are not included as part of direct cost calculations. In years 2-5 no indirect will be taken on consortium/contractual agreement subcontracts.



**RESEARCH & RELATED BUDGET - Cumulative Budget**

	Totals (\$)	
Section A, Senior/Key Person		1,280,377.55
Section B, Other Personnel		567,449.90
Total Number Other Personnel	15	
Total Salary, Wages and Fringe Benefits (A+B)		1,847,827.45
Section C, Equipment		0.00
Section D, Travel		361,125.00
1. Domestic	77,960.00	
2. Foreign	283,165.00	
Section E, Participant/Trainee Support Costs		0.00
1. Tuition/Fees/Health Insurance	0.00	
2. Stipends	0.00	
3. Travel	0.00	
4. Subsistence	0.00	
5. Other	0.00	
6. Number of Participants/Trainees	0	
Section F, Other Direct Costs		3,790,988.85
1. Materials and Supplies	39,587.50	
2. Publication Costs	0.00	
3. Consultant Services	75,000.00	
4. ADP/Computer Services	0.00	
5. Subawards/Consortium/Contractual Costs	3,541,401.35	
6. Equipment or Facility Rental/User Fees	0.00	
7. Alterations and Renovations	0.00	
8. Other 1	135,000.00	
9. Other 2	0.00	
10. Other 3	0.00	
Section G, Direct Costs (A thru F)		5,999,941.30
Section H, Indirect Costs		1,573,780.05
Section I, Total Direct and Indirect Costs (G + H)		7,573,721.35
Section J, Fee		0.00
Section K, Total Costs and Fee (I + J)		7,573,721.35

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 1

ORGANIZATIONAL DUNS\*: 6598088360000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Chulalongkorn University

Start Date\*: 03-01-2020

End Date\*: 02-28-2021

Budget Period: 1

A. Senior/Key Person													
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*	
1 .	Dr.	Supaporn	Wacharapluesadee	Ph.D	Co-Investigator							(b) (4), (b) (6)	
2 .	Dr.	Thiravat	Hemachudha	Ph.D	Co-Investigator							(b) (4), (b) (6)	
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>													
<b>Additional Senior Key Persons:</b>											File Name:	<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel								
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*	
	Post Doctoral Associates							
	Graduate Students							
	Undergraduate Students							
	Secretarial/Clerical							
1	Lab & Field Technician						(b) (4), (b) (6)	
1	Lab Technician						(b) (4), (b) (6)	
1	Field Technician						(b) (4), (b) (6)	
1	Program Manager						(b) (4), (b) (6)	
<b>4</b>	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b>	
							<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 1

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2020

**End Date\*:** 02-28-2021

**Budget Period:** 1

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	43,495.00
2. Foreign Travel Costs	7,601.00
<b>Total Travel Cost</b>	<b>51,096.00</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)



## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 1

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2020

**End Date\*:** 02-28-2021

**Budget Period:** 1

F. Other Direct Costs	Funds Requested (\$)*
1. Materials and Supplies	88,001.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Annual Meeting (Facilities, Meals)	3,660.00
9. Maintenance Costs	1,525.00
<b>Total Other Direct Costs</b>	<b>93,186.00</b>

G. Direct Costs	Funds Requested (\$)*
<b>Total Direct Costs (A thru F)</b>	<b>199,948.66</b>

H. Indirect Costs			
Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)*
1. Facilities and administrative costs	8.0		15,995.89
<b>Total Indirect Costs</b>			<b>15,995.89</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

I. Total Direct and Indirect Costs	Funds Requested (\$)*
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>215,944.55</b>

J. Fee	Funds Requested (\$)*

K. Total Costs and Fee	Funds Requested (\$)*
	<b>215,944.55</b>

L. Budget Justification*
File Name: Chulalongkorn_EIDRC_2019_Justification.pdf (Only attach one file.)

RESEARCH & RELATED Budget (F-K) (Funds Requested)

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 2

ORGANIZATIONAL DUNS\*: 6598088360000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Chulalongkorn University

Start Date\*: 03-01-2021

End Date\*: 02-28-2022

Budget Period: 2

A. Senior/Key Person													
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*	
1 .	Dr.	Supaporn	Wacharapluesadee	Ph.D	Co-Investigator							(b) (4), (b) (6)	
2 .	Dr.	Thiravat	Hemachudha	Ph.D	Co-Investigator							(b) (4), (b) (6)	
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>													
<b>Additional Senior Key Persons:</b>											File Name:	<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Lab & Field Technician						(b) (4), (b) (6)
1	Lab Technician						(b) (4), (b) (6)
1	Field Technician						(b) (4), (b) (6)
1	Program Manager						(b) (4), (b) (6)
<b>4</b>	<b>Total Number Other Personnel</b>					<b>Total Other Personnel</b>	(b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 2

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2021

**End Date\*:** 02-28-2022

**Budget Period:** 2

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	43,495.00
2. Foreign Travel Costs	7,601.00
<b>Total Travel Cost</b>	<b>51,096.00</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)



## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 2

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2021

**End Date\*:** 02-28-2022

**Budget Period:** 2

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	88,001.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Annual Meeting (Facilities, Meals)	3,660.00
9. Maintenance Costs	1,525.00
<b>Total Other Direct Costs</b>	<b>93,186.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>199,948.66</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1. Facilities and administrative costs	8.0		15,995.89
<b>Total Indirect Costs</b>			<b>15,995.89</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>215,944.55</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>215,944.55</b>

<b>L. Budget Justification*</b>
File Name: Chulalongkorn_EIDRC_2019_Justification.pdf (Only attach one file.)

