



SCIENCE AND TECHNOLOGY ORGANIZATION  
HUMAN FACTORS & MEDICINE PANEL



**PROGRAM**  
**SYMPOSIUM on**  
**HUMAN PERFORMANCE AND MEDICAL TREATMENT AND SUPPORT**  
**DURING COLD WEATHER OPERATIONS**  
*(HFM-RSY-349)*  
*Arlington, USA*  
*17-19 October 2022*  
*Times are in EST*

**Monday, 17th October 2022**

<b>Monday, 17th October 2022</b>					
		08:00	<i>Introduction: coffee, registration, everyone to their seats</i>		
KN1	NO	08:30	<b>Keynote on:</b> <i>Training for cold weather operations in the NATO Centre of Excellence for Cold Weather Operations</i>	COL Jo Haugom, CoE- CWO	Johaugom@mil.no
P1	US	09:15	<i>Frozen Russian Soldiers in Ukraine</i>	Dr. Adam Potter	adam.w.potter.civ@mail.mil
	US	09:30	<i>Explanation of the U.S. cold weather ration and distribution of samples</i>	Dr. Erin Stromberg	erin.g.stomberg.civ@army.mil
		09:45	<i>Coffee Break</i>		
<b>Thematic Session 1: Preparation for Cold Injury Prevention</b> Moderators: John Castellani & Wendy Sullivan-Kwantes					
P2	NL	10:00	<i>We are all exposed to the same environment, but some are more exposed than others</i>	Dr. Boris Kingma	boris.kingma@tno.nl
P3	UK	-	<i>Aircrew glove cold protection: defining thermal requirements accounting for loss of manual dexterity</i>	Dr. Andrew Weller	ASWELLER@qinetiq.com
P4	NO	-	<i>Training videos to prevent cold weather injury</i>	Ms. Hilde Teien	hilde-kristin.teien@ffi.no
P5	US	-	<i>Development of interactive guidance for Warfighters in cold using thermal models</i>	Dr. Xiaojiang Xu	xiaojiang.xu.civ@mail.mil
KN2	NO	11:30	<b>Position Paper Presentation:</b> <i>Classification of freezing cold injuries</i>	Dr. Arne Norheim	arne@avital.no
		12:00	<i>Lunch Break</i>		
P6	NL	13:00	<b>Demonstration:</b> <i>Immersive Cold Weather Experience</i>	Dm van de Laar, MinDef, NLD	DM.vd.Laar.01@mindef.nl

**Thematic Panel 1: Brain and Cognitive Function in the Cold**

Moderators: Graham White & Karl Friedl

P7	FI	14:00	<i>Cognitive performance among Finnish paratroopers during and after 20-day winter military field training</i>	Dr. Kari Kallinen	kari.kallinen@mil.fi
P8	US	-	<i>Low hand temperature predicts individual differences in cognitive adaptability during cold water immersion</i>	Dr. Timothy Dunn	timothy.l.dunn12.civ@mail.mil
P9	US	-	<i>Altered neural network oscillations and impaired cognitive performance during military cold water immersion</i>	Dr. Weimen Zheng	weimin.zheng.ctr@mail.mil

14:45

*Coffee Break and Poster Viewing*

**Thematic Panel 2: Cold Immersion and Diving Issues**

Moderators: Boris Kingma & John Florian

P10	CA	15:00	<i>Extremity cooling during Op NU 2019 diving exercise</i>	Ms. Wendy Sullivan- Kwantes	Wendy.Sullivan-Kwantes@drdc-rddc.gc.ca
P11	UK	-	<i>Scoping study of the thermal strain experienced by UK military dive support boat personnel</i>	Dr. Samantha Saunders	ssaunders@mail.dstl.gov.uk
P12	US	-	<i>Prediction of the decrease in core temperature during cold-water immersion in thermally protected men and women</i>	Dr. Courtney Wheelock	dhostler@buffalo.edu
P13	FI	-	<i>The human diving responses to arctic diving- assessment of ANS activity with heart rate</i>	Dr. Richard Lundell	richard.lundell@mil.fi
P14	US	-	<i>Prevalence of hypothermia and critical hand temperatures during military cold water immersion training</i>	Dr. Douglas Jones	douglas.m.jones93.ctr@mail.mil

