BONITA SPRINGS, Fla., Oct. 1, 2013 /PRNewswire-iReach/ -- At a time when pharmaceutical company researchers are quickly running out of options, HerbalScience Group has developed a new approach to fighting antibiotic resistant bacteria.

Scientists at HerbalScience have combined proprietary extracts of Generally Regarded as Safe (GRAS) botanicals with low doses of generic beta-lactam antibiotics to achieve significant synergistic results in inhibiting the growth of MRSA - a bacterium responsible for an increasing number of life threatening infections in hospitals and in communities.

"MRSA is a type of pathogenic bacteria that is able to survive exposure to the standard pharmaceutical-type antibiotics traditionally used to treat such infections, known as beta-lactams. Beta-lactams are a group of USFDA approved, and now generic antibiotics, that include penicillin derivatives such as methicillin and oxacillin. These antibiotics work by blocking construction of the protective outer layer of a bacterium known as the cell wall without which it cannot survive. Our studies have shown that HSG1004, an HerbalScience proprietary extract from a safe and natural plant food source, harnesses nature's inherent antibacterial capabilities to not only effectively treat MRSA alone, but also to act in concert with these generic pharmaceutical antibiotics to re-sensitize MRSA to their activity. Moreover, the combination therapy exceeds the abilities of the prescribed dose of either the natural product or the synthetic pharmaceutical augmenting both of their antibacterial actions, conventionally known as synergy. The results of our studies represent a breakthrough in the vital battle against antibiotic-resistant bacteria. Our studies demonstrate that low doses of oxacillin combined with this known to be safe food extract create a safe treatment solution for the serious MRSA health problem facing the world." said Christy Wentworth, Ph.D., Director of Biology at HerbalScience.

"The HerbalScience Biology Team was quite impressed by the very positive results generated by their preclinical studies which included studies conducted using human blood plasma. The HerbalScience biology team repeated the MRSA growth inhibition studies out to 500 generations. These studies not only confirmed that the initial finding was replicated each and every time but also confirmed that HSG1004 did not develop resistance over those generations. In additional good news, Dr. Wentworth's team also studied the new antibiotic/HSG1004 natural

product combination in MRSA resistance studies. In the 500 generations treated with the combination therapy thus far, not one of the generations of MRSA have become resistant, compared to the oxacillin antibiotic alone developing resistance at approximately 150 generations. This positive data has been well received by groups interested in licensing our natural compound." said Robert Gow Executive Chairman of HerbalScience Group.

Each time conventional antibiotics are incorrectly prescribed or misused, bacteria like *S. aureus* are able to survive exposure to these antibiotics and subsequently develop resistance by changing their genetic code to destroy or bypass the antibiotic's activity, thus creating antibacterial resistant strains of bacteria, such as the MRSA we face today. The ability of bacteria to quickly become resistant to antibiotics has caused both increasing prescription doses of standard antibiotics, like methicillin and oxacillin, as well as the need for development of new antibiotics, both of which increase toxicity, to continue to fight these resistant bacterial infections.

The synergy created by combining HerbalScience's natural product with the USFDA approved generic antibiotic is an important discovery because it reveals a potential MRSA treatment solution that is both highly effective and has the important quality of being a safer solution, a solution that is less toxic to humans. "The World Health Organization estimates that the total cost of treating all hospital borne antibiotic resistant infections is about $10 billion a year. The WHO and other global health agencies have joined with leading global researchers and medical organizations in the effort to find a solution for the increasing MRSA infection problem, and we are very pleased with the positive and timely results of our preclinical studies," said Dr. Christy Wentworth
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About HerbalScience Group -- HerbalScience Group (HSG) is a natural products research and development company that has over the last 10 years made significant scientific breakthroughs in the creation and production of science based botanical natural health products. HSG has created an industry leading proprietary technology platform which produces innovative, scientifically validated and physician friendly natural health products. The technology platform utilizes proprietary phytochemical based data bases and libraries; a screening library of over 850 thouand phytochemicals which reduces new natural health product development time by more than 80% and an industry leading 97 thousand phytochemical uptake library which was developed by conducting human pharmacokinetics on HSG produced health condition focused ingredients. HSG uses only GRAS status botanical raw material to produce its proprietary extracts. This library is used to assist in HSG's OTC natural health product development process and adds substantial value in the selection of new health condition focused dietary ingredients. HSG has also developed a GRAS botanical based functional ingredient library which contains over one thousand evidence based botanical ingredients. HSG has discovered

and confirmed the health condition focused biological mode of action of each the library's botanical drug and OTC product ingredients.

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