RESEARCH & RELATED Budget (F-K) (Funds Requested)

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 3

ORGANIZATIONAL DUNS\*: 6598088360000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Chulalongkorn University

Start Date\*: 03-01-2022

End Date\*: 02-28-2023

Budget Period: 3

A. Senior/Key Person													
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*	
1.	Dr.	Supaporn	Wacharapluesadee	Ph.D	Co-Investigator							(b) (4), (b) (6)	
2.	Dr.	Thiravat	Hemachudha	Ph.D	Co-Investigator							(b) (4), (b) (6)	
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>													
<b>Additional Senior Key Persons:</b>											File Name:	<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Lab & Field Technician						(b) (4), (b) (6)
1	Lab Technician						(b) (4), (b) (6)
1	Field Technician						(b) (4), (b) (6)
1	Program Manager						(b) (4), (b) (6)
<b>4</b>	<b>Total Number Other Personnel</b>					<b>Total Other Personnel</b>	(b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 3

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2022

**End Date\*:** 02-28-2023

**Budget Period:** 3

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>		<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)		43,495.00
2. Foreign Travel Costs		7,601.00
<b>Total Travel Cost</b>		<b>51,096.00</b>

<b>E. Participant/Trainee Support Costs</b>		<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance		
2. Stipends		
3. Travel		
4. Subsistence		
5. Other:		
<b>Number of Participants/Trainees</b>		<b>0.00</b>
<b>Total Participant Trainee Support Costs</b>		<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)



## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 3

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2022

**End Date\*:** 02-28-2023

**Budget Period:** 3

F. Other Direct Costs	Funds Requested (\$)*
1. Materials and Supplies	88,001.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Annual Meeting (Facilities, Meals)	3,660.00
9. Maintenance Costs	1,525.00
<b>Total Other Direct Costs</b>	<b>93,186.00</b>

G. Direct Costs	Funds Requested (\$)*
<b>Total Direct Costs (A thru F)</b>	<b>199,948.66</b>

H. Indirect Costs			
Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)*
1. Facilities and administrative costs	8.0		15,995.89
<b>Total Indirect Costs</b>			<b>15,995.89</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

I. Total Direct and Indirect Costs	Funds Requested (\$)*
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>215,944.55</b>

J. Fee	Funds Requested (\$)*

K. Total Costs and Fee	Funds Requested (\$)*
	<b>215,944.55</b>

L. Budget Justification*
File Name: Chulalongkorn_EIDRC_2019_Justification.pdf (Only attach one file.)

RESEARCH & RELATED Budget (F-K) (Funds Requested)

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 4

ORGANIZATIONAL DUNS\*: 6598088360000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Chulalongkorn University

Start Date\*: 03-01-2023

End Date\*: 02-29-2024

Budget Period: 4

A. Senior/Key Person													
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*	
1.	Dr.	Supaporn	Wacharapluesadee	Ph.D	Co-Investigator							(b) (4), (b) (6)	
2.	Dr.	Thiravat	Hemachudha	Ph.D	Co-Investigator							(b) (4), (b) (6)	
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>													
<b>Additional Senior Key Persons:</b>											File Name:	<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel								
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*	
	Post Doctoral Associates							
	Graduate Students							
	Undergraduate Students							
	Secretarial/Clerical							
1	Lab & Field Technician						(b) (4), (b) (6)	
1	Lab Technician						(b) (4), (b) (6)	
1	Field Technician						(b) (4), (b) (6)	
1	Program Manager						(b) (4), (b) (6)	
<b>4</b>	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b>	
							<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 4

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2023

**End Date\*:** 02-29-2024

**Budget Period:** 4

<b>C. Equipment Description</b>	
List items and dollar amount for each item exceeding \$5,000	
<b>Equipment Item</b>	<b>Funds Requested (\$)*</b>
<b>Total funds requested for all equipment listed in the attached file</b>	
<b>Total Equipment</b>	<b>0.00</b>
<b>Additional Equipment:</b> File Name:	

	Funds Requested (\$)*
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	43,495.00
2. Foreign Travel Costs	7,601.00
<b>Total Travel Cost</b>	<b>51,096.00</b>

	Funds Requested (\$)*
<b>E. Participant/Trainee Support Costs</b>	
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	<b>Total Participant Trainee Support Costs</b>
	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 4

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2023

**End Date\*:** 02-29-2024

**Budget Period:** 4

F. Other Direct Costs	Funds Requested (\$)*
1. Materials and Supplies	88,001.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Annual Meeting (Facilities, Meals)	3,660.00
9. Maintenance Costs	1,525.00
<b>Total Other Direct Costs</b>	<b>93,186.00</b>

G. Direct Costs	Funds Requested (\$)*
<b>Total Direct Costs (A thru F)</b>	<b>199,948.66</b>

H. Indirect Costs			
Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	Funds Requested (\$)*
1. Facilities and administrative costs	8.0		15,995.89
<b>Total Indirect Costs</b>			<b>15,995.89</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

I. Total Direct and Indirect Costs	Funds Requested (\$)*
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>215,944.55</b>

J. Fee	Funds Requested (\$)*

K. Total Costs and Fee	Funds Requested (\$)*
	<b>215,944.55</b>

L. Budget Justification*
File Name: Chulalongkorn_EIDRC_2019_Justification.pdf (Only attach one file.)

RESEARCH & RELATED Budget (F-K) (Funds Requested)



RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 5

ORGANIZATIONAL DUNS\*: 6598088360000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Chulalongkorn University

