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10 November 2003

Company Announcements Office  
Australian Stock Exchange Ltd (ASX)  
4th Floor, 20 Bridge Street  
Sydney NSW 2000

Dear Sir/Madam

Please find herewith a commercially sensitive announcement “**Alchemia listing to strengthen Medica**” for distribution to the market immediately.

Yours sincerely

NICHOLAS MATHIOU  
**Finance Director**



**Media Release**  
10 November 2003

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## **Alchemia listing to strengthen Medica**

Medica Holdings Ltd (ASX: MCA) today announced that its 21% owned investee Alchemia Pty Ltd is to seek a listing on the Australian Stock Exchange with a \$21 million initial public offering.

Dr Kevin Healey, Medica's Managing Director and a Director of Alchemia said the IPO follows an equity investment in Alchemia by leading US provider of injectable generic pharmaceutical products, American Pharmaceutical Partners, Inc. (NASDAQ: APPX).

"The IPO and the investment by APP come after Alchemia's earlier deal with Dow Chemical and the gaining of over \$10 million in START grants," Dr Healey said.

"We are absolutely delighted. The IPO and the APP deal strengthen our investment in Alchemia", he said.

Alchemia is an Australian biotechnology company developing new therapeutics and specialty pharmaceuticals using a unique proprietary carbohydrate-based technology. The APP equity deal gains it the rights to market a carbohydrate-based therapeutic currently being developed by Alchemia.

### **About Medica Holdings Limited**

Medica, an ASX-listed Pooled Development Fund, specialises in investing in the biotechnology sector. As well as its 21% ownership of Alchemia, it facilitated the establishment of Cytopia, which is developing a range of drug candidates against immune diseases and prostate cancer, and owns approximately 80% of the company, and owns approximately 25% of Xenome, which is developing new drugs derived from venoms for the treatment of neurological disorders. Under the PDF Scheme, Medica's shareholders are exempt from tax on capital gains or profits from the sale of shares.

For further information please contact:

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or visit our website at: [www.medica.com.au](http://www.medica.com.au).

## **MEDIA RELEASE**

**Date: 9 November 2003**

**Source: ALCHEMIA LIMITED**

### **ALCHEMIA LAUNCHES \$21 MILLION IPO**

Alchemia Limited has today announced it has lodged a Prospectus with the Australian Securities and Investments Commission for a \$21 million public offering ("the Offer") and to seek a listing on the Australian Stock Exchange.

Alchemia is an Australian biotechnology company dedicated to the profitable commercial development of new therapeutics and speciality pharmaceuticals, using a unique proprietary carbohydrate-based technology.

Under the Offer, Alchemia will issue 30.0 million new shares at an issue price of \$0.70 each to raise \$21 million, bringing the total shares on issue to 100 million.

Upon completion of the Offer and subsequent listing on the ASX, Alchemia is expected to have a market capitalisation of approximately \$70 million.

The Offer is jointly and fully underwritten by Credit Suisse First Boston Australia Limited and ABM AMRO Morgans Corporate Limited and is expected to open on 17 November and close on 12 December 2003.

Alchemia's Chairman, Mr Mel Bridges said Alchemia had developed a unique carbohydrate synthesis technology that was being applied to the manufacture and discovery of carbohydrate-based drugs.

He said carbohydrates had enormous untapped potential as therapeutics but this potential had not been realised owing to a lack of enabling technologies for their large-scale synthesis.

"Alchemia has developed and applied to patent a process for the manufacture of a generic form of Arixtra<sup>®</sup>, a synthetic heparin, used to prevent the formation of blood clots. The heparin family of anticoagulants, including synthetic heparin, had sales exceeding US\$3 billion in 2002.

Alchemia anticipates that its synthetic heparin will be ready for market in North America in 2008, once the current manufacturer's exclusivity period has expired and US Food and Drug Administration approval has been received.

Mr Bridges also announced today that Alchemia had formed a significant strategic alliance with American Pharmaceutical Partners (APP) – one of America's leading providers of injectable generic pharmaceutical products.

He said APP would bring considerable expertise and experience to Alchemia, particularly in obtaining regulatory approvals, and in the market development and sales penetration for generic drugs.

"Alchemia also has a formal alliance with the world's largest chemical company – The Dow Chemical Company – for the large-scale process development and manufacture of Alchemia's products, including synthetic heparin," he said.

“Alchemia intends to commercialise its synthetic heparin, the Company’s first product, with its industry partners. Under the alliances Alchemia will receive a 50% profit share on the manufacture and sale of its synthetic heparin.

