Task Book Report Generated on: 04/24/2024

Fiscal Veri: FY 2013 Task Last Updated: FY 03-25/2013 PIN Nume:   Ilurs, Vivor Pk.D.   Project Title:   Assisted Medical Procedures (AMP)	Etaal Wasse	EV 2012	Tr1 T ( TT 1 ( )	EV 02/25/2012
Project Title: Assired Medical Procedures (AMP)  Division Name: Human Research  Program/Discipline: HUMAN RESEARCH  Program/Discipline: HUMAN RESEARCH—Operational and clinical research  Element-Subdivide: Search  Ileman Research Program Elements: (I) EaMC: Exploration Medical Capabilities  Human Research Program Elements: (I) CamC: Exploration Medical Capabilities  Human Research Program Risks: (I) CamC: Exploration Medical Capabilities  Human Research Program Risks: (I) CamC: Exploration Medical Capabilities  Human Research Program Risks: (I) CamC: Exploration Medical Capabilities  Space Biology Element: None  None  Space Biology Element: None  None  None  None  None  Space Biology Special Category: None  PI Email: View Insulation Ximate View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Ximate View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Ximate View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Ximate View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Ximate View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Ximate View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View Insulation Risk of Advence Health Outcomes Due to Mission Exposures  PI Email: View P			Task Last Updated:	F1 U3/23/2U13
Dision Name:   Human Research   Frogram/Discipline:   HUMAN RISEARCH   Frogram/Discipline:   HUMAN RISEARCH   Foperational and clinical research   Frogram Placing   HUMAN RESEARCH   Operational and clinical research   Frogram Placing   From the program Rise   Frogram Rise   Frogram Rise   Human Research Program Rise   () FAMC: Exploration Medical Capabilities   Human Research Program Rise   () Medical ConditionacRise Advancer leath Outcomes and Decrements in Performance Due to Medical Conditional Rise Advancer leath Outcomes Due to Mission Exposures   From the occur in Mission, in well is Long Term Rise   Mission Exposures   Frogram Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the Outcomes Due to Mission Exposures   From the occur in Mission, well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission, in well is Long Term Rise   From the occur in Mission   From the Occur in From Place   F		,		
Program/Discipline: HUMAN RESEARCH Program/Discipline- Element/Subdiscipline- Element/Subdiscipline- Element/Subdiscipline- Joint Agency Name: TechPort: Yes Human Research Program Elements: (1) EMC:Exploration Medical Capubilities Human Research Program Elements: (1) EMC:Exploration Medical Capubilities Human Research Program Risks: (1) Medical Conditions, Risk of Adverse Health Outcomes and Decrements in Performance Due to Medical Conditions Risk of Adverse Health Outcomes Due to Mission Exposures Space Biology Element: None Space Biology Special Category: None  PI Email: Selogy Special Category: None PI Email: Selogy Special Category: None PI Email: Selogy Special Category: None PI Camilation Type: NASA CENTER Phone: (281) 212-1460 Organization Type: ASSA CENTER Phone: (281) 212-1460 Organization Name: Wyle-Science, Technology, and Engineering/NASA Johnson Space Center PI Address 1: 1290 Hercules Avenue PI Address 2: PI Web Page: City: Houston State: TX Zip Code: 7058 Congressional District: 36 Comments: Project Type: GROUND Solicitation / Funding Source: Deceded Research No. of Post Does: 0 No. of Montering Center: NASA Johnson Space Center Project Type: GROUND Solicitation / Funding Source: Deceded Research No. of Post Does: 0 No. of Montering Center: NASA JSC Comments:  No. of Post Does: 0 No. of Montering Center: NASA JSC Contract Monitor: 0 No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC Contract Monitor: Warkins, Sharmila Contact Phone: 281 A85.0395 Contact Monitor: Warkins, Sharmila Contact Phone: 281 A85.0395 Contact Email: balancia of period of performance per information from PI (Ed., 1130-2011)  Key Personnel Changes/Previous PI: COI Name (Institution): Robin, David (Wyle-Science, Technology & Engineering) Chen, Dame: (Wyle-Science, Technology & Engineering) Chen, Dame: (Wyle-Science, Technology & Engineering) Circle Commence Goal No.:	Project Title:	Assisted Medical Procedures (AMP)		
Program/Discipline-  Element's Undiscipline-  Allowance   TechPort: Yes	Division Name:	Human Research		
Element Shudricpline: Joint Agency Name: Itamuna Research Program Elements Itamuna Research Program Risabis Itamuna Ri	Program/Discipline:	HUMAN RESEARCH		
