

Conference Agenda

Session Overview

Date: Monday, 14/June/2021

8:15am - 12:00pm	DiMM Preconference: Diploma in Mountain Medicine Virtual Faculty Development Course Location: Virtual Chair: Jason Dale Williams , University of New Mexico, United States of America On personal invitation only
12:30pm - 4:30pm	DiMM Course Organizers Meeting Location: Virtual Chair: Jason Dale Williams , University of New Mexico, United States of America On personal invitation only.
5:00pm - 5:30pm	Plenary 1: Opening Ceremony Location: Virtual Chair: Prof. Monika Brodmann Maeder , Inselspital, University Hospital, Switzerland Chair: Prof. Hermann Brugger , EURAC research, Italy Chair: Dr. Scott McIntosh , Wilderness Medical Society, United States of America Chair: Dr. John Ellerton , ICAR Medcom, United Kingdom Invitees: Urs Hefti, president MedCom UIAA, Franz Stämpfli, president ICAR; Corinna Schoen, president SGGM, Pierre Metrailler, president GRIMM, Aristomenis Exadaktylos, Inselspital Bern, Philipp Ritschard, Mayor of Interlaken
5:30pm - 6:15pm	Keynote 1: Climate Change and Human Health: Doctors and Mountaineers Location: Virtual Chair: Prof. Paul Stuart Auerbach , Stanford University School of Medicine, United States of America Chair: Prof. Hermann Brugger , EURAC research, Italy

