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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy	Date: March 2019
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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604771N / <i>Medical Development</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	150.929	36.392	38.095	8.181	-	8.181	9.020	9.249	9.478	9.668	Continuing	Continuing
0933: <i>Medical/Dental Equipment Dev</i>	18.628	9.353	8.095	8.181	-	8.181	9.020	9.249	9.478	9.668	Continuing	Continuing
9999: <i>Congressional Adds</i>	132.301	27.039	30.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	189.340

A. Mission Description and Budget Item Justification

The purpose of this program is to develop biomedical equipment and related techniques to reduce morbidity; to enhance the logistic feasibility of modern medical care for combat casualties; to sustain casualties for evacuation to fixed medical facilities for definitive care; and to ensure that personnel are medically qualified for military duty. Each work unit undertaken in this project has a military requirement. Efforts are justified based upon military payoff and cost benefit. There is a strong potential for dual use, technology transfer, and biotechnology firm/industry participation in the projects.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	9.353	8.095	8.214	-	8.214
Current President's Budget	36.392	38.095	8.181	-	8.181
Total Adjustments	27.039	30.000	-0.033	-	-0.033
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	30.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.961	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.033	-	-0.033
• Congressional Add Adjustments	28.000	-	-	-	-

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: *Congressional Adds*

Congressional Add: *Military Dental Research*

Congressional Add: *Hypoxia Research*

Congressional Add: *Aircrew Mounted Physiological Sensors*

Congressional Add: *Wound Care Research*

FY 2018	FY 2019
9.657	10.000
4.828	0.000
2.897	0.000
9.657	15.000

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<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2018	FY 2019
Congressional Add: <i>Hypoxia Research (MD)</i>		0.000	5.000
Congressional Add Subtotals for Project: 9999		27.039	30.000
Congressional Add Totals for all Projects		27.039	30.000

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy									Date: March 2019			
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604771N / Medical Development				Project (Number/Name) 0933 / Medical/Dental Equipment Dev			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
0933: Medical/Dental Equipment Dev	18.628	9.353	8.095	8.181	-	8.181	9.020	9.249	9.478	9.668	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The purpose of this program is to develop biomedical equipment and related techniques to reduce morbidity; to enhance the logistic feasibility of modern medical care for combat casualties; to sustain casualties for evacuation to fixed medical facilities for definitive care; and to ensure that personnel are medically qualified for military duty. Each work unit undertaken in this project has a military requirement. Efforts are justified based upon military payoff and cost benefit. There is a strong potential for dual use, technology transfer, and biotechnology firms/industry participation in the projects.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: Medical/Dental Equipment Development								9.353	8.095	8.181	0.000	8.181
								Articles: - - - - -				
FY 2019 Plans:												
-Complete system development and validation of manufacturing support for military relevant Malaria vaccine regimen production scale up. -Continue Individual Fatigue-Based Scheduling and Countermeasure System that predicts, prevents, detects, and mitigates periods of high risk associated with fatigue. -Continue fatigue mitigation and validation of scheduling tools to include validation of an alternative watchstanding schedule on Naval Surface Combatants. -Complete development of future capability products and technologies for management of moderate to severe hemorrhage. -Continue joint development projects with MARCORSYSCOM acquisition for medical products and equipment. -Complete support for phage therapy to combat antibiotic resistant bacterial infections. -Complete support for mitigating adverse physiological episodes to enhance safety and warfighter readiness in tactical aircraft. -Complete Human Performance/Crew Endurance effort: Enhancing Decision-Making under Stress. -Continue Human Performance/Crew Endurance effort: Controlled Light Exposure and Fatigue Mitigation. -Initiate innovative medical technologies; enhanced medical logistics. Primary focus includes enhancing: 1) Casualty treatment capabilities while reducing the overall logistics burden; 2) Medical logistics capability; and 3) Enroute care, patient transport and trauma care systems associated with the time distance continuum in a sea base environment.												