“Furthermore, Alchemia has received approval for a new Federal Government R&D START grant to the value of \$4.5 million, which Alchemia expects will meet a significant proportion of anticipated development costs for its synthetic heparin.”

Mr Bridges said Alchemia was also applying its proprietary technology to discover new drugs.

“Because we are able to create large portfolios of small novel molecules, we believe that we can increase the probability of successful drug discovery,” he said.

“We already have discovered exciting lead molecules in the anticancer and antibiotic fields. Our antibiotic leads are effective against multi-drug resistant bacteria such as the notorious ‘golden staph’.

“We intend to progress these candidates to the point where they can be successfully partnered with pharmaceutical companies to assist with clinical development, regulatory approval and marketing.”

Since its formation in 1995, Alchemia has been well funded by a number of venture capital groups in Australia.

This funding has been supplemented by two Federal Government R&D START grants, totalling \$7 million, and an upfront payment of US\$2 million under its agreement with Dow and a recent equity injection of \$1.8 million by APP.

Funds raised through the Offer will be used primarily in the development of the Company’s drug pipeline, including Alchemia’s synthetic heparin and its anticancer and antibiotic leads, as well as for working capital and general corporate purposes.

**ENDS**

**For more information:**

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Chairman  
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Chief Executive & Managing Director  
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The offer of shares in Alchemia will be made in a Prospectus. Anyone wishing to acquire shares in Alchemia will need to complete the application form that will be in or will accompany the Prospectus. The Prospectus may not be sent to investors in the US or otherwise distributed in the US. This announcement has been prepared for publication in Australia and may not be released in the US. This press release does not constitute an offer of any shares for sale.

**A copy of the Prospectus can be viewed on the Alchemia website:**

[www.alchemia.com.au](http://www.alchemia.com.au)

## ALCHEMIA LIMITED

**Alchemia Limited** is an Australian biotechnology company focused on the discovery, development and commercialisation of new therapeutics and specialty pharmaceuticals for the treatment of human diseases.

The Company is committed to unlocking the therapeutic potential of carbohydrates – a major class of naturally occurring biological molecules alongside proteins and DNA.

Carbohydrates are found on the surface of every cell in the human body. They play a critical role in the biochemical processes of human development, growth and the maintenance of health. Carbohydrates are relevant to many debilitating or life-threatening conditions, including cancer, heart disease, bacterial and viral infections, thrombosis and auto-immune disorders like arthritis.

The Company's unique carbohydrate chemistry expertise has led to significant developments in the areas of drug manufacturing and drug discovery of carbohydrate-based products.

Alchemia is developing a generic version of an existing pharmaceutical, fondaparinux (referred to in the Company's Prospectus as Synthetic Heparin). Synthetic Heparin is Alchemia's first substantial commercial opportunity, and is the latest innovation in the Heparin Family of drugs - a growing US\$ 3.0 billion market.

Alchemia's carbohydrate chemistry expertise is also being applied to the development of products and treatments for areas of unmet medical need including oncology and antibiotics.

Alchemia's advances in carbohydrate synthesis have attracted substantial interest from the scientific community, as well as from leading global biotechnology and manufacturing companies seeking an edge for their drug discovery efforts.

Since its formation in 1995, the Company has been funded principally by a number of venture capital groups in Australia to the extent of \$26 million. This has been supplemented by two Federal Government R&D START grants, totalling \$7 million, an upfront payment of US\$ 2.0 million under its agreement with Dow, and a \$1.8 million equity investment by American Pharmaceutical Partners, Inc.

## ALCHEMIA LIMITED: IPO AT A GLANCE

### Summary of the Offer

Amount to be raised	\$21.0 million
Offer price per share	\$0.70
Number of new shares being offered	30 million
Indicative market capitalisation on listing at the Offer Price	\$70 million

### Key Dates

Offer Opens	17 November 2003
Offer Closes	12 December 2003
Allocation and allotment of ordinary shares	15 December 2003
Quotation of ordinary shares on the ASX	18 December 2003

### Underwriting

Credit Suisse First Boston and ABN AMRO Morgans Corporate have fully and jointly underwritten the Offer.

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## **ALCHEMIA LIMITED - BOARD**

Alchemia has a strong and experienced Board with relevant scientific and commercial expertise.