Start Date\*: 03-01-2024

End Date\*: 02-28-2025

Budget Period: 5

A. Senior/Key Person													
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*	
1.	Dr.	Supaporn	Wacharapluesadee	Ph.D	Co-Investigator							(b) (4), (b) (6)	
2.	Dr.	Thiravat	Hemachudha	Ph.D	Co-Investigator							(b) (4), (b) (6)	
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>													
<b>Additional Senior Key Persons:</b>											File Name:	<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Lab & Field Technician						(b) (4), (b) (6)
1	Lab Technician						(b) (4), (b) (6)
1	Field Technician						(b) (4), (b) (6)
1	Program Manager						(b) (4), (b) (6)
<b>4</b>	<b>Total Number Other Personnel</b>					<b>Total Other Personnel</b>	(b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 5

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2024

**End Date\*:** 02-28-2025

**Budget Period:** 5

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	43,495.00
2. Foreign Travel Costs	7,601.00
<b>Total Travel Cost</b>	<b>51,096.00</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 5

**ORGANIZATIONAL DUNS\*:** 6598088360000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Chulalongkorn University

**Start Date\*:** 03-01-2024

**End Date\*:** 02-28-2025

**Budget Period:** 5

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	88,001.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Annual Meeting (Facilities, Meals)	3,660.00
9. Maintenance Costs	1,525.00
<b>Total Other Direct Costs</b>	<b>93,186.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>199,948.66</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1. Facilities and administrative costs	8.0		15,995.89
<b>Total Indirect Costs</b>			<b>15,995.89</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>215,944.55</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>215,944.55</b>

<b>L. Budget Justification*</b>
File Name: Chulalongkorn_EIDRC_2019_Justification.pdf (Only attach one file.)

RESEARCH & RELATED Budget (F-K) (Funds Requested)

## **CHULALONGKORN HOSPITAL BUDGET JUSTIFICATION, SUBAWARD**

### **A. Senior/Key Personnel**

Supaporn Wacharapluesadee, Co-Investigator will commit (b) (4), (b) (6) to this project. Dr. Wacharapluesadee is a known expert in field surveillance in wild mammals, human behavioral risk surveys, and clinical sampling in Thailand. Dr. Wacharapluesadee will oversee all aspects of this project in Thailand and direct the activities of the Other Personnel. At a regular basis, Dr. Wacharapluesadee will meet with the PI and other Co-PIs to refine study protocols, report back results, and prepare publications. Dr. Wacharapluesadee has been working on the discovery and characterization of novel viruses from bats and other wildlife as well as clinical sampling for over 15 years and has worked extensively with and managing international and local interdisciplinary teams. Dr. Wacharapluesadee's laboratory was the first to correctly diagnose the first human MERS case in Thailand, which led to swift execution of containment measures preventing a MERS outbreak.

Thiravat Hemachudha, Co-Investigator will commit (b) (4), (b) (6) to this project. Dr. Thiravat has over 20 years of internationally funded research in various fields, from immunological studies, to rabies pathology, to CNS infection pathology. Since 2008, Dr. Thiravat has been the director of the World Health Organization's Collaborating Centre for Research and Training on Viral Zoonoses. Dr. Thiravat will directly supervise and coordinate all the clinical hospital work under this project.

### **B. Other Personnel**

TBD, Laboratory and Field Technician will commit (b) (4), (b) (6) per year to this project to directly supervisor the lab and field technicians, and coordinate with Senior Personnel and collaborators for communication, reporting, and or organizing meetings and reports.

TBD, Laboratory Technician will commit (b) (4), (b) (6) per year to run diagnostic assays, genomics, and virus isolation work as well as assisting with sample shipments, storage, and maintenance of cold chain

TBD, Field Technician will commit (b) (4), (b) (6) per year to conduct field surveillance efforts and coordinate partner institution/site field teams

TBD, Program Manager will commit (b) (4), (b) (6) per year to assisting all personnel and maintaining all administrative aspects of this proposal including equipment purchase and inventory, reporting, minutes, setting up meetings, and coordinating annual in-country meetings.

### **Fringe Benefits**

No fringe benefits are requested.

### **C. Equipment**

No equipment over \$5,000 will be purchased.

### **D. Travel**

#### *Domestic Travel.*

Domestic travel costs are estimated at \$43,495 per year for site surveillance and sampling visits. These costs are calculated as follows: \$17,398 for four 1-week bat sampling trips per year (visiting each site twice per year); concurrent community sampling is estimated at the same cost \$17,398. Sampling costs include field personnel, drivers, vehicle rental, and flights

#### *Foreign Travel.*

International travel costs are requested for 1 trip for Co-Investigator annually from Bangkok to USA (DC and NYC) for NIH kickoff (Year 1) and annual meetings (Years 2-5). Co-Investigator will fly roundtrip to NYC and take train to NIH annual meeting and return to NYC to EcoHealth Alliance Offices to meet with PI, Co-Investigators, and Research Scientists. Costs for one traveler are estimated at \$251 NYC/DC hotel per diem (\$251 x 6 nights = \$1,506); \$76/day for meals and incidental expenses with 75% applied on first and final days of travel (\$76 x 6.5 days = \$494); \$1,400 round trip flight from Bangkok to NYC (\$1,400 x 1 = \$1,400); \$192 for roundtrip train fare from NYC to Washington DC (\$192 x 1 = \$192); \$30 per daily taxi rides in NYC and DC (\$15 x 2 rides per day x 5 days = \$150); \$330 for to/from airport taxis in Bangkok and USA (\$110 per ride in



NYC = \$220 and \$30 per ride in Bangkok = \$60, total = \$280).