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Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0604771N / Medical Development		Project (Number/Name) 0933 / Medical/Dental Equipment Dev		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<div>-Continue innovative medical technologies and enhanced medical logistics: Autonomous system for field delivery of critical medical supplies.</div> <div>-Continue cabin-pressure/decompression sickness (DCS) test and evaluation capability.</div> <div>-Continue clinical trial evaluation of rapid pharmaceutical intervention for the prevention of motion sickness in dynamic military environments.</div> <div>-Initiate evaluation of physiological monitoring sensor system in relevant military environments.</div> <div>-Initiate Human Performance/Crew Endurance effort: Navy specific Stress Inoculation Study.</div> <div>-Initiate medical wargaming to evaluate Distributed Maritime Operations (DMO) and support of Future Fleet Architecture.</div> <div>FY 2020 Base Plans:</div> <div>-Complete Individual Fatigue-Based Scheduling and Countermeasure System that predicts, prevents, detects, and mitigates periods of high risk associated with fatigue.</div> <div>-Continue fatigue mitigation and validation of scheduling tools to include validation of an alternative watchstanding schedule on Naval Surface Combatants.</div> <div>-Continue joint development projects with MARCORSYSCOM acquisition for medical products and equipment.</div> <div>-Continue Human Performance/Crew Endurance effort: Controlled Light Exposure and Fatigue Mitigation.</div> <div>-Continue innovative medical technologies; enhanced medical logistics. Primary focus includes enhancing: 1) Casualty treatment capabilities while reducing the overall logistics burden; 2) Medical logistics capability; and 3) Enroute care, patient transport and trauma care systems associated with the time distance continuum in a sea base environment.</div> <div>-Continue innovative medical technologies and enhanced medical logistics: Autonomous system for field delivery of critical medical supplies.</div> <div>-Continue cabin-pressure/decompression sickness (DCS) test and evaluation capability.</div> <div>-Complete clinical trial evaluation of rapid pharmaceutical intervention for the prevention of motion sickness in dynamic military environments.</div> <div>-Continue evaluation of physiological monitoring sensor system in relevant military environments.</div> <div>-Continue Human Performance/Crew Endurance effort: Navy specific Stress Inoculation Study.</div> <div>-Complete medical wargaming to evaluate Distributed Maritime Operations (DMO) and support of Future Fleet Architecture.</div> <div>FY 2020 OCO Plans:</div> <div>N/A</div> <div>FY 2019 to FY 2020 Increase/Decrease Statement:</div>						

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Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0604771N / <i>Medical Development</i>		Project (Number/Name) 0933 / <i>Medical/Dental Equipment Dev</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
There is no significant change from FY 2019 to FY 2020.					
Accomplishments/Planned Programs Subtotals		9.353	8.095	8.181	0.000
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
<p>The acquisition strategy for product lines and products in the Medical Development Program is designed and implemented consistent with the purpose of the particular product and with the nature and size of the investment. The Medical Development Program has a Memorandum of Agreement with the Marine Corps Systems Command (Family of Field Medical Equipment) for co-development of products for procurement by the USMC. The acquisition strategy for products involves direct partnership with the acquisition and procurement professionals at Marine Corps Systems Command.</p> <p>The major Product Areas in the Medical Development Program are: 1) Equipment, 2) Pharmaceuticals/Biologics, and 3) Operational Knowledge/Concepts. The primary Program Areas of Interest are: 1) Optimize health, performance, and resilience of the ready and forward operating forces; 2) Enhance medical logistics; 3) Reduce mortality and morbidity from battlefield and mission-related injuries in support of Navy Health Services Support in Terrestrial, Maritime Surface, Submarine, and Aviation Operations and USMC in Expeditionary Operations.</p> <p>For Product Areas 1 and 2, there are two primary acquisition strategies. The first is to test and evaluate for Naval application commercially-developed medical product or candidates in managed trials with the ultimate goal of Food and Drug Administration (FDA) approval, where appropriate. Partnerships with commercial developers promotes developing products of military interest for procurement by the Operating Forces. A second benefit of this strategy is that products are made available across the DoD, Federal Government, and commercial market, thus reducing overall procurement costs. During development, DoD end users are included in the process to the extent possible. The second strategy is to drive a collaborative development process with larger DoD program investments. Navy and Marine Corps needs can be met at lower service cost. This process involves developing in-house or industrial prototypes in government-managed programs to meet Naval needs while meeting regulatory requirements for production and fielding. Both tactics promote development of procurement plans that align product availability with Service integration strategies.</p> <p>The Third Product Area (Knowledge/Concepts) is focused on the introduction of technologies, techniques, and procedures that enhance medical practice and standards of care for effective delivery of health care and casualty care in the Naval operating environment. These primarily require early involvement of the senior leadership of military medicine, in that the end product of the program is modification of concepts of operations, policy, and/or doctrine. These acquisitions can impact the care and performance of Sailors and Marines. Medical Development Program examples include Navy Crew Endurance Handbook and associated implementation tools.</p>					