Joint Agency Name:  Human Research Program Elements:  (1) EAMC:Exploration Medical Capabilities  Human Research Program Risks:  (1) Medical Conditions Risk of Adverse Health Outcomes and Decrements in Performance Due to Medical Conditions that occur in Mission Exposures  Space Biology Element:  None  Space Biology Special Category:  None  PI Email:  victor Juntus (Jonas)  None  PI Address 1:  1290 Hercules Avenue  PI Address 1:  1290 Hercules Avenue  PI Address 2:  PI Web Page:  City:  Houston  State: TX  Zip Code:  77058  Congressional District: 36  Comments:  Project Type:  GROUND  Solicitation / Funding Source:  Directed Research  No. of Phot Degress:  No. of Phot Degress:  No. of Phot Degress:  No. of Master' Degrees:  No. of Bachelor's Degrees:  No. of Bachelor's Candidates:  No. of Bachelor's Candidates		HUMAN RESEARCHOperational and clinical res	earch	
Human Research Program Elements: (1) EAMC-Exploration Medical Capabilities  Human Research Program Risks: (1) Medical Conditions; Risk of Advense Health Outcomes and Decrements in Performance Due to Medical Conditions that occur in Mission, as well as Long Term Health Outcomes Due to Mission Exposures  Space Biology Cross-Element: None  Space Biology Cross-Element: None  Space Biology Cross-Element: None  Space Biology Special Category: None  PI Email: Veloco hurst@inasa.gov Fax: FY  Pl Organization Type: NASA CENTER Phone: (281) 212-1460  Organization Name: Wyle-Science, Technology, and Engineering/NASA Johnson Space Center  PI Address 1: 1290 Hercules Avenue  PI Address 2:   PI Web Page:  City: Houston State: TX  Zip Code: 77058 Congressional District: 36  Comments:  Project Type: GROWND Solicitation / Funding Source: Directed Research  No. of Post Does: 0 No. of PhD Degress: 0 No. of PhD Degress: 0  No. of Post Does: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Master's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Master's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Master's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Master's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 No. of Ba		•	Took Pouts	Vac
Human Research Program Risks: Space Biology Element: None Space Biology Cross-Element None Space Biology Cross-Element None Space Biology Special Category: None PI Corganization Type: NASA CENTER Phone: (281) 212-1460 Organization Name: Wyle-Science, Technology, and Engineering/NASA Johnson Space Center PI Address 1: 1290 Hercules Avenue PI Address 2:		(I) E. M.C. Evralouetien Medical Canabilities	Techrort:	res
Hard nesearch Program Risses: that occur in Mission, as well as Long Term Health Outcomes Due to Mission Exposures  Space Biology Cross-Element Docipline: Space Biology Special Category: None  PI Email: ploy of Deciplines  None  PI Email: ploy of Deciplines  NASA CENTER NASA CENTER Phone: (281) 212-1460  Organization Name: Wyle-Science, Technology, and Engineering/NASA Johnson Space Center  PI Address 1: 1290 Hercules Avenue  PI Address 2: PI Web Page: City: Houston Trös Congressional District: 36  Congressional District: 36  Comments: Project Type: GROUND Solicitation / Funding Source: Directed Research Start Date: 1001/2008 End Date: 04-01/2014 No. of Post Does: No. of PhD Candidates: No. of Pastelor's Degrees: No. of Master's Candidates: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Candidates: No. of Bachelor's Candidates: No. of Bachelor's Candidates: NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 725/2012) NOTE: Indi date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOTE: date is now 41/2014 per HRP 3/14/12 Master Task List information (Ed., 49/2012) NOT	numan kesearch Program Elements:	- 1	4	Dec 4- Madical Conditions
Space Biology Cross-Element Discipline:  Space Biology Special Category:  None  PI Email:  victor.hurst@nass.gov  Fax: FY  Pl Organization Type:  NASA CENTER  Phone: (281) 212-1460  Organization Name:  Wyle-Science, Technology, and Engineering/NASA Johnson Space Center  PI Address 1:  1290 Hercules Avenue  PI Address 2:  PI Web Page:  City:  Houston  State: TX  Zip Code:  77058  Congressional District: 36  Comments:  Project Type:  GROUND  Solicitation / Funding Source: Directed Research  Start Date:  10/01/2008  End Date: 04/01/2014  No. of Post Docs:  0  No. of Master' Degrees: 0  No. of Master's Candidates:  3  No. of Master's Candidates:  3  No. of Bachelor's Candidates:  0  No. of Bachelor's Candidates:  0  Monitoring Center: NASA JSC  Contact Monitor:  Watkins, Shamila  Contact Phone: 281.483.0395  Contact Email:  shamila watkins@nass.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMD)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: End date is now 4/12/014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution):  Rubin, David (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)	Human Research Program Risks:	* /		