Additional international travel support is requested for both Co-Investigators (2) to attend annual regional meetings in Singapore and Malaysia. These costs are estimated as follows: \$200 for Singapore hotel per diem ( $\$200 \times 2 \text{ nights} \times 2 \text{ people} = \$800$ ); \$95 for meals and incidental expenses with 75% applied on first and final days of travel ( $\$95 \times 2.5 \text{ days} \times 2 \text{ people} = \$475$ ); \$150 roundtrip airfare from Bangkok to Singapore ( $\$150 \times 2 \text{ people} = \$300$ ); \$10 per daily taxi rides in Singapore ( $\$10 \times 2 \text{ people} \times 1 \text{ day} = \$20$ ); \$120 for to/from airport taxis in Bangkok and Singapore ( $\$30 \text{ per ride in Bangkok and Singapore} = \$30 \times 2 \text{ trips to/from airport} \times 2 \text{ people} = \$240$ ). Trips to Malaysia for two Co-Investigators are estimated from Bangkok to Kuala Lumpur at: \$186 for Singapore hotel per diem ( $\$186 \times 2 \text{ nights} \times 2 \text{ people} = \$372$ ); \$80 for meals and incidental expenses with 75% applied on first and final days of travel ( $\$80 \times 2.5 \text{ days} \times 2 \text{ people} = \$160$ ); \$150 roundtrip airfare from Bangkok to Kuala Lumpur ( $\$150 \times 2 \text{ people} = \$300$ ); \$10 per daily taxi rides in Kuala Lumpur ( $\$10 \times 2 \text{ people} \times 1 \text{ day} = \$20$ ); \$120 for to/from airport taxis in Bangkok and Kuala Lumpur ( $\$30 \text{ per ride in Bangkok and Kuala Lumpur} = \$30 \times 2 \text{ trips to/from airport} \times 2 \text{ people} = \$240$ ).

#### **E. Participant/Trainee Support Costs**

No participant/trainee support costs are requested.

#### **F. Other Direct Costs**

##### *Materials and Supplies.*

Chulalongkorn University Hospital requests reimbursement of estimated laboratory costs. These are calculated based upon current annual costs and requested in each year of this proposed project. Costs include RNA extraction (\$13,200.15) PCR reagents and sequencing (\$44,000.50) and gloves, chemicals, plasticware, and other miscellaneous supplies (\$13,200.15). In addition, NGS sequencing costs are estimated at (\$17,600.20).

##### *Annual Meeting*

Chulalongkorn University Hospital will host an annual meeting of PI, Co-Investigators and other collaborators. Facilities fees are estimated at \$3,666.00 and detailed as follows: \$1,500.00 for room rental costs, AV, and University support; University Dining will charge a fixed fee for meals for 20 attendees at \$36/day for the three days of the meeting ( $\$36 \times 3 \text{ days} \times 20 \text{ people} = \$2,166.00$ ).

##### *Maintenance Costs.*

Reimbursement is requested in the amount of \$1,525.00 for annual maintenance costs for laboratory PCR-sequencers and other equipment.

#### **H. Indirect Costs (8%)**

Chulalongkorn University Hospital requests reimbursement of the *de minimus* indirect cost recovery rate of 8% of modified or allowable direct costs.

**RESEARCH & RELATED BUDGET - Cumulative Budget**

	Totals (\$)	
Section A, Senior/Key Person		133,333.30
Section B, Other Personnel		145,000.00
Total Number Other Personnel	20	
Total Salary, Wages and Fringe Benefits (A+B)		278,333.30
Section C, Equipment		0.00
Section D, Travel		255,480.00
1. Domestic	217,475.00	
2. Foreign	38,005.00	
Section E, Participant/Trainee Support Costs		0.00
1. Tuition/Fees/Health Insurance	0.00	
2. Stipends	0.00	
3. Travel	0.00	
4. Subsistence	0.00	
5. Other	0.00	
6. Number of Participants/Trainees	0	
Section F, Other Direct Costs		465,930.00
1. Materials and Supplies	440,005.00	
2. Publication Costs	0.00	
3. Consultant Services	0.00	
4. ADP/Computer Services	0.00	
5. Subawards/Consortium/Contractual Costs	0.00	
6. Equipment or Facility Rental/User Fees	0.00	
7. Alterations and Renovations	0.00	
8. Other 1	18,300.00	
9. Other 2	7,625.00	
10. Other 3	0.00	
Section G, Direct Costs (A thru F)		999,743.30
Section H, Indirect Costs		79,979.45
Section I, Total Direct and Indirect Costs (G + H)		1,079,722.75
Section J, Fee		0.00
Section K, Total Costs and Fee (I + J)		1,079,722.75

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 1

ORGANIZATIONAL DUNS\*: 5344092560000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Conservation Medicine Ltd.