Date: Tuesday, 15/June/2021

Poster session online	Online: Poster Session	P1: Poster Session
9:00am - 9:55am	Keynote 2: Teamwork as imagined and teamwork as done Location: Virtual Chair: Prof. Peter Dieckmann , University of Stavanger and CAMES, Denmark Chair: Prof. Monika Brodmann Maeder , Inselspital, University Hospital, Switzerland	
10:00am - 11:15am	Science MEM11: Accidental Hypothermia & Avalanches Location: Virtual Chair: Dr. Mathieu Pasquier , University Hospital of Lausanne, Switzerland Chair: Dr. Jennifer Dow , Denali National Park, United States of America Chair: Dr. Tomasz Darocha , Medical University of Silesia, Katowice, Poland., Poland Chair: MD Beat Walpoth , University of Geneva, Switzerland Chair: Prof. Valentin Rousson , Unisanté, University of Lausanne, Switzerland Successful pre- rewarming resuscitation after cardiac arrest in severe hypothermia: an overview of 14 cases. Cools, Evelien¹; Meyer, Marie²; Courvoisier, Delphine¹; Walpoth, Beat¹ 1: University Hospitals Geneva, Switzerland; 2: Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland Rewarming speed affects cardiopulmonary and neurological functions after deep hypothermic cardiac arrest Linardi, Daniele¹; Walpoth, Beat²; Mani, Romel¹; Murari, Angela¹; D'Alessandro, Gemma¹; Tessari, Maddalena¹; Decimo, Ilaria³; Dolci, Sissi³; Hallmstroem, Seth⁴; Luciani, Giovanni Battista¹; Faggian, Giuseppe¹; Rungatscher, Alessio¹ 1: Department of Cardiac Surgery, University of Verona, Verona, Italy; 2: Department of Cardiovascular Surgery, University of Geneva, Geneva, Switzerland; 3: Department of Pharmacology, University of Verona, Verona, Italy; 4: Department of Physiology, University of Graz, Austria Extrication times during Avalanche Companion Rescue – A randomized single blinded manikin study Wallner, Bernd^{1,2}; Moroder, Luca³; Brandt, Anna¹; Mair, Peter¹; Erhart, Stefanie⁴; Bachler, Mirjam¹; Putzer, Gabriel¹; Turner, Rachel²; Strapazzon, Giacomo²; Falk, Markus²; Brugger, Hermann² 1: Department of Anaesthesiology and Intensive Care Medicine, University Clinic Innsbruck, Medical University Innsbruck, Anichstraße 35, 6020 Innsbruck, Austria; 2: Institute of Mountain Emergency Medicine, Eurac research, Viale Druso 1, 39100 Bolzano, Italy; 3: Department of Anaesthesiology and Critical Care Medicine, General Hospital Brixen, Dantestraße 51, 39042 Brixen, Italy; 4: Department of Orthopaedics and Traumatology, University Hospital Hall in Tirol, Milserstrasse 10, 6060 Hall in Tirol, Austria An artificial air pocket device reduces inspired level of carbon dioxide in participants completely buried in avalanche debris - an experimental, randomized crossover study Strapazzon, Giacomo^{1,2}; Governo, Erica³; Malacrida, Sandro¹; Dal Cappello, Tomas¹; Rauch, Simon¹; Giardini, Guido³; Urgesi, Margherita¹; Mrakic-Spota, Simona⁴; Vezzoli, Alessandra⁴; Falla, Marika⁵; Caberle, Alberto²; Palma, Martin¹; Cavoretto, Luca^{2,3}; Visetti, Enrico^{2,6}; Brugger, Hermann¹; Prato, Federico^{2,7} 1: Eurac Research, Institute of Mountain Emergency Medicine, Bolzano, Italy; 2: Corpo Nazionale Soccorso Alpino e Speleologico, CNSAS, Milano, Italy; 3: Mountain Medicine Center, Azienda Sanitaria Valle d'Aosta, Aosta, Italy; 4: Institute of Clinical Physiology - National Research Council IFC - CNR, Milano, Italy; 5: CIMeC - Center for Mind/Brain Sciences, University of Trento, Rovereto, Italy; 6: Department of Anesthesia and Intensive Care, Gruppo Policlinico di Monza, Monza, Italy; 7: Anesthesia and Intensive Care Unit, Azienda Sanitaria Locale di Biella, Biella, Italy Extracorporeal Life Support in Accidental Hypothermia Related Cardiac Arrest and Rewarming – a Review for ECLS Practitioners Swol, Justyna¹; Darocha, Tomasz²; Paal, Peter³; Brugger, Hermann⁴; Podsiadlo, Pawel⁵; Kosinski, Sylwierz⁶; Puslecki, Mateusz⁷; Ligowski, Marcin⁸; Pasquier, Mathieu⁹ 1: Dept. of Respiratory Medicine, Allergology and Sleep Medicine, Paracelsus Medical University, Nuremberg, Germany; 2: Severe Accidental Hypothermia Center, Department of Anesthesiology and Intensive Care, Medical University of Silesia, Katowice, Poland; 3: Department of Anesthesiology and Intensive Care Medicine, Hospitallers Brothers Hospital, Paracelsus Medical University, Salzburg, Austria; 4: Institute of Mountain Emergency Medicine, Eurac Research, Bolzano, Italy; 5: Department of Emergency Medicine, Jan Kochanowski University, Kielce, Poland; 6: Faculty of Health Sciences, Jagiellonian University Medical College, Krakow, Poland; 7: Department of Medical Rescue, Poznan University of Medical Sciences, Poznan, Poland; 8: Departmentf Cardiac Surgery and Transplantology, Poznan University of Medical Sciences, Poznan, Poland; 9: Emergency Department, Lausanne University Hospital, Lausanne, Switzerland	
11:30am - 12:45pm	Science MEM12: AvaLife – A Decision Support Tool and Avalanche Patient Protocol Location: Virtual Chair: Dr. Peter Paal , St. John of God Hospital, Paracelsus Medical University, Salzburg, Austria, Austria Chair: Dr. Scott McIntosh , Wilderness Medical Society, United States of America Chair: Prof. Darryl J. Macias , University of New Mexico, United States of America Chair: Manuel Genswein , MountainSafety.info, Switzerland	
12:45pm - 2:00pm	Free session 1: Lunch Break with free presentations Location: Virtual Mitigating Risk of COVID-19 during Mountain Rescue - Official Guidelines of the International Commission for Alpine Rescue (ICAR) Roy, Steven^{1,2,3}; Sheets, Alison^{2,4,5}; Soteras, Inigo^{2,6}; Strapazzon, Giacomo^{2,7,8}; McPhalen, Don^{2,10}; Nerin, Maria Antonia^{2,11}; Rauch, Simon^{2,6,12}; Price, Richard^{2,13}; Oshiro, Kazue^{2,14,15}; Allen, Myron^{16,17}; Read, Alistair^{17,18}; Paal, Peter^{2,9,19,20}	

1: Department of Critical Care Medicine, University of Calgary, Canada; 2: Medical Commission of the International Commission for Alpine Rescue (ICAR MEDCOM), Switzerland; 3: International Society for Mountain Medicine (ISMM), Switzerland; 4: Emergency Medicine, Boulder Community Health, Boulder, Colorado, USA; 5: University of Colorado Wilderness and Environmental Medicine Fellowship, Aurora, Colorado, USA; 6: Emergency Medical System. Catalonia, Spain. University of Girona, Catalonia, Spain; 7: Institute of Mountain Emergency Medicine, Eurac Research, Bolzano, Italy; 8: Corpo Nazionale Soccorso Alpino e Speleologico, National Medical School (CNSAS SNaMed), Milan, Italy; 9: Department of Anaesthesiology and Intensive Care Medicine, Hospitalers Brothers Hospital, Paracelsus Medical University Salzburg, Austria; 10: Department of Surgery, University of Calgary, Canada; 11: Jose Ramon Morandeira Mountain Medicine Association-CUEMUM, Spain; 12: Department of Anaesthesiology and Intensive Care Medicine, F. Tappeiner Hospital, Merano, Italy; 13: LandSAR, New Zealand; 14: Department of Cardiovascular Medicine, Hokkaido Ohno Memorial Hospital, Sapporo, Japan; 15: Director of Mountain Medicine, Research, and Survey Division, Hokkaido Ohno Memorial Hospital, Sapporo, Japan; 16: National Ski Patrol, USA; 17: Terrestrial Commission of the International Commission for Alpine Rescue (ICAR), Switzerland; 18: Mountain Rescue, England and Wales, UK; 19: Austrian Board for Mountain Safety, Innsbruck, Austria; 20: Austrian Society of Mountain and High Altitude Medicine, Mieming, Austria