16:30

*Break for the Day*

18:00

*Informal Dinner Arrangements in DC*

**Tuesday, 18th October 2022**

KN3	US	08:30	<b>Keynote on:</b> <i>Training for cold weather operations at the US Marine Corps Mountain Warfare Training Center</i>	Col Daniel Wittnam, MCMWTC	daniel.j.wittnam@usmc.mil
		09:15	<i>Mentimeter Questions</i>		
		09:30	<i>Coffee Break and Poster Viewing</i>		
<b>Thematic Session 2: Metabolic Balance and Stress of Field Training in the Cold</b> Moderators: Heikki Kyrolainen & Hilde Teien					
P15	FI	10:00	<i>Physiological changes during a 20-day winter military training course and its subsequent 10-day recovery</i>	Dr. Tommi Ojanen	Tommi.Ojanen@mil.fi
P16	FI	-	<i>Effects of paratroopers' initial body composition on changes in physical performance and recovery during a 20-day winter military field training</i>	Dr. Kai Pihlainen	kai.pihlainen@mil.fi
P17	FI	-	<i>Can physiological and psychological factors predict dropout from intense 1-day winter military survival training?</i>	Dr. Jani Vaara	jani.vaara@mil.fi
P18	US	-	<i>Fueling performance for cold-weather military operations</i>	Dr. Lee Margolis	lee.m.margolis.civ@mail.mil
		11:30	<i>Lunch Break</i>		
<b>Thematic Session 3: Freezing Cold Injuries and their Treatment</b> Moderators: Henriette Hasselstrøm & Wendy Sullivan-Kwantes					
P19	NO	12:30	<i>Freezing cold injuries in the Norwegian Armed Forces between 2004 and 2021</i>	Dr. Tuva Steinberg (presented by Dr. Arne Norheim)	tuvabs@gmail.com (arne@avital.no)
P20	UK	-	<i>Iloprost at the point of injury? A literature review</i>	Dr. Jonathon Lowe	jlowe5@nhs.net
P21	NO	-	<i>Botulinum toxin A in the treatment of frostbite sequelae- a randomized, double blind, placebo-controlled pill pilot study</i>	Dr. Arne Norheim	arne@avital.no

P22	GE	-	<i>Control of major bleeding by application of tourniquets over clothing in cold weather warfare</i>	Dr. Raimund Lechner	raimund.lechner@uni-ulm.de
P23	SW	-	<i>Acral skin vasoreactivity and thermosensitivity to hand cooling following short-term, whole-body cold acclimation</i>	Dr. Roger Kölegård	kolegard@kth.se
		14:30	<b>Mentimeter Audience Participation- Cold medicine research gaps</b>		
		15:00	<i>Load Buses for Tour of the National Museum of Health and Medicine (includes biophysical testing of cold weather clothing, polar bear heads, and more)</i>		

**Wednesday, 19th October 2022**

KN4	CA	08:30	<b>Keynote on:</b> <i>Clinical experience with iloprost in the treatment of freezing cold injury</i>	Dr. Alexander Poole	alexjpoole@mac.com
	US	09:15	<i>US perspective on medical issues and training for Arctic operations</i>	Maj Titus Rund	titus.j.rund.mil@army.mil
		09:30	<i>Coffee Break and Poster Viewing</i>		
<b>Thematic Panel 3: Medical Training and Treatment Planning for Medicine in Austere Cold Environments</b> Moderators: Arne Norheim & Karl Friedl					
P24	UK	09:45	<i>Optimising "reachback" capabilities to maintain operational effectiveness - lessons from military practice</i>	Dr. Jonathan Lowe	jlowe5@nhs.net
P25	UK	-	<i>Developing a bespoke extreme cold weather medical course for UK forces operating in the Arctic++</i>	Surgeon Commander RJ Howes	doogie.howes@nhs.net
P26	UK	-	<i>MSKI in UK service personnel and the impact of in-theatre rehabilitation during cold weather warfare training</i>	Maj Dave Ferraby Maj Debs Hayhurst	David.ferraby100@mod.gov.uk Debra.hayhurst817@mod.gov.uk
		11:00	<b>Final Discussion/Conference Proceeding Synthesis/Report of the Technical Evaluator</b>		
		12:00	<i>End of Symposium</i>		