Start Date\*: 03-01-2020

End Date\*: 02-28-2021

Budget Period: 1

A. Senior/Key Person												
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*
1	Mr.	Thomas	J.		Hughes	Co-Investigator						(b) (4), (b) (6)
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>											(b) (4), (b) (6)	
<b>Additional Senior Key Persons:</b> File Name:											<b>Total Senior/Key Person</b> (b) (4), (b) (6)	

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Lab Coordinator						(b) (4), (b) (6)
1	Lab Technician						
1	Field Coordinator						
1	Veterinarian						
2	Wildlife Rangers						
<b>6</b>	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b> (b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 1

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2020

**End Date\*:** 02-28-2021

**Budget Period:** 1

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	34,800.00
2. Foreign Travel Costs	4,807.50
<b>Total Travel Cost</b>	<b>39,607.50</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)



## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 1

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2020

**End Date\*:** 02-28-2021

**Budget Period:** 1

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	63,660.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
<b>Total Other Direct Costs</b>	<b>63,660.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>208,331.63</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1 . US Federal Gov't de minimus rate	8.0	208,331.62	16,666.53
<b>Total Indirect Costs</b>			<b>16,666.53</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>224,998.16</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>224,998.16</b>

<b>L. Budget Justification*</b>
File Name: CM_EIDRC_2019_Subawardbudget_Justification_v02.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 2

ORGANIZATIONAL DUNS\*: 5344092560000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Conservation Medicine Ltd.

Start Date\*: 03-01-2021

End Date\*: 02-28-2022

Budget Period: 2

A. Senior/Key Person												
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*
1	Mr.	Thomas	J.		Hughes	Co-Investigator						(b) (4), (b) (6)
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>											(b) (4), (b) (6)	
<b>Additional Senior Key Persons:</b> File Name:											<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel								
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*	
	Post Doctoral Associates							
	Graduate Students							
	Undergraduate Students							
	Secretarial/Clerical							
1	Lab Coordinator						(b) (4), (b) (6)	
1	Lab Technician							
1	Field Coordinator							
1	Veterinarian							
2	Wildlife Rangers							
<b>6</b>	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b>	
							<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 2

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2021

**End Date\*:** 02-28-2022

**Budget Period:** 2

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	34,800.00
2. Foreign Travel Costs	4,807.50
<b>Total Travel Cost</b>	<b>39,607.50</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 2

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2021

**End Date\*:** 02-28-2022

**Budget Period:** 2

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	63,660.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
<b>Total Other Direct Costs</b>	<b>63,660.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>208,331.63</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1 . US Federal Gov't de minimus rate	8.0	208,331.62	16,666.53
<b>Total Indirect Costs</b>			<b>16,666.53</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>224,998.16</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>224,998.16</b>

<b>L. Budget Justification*</b>
File Name: CM_EIDRC_2019_Subawardbudget_Justification_v02.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)



RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 3

ORGANIZATIONAL DUNS\*: 5344092560000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Conservation Medicine Ltd.

Start Date\*: 03-01-2022

End Date\*: 02-28-2023

Budget Period: 3

A. Senior/Key Person												
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*
1	Mr.	Thomas	J.		Hughes	Co-Investigator						(b) (4), (b) (6)
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>											(b) (4), (b) (6)	
<b>Additional Senior Key Persons:</b> File Name:											<b>Total Senior/Key Person</b> (b) (4), (b) (6)	

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Lab Coordinator						(b) (4), (b) (6)
1	Lab Technician						
1	Field Coordinator						
1	Veterinarian						
2	Wildlife Rangers						
<b>6</b>	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b> (b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 3

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2022

**End Date\*:** 02-28-2023

**Budget Period:** 3

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	34,800.00
2. Foreign Travel Costs	4,807.50
<b>Total Travel Cost</b>	<b>39,607.50</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 3

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2022

**End Date\*:** 02-28-2023

**Budget Period:** 3

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	63,660.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
<b>Total Other Direct Costs</b>	<b>63,660.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>208,331.63</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1 . US Federal Gov't de minimus rate	8.0	208,331.62	16,666.53
<b>Total Indirect Costs</b>			<b>16,666.53</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>224,998.16</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>224,998.16</b>

<b>L. Budget Justification*</b>
File Name: CM_EIDRC_2019_Subawardbudget_Justification_v02.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 4

ORGANIZATIONAL DUNS\*: 5344092560000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Conservation Medicine Ltd.

Start Date\*: 03-01-2023

End Date\*: 02-29-2024

Budget Period: 4

A. Senior/Key Person												
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*
1	Mr.	Thomas	J.		Hughes	Co-Investigator						(b) (4), (b) (6)
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>											(b) (4), (b) (6)	
<b>Additional Senior Key Persons:</b> File Name:											<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Lab Coordinator						(b) (4), (b) (6)
1	Lab Technician						
1	Field Coordinator						
1	Veterinarian						
2	Wildlife Rangers						
<b>6</b>	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b>
							<b>Total Salary, Wages and Fringe Benefits (A+B)</b>

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 4

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2023

**End Date\*:** 02-29-2024

**Budget Period:** 4

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	34,800.00
2. Foreign Travel Costs	4,807.50
<b>Total Travel Cost</b>	<b>39,607.50</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)



## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 4

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2023

**End Date\*:** 02-29-2024

**Budget Period:** 4

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	63,660.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
<b>Total Other Direct Costs</b>	<b>63,660.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>208,331.63</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1 . US Federal Gov't de minimus rate	8.0	208,331.62	16,666.53
<b>Total Indirect Costs</b>			<b>16,666.53</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>224,998.16</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>224,998.16</b>

<b>L. Budget Justification*</b>
File Name: CM_EIDRC_2019_Subawardbudget_Justification_v02.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 5

ORGANIZATIONAL DUNS\*: 5344092560000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Conservation Medicine Ltd.