### **Mel Bridges, BAppSc, FAICD - Chairman**

Mel has spent the majority of his career in the biotech and healthcare industry, where he has more than 28 years experience. During this period, he founded and managed successful diagnostics, biotech and medical device businesses. Mel is a Fellow of the Australian Institute of Company Directors, he co-founded listed company PANBIO, and is currently Chairman of a number of listed and unlisted companies including, Peptech, Genetic Solutions, Farmacule and ToxiTech. He is also the founder and an executive director of the medical device group, Impedimed.

Businesses Mel has founded have won numerous awards including, the Queensland Export Award, Australian Small Business of the Year, BRWs Top 100 Fastest Growing Companies for seven consecutive years and The Australian Quality Award. In 2000 he was awarded the Business Bulletin Business Star of the Year and last year was awarded Ernst & Young's Queensland Entrepreneur of the Year.

### **Tracie Ramsdale, PhD - Chief Executive Officer and Managing Director**

Tracie is one of the founders of Alchemia and has led the Company's development as its Chief Executive Officer and Managing Director. Tracie has extensive experience in research management and technology commercialisation. Before establishing Alchemia, she was employed as a Principal Investigator and Commercial Manager of the Centre for Drug Design and Development at the University of Queensland, where she was responsible for the management of the Centre's intellectual property and its commercialisation.

Since Alchemia's inception, Tracie has been responsible for raising over \$26 million in venture capital funding, negotiating Alchemia's alliances with Dow and APP and recruitment of Alchemia's senior management team. Tracie is a member of the Australian Institute of Company Directors and serves on the Queensland Biotechnology Advisory Council.

### **Prof. Peter Andrews, PhD - Director**

Peter is one of the founders of Alchemia and has been a board member since the Company's establishment. He is the former Director of the Centre for Drug Design and Development at the University of Queensland, co-founder of the University's Institute for Molecular Bioscience and former CEO of its commercialisation arm, IMBcom. His involvement in the biotechnology industry has spanned the past twenty years, during which he has founded several biotechnology businesses and served on the boards of publicly listed biotechnology companies Biota Holdings and Agen Ltd.

Peter is currently CEO of a private biobusiness consulting company, Chairman of the Queensland Biotechnology Advisory Council and a member of the Federal Government's IR&D Board. He is also a board member of AgResearch, Celentis, Protagonist and ToxiTech. Peter is a Fellow of the Australian Institute of Company Directors, the Academy of Technological Sciences and Engineering and the Royal Australian Chemical Institute.

**Kevin Healey, PhD - Director**

Kevin is a Founder and Managing Director of Medica Holdings Limited. Since the establishment of Medica, he has successfully guided the company through fund raisings of over \$30 million, including a listing on the Australian Stock Exchange. He has negotiated and completed three investments on behalf of Medica and is also a Director of Xenome Limited and Director and CEO of Cytopia Pty Ltd. In the 11 years prior to forming Medica, Kevin provided consulting advice to the biotechnology industry as a Director of INSITE Advisors and as Principal Consultant with Invetech Operations, part of the Vision Systems Group.

**Errol Malta, PhD - Director**

Errol has over 14 years experience in the pharmaceutical/biotechnology industry in drug development. In that time he worked for over ten years with Amgen serving eight years at its global headquarters in California US where he was Product Development Team Leader, responsible for global drug development and commercialisation for a number of different molecules. He was responsible for five successful new-molecule IND submissions to FDA and other regulatory agencies, subsequent Phase I/II programs, as well as a number of Phase III and IV trials. Upon return to Australia he was appointed Director of Scientific Affairs at Amgen Australia and Head of the Melbourne office.

Over the last 18 months he has been a consultant to a number of biotechnology companies in early phase product development in Australia, and currently is on the boards of two Australian biotechnology companies. Errol is a PhD graduate of the University of Melbourne, as well as a graduate of Australian Institute of Company Directors, and successfully completed the UCLA (Anderson School) Executive Program in Management.

**Nerolie Withnall, BA LLB MAICD - Director**

Nerolie is a consultant and former partner of Minter Ellison Lawyers. In 2001 she retired from the law after practicing for more than 30 years in Sydney, Darwin and Brisbane, to focus on board and consulting positions. Nerolie is a director of Campbell Brothers Ltd and Pan Australian Resources N. L. (both listed on ASX), Darling Downs Foods Ltd and The Brisbane Institute. She is Chairman of the board of two privately owned companies, a member of the Takeover Panel and the Corporations and Markets Advisory Committee, a Director of the Major Sports Facilities Authority and a Councillor of the National Maritime Museum.