Introduction of an Objective Structured Practical Examination into the Nepalese Diploma in Mountain Medicine

Odbert, Tom^{1,2}; **McElroy, Beth**^{1,3}; **Dawadi, Suvash**^{1,4}; **Hunter, Jez**^{1,5}; **Nepal, MMSN Diploma Group**¹

1: Mountain Medicine Society of Nepal, Kathmandu, Nepal; 2: Northampton General Hospital, United Kingdom; 3: Cheltenham General Hospital, United Kingdom; 4: CIWEC Hospital, Nepal; 5: Royal Cornwall Hospital, United Kingdom

What drives us to climb mountains? Exploration of salutogenic and pathogenic aspects in regular and extreme mountaineering

Habelt, Leonie²; **Kemmler, Georg**¹; **Defrancesco, Michaela**¹; **Spanier, Bianca**²; **Halle, Martin**²; **Sperner-Unterweger, Barbara**¹; **Hüfner, Katharina**¹

1: Department of Psychiatry, Psychotherapy and Psychosomatics, Medical University of Innsbruck; 2: Department of Prevention, Rehabilitation and Sports Medicine, Klinikum rechts der Isar, School of Medicine, Technical University of Munich

Helicopter rescue of COVID-19 and non-COVID-19 patients in Nepal during pandemics: HAMS Hospital experience

Thapa, Ghan Bahadur^{1,2}; **Karki, Sanjaya**²; **Shrestha, Shreeram**²; **Budhathoki, Ram k**²; **Dhakal, Nishant**²; **Pant, Manish N**²; **Adhikari, Abhijit**²

1: Mountain Medicine Society of Nepal, Nepal; 2: HAMS hospital

Improvement on the stage of hypothermia with on-site non-invasive rewarming method during alpine rescue in Hokkaido, Japan: A 8-years' experience

Oshiro, Kazue¹; **Murakami, Tomikazu**²; **Matsumoto, Takashi**³

1: Hokkaido Ohno Memorial Hospital, Japan; 2: Association for Mountain Medical Rescue; 3: Hokkaido Police Mountain Search and Rescue

2:00pm
-
3:15pm

Science HAM11: Prevention and Preexposure

Location: **Virtual**

Chair: **Dr. Hannes Gatterer**, Eurac Research, Italy

Chair: **Prof. Susi Kriemler**, University of Zürich, Switzerland

Chair: **Dr. Andrew Mark Luks**, University of Washington, United States of America

Acetazolamide for Preventing Acute Mountain Sickness in Healthy Older than 40 years. RCT.

Furian, Michael^{1,3}; **Mademilov, Maamed**^{2,3}; **Abdraeva, Ainura**^{2,3}; **Lichtblau, Mona**^{1,3}; **Sheraliev, Ulan**^{2,3}; **Marazhapov, Nuriddin H**^{2,3}; **Buergin, Aline**¹; **Bitos, Konstantinos**¹; **Mayer, Laura**¹; **Reiser, Aurelia E**¹; **Schneider, Simon R**^{1,3}; **Buenzli, Simone**^{1,3}; **Aydaralieva, Shaira**^{2,3}; **Muratbekova, Aybermet**^{2,3}; **Sooronbaev, Talant M**^{2,3}; **Ulrich, Silvia**^{1,3}; **Bloch, Konrad E**^{1,3}

1: University Hospital Zurich, Department of Respiratory Medicine, Zurich, Switzerland; 2: National Center for Cardiology and Internal Medicine, Pulmonary Department, Bishkek, Kyrgyzstan; 3: Swiss-Kyrgyz High Altitude Medicine and Research Initiative, Zurich, Switzerland, Bishkek, Kyrgyz Republic

Randomized trial of acetazolamide for preventing altitude-illness in patients with chronic obstructive pulmonary disease