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E. Performance Metrics

Successful completion of Milestones/Demonstration Events for individualized project/product roadmap, on time and on budget. Ensuring dependencies across multiple efforts are maintained on schedule are primary metrics.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604771N / Medical Development				Project (Number/Name) 0933 / Medical/Dental Equipment Dev					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Malaria Vaccine	SS/CR	Sanaria, Inc. : Rockville, MD	7.084	0.000		0.000		0.000		-		0.000	0.000	7.084	-
Malaria Vaccine	C/FFP	Various : Not Specified	0.133	0.000		0.000		0.000		-		0.000	0.000	0.133	-
Human Factors Individualized Fatigue Based Scheduling	Allot	Naval Submarine Medical Research Laboratory : Groton, CT	1.641	0.425	Mar 2018	0.429	Dec 2018	0.000		-		0.000	0.000	2.495	-
Fatigue Based Scheduling	WR	Naval Post Graduate School : Monterey, CA	1.324	0.390	Dec 2017	0.303	Mar 2019	0.301	Dec 2019	-		0.301	Continuing	Continuing	Continuing
Future capabilities products & technologies: Management of Moderate to Severe Hemorrhage	Allot	Naval Med Rsrch. Cntr./Walter Reed Inst. of Rsrch. : Silver Spring, MD	0.659	0.235	May 2019	0.000		0.000		-		0.000	0.000	0.894	-
Marine Corps Systems Command Medical Products and Equipment	Various	Various : Not Specified	0.374	0.000		0.500	Jun 2019	0.750	Jun 2020	-		0.750	Continuing	Continuing	Continuing
Phage Therapy	Allot	Naval Med Rsrch. Cntr./Walter Reed Inst. of Rsrch. : Silver Spring, MD	0.532	0.346	Dec 2017	0.000		0.000		-		0.000	0.000	0.878	-
Mitigation of Adverse Physiological Episodes in Tactical Aircraft	Allot	Various : Not Specified	0.272	0.995	Dec 2017	0.000		0.000		-		0.000	0.000	1.267	-
Enhanced Decision Making Under Stress	Allot	Naval Health Research Center : San Diego, CA	0.000	0.397	Dec 2017	0.000		0.000		-		0.000	0.000	0.397	-
Crew Endurance and Fatigue Mitigation	WR	Naval Post Graduate School : Monterey, CA	0.000	1.515	Mar 2018	1.300	Dec 2018	1.510	Dec 2019	-		1.510	Continuing	Continuing	Continuing
Innovative Medical Technologies and Logistics	Various	Various : Not Specified	0.000	0.000		0.671	Jun 2019	1.329	May 2020	-		1.329	Continuing	Continuing	Continuing