## **ALCHEMIA LIMITED: ALLIANCE PARTNERS**

Alchemia is committed to partnering with world leading organisations in the pharmaceutical and biotechnology industries, to maximise product potential.

The Company has strong industry partners in Dow and APP for the development, production and marketing of Alchemia's Synthetic Heparin. Synthetic Heparin is the latest innovation in the heparin family of drugs. The heparin family of drugs have been used for many years to prevent and treat blood clots in a variety of conditions and surgical procedures. The heparin family of anticoagulants including synthetic heparin had sales in excess of US\$3 billion in 2002.

Alchemia, with its alliance partners plan to launch a generic Synthetic Heparin product in 2008. Alchemia is entitled to receive 50% of the profits from the manufacture and sale of its Synthetic Heparin.

### **American Pharmaceutical Partners (APP)**

In October 2003, Alchemia and American Pharmaceutical Partners (APP) entered into a collaboration agreement in North America for the research and development, and commercialisation of a generic Synthetic Heparin, Alchemia's most advanced drug program.

Under the terms of the agreement APP will contribute to the development costs related to Synthetic Heparin, and will be responsible for its regulatory approval by the US Foods and Drug Administration (FDA), and for the sales and marketing of Synthetic Heparin in the US and Canada.

### **The Dow Chemical Company (Dow)**

In 2000, Alchemia signed an alliance agreement with Dow, the world's largest chemical company, for the purpose of manufacturing carbohydrates for pharmaceutical and other applications.

The alliance combines the benefits of Alchemia's proprietary carbohydrate chemistry expertise with Dow's extensive experience in process development, manufacturing and regulatory compliance.

### **R&D START Grant**

Alchemia was recently awarded a Commonwealth Government Industry Research and Development Board R&D START Grant entitled: **Development of New and Efficient methods for the preparation of low molecular weight Heparin derivatives.**

The grant recognises three years of research by Alchemia towards the preparation of a third generation heparin drug – fondaparinux sodium. This is the third START grant Alchemia has received (previous grants have totalled \$7.2 million).

The START grant provides funding of \$4.5 million over two years for the development of manufacturing processes for fondaparinux sodium (or Alchemia's Synthetic Heparin).

## SYNTHETIC HEPARIN

Alchemia's core competency is in the synthesis of carbohydrate-based compounds. It has developed a unique process that enables the large-scale, cost-effective synthesis of carbohydrates.

Alchemia has applied its carbohydrate synthesis method to manufacture a generic version of a synthetic low molecular weight heparin, which is used to treat or prevent thrombosis.

Synthetic Heparin is a highly complex molecule containing five sugar units and it is among the most difficult carbohydrate based therapeutics to manufacture.

Synthetic heparin is also referred to as fondaparinux sodium. Drugs typically have three names - a chemical name, a generic name and a brand name. Fondaparinux sodium is the generic name for a synthetically modified carbohydrate that attaches to anti-thrombin III, a protein that causes blood clots to form.

Synthetic Heparin is part of the Heparin Family. Natural heparin is a complex mixture of carbohydrates which prevents the formation of blood clots and has been widely used in medical procedures since the 1930s. The majority of natural heparin used today is extracted from pigs intestines. This material has several drawbacks as a pharmaceutical. Although natural heparin is still in use today, improved second-generation products known as low molecular weight heparins (LMWHs) have become the dominant player in the Heparin family. LMWHs accounted for more than 85% of the sales revenue for the heparin family in 2002. The latest innovation in the Heparin family is Arixtra®, a Synthetic Heparin which offers further improvements in efficacy. Arixtra®, was developed by Organon Sanofi-Synthelabo LLC, and launched in 2002. The patent covering this material expired in August 2003 and their US FDA market exclusivity will expire in December 2006.

Alchemia has developed and applied to patent a process for the manufacture of a *generic* version of Arixtra®. This process is the culmination of three years of research activity and is now proceeding to pilot production at Dow.

### **The Market for Synthetic Heparin**

The Heparin Family of anticoagulants including Synthetic Heparin had sales of US\$ 3.0 billion in 2002.

Alchemia anticipates that its Synthetic Heparin product will be ready for market in North America in 2008 once the current manufacturer's exclusivity period has expired and US Food and Drug Administration (FDA) approval has been received.

The market for the Heparin Family of drugs is forecast by Datamonitor to reach sales of US\$ 4 billion in 2008.

Arixtra® is a registered trademark of Organon Sanofi-Synthelabo LLC