Licensing Contacts
Ron Marchessault
ronald.marchessault.ctr@mail.mil
OFC: 301-619-2867

Nondisclosure agreement
NDA Body Cooling System

Publications


Press
The Inventors
- David W. DeGroot
- Richard Gallimore
- Gary Proulx
- Karen Buehler

The Lab
U.S. Army Research Institute of Environmental Medicine (USARIEM) is internationally recognized as the DoD’s premier laboratory for Warfighter health and performance research and focuses on environmental medicine, physiology, physical and cognitive performance, and nutrition research. Military guidance has been published for operations in heat, cold, and high-altitude environments and nutrition for health and performance.

U.S. Army Medical Materiel Development Activity (USAMMDA) is the DoD’s advanced development activity for products designed to protect and preserve the lives of Warfighters. It develops new drugs, vaccines and medical support equipment that enhance readiness, ensures the provision of the highest quality medical care to the DoD and maximizes survival of medical casualties on the battlefield.

BLUF (Bottom Line Upfront)
U.S. Medical Research and Development Command seeks additional licenses for the Body Cooling System; a lightweight portable apparatus that reduces a person’s core temperature by transferring heat through the hands and forearm into cold water.

Introduction
The Body Cooling System (BCS) was co-invented and developed by MAJ David W. DeGroot, PhD, Physiologist, Tripler Army Medical Command and Richard Gallimore, PhD, Gary Proulx, PhD and Karen Buehler, PhD, research engineers from the US Army Natick Soldier Research Development and Engineering Center.

Focus
Prevention of exertional heatstroke; maximizing performance and safety by reducing body core temperature through heat transfer from the hands and forearms into cold water.

Market Opportunity
The sports medicine market for the Body Cooling System includes military training, community, high school, university and professional sports programs and fire and rescue services.

Competitors

Technology
The Body Cooling System can be used in high risk heat environments to decrease the incidence of heat-related illnesses by reducing the body’s core temperature, therefore extending heat tolerance and increasing total work time. It is ideal for local and professional sports teams, athletic/endurance events such as marathons, training situations, firefighting, and any strenuous activity commonly performed in hot environments.

Advantages
- Reduces core body temperature 1.0°C in 3-10 minutes
- Minimizes heat-related illnesses
  (Exertional Heat Stroke is usually among the top 3 causes of death in athletes)
- Allows for easy transportation, setup, and storage
- Accommodates 6 adults at a time
- Integrated thermometer monitors water temperature
- Assembly and use instructions stenciled on the waterproof, flexible fabric
- Holds up to 48 gallons of water, equaling 6 inches of water in the reservoir
- Legs adjust to provide ideal height for users
- Inexpensive to manufacture
- Successfully implemented in military settings

Transportable:
Lightweight portable apparatus with storage kit.

Assembly:
Quick assembly at the point of use.

Note: Can be used in whole body immersion for exertional heat stroke

Commercial Opportunities
1. License as a manufacturer
2. License as a distributor/seller
3. Sublicense as an event coordinator
4. License for advertising purposes

You may be interested in one or more of the above. Please contact us to discuss.
Collaborators & Partners
Mark Brown, USAMMDA: design and prototyping
Kenneth Rice, RDECOM, NSRDEC: Insulated Fabric Body Cooling Systems
Licensee: Actively Seeking Licensees

Intellectual Property
Issued US Patent 10,058,448, August 28, 2018
Referred to as “Arm Immersion Cooling Apparatus And Method”