Space Biology Special Category:   None	Space Biology Element:	None		
PI Email: victor Intra€Ginasa acov Fax: FY PI Organization Type: NASA CENTER Phone: (281) 212-1460 Organization Name: Wyle-Science, Technology, and Engineering/NASA Johnson Space Center PI Address 1: 1290 Hercules Avenue PI Address 2: PI Web Page: City: Houston State: TX Zip Code: 77058 Congressional District: 36 Comments: Project Type: GROUND Solicitation / Funding Source: Directed Research Start Date: 10/01/2008 End Date: 04/01/2014 No. of Post Does: 0 No. of PhD Degrees: 0 No. of PhD Candidates: 0 No. of Master' Degrees: 0 No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0 No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0 No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0 Contact Monitor: Walkins, Sharmila Contact Phone: 281.483.0395 Contact Email: sharmila walkins@nasa.gov Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per 15C (Ed., 7125/2012) NOTE: End date is now 41/2014 per HIR Task List information (Ed., 44/9/2012) NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI: COI Name (Institution): Directed Research Performance Goal No.:		None		
Plorganization Type: NASA CENTER Phone: (281) 212-1460 Organization Name: Wylc-Science, Technology, and Engineering/NASA Johnson Space Center PI Address 1: 1290 Hercules Avenue PI Address 2: PI Web Page: City: Houston State: TX Zip Code: 77058 Congressional District: 36 Comments: Project Type: GROUND Solicitation / Funding Source: Directed Research Start Date: 10701/2008 End Date: 04/01/2014 No. of Post Does: 0 No. of PhD Degrees: 0 No. of Post Does: 0 No. of PhD Degrees: 0 No. of Post Decrees: 0 No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0 No. of Bachelor's Candidates: 3 No. of Bachelor's Degrees: 0 No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395 Contact Email: sharmila watkins@nasa.gov Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012) NOTE: Guestion of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI: COI Name (Institution): City Contract No.: Directed Research	Space Biology Special Category:	None		
Organization Name: Wyle-Science, Technology, and Engineering/NASA Johnson Space Center  PI Address 1: 1290 Hercules Avenue  PI Address 2:	PI Email:	victor.hurst@nasa.gov	Fax:	FY
PI Address 1: 1290 Hereules Avenue  PI Address 2:  PI Web Page:  City: Houston State: TX  Zip Code: 77058 Congressional District: 36  Comments:  Project Type: GROUND Solicitation / Funding Source: Directed Research  Start Date: 10/01/2008 End Date: 04/01/2014  No. of Post Does: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: Sharmila watkins@inasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: end date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Grant/Contract No.: Directed Research  Performance Goal No.:	PI Organization Type:	NASA CENTER	Phone:	(281) 212-1460
PI Address 2: PI Web Page:  City: Houston State: TX  Zip Code: 77058 Congressional District: 36  Comments:  Project Type: GROUND Solicitation / Funding Source: Directed Research  Start Date: 10/01/2008 End Date: 04/01/2014  No. of Post Docs: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: Sharmila watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: end date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Chiracted Research  Performance Goal No.:	Organization Name:	Wyle-Science, Technology, and Engineering/NASA	Johnson Space Center	
PI Web Page:  City: Houston State: TX  Zip Code: 77058 Congressional District: 36  Comments:  Project Type: GROUND Solicitation / Funding Source: Directed Research  Start Date: 10/01/2008 End Date: 04/01/2014  No. of Post Does: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.: Directed Research  Performance Goal No.:	PI Address 1:	1290 Hercules Avenue		
City: Houston State: TX  Zip Code: 77058 Congressional District: 36  Comments:  Project Type: GROUND Solicitation / Funding Source: Directed Research  Start Date: 10/01/2008 Engineering )  No. of Post Docs: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: sharmila watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Crant/Contract No.: Directed Research  Performance Goal No.:	PI Address 2:			
Zip Code: 77058 Congressional District: 36  Comments:  Project Type: GROUND Solicitation / Funding Source: Directed Research  Start Date: 10/01/2008 End Date: 04/01/2014  No. of Post Docs: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Crant/Contract No.: Directed Research  Performance Goal No.:	PI Web Page:			
