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## A GAME-CHANGING LIVE CELL ENCAPSULATION TECHNOLOGY FOR ENABLING ALLOGENIC CELL THERAPIES AND DELIVERY OF PROBIOTICS TO THE GUT

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### SUMMARY

For allogenic cell therapy products encapsulation provides a safe means for implantation as well as protection for the implanted cells against the patient's immune system. Enhanced implanted cell survival can be measured in terms of longevity of the cells *in vivo* as well as dramatic reduction in the numbers of cells required to have the same therapeutic effect. Implanted free cells are also known to be highly mobile in the body and although it's difficult to track them, it's thought that within hours or days, only few cells remain where they were originally implanted. Austrianova Singapore, the world's leading expert in live cell encapsulation, can solve all of these challenges. Cell-in-a-Box® and related products have been implanted safely and with efficacious results in 27 pancreatic cancer patients in 2 independent human trials and currently manufacturing is underway for a 3<sup>rd</sup> trial in USA. The proprietary and patented processes and materials have multiple regulatory approvals and Austrianova is able to manufacture cGMP-grade capsules for clinical trials. Austrianova has also developed the Bac-in-a-Box® technology for encapsulation of probiotics. Capsules containing bacteria or yeast can be freeze-dried without damage to the capsules (or microorganisms inside) for long periods of storage and most interestingly the capsules also confer an extremely high degree of protection to stomach acid and bile juices. This level of acid protection outperforms any other known technology several thousand-fold. The talk will focus on research and development of the technology for medical and nutraceutical applications.