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Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604771N / Medical Development				Project (Number/Name) 0933 / Medical/Dental Equipment Dev					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Autonomous System for Field Delivery of Critical Medical Supplies	Various	Various : Not Specified	0.000	2.000	May 2018	3.200	May 2019	2.750	May 2020	-		2.750	Continuing	Continuing	Continuing
Cabin-pressure/ Decompression Sickness Test and Evaluation Capability	C/FFP	TBD : Not Specified	0.000	1.500	Dec 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Rapid Pharmaceutical Intervention for the Prevention of Motion Sickness	Allot	Naval Medical Research Unit - Dayton : Dayton, OH	0.000	0.328	Aug 2018	0.000		0.000		-		0.000	0.000	0.328	-
Physiological Monitoring Sensor Systems	Various	Various : Not Specified	0.000	0.000		0.550	Jul 2019	0.500	May 2020	-		0.500	Continuing	Continuing	Continuing
Medical wargaming to evaluate Distributed Maritime Operations (DMO)	TBD	Center for Naval Analysis : Arlington, VA	0.000	0.250	Jan 2019	0.000		0.000		-		0.000	0.000	0.250	-
Medical wargaming to evaluate and support Future Fleet Architecture	TBD	Center for Naval Analysis : Arlington, VA	0.000	0.750	Feb 2019	0.000		0.000		-		0.000	0.000	0.750	-
Navy specific Stress Inoculation Study	WR	Naval Post Graduate School : Monterey, CA	0.000	0.000		0.300	Mar 2019	0.299	Dec 2019	-		0.299	Continuing	Continuing	Continuing
Medical Product Development	Various	Various : Not Specified	5.586	0.000		0.097	Aug 2019	0.022	Aug 2020	-		0.022	Continuing	Continuing	Continuing
Subtotal			17.605	9.131		7.350		7.461		-		7.461	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support	Various	Various : Not Specified	1.023	0.222	Aug 2018	0.745	Aug 2019	0.720	Aug 2020	-		0.720	Continuing	Continuing	Continuing
Subtotal			1.023	0.222		0.745		0.720		-		0.720	Continuing	Continuing	N/A

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Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604771N / <i>Medical Development</i>					Project (Number/Name) 0933 / <i>Medical/Dental Equipment Dev</i>			
	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.628	9.353		8.095		8.181		-		8.181	Continuing	Continuing	N/A
Remarks													

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PE 0604771N: *Medical Development*
Navy

R-1 Line #147

Appropriation/Budget Activity 1319 / 5												R-1 Program Element (Number/Name) PE 0604771N / Medical Development								Project (Number/Name) 0933 / Medical/Dental Equipment Dev												
Proj 0933	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Innovative Medical Technologies/Enhanced Medical Logistics: Next Generation Logistics																																
								Evaluate Medical Logistics Technology																								
Innovative Medical Technologies/Enhanced Medical Logistics: Autonomous System for Field Delivery of Critical Medical Supplies																																
					Evaluate System				Technology Development and Testing																							
Optimized Health, Performance, and Resilience: Human Performance/Crew Endurance and Fatigue Mitigation																																
					Evaluate System and Design Integration Methods																											
Optimized Health, Performance, and Resilience: Cabin-pressure/decompression sickness (DCS) test and evaluation capability																																
					Develop Test and Evaluate Capability																											
2020PB - 0604771N - 0933																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604771N / <i>Medical Development</i>	Project (Number/Name) 0933 / <i>Medical/Dental Equipment Dev</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Proj 0933</i>				
Innovative Medical Technologies/Enhanced Medical Logistics: Next Generation Logistics: Evaluate Medical Logistics Technology	3	2019	4	2024
Innovative Medical Technologies/Enhanced Medical Logistics: Autonomous System for Field Delivery of Critical Medical Supplies: Evaluate System	4	2018	4	2019
Innovative Medical Technologies/Enhanced Medical Logistics: Autonomous System for Field Delivery of Critical Medical Supplies: Technology Development and Testing	1	2020	3	2023
Optimized Health, Performance, and Resilience: Human Performance/Crew Endurance and Fatigue Mitigation: Evaluate System and Design Integration Methods	2	2018	3	2021
Optimized Health, Performance, and Resilience: Cabin-pressure/decompression sickness (DCS) test and evaluation capability: Develop Test and Evaluate Capability	1	2019	3	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604771N / Medical Development				Project (Number/Name) 9999 / Congressional Adds			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
9999: Congressional Adds	132.301	27.039	30.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	189.340
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