Furian, Michael^{1,3}; **Mademilov, Maamed**^{2,3}; **Buergin, Aline**¹; **Scheiwiller, Philipp M**^{1,3}; **Mayer, Laura**¹; **Schneider, Simon R**^{1,3}; **Emilov, Berik**^{2,3}; **Lichtblau, Mona**^{1,3}; **Bitos, Konstantinos**¹; **Muralt, Lara**^{1,3}; **Groth, Alexandra**¹; **Sheraliev, Ulan**^{2,3}; **Marazhapov, Nuriddin H**^{2,3}; **Aydaralieva, Shaira**^{2,3}; **Muratbekova, Aybermet**^{2,3}; **Sooronbaev, Talant M**^{2,3}; **Ulrich, Silvia**^{1,3}; **Bloch, Konrad E**^{1,3}

1: University Hospital of Zurich, Department of Respiratory Medicine, Zurich, Switzerland; 2: National Center for Cardiology and Internal Medicine, Department of Respiratory Medicine, Bishkek, Kyrgyz Republic; 3: Swiss-Kyrgyz High Altitude Medicine and Research Initiative, Zurich, Switzerland, and Bishkek, Kyrgyz Republic

Short-term pre-acclimatization by sleeping in normobaric hypoxia

Faulhaber, Martin^{1,2}; **Rausch, Linda**¹; **Netzer, Nikolaus**^{1,3,4}

1: University Innsbruck, Austria; 2: Austrian Society of Alpine and High Altitude Medicine, Austria; 3: Geriatric Rehabilitation Clinics Bad Aibling and Lenggries, Germany; 4: Eurac Research, Italy

3:30pm
-
4:45pm

Science HAM12: Hot & new topics in High Altitude

Location: **Virtual**

Chair: **Dr. Christoph Siebenmann**, EURAC Research, Italy

Chair: **Dr. Ken Zafren**, Stanford University, United States of America

Chair: **Dr. Santosh Baniya**, Mountain Medicine Society of Nepal, Nepal

High Altitude Dicrotism: Normal healthy individuals presenting with Pseudo-Tachyarrhythmia

Ghimire, Abhyu; **Zafren, Ken**

The Mountain Medical Institute, Nepal

Plasma volume contraction reduces atrial natriuretic peptide in hypoxia

Gatterer, Hannes¹; Rauch, Simon^{1,2}; Strapazzon, Giacomo¹; Regli, Ivo¹; Woyke, Simon^{1,3}; Schlittler, Maja⁴; Turner, Rachel¹; Siebenmann, Christoph¹

1: Institute of Mountain Emergency Medicine, Eurac Research, Italy; 2: Department of Anesthesia and Intensive Care Medicine, "F. Tappeiner" Hospital, Italy; 3: Department of Anesthesiology and Intensive Care Medicine, Medical University of Innsbruck, Austria; 4: none

The Khardung-La Challenge; Observations on a High-Altitude Ultra-Marathon

Sashindran, VK¹; Singh, Surinderpal²; Singh, Dharmendra³; Ghosh, Arijit³; Vinod, Arjun³; Ghosh, Debashish⁴; Bhattacharya, Anirban⁵; Sharma, Rachit⁶; Bhardwaj, Khushboo⁶; Ghoshal, Anupam⁶; Thinias, Tashi⁷; Solanki, Pramod⁶

1: HQ, Central Air Command, Prayagraj, India; 2: All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India; 3: Armed Forces Medical College, Pune, India; 4: Command Hospital, Northern Command, Udampur, India; 5: High Altitude Medical Research Center, Leh, India; 6: 153 General Hospital, Leh, India; 7: Sonam Norboo Memorial Hospital, Leh, India

Prevalence of high altitude illness among rapidly ascending Nepalese tourist to the Base Camp (4130m) of Lake Tilicho (4919m); A cross sectional study

Baniya, Santosh¹; Dawadi, Suvash¹; Dahal, Bishad¹; Kandel, Narayan¹; Basnyat, Buddha^{1,2}

1: Mountain Medicine Society of Nepal, Nepal; 2: Himalayan Rescue Association, Nepal

Ambulatory blood pressure at high altitude in participants with and without preexisting hypertension: Preliminary Data from the Colorado High Altitude Monitoring Blood Pressure Study (CHAMPS)

Kreider Carlson, Greta; Niswander, Cameron; Keyes, Linda E.

University of Colorado, United States of America

5:00pm

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6:15pm

Round Table: Research in or out of the box?

