

# intellectual property portfolio

Alchemia seeks to secure and protect intellectual property (IP) rights over our key technology platforms and therapeutic programs, in order to strengthen our position in the global biotechnology sector and protect our future revenue streams. Significantly, in 2008/09 we were granted a number of key patents in support of our fondaparinux program as well as several patents in our drug discovery technology and therapeutic target technology portfolio.

Alchemia regularly reviews all of its research activities and is proactive in identifying new intellectual property, as well as considering superseded intellectual property. The Company will continue to apply for appropriate patent protection as new and improved technologies are identified, with particular emphasis on emerging IP resulting from the Diversity Scanning library and VAST® drug development

projects. Alchemia intends to protect key project outcomes with pharmaceutical use applications at the appropriate time. This strategy is designed to provide the maximum protection with the longest possible commercialisation life. Where appropriate, the Company also maintains selected intellectual property as trade secrets.

Alchemia's intellectual property portfolio is maintained by in-house management with extensive patent experience and formal qualifications, who work closely with patent attorneys and lawyers in Australia and abroad. Alchemia actively monitors its IP portfolio for potential infringement by its competitors. Alchemia's published patent portfolio is summarised in the table below.

Alchemia Oncology's patent portfolio continues through prosecution in a number of key jurisdictions.

PCT number	patent name and description	status
<b>Carbohydrate Technology Patents</b>		
AU97/00544	<b>Oligosaccharide Synthesis:</b> Technology patent for the preparation and manipulation of carbohydrates  <b>Priority Date:</b> 26 August 1996	Granted in Australia, USA, Europe, China
AU98/00131	<b>Protected Aminosugars:</b> Technology patent for the preparation and manipulation of carbohydrates  <b>Priority Date:</b> 27 February 1997	Granted in Australia, USA
AU98/00808	<b>Protecting and Linking Groups for Organic Synthesis:</b> Technology patent for the preparation and manipulation of carbohydrates  <b>Priority Date:</b> 24 September 1997	Granted in Australia, USA
AU00/00025	<b>Protecting Groups for Carbohydrate Synthesis:</b> Technology patent for the preparation and manipulation of carbohydrates  <b>Priority Date:</b> 18 January 1999	Granted in Australia, USA
US10/676436	<b>Delivery Systems:</b> Composition of matter and methods for drug delivery  <b>Priority Date:</b> 4 July 2002	Granted in USA
AU02/01228	<b>Synthetic Heparin Pentasaccharides:</b> Composition of matter and process for Synthetic Heparin  <b>Priority Date:</b> 7 September 2001	Granted in Australia (4 patents), USA (1 patent); National phase in USA (1 patent), Europe, Japan, Canada, China

PCT number	patent name and description	status
<b>Drug Discovery Technology Patents</b>		
AU01/01307	<b>Combinatorial Libraries of Monosaccharides:</b> Composition of matter for drug discovery  <b>Priority Date:</b> 17 October 2000	Granted in Australia, USA
AU03/00384	<b>Anomeric Derivatives of Monosaccharides:</b> Methods and composition of matter for drug discovery  <b>Priority Date:</b> 28 March 2002	Granted in Australia (2 patents), China; National phase in USA, Europe, Japan, Canada
AU03/00494	<b>Disaccharides for Drug Discovery:</b> Methods and composition of matter for drug discovery  <b>Priority Date:</b> 3 May 2002	Granted in Australia; National phase in USA, Europe, Japan, Canada
AU03/01008	<b>Derivatives of Monosaccharides for Drug Discovery:</b> Methods and composition of matter for drug discovery  <b>Priority Date:</b> 8 August 2002	Granted in Australia; National phase in USA, Europe, Japan, Canada, China, India
AU06/001431	<b>Method of Drug Design:</b> Method of designing of library based on molecular diversity to identify biologically active compounds  <b>Priority Date:</b> 4 October 2005	National phase in Australia, USA, Europe, Japan, Canada, China, India
<b>Therapeutic Target Patents</b>		
AU03/01146	<b>Kinase Inhibitors:</b> Composition of matter and therapeutic use  <b>Priority Date:</b> 6 September 2002	Granted in Australia; National phase in USA, Europe, Japan, China
AU2006/000129	<b>Classes of Compounds that Interact with Integrin Receptors:</b> Composition of matter and therapeutic use  <b>Priority Date:</b> 4 February 2005	National phase in Australia, USA, Europe, Japan, Canada, China
2002951995	<b>Compounds that Interact with GPCR's:</b> Composition of matter and therapeutic use for GPCR's  <b>Priority Date:</b> 11 October 2002	Granted in Australia, India; National phase in USA, Europe, Japan, Canada
AU2005/001510	<b>Selective Inhibitors:</b> Composition of matter and therapeutic use  <b>Priority Date:</b> 4 October 2004	National phase in Australia, USA, Europe, Japan, Canada, China
<b>Anti-cancer Patents</b>		
AU2005/000506	<b>Methods for Inhibiting Blood Vessel Growth:</b> Composition of matter and therapeutic use  <b>Priority Date:</b> 8 April 2004	National phase in Australia, USA, Europe, Japan, Canada

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<b>Antibiotic Patents</b>		
AU03/001377	<b>Novel Carbohydrate Based Antibacterials:</b> Composition of matter and therapeutic use  <b>Priority Date:</b> 17 October 2002	Granted in Australia; National phase in USA, Europe, Japan, Canada, China, India
AU06/001939	<b>Antibacterial Agents:</b> Composition of matter and therapeutic use  <b>Priority Date:</b> 22 December 2005	National phase in Australia, USA, Europe
<b>Alchemia Oncology Key Patent Families</b>		
AU00/00004	<b>Enhanced Efficacy:</b> Use of HA/HyCAMP™ for overcoming cellular resistance  <b>Priority Date:</b> 13 January 1999	Granted in Australia, New Zealand, Spain, Europe, Taiwan, China, Canada; National phase in USA
AU01/00849	<b>Pre-sensitizing:</b> Composition comprising prior administration of HA  <b>Priority Date:</b> 14 July 2000	Granted in Australia, New Zealand, United Kingdom; National phase in Canada, China, Spain, USA
AU02/01160	<b>Improved Therapeutics:</b> Composition comprising high dose of HA/HyCAMP™  <b>Priority Date:</b> 27 August 2001	Granted in Australia; National phase in Canada, China, Europe, Japan, Mexico, New Zealand, USA
AU04/01383	<b>Modulation of HA Synthase:</b> Modulation of HA synthesis  <b>Priority Date:</b> 10 October 2003	National phase in Australia, New Zealand, USA
AU2006/001059	<b>Therapeutic Protocols Using Hyaluronan (Glucuronide):</b> Compositions comprising HA and methods for reducing toxicity or enhance efficacy of agents  <b>Priority Date:</b> 27 July 2005	National phase in Australia, Canada, China, Europe, India, Japan, USA
AU2006/001293	<b>Therapeutic compositions and methods of treatment:</b> Antibody formulations of HyACT®  <b>Priority Date:</b> 7 September 2005	National phase in Australia, Canada, China, Europe, India, Japan, USA, Indonesia, Brazil, Mexico, USA, Israel, Malaysia
AU2007/000359	<b>Method of treatment:</b> HAS II  <b>Priority Date:</b> 31 March 2006	National phase in Australia, Canada, China, Europe, India, Japan, USA