Start Date\*: 03-01-2024

End Date\*: 02-28-2025

Budget Period: 5

A. Senior/Key Person												
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*
1	Mr.	Thomas	J.		Hughes	Co-Investigator						(b) (4), (b) (6)
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>											(b) (4), (b) (6)	
<b>Additional Senior Key Persons:</b> File Name:											<b>Total Senior/Key Person</b> (b) (4), (b) (6)	

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
	Post Doctoral Associates						
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	Lab Coordinator						(b) (4), (b) (6)
1	Lab Technician						
1	Field Coordinator						
1	Veterinarian						
2	Wildlife Rangers						
<b>6</b>	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b> (b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 5

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2024

**End Date\*:** 02-28-2025

**Budget Period:** 5

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	34,800.00
2. Foreign Travel Costs	4,807.50
<b>Total Travel Cost</b>	<b>39,607.50</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 5

**ORGANIZATIONAL DUNS\*:** 5344092560000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Conservation Medicine Ltd.

**Start Date\*:** 03-01-2024

**End Date\*:** 02-28-2025

**Budget Period:** 5

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	63,660.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
<b>Total Other Direct Costs</b>	<b>63,660.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>208,331.63</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1 . US Federal Gov't de minimus rate	8.0	208,331.62	16,666.53
<b>Total Indirect Costs</b>			<b>16,666.53</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>224,998.16</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>224,998.16</b>

<b>L. Budget Justification*</b>
File Name: CM_EIDRC_2019_Subawardbudget_Justification_v02.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)

## CHULALONGKORN HOSPITAL BUDGET JUSTIFICATION, SUBAWARD

### **A. Senior/Key Personnel**

Thomas J. Hughes, Co-Investigator will commit (b) (4), (b) (6) to this project. Mr. Hughes is a known expert in field surveillance in wild mammals and human behavioral risk surveys, and clinical sampling in Malaysia. Mr. Hughes will oversee all aspects of this project in Malaysia and direct the activities of the other personnel. At a regular basis, Mr. Hughes will meet with the PI and other Co-PIs to refine study protocols, report back results, and prepare publications. Mr. Hughes has been working on the discovery and characterization of novel viruses from bats and other wildlife as well as clinical sampling for over 10 years and has worked extensively with and managing international and local interdisciplinary teams.

### **B. Other Personnel**

TBD, Laboratory and Program Coordinator will commit (b) (4), (b) (6) per year to this project to conduct all laboratory assays and supervise the Laboratory Technician. The Laboratory Coordinator will work with Mr. Hughes and other Senior/Key Personnel and collaborators for communication, reporting, contracts as well as equipment purchases, inventory, minutes, setting up meetings, and coordinating annual in-country meetings.

TBD, Laboratory Technician will commit (b) (4), (b) (6) per year to run diagnostic assays and virus isolation work as well as assisting with sample shipments, storage, and maintenance of cold chain

TBD, Field Coordinator will commit (b) (4), (b) (6) per year to conduct field and clinic surveillance efforts and coordinate partner institution/site field teams. Field Coordinator will supervise the Field Veterinarian and Wildlife Rangers (2).

TBD, Field Veterinarian will commit (b) (4), (b) (6) per year to training and working with all field personnel and maintaining highest quality of sampling aspects of this proposal as well as safety for all human and non-human animals.

TBD, Field/Wildlife Rangers (2) will commit (b) (4), (b) (6) to assisting Field Coordinator and Field Veterinarian in collection, processing, storage, and shipping of field sampling efforts.

### **Fringe Benefits**

No fringe benefits are requested.

### **C. Equipment**

No equipment over \$5,000 will be purchased.

### **D. Travel**

#### *Domestic Travel.*

Domestic travel costs are estimated at \$34,800 per year for site surveillance and sampling visits in Sabah, Sarawak, and Peninsular Malaysia. These costs are calculated as follows: \$14,400 for 2 1-week bat sampling trips per year, i.e. visiting each site twice per year. Concurrent community sampling is estimated at the same cost \$14,400. Sampling costs include field personnel, drivers, vehicle rental, and local flights as well as equipment for clinical surveillance (\$6,000).

#### *Foreign Travel.*

International travel costs are requested for 1 trip for Co-Investigator Hughes to fly annually from Kuala Lumpur to USA (DC and NYC) for NIH kickoff (Year 1) and annual meetings (Years 2-5). Co-Investigator will fly roundtrip to NYC and take train to NIH annual meeting and return to NYC to EcoHealth Alliance Offices to meet with PI, Co-Investigators, and Research Scientists. Costs for one traveler are estimated at \$251 NYC/DC hotel per diem (\$251 x 6 nights = \$1,506); \$76/day for meals and incidental expenses with 75% applied on first and final days of travel (\$76 x 6.5 days = \$494); \$1,400 round trip flight from Kuala Lumpur to NYC (\$1,400 x 1 = \$1,400); \$192 for roundtrip train fare from NYC to Washington DC (\$192 x 1 = \$192); \$30 per daily taxi rides in NYC and DC (\$15 x 2 rides per day x 5 days = \$150); \$330 for to/from airport taxis in Kuala Lumpur and USA (\$110 per ride in NYC = \$220 and \$30 per ride in Kuala Lumpur = \$60, total = \$280).