Location: **Virtual**

Chair: **Prof. Hermann Brugger**, EURAC research, Italy

Chair: **Prof. Buddha Basnyat**, Himalaya Rescue Association, Nepal

Chair: **Prof. Peter Bärtsch**, University Clinic, Heidelberg, Germany, Switzerland

Chair: **Dr. Erik Swenson**, University of Washington, United States of America

Chair: **Prof. Peter H Hackett**, Altitude Research Center, University of Colorado, United States of America

Chair: **Dr. Benjamin David Levine**, UT Southwestern Medical Center, United States of America

Presenting guests: Markus Falk, Renaud Guillermet, Maja Schlittler

Acetazolamide cannot be recommended for HAPE prevention after rapid and active ascent to 4,559 m

Schiefer, Lisa M¹; Berger, Marc M²; Sareban, Mahdi³; Macholz, Franziska¹; Schäfer, Larissa¹; Schmidt, Peter¹; Schimke, Magdalena M¹; Swenson, Kai E⁴; Mayer, Benjamin⁵; Niebauer, Josef³; Cogo, Annalisa⁶; Kriemler, Susi⁷; Schwery, Stefan⁸; Pickerodt, Philipp A⁹; Bärtsch, Peter¹⁰; Swenson, Erik R¹¹

1: Department of Anesthesiology, Perioperative and General Critical Care Medicine, Paracelsus Medical University, Salzburg, Austria; 2: Paracelsus Medical University, Salzburg, Austria; Department of Anesthesiology, University Hospital Heidelberg, Germany; 3: University Institute of Sports Medicine, Prevention and Rehabilitation, Paracelsus Medical University, Salzburg, Austria; Research Institute of Molecular Sports Medicine and Rehabilitation, Paracelsus Medical University, Salzburg, Austria; 4: Division of Pulmonary and Critical Care Medicine, Stanford University, Palo Alto, CA, USA; 5: Institute of Epidemiology and Medical Biometry, University of Ulm, Germany; 6: Biomedical Sport Studies Center, University of Ferrara, Ferrara, Italy; 7: Epidemiology, Biostatistics and Public Health Institute, University of Zürich, Zurich, Switzerland; 8: Hospital of Valais, Switzerland; 9: Department of Anesthesiology and Operative Intensive Care Medicine, Campus Charité Mitte and Virchow-Klinikum, Charité-Universitätsmedizin Berlin, Berlin, Germany; 10: Department of Internal Medicine, University of Heidelberg, Heidelberg, Germany; 11: Pulmonary, Critical Care and Sleep Medicine, VA Puget Sound Health Care System, University of Washington, Seattle, WA, USA

Simulated acute hypobaric hypoxia effects on cognition in helicopter emergency medical service (HEMS) personnel – a randomized, controlled, single-blind, cross-over study

Falla, Marika^{1,2}; Hüfner, Katharina³; M. Weiss, Elisabeth⁴; Vögele, Anna¹; Dejaco, Alexander¹; Brandner, Jonas³; Falk, Markus¹; vanVeelen, Michiel¹; Nicoletto, Giada¹; Weber, Bernard⁵; Brugger, Hermann¹; Strapazzon, Giacomo¹

1: Institute of Mountain Emergency Medicine, Eurac Research, Bolzano, Italy; 2: University of Trento, Italy; 3: Department of Psychiatry, Psychotherapy and Psychosomatics, University Hospital for Psychiatry II, Medical University of Innsbruck, , Austria; 4: Department of Psychology, University of Innsbruck, Austria.; 5: Department of Psychology, University of Graz, Austria

6:30pm

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8:00pm

General Assembly of the International Society for Mountain Medicine ISMM

Location: **Virtual**

Chair: **Prof. Hermann Brugger**, EURAC research, Italy

Chair: **Prof. Monika Brodmann Maeder**, Inselspital, University Hospital, Switzerland