None

A. Mission Description and Budget Item Justification

Congressional Adds

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2018	FY 2019
<i>Congressional Add:</i> Military Dental Research	9.657	10.000
<i>FY 2018 Accomplishments:</i> Continue efforts in craniofacial injury surveillance; combat dentistry; treatment of maxillofacial injury; dental disease non-battle injuries; and oral/facial disease and infection in military personnel.		
<i>FY 2019 Plans:</i> Continue efforts in craniofacial injury surveillance; combat dentistry; treatment of maxillofacial injury; dental disease non-battle injuries; and oral/facial disease and infection in military personnel.		
<i>Congressional Add:</i> Hypoxia Research	4.828	0.000
<i>FY 2018 Accomplishments:</i> Initiate research to help inform Doctrine Organization Training Material Leadership Personnel Facilities (DOTMLPF) updates to meet pilot mission needs and to ensure the safety of service members. Focus areas to include: Cabin pressure related events/decompression sickness (DCS); Toxicology of chemical exposure; and Physiological monitoring.		
<i>FY 2019 Plans:</i> N/A		
<i>Congressional Add:</i> Aircrew Mounted Physiological Sensors	2.897	0.000
<i>FY 2018 Accomplishments:</i> Initiate research for physiological monitoring of aircrew physiological events.		
<i>FY 2019 Plans:</i> N/A		
<i>Congressional Add:</i> Wound Care Research	9.657	15.000

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B. Accomplishments/Planned Programs (\$ in Millions)		
	FY 2018	FY 2019
FY 2018 Accomplishments: Continue to develop novel diagnostics and treatments to enhance the care of the wounded warfighter.		
FY 2019 Plans: Continue to develop novel diagnostics and treatments to enhance the care of the wounded warfighter.		
Congressional Add: Hypoxia Research (MD)	0.000	5.000
FY 2018 Accomplishments: N/A		
FY 2019 Plans: Initiate research to help inform Doctrine Organization Training Material Leadership Personnel Facilities (DOTMLPF) updates to meet pilot mission needs and to ensure the safety of service members. Focus areas to include: Cabin pressure related events/decompression sickness (DCS); Toxicology of chemical exposure; and Physiological monitoring.		
Congressional Adds Subtotals	27.039	30.000
C. Other Program Funding Summary (\$ in Millions)		
N/A		
Remarks		
D. Acquisition Strategy		
None		
E. Performance Metrics		
Not required for Congressional adds.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604771N / Medical Development				Project (Number/Name) 9999 / Congressional Adds					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Congressional Add - Wound Care Research	TBD	TBD : Not Specified	31.932	9.657	Mar 2019	15.000	Sep 2019	0.000		-		0.000	0.000	56.589	-
Congressional Add - Military Dental Research	Allot	Naval Medical Research Unit - San Antonio : San Antonio, TX	8.921	4.863	Jun 2018	5.000	Jan 2019	0.000		-		0.000	0.000	18.784	-
Congressional Add - Military Dental Research	MIPR	USAISR Dental & Craniofacial Trauma Research Dir. : San Antonio, TX	8.672	4.794	Jun 2018	5.000	Jan 2019	0.000		-		0.000	0.000	18.466	-
Congressional Add - Hypoxia Research	Various	Various : Not Specified	0.000	4.828	Oct 2018	0.000		0.000		-		0.000	0.000	4.828	-
Congressional Add - Aircrew Mounted Physiological Sensors	Various	Various : Not Specified	0.000	2.897	Sep 2018	0.000		0.000		-		0.000	0.000	2.897	-
Congressional Add - Hypoxia Research II	Various	Various : Not Specified	0.000	0.000		5.000	Sep 2019	0.000		-		0.000	0.000	5.000	-
Congressional Adds	Various	Various : Not Specified	82.776	0.000	Aug 2018	0.000		0.000		-		0.000	0.000	82.776	-
Subtotal			132.301	27.039		30.000		0.000		-		0.000	0.000	189.340	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			132.301	27.039		30.000		0.000		-		0.000	0.000	189.340	N/A
Remarks															

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PE 0604771N: *Medical Development*
Navy

R-1 Line #147

[illegible]

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604771N / <i>Medical Development</i>	Project (Number/Name) 9999 / <i>Congressional Adds</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Proj 9999</i>				
Military Dental Research: Schedule Detail	3	2018	4	2020
Wound Care Research: Schedule Detail	2	2019	4	2020
Hypoxia Research: Schedule Detail	1	2019	4	2019
Aircrew Mounted Physiological Sensors: Schedule Detail	4	2018	4	2019
Hypoxia Research II: Schedule Detail	4	2019	4	2020