Comments:  Project Type: GROUND Solicitation / Funding Source: Directed Research  Start Date: 10/01/2008 End Date: 04/01/2014  No. of Post Does: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Master' Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.: Directed Research  Performance Goal No.:	City:	Houston	State:	TX
Project Type: GROUND Solicitation / Funding Source: Directed Research  Start Date: 10/01/2008 End Date: 04/01/2014  No. of Post Docs: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: Sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: uestion of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.: Directed Research  Performance Goal No.:	Zip Code:	77058	Congressional District:	36
Start Date: 10/01/2008 End Date: 04/01/2014  No. of Post Docs: 0 No. of PhD Degrees: 0  No. of PhD Candidates: 0 No. of Master' Degrees: 0  No. of Master's Candidates: 3 No. of Bachelor's Degrees: 0  No. of Bachelor's Candidates: 0 Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering)  Crant/Contract No.: Directed Research  Performance Goal No.:	Comments:			
No. of Post Docs:  0	Project Type:	GROUND	<b>Solicitation / Funding Source:</b>	Directed Research
No. of PhD Candidates:  0	Start Date:	10/01/2008	End Date:	04/01/2014
No. of Master's Candidates:  No. of Bachelor's Candidates:  O Monitoring Center: NASA JSC  Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012) NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering) Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.: Directed Research  Performance Goal No.:	No. of Post Docs:	0	No. of PhD Degrees:	0
No. of Bachelor's Candidates:  Contact Monitor:  Watkins, Sharmila  Contact Phone: 281.483.0395  Contact Email:  sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012)  NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)  NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution):  Rubin, David (Wyle-Science, Technology & Engineering)  Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.:  Directed Research  Performance Goal No.:	No. of PhD Candidates:	0	No. of Master' Degrees:	0
Contact Monitor: Watkins, Sharmila Contact Phone: 281.483.0395  Contact Email: sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012) NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering) Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.: Directed Research  Performance Goal No.:	No. of Master's Candidates:	3	No. of Bachelor's Degrees:	0
Contact Email: sharmila.watkins@nasa.gov  Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012) NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution): Rubin, David (Wyle-Science, Technology & Engineering) Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.: Directed Research  Performance Goal No.:	No. of Bachelor's Candidates:	0	<b>Monitoring Center:</b>	NASA JSC
Flight Program:  NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012) NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution):  Rubin, David (Wyle-Science, Technology & Engineering) Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.:  Directed Research  Performance Goal No.:	Contact Monitor:	Watkins, Sharmila	Contact Phone:	281.483.0395
NOTE: Project name change to "Assisted Medical Procedures (AMP)" from "Advanced Integrated Clinical System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012) NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution):  Rubin, David (Wyle-Science, Technology & Engineering) Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.:  Directed Research  Performance Goal No.:	Contact Email:	sharmila.watkins@nasa.gov		
System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012) NOTE: question of period of performance per information from PI (Ed., 11/30/2011)  Key Personnel Changes/Previous PI:  COI Name (Institution):  Rubin, David (Wyle-Science, Technology & Engineering) Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.:  Directed Research  Performance Goal No.:	Flight Program:			
COI Name (Institution):  Rubin, David (Wyle-Science, Technology & Engineering) Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.:  Directed Research  Performance Goal No.:	Flight Assignment:	System-Guided Medical Procedure Systems," per JSC (Ed., 7/25/2012) NOTE: End date is now 4/1/2014 per HRP 3/14/12 Master Task List information (Ed., 4/9/2012)		
Chin, Duane (Wyle-Science, Technology & Engineering)  Grant/Contract No.:  Directed Research  Performance Goal No.:	Key Personnel Changes/Previous PI:			
Performance Goal No.:	COI Name (Institution):			
	Grant/Contract No.:	Directed Research		
Performance Goal Text:	Performance Goal No.:			
	Performance Goal Text:			