Date: Wednesday, 16/June/2021

9:00am - 9:55am	Keynote 3: Prophylaxis of altitude illness: medical and ethical musings Location: Virtual Chair: Prof. Bengt Kayser , University of Lausanne, Switzerland Chair: Dr. Hannes Gatterer , Eurac Research, Italy
10:00am - 11:15am	Science HAM21: Genomics Location: Virtual Chair: Prof. Max Gassmann , University of Zurich, Switzerland Chair: Dr. Ainash Childebayeva , Max Planck Institute for the Science of Human History, Germany Hemoglobin levels mirror the topography of Switzerland: Evidence for an ancient but precise oxygen sensing process Gassmann, Max¹; Staub, Kaspar¹; Rühli, Frank¹; Muckenthaler, Martina²; Maggiorini, Marco¹ 1: University of Zurich, Switzerland; 2: University of Heidelberg, Germany Hypoxic-inflammatory responses under acute hypoxia: in vitro experiments and prospective observational expedition trial Kammerer, Tobias^{1,4}; Faihs, Valentina¹; Hulde, Nikolai²; Kröpfl, Julia³; Spengler, Christina³; Schäfer, Simon¹ 1: Department of Anaesthesiology, University Hospital, LMU Munich, Germany; 2: Institute of Anesthesiology, Heart and Diabetes Center NRW, Ruhr-University Bochum, Germany; 3: Exercise Physiology Lab, Institute of Human Movement Sciences and Sport, ETH Zurich, Switzerland; 4: University Hospital of Cologne, Department of Anesthesiology and Intensive Care Medicine
11:30am - 12:45pm	Science HAM22: High Altitude and the Organs 1 Location: Virtual Chair: Dr. Lorenza Pratali , National Council of researcher, Italy Chair: Dr. Christoph Dehnert , Medbase Zurich, Switzerland Chair: Prof. Tatum S. Simonson , University of California San Diego, United States of America Nocturnal saturation variance is related to Lake Louise Scores during ascent to 4,800 m. Joyce, Kelsey E.^{1,9}; Delamere, John^{2,9}; Bradley, Chris^{1,9}; Lucas, Rebekah^{1,9}; Ashdown, Kimberly^{3,9}; Thomas, Owen^{4,9}; Lock, Hannah^{5,9}; Malein, Will^{6,9}; Letchford, Abigail^{7,8,9}; Bradwell, Arthur R.^{2,9}; Lucas, Samuel J.E.^{1,9} 1: School of Sport, Exercise & Rehabilitation Sciences, University of Birmingham, Birmingham, UK; 2: Medical School, University of Birmingham, Birmingham, UK; 3: Occupational Performance Research Group, University of Chichester, Chichester, UK; 4: Department of Anaesthesia, Royal Gwent Hospital, NHS Direct Wales, Newport, UK; 5: Emergency Medicine, Ysbyty Gwynedd, Bangor, Wales, UK; 6: Department of Anaesthesia, Ninewells Hospital, Dundee, UK; 7: Greysleydale Healthcare Centre, Swadlincote, UK; 8: St Helens and Knowsley Teaching Hospitals, NHS Trust, Whiston, UK; 9: Birmingham Medical Research Expeditionary Society, Birmingham, UK Cerebral oxygen delivery at rest and during submaximal exercise in various acute normo-/hypobaric normo-/hypoxic conditions Aebi, Mathias Roland^{1,2}; Bourdillon, Nicolas^{1,3}; Bron, Denis²; Millet, Grégoire P.¹ 1: Institute of sport sciences, University of Lausanne, Switzerland; 2: Swiss Aeromedical Center, Swiss Air Force, Dübendorf, Switzerland; 3: Becare SA, Renens, Switzerland Pulmonary Function Tests Not Associated with Development of Acute Mountain Sickness Small, Elan¹; Pomeranz, David²; Burns, Patrick¹; Phillips, Caleb³; Cheffers, Mary⁴; Evans, Kristina¹; Jurkiewicz, Carrie¹; Juul, Nicholas⁵; Hackett, Peter⁶; Lipman, Grant¹ 1: Department of Emergency Medicine, Stanford University School of Medicine, Stanford, California; 2: Inyo Hospital, Bishop, California; 3: Department of Computational Science, University of Colorado, Boulder, Colorado; 4: Department of Emergency Medicine, Keck School of Medicine, Los Angeles, California; 5: Department of Medicine, Stanford University School of Medicine, Stanford, California; 6: Department of Emergency Medicine, Institute for Altitude Medicine, University of Colorado, Boulder, Colorado CEREBRAL BLOOD FLOW IN HYPOBARIC HYPOXIA: TIME COURSE AND IMPACT OF PLASMA VOLUME EXPANSION Turner, Rachel¹; Tremblay, Joshua C²; Gatterer, Hannes¹; Lawley, Justin³; Strapazzon, Giacomo¹; Ainslie, Phillip N²; Siebenmann, Christoph¹ 1: Institute of Mountain Emergency Medicine, Eurac Research, Bolzano, Italy; 2: Centre for Heart, Lung and Vascular Health, School of Health and Exercise Sciences, University of British Columbia – Okanagan, Kelowna, British Columbia, Canada; 3: University Innsbruck, Department of Sport Science, Innsbruck, Austria Different autonomic and endocrine responses during a daytime nap under normobaric hypoxia in men and women Riveros-Rivera, Alain^{1,2}; Penzel, Thomas³; Klug, Lars⁴; Opatz, Oliver¹; Gunga, Hanns-Christian¹; Paul, Friedemann⁴; Boschmann, Michael⁴; Mähler, Anja⁴ 1: Charité - Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, Institute of Physiology, Center for Space Medicine and Extreme Environments Berlin, Berlin, Germany.; 2: Pontificia Universidad Javeriana. Faculty of Medicine. Dpt. of Physiological Sciences. Bogotá, Colombia.; 3: Charité - Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, Interdisciplinary Center of Sleep Medicine, Berlin, Germany.; 4: Charité - Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, Experimental & Clinical Research Center (ECRC), a joint collaboration between Max-Delbrück Center for Molecular Medicine and Charité Universitätsmedizin, Berlin, Germany.
12:45pm - 2:00pm	Free session 2: Lunch break with free presentations Location: Virtual

