

IMB Output

Research update from the Institute for Molecular Bioscience

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Drugs from bugs

The IMB and the Australian R&D company Microbial Screening Technologies (MST) have signed a collaborative research agreement, representing a major leap forward in Australian biodiscovery.

IMB's Professor Rob Capon said that this agreement allowed IMB access to one of the world's largest ready-made libraries of microbial biodiversity (>400,000 isolates of fungi, actinomycetes and other bacteria), to search for new chemistries that may form the basis of new drugs.

"This agreement advances both organisations to the forefront of microbial biodiscovery, both in Australia and internationally," he said.

"In the last 50 years more than half of the major breakthroughs in the pharmaceutical industry have been natural products.

"Furthermore, 60 percent of chemotherapeutics entering late stage clinical trials are of microbial origin, emphasising the huge potential of this arrangement," he said.

"Biodiscovery at IMB has leapfrogged the expensive and time-consuming process of collecting and cataloguing microbial biodiversity, allowing us to immediately focus on finding new biologically active molecules," he said.

By combining forces, IMB and MST have established a critical mass of expertise and infrastructure across microbiology, chemistry and molecular biology that will significantly advance the discovery of next generation pharmaceuticals across a range of important diseases.

Early results show great promise in areas such as anti-infectives (viral, bacterial, fungal, and parasitic), anti-cancer and the relief of chronic pain, with two new classes of anti-cancer agent already approaching patent.

MST, an established Australian R&D company, has developed innovative approaches to tailor microbial chemical diversity to the needs of high throughput screening, thereby positioning itself to fuel drug discovery pipelines.

MST Managing Director Dr Ernest Lacey said that the agreement was a good fit for both organisations.

"This agreement unites our respective capabilities to deploy smart biology and smart chemistry, on a scale that embraces both the breadth of microbial biodiversity, and the full range of illnesses and disease states," he said.

"This initiative represents an opportunity to redefine the biodiscovery paradigms – greatly enabling our capacity to fuel the transition from microbes to molecules to drugs."

CEO of IMBcom Pty Ltd, the commercialisation company for the IMB, Dr Peter Isdale paid tribute to the vision of Rob Capon and MST Managing Director Dr Ernest Lacey for recognising the benefits of forging relationships between Australian research and industry.

"This agreement lays the foundation for the discovery of new bioactives, potentially into the next millennium," he said.

"IMBcom is looking forward to commercialising any outcomes from this collaborative agreements for both MST and IMB."

