

## DoD Defense Medical Research & Development Program (DMRDP)

*Each year, the Department of Defense's office of the Congressionally Directed Medical Research Programs (CDMRP) assesses scientific opportunities to advance research in specific areas. The investigators supported by individual programs are making significant progress against targeted diseases, conditions, and injuries. This list is not intended to be a full representation of accomplishments, but rather a sampling of the broad portfolio of research and advances resulting from congressional appropriations.*

Year	DMRDP Research Contributions	Additional Information and Hyperlinks
2008	Dr. Michael Hamblin demonstrated that low-light therapy provides therapeutic benefit in a mouse animal model of traumatic brain injury (TBI). Findings from this study led to funding for associated investigators to conduct additional studies in animals and initiated a pilot clinical study in humans.	
2008	Dr. Raymond Goodrich demonstrated the Mirasol® pathogen reduction technology system is an effective method for reducing blood-borne pathogens in whole blood. The system uses riboflavin (vitamin B2) and UV-light treatment to disrupt pathogen replication and has potential to reduce the risk of transmission of blood-borne infections.	
2009	Dr. Richard Hogle developed and refined the BrainPort vision device for visually impaired individuals. The non-surgical assistive technology delivers electro-tactile signals to an individual's tongue to provide perceptual cues relating to features such as object detection, location, and motion.	<ul style="list-style-type: none"> <li>• <a href="#">DMRDP Research Highlight</a></li> </ul>
2010	Drs. Arthur Kuo and Glenn Klute aimed to develop a prosthetic knee-ankle-foot system that actively coordinates the joints. A key innovation of the project is that the knee and ankle-foot prostheses will be computer-controlled but self-powered by harvesting energy from the user.	<ul style="list-style-type: none"> <li>• <a href="#">DMRDP Research Highlight</a></li> </ul>
2010	Dr. Crystal Jaing and colleagues began developing new tools that will, for the first time, produce a complete clinical wound profile by merging information on host response biomarkers with the identity of potentially dangerous microorganisms in the combat wound.	
2010	Dr. Gang Luo developed a prototype video camera-based assistive device to provide audible collision warning for individuals with decreased visual fields.	
2010	Dr. Shigeo Tamiya demonstrated dasatinib, an FDA-approved tyrosine kinase inhibitor, inhibits changes to retinal pigment epithelial cells resulting from proliferative vitreoretinopathy (PVR), a major complication resulting from battlefield eye injury.	
2010	Dr. Kenton Kaufman developed a specialized treadmill training program to increase mobility and reduce the risk of falls among individuals with lower extremity limb amputations. Early findings include improvements in gait and stability among trainees.	
2012	Dr. Warren Haggard began developing a next-generation wound dressing to prevent infection and aid in wound healing for trauma patients. This dressing is a naturally sourced biocompatible sponge material and is available from Bionova Medical.	<ul style="list-style-type: none"> <li>• <a href="#">DMRDP Research Highlight</a></li> </ul>

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2012	Dr. B. Lynn Allen-Hoffman of Stratatech Corporation demonstrated that the antimicrobial skin tissue, ExpressGraft-C9T1, promotes wound healing and prevents wound infection in an animal model. This data is now enabling a Phase I clinical safety trial in the treatment of human skin wounds.	<ul style="list-style-type: none"> <li>• <a href="#">DMRDP Research Highlight</a></li> </ul>
2012	Dr. Connie Price has collaborated with Accelerate Diagnostics, Inc. to develop pathogen identification and antibiotic susceptibility tests based on multiplexed automated digital microscopy. This data facilitated FDA clearance for the first test of pathogens causing bloodstream infections.	<ul style="list-style-type: none"> <li>• <a href="#">DMRDP Research Highlight</a></li> </ul>