Alterations in acid-base balance under hypoxic conditions and resulting implications for anaerobic exercise performance at altitude: A retrospective analysis

Limmer, Mirjam^{1,2}; **de Marées, Markus**²; **Platen, Petra**²

1: German Sport University, Germany; 2: Ruhr-University Bochum, Germany

Pulmonary thromboembolism mimicking high altitude pulmonary edema in High Altitude, diagnostic dilemma: A Review

Sharma, Rajesh^{1,2}; **Shrestha, Suraj**^{1,2}; **Kandel, Suraj**^{1,2}; **Acharya, Suman**¹

1: Mountain Medicine Society of Nepal, Nepal; 2: Maharajgunj Medical Campus, Kathmandu, Nepal

ECG changes at high altitude and findings on Coronary Angiogram – A Correlation.

Saif, Mohsin

AFIC, Pakistan

2:00pm

3:15pm

Science HAM23: High Altitude and the Organs 2

Location: **Virtual**

Chair: **Dr. Matthias Hilty**, University Hospital of Zurich, Switzerland

Chair: **Prof. Cynthia M Beall**, Case Western Reserve University, United States of America

Chair: **Dr. Erik Swenson**, University of Washington, United States of America

Ambulatory Blood Pressure at Low vs High Altitude: Preliminary Data from the Colorado High Altitude Monitoring Blood Pressure Study (CHAMPS)

Kreider Carlson, Greta; **Niswander, Cameron**; **Keyes, Linda E.**

University of Colorado, United States of America

Evaluation of left ventricular contractile reserve during stress ecocardiography in normobaric normoxia and symulated hypoxia: healthy controls vs ischaemic patients.

Salvi, Emanuele^{1,2}; **Bastiani, Luca**³; **Mrakic Sposta, Simona**⁴; **Vezzoli, Alessandra**⁴; **Riccardi, Elisa**⁵; **Catuzzo, Bruna**⁶; **Giardini, Guido**⁷; **Pratali, Lorenza**³

1: Italian Navy Medical Service, Naval Academy; Livorno, ITALY; 2: University of Pisa; 3: CNR National Research Council, Institute of Clinical Physiology; Pisa, ITALY; 4: Institute of Clinical Physiology, National Research Council (CNR), ASST Grande Ospedale Metropolitano Niguarda, Milan, ITALY; 5: Department of Pneumology, University of Turin, Torino, ITALY; 6: Mountain Medicine Center, Ospedale Regionale Umberto Parini, Aosta, Italy.; 7: Department of Neurology, Neurophysiopathology Unit, Valle d'Aosta regional hospital; Aosta, ITALY

High Altitude Cor Pulmonale: Possibly resulting from chronic Pulmonary Artery Hypertension

Ghimire, Abhyu; **Sherpa, Mingma Thsering**; **Zafren, Ken**

The Mountain Medical Institute, Nepal

Virchow-Robin spaces enlarge during recovery from High Altitude Cerebral Edema and persist

Roy, Steven¹; **Barisano, Giuseppe**²; **Hackett, Peter**³

1: Department of Critical Care Medicine, Cumming School of Medicine, University of Calgary, Canada; 2: USC Stevens Neuroimaging and Informatics Institute, Keck School of Medicine, University of Southern California, USA; 3: Altitude Research Center, Division of Pulmonary Sciences and Critical Care Medicine, Department of Medicine, University of Colorado Anschutz Medical Campus, USA

3:30pm

4:45pm

Science MEM21: Traumatology and Mass Casualty Incidences

Location: **Virtual**

Chair: **Dr. Iñigo Soteras**, ICAR-MEDCOM, Spain

Chair: **Dr. Andrea Orlandini**, Hopital Riviera Chablais, France

Chair: **Dr. N. Stuart Harris**, Harvard Medical School/MGH Division of Wilderness Medicine, Dept of EM., United States of America

Dr. Francois Albasini

A comparison of pre-hospital "Point of care" ultrasound use between rural/urban and mountain rescues

Hubert, Romain¹; **Moens, Didier**^{1,2}; **Piazza, Justine**^{1,2}; **Javillier, Benjamin**^{1,3}

1: University of Liège, Liège, Belgium; 2: Heliport Medical Center of Bra-sur-Lienne, Bra-sur-Lienne, Belgium; 3: Clinique Saint-Luc of Bouge, Namur, Belgium

ICAR MEDCOM recommendation on suspension syndrome

Rauch, Simon^{1,2}; **Giacomo, Strapazzon**^{1,2}; **Brugger, Hermann**^{1,2}; **Pasquier, Mathieu**²; **Mortimer, Roger**²; **Skaiaa, Sven Christjar**²; **Ellerton, John**²; **Lechner, Raimund**²; **Paal, Peter**²