Task Book Report Generated on: 04/24/2024

The Advanced Integrated Clinical Systems-Guided Medical Procedure System task was to provide the Constellation Program with a robust medical procedure system that fosters both astronaut wellness and mitigates medical issues during missions to the International Space Station (ISS), the Moon (Lunar Sorties and Lunar Outpost), and outreaching planets. With the cancellation of the Constellation Program, the work for the Advanced Integrated Clinical Systems-Guided Medical Procedure System ceased at the end of Fiscal Year 2010 and the project was closed. At the start of Fiscal Year 2012, the NASA Human Research Program (HRP) received funding to conduct the Exploration Medical System Demonstration project (EMSD). The objective of the EMSD is to determine what medical technologies are needed for an exploration class mission and what medical informatics tools for managing evidence and decision making can be integrated into a single system to be used crew in an efficient and meaningful manner. The EMSD will be coordinated by the HRP Element called the Exploration Medical Capability (ExMC) Group who will utilize the International Space Station (ISS) as a test-bed to evaluate these technologies, informatics tools and

**Task Description:** 

The EMSD will consist of two phases: 1) A ground phase where all capabilities will be tested in a ground-based exercise in 2014 and 2) a space flight-phase where some of the capabilities from the ground-phase will tested aboard the ISS in 2016. Included in both phases is an electronic ("paperless") medical procedure system called the Assisted Medical Procedures (AMP) that will help crew both select a medical procedure as well as guide them through the procedure. The system will be used for all medical encounters, especially during periods of exploration missions when contact with ground resources (e.g. flight surgeon) will either be minimal or absent (i.e. autonomous medical care).

Development of the AMP will be accomplished by generating an operational concepts (OpsCon) document, creation of requirements, procuring of hardware/software (if necessary) and generating corresponding drawings to produce the components of the system.

### **Rationale for HRP Directed Research:**

# **Research Impact/Earth Benefits:**

It is anticipated that the development of the AMP will result in innovations to interfaces with wireless medical peripherals (e.g. ECG monitors, pulse oximetry), informatics tools (e.g. electronic medical record, middleware), and to autonomous medical care in austere environments.

### Documentation and Development

A baseline version of the EMSD Operational Concept (OpsCon) document was completed on 21 November 2011. Using this document as a reference, the AMP OpsCon document was finalized on 13 February 2012. The AMP OpsCon document was then used to generate a requirements document that has completed formal review by the ExMC Advisory Group and the EMSD's System Requirements Review (SRR) in February 2012 and March 2012, respectively. The AMP requirements have been finalized following these reviews and have been prepared for use in procurement documentation.

A formal request for proposal (RFP) for procuring an AMP was sent out to potential vendors in May 2012. The ExMC team received one formal response and a partial response from two of the ten vendors contacted. As a result of this minimal response, the team reassessed the content of its proposal and updated the specificity of the requirements. A second RFP was sent to an updated list of potential vendors in October 2012.

In addition to procuring a possible solution, the ExMC Team is also working with software developers within NASA on an electronic procedure display system that was initially developed for the Constellation Program. The devices and their relevant architecture may be able to be configured to meet AMP requirements.

# Evaluations

During the initial phases of AMP development, ExMC conducted evaluations of how existing ISS medical resources and newly developed procedures and tools would function on an exploration class mission. Doing such evaluations helps ExMC identify what is needed in the AMP to address any gaps in its capability.

Results of the Autonomous Mission Operation (AMO) study indicated that written medical procedures can be effectively executed by minimally-trained caregivers (e.g. CMOs) with minimal remote guidance from subject matter experts to provide useful clinical data to ground-based medical support. The study also showed that use of mitigation tools such as the Advanced Diagnostic Ultrasound software (ADUS) enable minimally-trained caregivers to autonomously execute clinical tasks in a manner that increases the quality of clinical deliverables, in this case, ultrasound imagery.

Initial review of the data from the Mission Operation Test (MOT) indicates that there are areas where automation can be applied to decrease a) the time to execute a procedure task, b) decrease the number of data transfer steps, and c) decrease the search time for and retrieval time of health records.

# Conclusion

The work by the ExMC team over the past year has enabled them to 1) identify gaps in procedure flow where AMP capability can enable better crew performance during exploration class mission medical events as provided by the completion of two exploration class relevant simulations, 2) finalize the functional and technical requirements for the AMP, and 3) begin procurement and development of an initial iteration of the AMP. This work immediately addresses Critical Path Roadmap (CPR) Risks #17 and #23 and enables ExMC to better address CPR Risks #17, #20, #22, and #23 in the coming fiscal year.

The objectives for FY13 are to 1) generate the first iteration of the AMP either by development, procurement, or a combination of both and 2) conduct an evaluation of this AMP's capability in an analog environment that mimics an exploration class mission.

**Bibliography Type:** 

Description: (Last Updated: 07/01/2015)

Task Progress:

Task Book Report Generated on: 04/24/2024

Abstracts for Journals and Proceedings

Hurst V 4th, Garcia K, Jain V, Ham D, Menon A, Watkins S. "Evaluation of current space medical capability for exploration space missions." 84th Annual Scientific Meeting, Aerospace Medical Association, Chicago, IL, May 12-16, 2013.

Aviation, Space, and Environmental Medicine. 2013 Apr;84(4):376. See <a href="http://www.ingentaconnect.com/content/asma/asem">http://www.ingentaconnect.com/content/asma/asem</a> for searching., Apr-2013