Additional international travel support is requested for both Co-Investigator Hughes to attend annual regional meetings in Singapore and Thailand. These annual costs to Singapore or Thailand are estimated as follows: \$200 for Singapore hotel per diem ( $\$200 \times 2 \text{ nights} \times 1 \text{ person} = \$400$ ); \$95 for meals and incidental expenses with 75% applied on first and final days of travel ( $\$95 \times 2.5 \text{ days} \times 1 \text{ person} = \$237.50$ ); \$150 roundtrip airfare from Kuala Lumpur to Singapore or Thailand ( $\$150 \times 1 \text{ person} = \$150$ ); \$20 per day taxi rides in Singapore or Thailand ( $\$20 \times 1 \text{ person} \times 1 \text{ day} = \$20$ ); \$120 for to/from airport taxis in Kuala Lumpur and Singapore or Thailand ( $\$30 \text{ per ride in Bangkok and Singapore} = \$30 \times 2 \text{ trips to/from airport} \times 2 \text{ people} = \$240$ ). Trips to Malaysia for Mr. Hughes is estimated from Bangkok to Kuala Lumpur at: \$186 for Singapore or Bangkok hotel per diem ( $\$186 \times 2 \text{ nights} \times 1 \text{ person} = \$372$ ); \$80 for meals and incidental expenses with 75% applied on first and final days of travel ( $\$80 \times 2.5 \text{ days} \times 1 \text{ person} = \$200$ ); \$150 roundtrip airfare from Bangkok to Kuala Lumpur ( $\$150 \times 1 \text{ person} = \$150$ ); \$10 per daily taxi rides in Kuala Lumpur ( $\$10 \times 1 \text{ person} \times 1 \text{ day} = \$20$ ); \$120 for to/from airport taxis in Bangkok and Kuala Lumpur ( $\$30 \text{ per ride in Bangkok and Kuala Lumpur} = \$30 \times 2 \text{ trips to/from airport} \times 1 \text{ person} = \$240$ ).

#### **E. Participant/Trainee Support Costs**

No participant/trainee support costs are requested.

#### **F. Other Direct Costs**

##### *Laboratory Supplies.*

Conservation Medicine requests reimbursement of estimated laboratory costs. These are calculated based upon current annual costs and requested in each year of this proposed project. Costs include RNA extraction (\$12,000), PCR reagents and sequencing (\$36,000) and gloves, chemicals, plasticware, and other miscellaneous supplies (\$12,000).

##### *Annual Meeting*

Conservation Medicine Malaysia and partner institutions in Sabah, Sarawak, and Peninsular Malaysia will host annual meetings of PI, Co-Investigators and other collaborators. University facilities fees are estimated at \$3,666.00 and detailed as follows: \$1,500.00 for room rental costs, AV, and University support; University Dining will charge a fixed fee for meals for 20 attendees at \$36/day for the three days of the meeting ( $\$36 \times 3 \text{ days} \times 20 \text{ people} = \$2,166.00$ ).

#### **H. Indirect Costs (8%)**

Conservation Medicine Malaysia requests reimbursement of the *de minimus* indirect cost recovery rate for foreign organizations of 8% of modified or allowable direct costs.

**RESEARCH & RELATED BUDGET - Cumulative Budget**

	Totals (\$)	
Section A, Senior/Key Person		271,890.00
Section B, Other Personnel		253,430.65
Total Number Other Personnel	30	
Total Salary, Wages and Fringe Benefits (A+B)		525,320.65
Section C, Equipment		0.00
Section D, Travel		198,037.50
1. Domestic	174,000.00	
2. Foreign	24,037.50	
Section E, Participant/Trainee Support Costs		0.00
1. Tuition/Fees/Health Insurance	0.00	
2. Stipends	0.00	
3. Travel	0.00	
4. Subsistence	0.00	
5. Other	0.00	
6. Number of Participants/Trainees	0	
Section F, Other Direct Costs		318,300.00
1. Materials and Supplies	318,300.00	
2. Publication Costs	0.00	
3. Consultant Services	0.00	
4. ADP/Computer Services	0.00	
5. Subawards/Consortium/Contractual Costs	0.00	
6. Equipment or Facility Rental/User Fees	0.00	
7. Alterations and Renovations	0.00	
8. Other 1	0.00	
9. Other 2	0.00	
10. Other 3	0.00	
Section G, Direct Costs (A thru F)		1,041,658.15
Section H, Indirect Costs		83,332.65
Section I, Total Direct and Indirect Costs (G + H)		1,124,990.80
Section J, Fee		0.00
Section K, Total Costs and Fee (I + J)		1,124,990.80

RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 1

ORGANIZATIONAL DUNS\*: 5861922530000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Duke NUS Medical School

Start Date\*: 03-01-2020

End Date\*: 02-28-2021

Budget Period: 1

A. Senior/Key Person												
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*
1 . Dr.	Linfa		Wang		Co-Investigator							(b) (4), (b) (6)
2 . Dr.	Danielle		Anderson		Co-Investigator							(b) (4), (b) (6)
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>												
<b>Additional Senior Key Persons:</b>		File Name:								<b>Total Senior/Key Person</b>	(b) (4), (b) (6)	

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
1	Post Doctoral Associates						(b) (4), (b) (6)
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
<b>1</b>	<b>Total Number Other Personnel</b>					<b>Total Other Personnel</b>	(b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							(b) (4), (b) (6)

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 1

**ORGANIZATIONAL DUNS\*:** 5861922530000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Duke NUS Medical School

**Start Date\*:** 03-01-2020

**End Date\*:** 02-28-2021

**Budget Period:** 1

<b>C. Equipment Description</b>		<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000		
<b>Equipment Item</b>		
<b>Total funds requested for all equipment listed in the attached file</b>		
<b>Total Equipment</b>		<b>0.00</b>
<b>Additional Equipment:</b> File Name:		

<b>D. Travel</b>		<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)		
2. Foreign Travel Costs		5,000.00
<b>Total Travel Cost</b>		<b>5,000.00</b>

<b>E. Participant/Trainee Support Costs</b>		<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance		
2. Stipends		
3. Travel		
4. Subsistence		
5. Other:		
<b>Number of Participants/Trainees</b>		<b>0.00</b>
<b>Total Participant Trainee Support Costs</b>		<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 1