1: Eurac research, Italy; 2: International Commission for Mountain Emergency Medicine (ICAR MedCom)

Usefulness of "point-of-care" ultrasound for mountain rescues

Ziani, Yassine¹; **Moens, Didier**^{1,2}; **Piazza, Justine**^{1,2}; **Javillier, Benjamin**^{1,3}

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Helicopter Mountain Rescues in Nepalese Himalayas

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Pre-hospital use of Ketamine in Mountain Rescue: a Survey of Emergency Physicians from an Alpine Helicopter-based Emergency Service

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	1: University of Lausanne, Switzerland; 2: Lausanne University Hospital, Switzerland
5:00pm - 6:15pm	<p>Science MEM22: Hot & new topics in Mountain Emergency Medicine Location: Virtual Chair: Prof. Giacomo Strapazzon, Eurac Research, Italy Chair: Dr. Jennifer Dow, Denali National Park, United States of America Chair: Dr. Métrailler Pierre, GRIMM, Switzerland Chair: Dr. Urs Pietsch, Kantonsspital St. Gallen, Switzerland Chair: MD Michiel van Veelen, Eurac Research, Italy</p> <p>Utilizing Drones in Search and Rescue Operations to Rapidly Deliver Water to Dehydrated Victims Stranded in Remote Areas. McRae, Jake^{1,2}; Gay, Christopher¹; Nielsen, Brandon^{1,2}; Hunt, Andrew¹; Sirrine, Taylor^{1,2}; Nigh, Andrew¹ 1: Rock Vista University College of Osteopathic Medicine, United States of America; 2: Washington County Search and Rescue, United States of America</p> <p>Stress detection in HEMS operation with Heart Rate Variability Forti, Alessandro¹; Marchesin, Davide²; Zaetta, Cristina¹; Battistella, Giuseppe³; Cipolotti, Giovanni¹; Gatterer, Hannes⁴; Strapazzon, Giacomo⁴; Falla, Marika^{4,5} 1: HEMS Department, ULSS 1 Dolomiti - Pieve di Cadore – ITALY; 2: Anestheisa and Intensive Care , University of Padova - padova - ITALY; 3: Statistic and Epidemiology, ULSS 2 Marca Trevigiana - Treviso – ITALY; 4: Institute of Mountain Emergency Medicine, Eurac Research, Bolzano, Italy; 5: Department of Psychology and Cognitive Science, Center for Mind/Brain Sciences –, CIMeC, University of Trento, Rovereto - Trento – ITALY</p> <p>The effectiveness of chest-compression-only CPR in acute hypobaric hypoxia by HEMS crews Vögele, Anna¹; van Veelen, Michiel¹; Dejaco, Alexander²; Nicoletto, Giada¹; Dal Cappello, Tomas¹; Hüfner, Katharina³; Falla, Marika⁴; Brandner, Jonas³; Falk, Markus¹; Kaufmann, Marc⁵; Brugger, Hermann¹; Strapazzon, Giacomo¹ 1: Eurac Research, Italy; 2: AUVA Trauma Center Vienna - Lorenz Böhler, Austria; 3: Medical University of Innsbruck, Austria; 4: University of Trento, Italy; 5: Bolzano Hospital, Italy</p> <p>AVSORTII: Multi-casualty Avalanche Triage Algorithm Inniss, Mike¹; McLaughlin, Kyle²; Boyd, Jeff³ 1: MD,DiMM,Canadian Society Mountain Medicine; 2: MD,DiMM,Parks Canada; 3: MD,IFMGA</p> <p>CPR in confined space using alternative rescuer positions – a mannequin study simulating the CPR scenario after avalanche burial Wallner, Bernd^{1,2}; Moroder, Luca³; Kranebitter, Hannah¹; Mair, Peter¹; Erhart, Stefanie⁴; Strapazzon, Giacomo²; Falk, Markus²; Brugger, Hermann² 1: Department of Anaesthesiology and Intensive Care Medicine, University Clinic Innsbruck, Medical University Innsbruck, Anichstraße 35, 6020 Innsbruck, Austria; 2: Institute of Mountain Emergency Medicine, Eurac research, Viale Druso 1, 39100 Bolzano, Italy; 3: Department of Anaesthesiology and Critical Care Medicine, General Hospital Brixen, Dantestraße 51, 39042 Brixen, Italy; 4: Department of Orthopaedics and Traumatology, University Hospital Hall in Tirol, Milserstrasse 10, 6060 Hall in Tirol, Austria</p>
6:15pm - 6:45pm	<p>Plenary 2: Closing Ceremony Location: Virtual Chair: Prof. Monika Brodmann Maeder, Inselspital, University Hospital, Switzerland Chair: Prof. Hermann Brugger, EURAC research, Italy</p>