**ORGANIZATIONAL DUNS\*:** 5861922530000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Duke NUS Medical School

**Start Date\*:** 03-01-2020

**End Date\*:** 02-28-2021

**Budget Period:** 1

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	12,500.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Scientific services	14,500.00
<b>Total Other Direct Costs</b>	<b>27,000.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>100,000.00</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1. Facilities and administrative costs	8.0		8,000.00
<b>Total Indirect Costs</b>			<b>8,000.00</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>108,000.00</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>108,000.00</b>

<b>L. Budget Justification*</b>
File Name: DUKE_NUS_EIDRC_2019_Subawardbudget_Justification_v01- LW-DEA_FINAL.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)



RESEARCH & RELATED BUDGET - SECTION A & B, Budget Period 2

ORGANIZATIONAL DUNS\*: 5861922530000

Budget Type\*:  Project  Subaward/Consortium

Enter name of Organization: Duke NUS Medical School

Start Date\*: 03-01-2021

End Date\*: 02-28-2022

Budget Period: 2

A. Senior/Key Person													
Prefix	First Name*	Middle Name	Last Name*	Suffix	Project Role*	Base Salary (\$)	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits (\$)*	Funds Requested (\$)*	
1 . Dr.	Linfa		Wang		Co-Investigator							(b) (4), (b) (6)	
2 . Dr.	Danielle		Anderson		Co-Investigator							(b) (4), (b) (6)	
<b>Total Funds Requested for all Senior Key Persons in the attached file</b>													
<b>Additional Senior Key Persons:</b>											File Name:	<b>Total Senior/Key Person</b>	(b) (4), (b) (6)

B. Other Personnel							
Number of Personnel*	Project Role*	Calendar Months	Academic Months	Summer Months	Requested Salary (\$)*	Fringe Benefits*	Funds Requested (\$)*
1	Post Doctoral Associates						(b) (4), (b) (6)
	Graduate Students						
	Undergraduate Students						
	Secretarial/Clerical						
1	<b>Total Number Other Personnel</b>					<b>Total Other Personnel</b>	(b) (4), (b) (6)
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>							

RESEARCH & RELATED Budget {A-B} (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTION C, D, & E, Budget Period 2

**ORGANIZATIONAL DUNS\*:** 5861922530000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Duke NUS Medical School

**Start Date\*:** 03-01-2021

**End Date\*:** 02-28-2022

**Budget Period:** 2

<b>C. Equipment Description</b>	<b>Funds Requested (\$)*</b>
List items and dollar amount for each item exceeding \$5,000	
<b>Equipment Item</b>	
<b>Total funds requested for all equipment listed in the attached file</b>	
<b>Total Equipment</b>	<b>0.00</b>
<b>Additional Equipment:</b> File Name:	

<b>D. Travel</b>	<b>Funds Requested (\$)*</b>
1. Domestic Travel Costs ( Incl. Canada, Mexico, and U.S. Possessions)	
2. Foreign Travel Costs	5,000.00
<b>Total Travel Cost</b>	<b>5,000.00</b>

<b>E. Participant/Trainee Support Costs</b>	<b>Funds Requested (\$)*</b>
1. Tuition/Fees/Health Insurance	
2. Stipends	
3. Travel	
4. Subsistence	
5. Other:	
<b>Number of Participants/Trainees</b>	
<b>Total Participant Trainee Support Costs</b>	<b>0.00</b>

RESEARCH & RELATED Budget (C-E) (Funds Requested)

## RESEARCH & RELATED BUDGET - SECTIONS F-K, Budget Period 2

**ORGANIZATIONAL DUNS\*:** 5861922530000

**Budget Type\*:**     Project     Subaward/Consortium

**Organization:** Duke NUS Medical School

**Start Date\*:** 03-01-2021

**End Date\*:** 02-28-2022

**Budget Period:** 2

<b>F. Other Direct Costs</b>	<b>Funds Requested (\$)*</b>
1. Materials and Supplies	11,410.00
2. Publication Costs	
3. Consultant Services	
4. ADP/Computer Services	
5. Subawards/Consortium/Contractual Costs	
6. Equipment or Facility Rental/User Fees	
7. Alterations and Renovations	
8. Scientific services	14,500.00
<b>Total Other Direct Costs</b>	<b>25,910.00</b>

<b>G. Direct Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct Costs (A thru F)</b>	<b>100,000.00</b>

<b>H. Indirect Costs</b>			
<b>Indirect Cost Type</b>	<b>Indirect Cost Rate (%)</b>	<b>Indirect Cost Base (\$)</b>	<b>Funds Requested (\$)*</b>
1. Facilities and Administrative costs	8.0		8,000.00
<b>Total Indirect Costs</b>			<b>8,000.00</b>
<b>Cognizant Federal Agency</b>			
(Agency Name, POC Name, and POC Phone Number)			

<b>I. Total Direct and Indirect Costs</b>	<b>Funds Requested (\$)*</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	<b>108,000.00</b>

<b>J. Fee</b>	<b>Funds Requested (\$)*</b>

<b>K. Total Costs and Fee</b>	<b>Funds Requested (\$)*</b>
	<b>108,000.00</b>

<b>L. Budget Justification*</b>
File Name: DUKE_NUS_EIDRC_2019_Subawardbudget_Justification_v01- LW-DEA_FINAL.pdf (Only attach one file.)

RESEARCH & RELATED Budget {F-K} (Funds Requested)