

Bionomics



Creating and developing innovative therapies

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Bionomics – Merck & Co BNC375 program partnership
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Factors Affecting Future Performance

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Agenda

- Exclusive Research Collaboration & License Agreement
- BNC375 Research Program and Market Opportunity
- Background to Bionomics



New Bionomics-Merck & Co Partnership

- Research Collaboration & Licensing Agreement
- Targeting cognitive impairment – Alzheimer's disease, Parkinson's disease & other conditions
- Covers Bionomics' research program on BNC375 and related compounds
- Potential for up to US\$506 million in payments to Bionomics plus royalties on net product sales
 - Upfront payments of US\$20 million
- Merck & Co is a leading global pharmaceutical company, with 2013 revenues of approximately US\$44 billion, at the forefront of developing innovative ways to treat and prevent disease
 - Fund all R&D including clinical trials
 - Commercialise worldwide



BNC375 Program Overview

- BNC375 targets a receptor critical to cognitive processes
- BNC375 has demonstrated potent in vivo memory enhancing properties in animal models
 - Both episodic and working memory improved
 - 100-fold therapeutic dose range & wide safety window in studies to date
- BNC375 studies presented in US and European symposia



Potential Competitive Advantages*

Characteristics	Bionomics BNC375	Competing Agents+
Potent	✓	✓
Rapid onset of action	✓	✗
Potentiates endogenous receptor ligand	✓	✗
Preserve the normal signalling patterns of the receptor	✓	✗
Do not cause receptor desensitization	✓	✗
No potential for development of tolerance	✓	✗
Selectivity over other nicotinic receptors	✓	✓

*Based on data from preclinical animal studies

+Published information & Bionomics' in-house data



Market Potential

- Market opportunity includes many neurodegenerative & psychiatric disorders

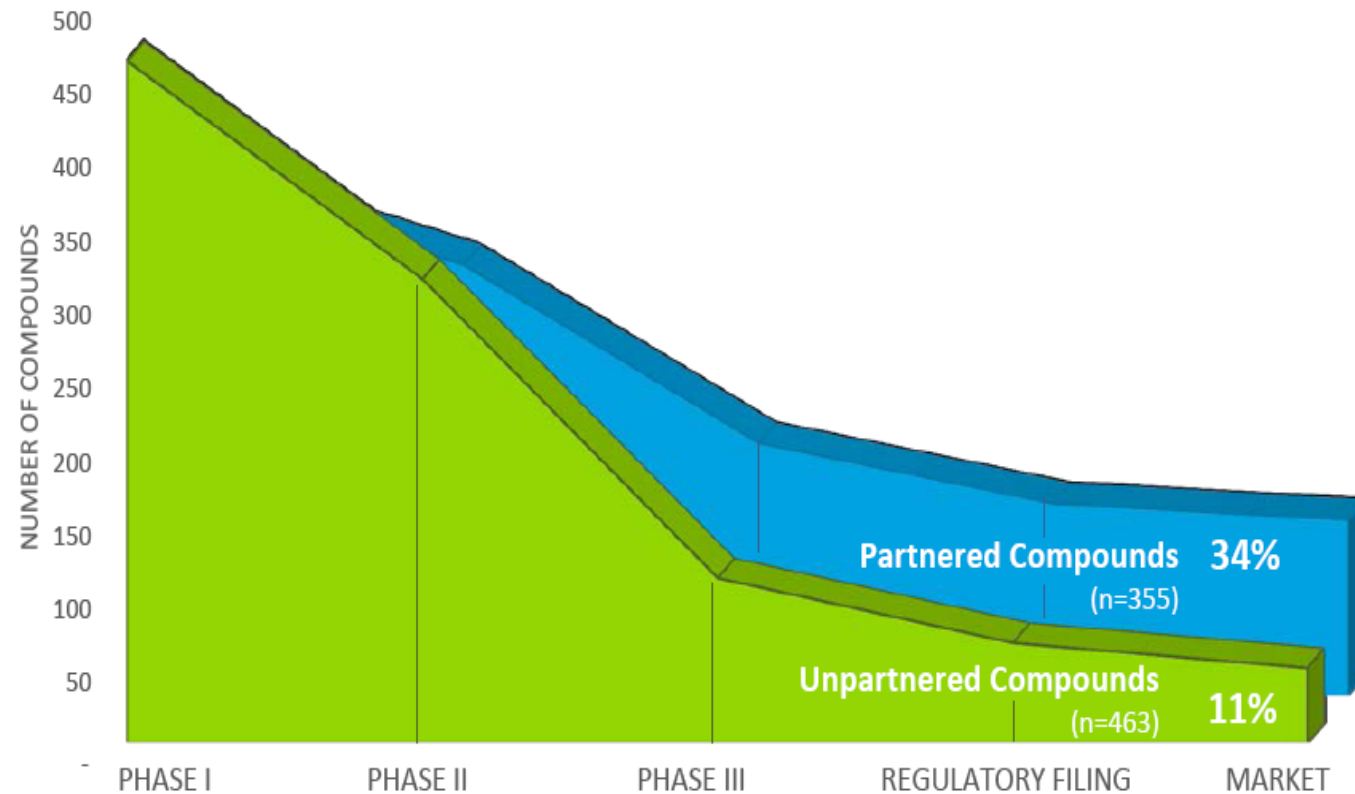
	Prevalence	Estimated global sales pa
Alzheimer's disease	9.7m	\$10.2b (2012)
Cognitive Dysfunction in Schizophrenia	3.4m	No approved products
ADHD	44.9m	\$4.9b
Parkinson's disease	7m	\$3.5b

- Alzheimers disease is the most common form of dementia and the 6th leading cause of death in the US
- 40% growth in Americans over 65 with Alzheimer's by 2025
- Direct cost of Alzheimer's care in the US in 2014 \$214b
- Need for new treatments, with no new drug for a decade.



The Partnership Effect

- Success rate is the % of compounds entering Phase I that reached the market in at least one indication in the US or Europe



Data is for compounds that were in clinical development from 1/12/81 through 8/11/12 by 330 biopharmaceutical companies. A partnered compound is a compound that was part of a Co-Development, Collaboration, Co-Marketing, Co-Promotion, Development or Research License agreement, or a Joint Venture agreement that involved another biopharmaceutical company. The compound retains the status of a partnered asset even though the partnership may have ended at some point.

Data: Deloitte



Conclusion

- Partnering of the BNC375 research program represents the combining of a cutting edge research innovator with a major pharma company with a depth of experience in developing and commercialising innovative medicines
- The BNC375 program is addressing the need for new and effective therapies to treat cognitive impairment
- This is the second partnership between Bionomics and Merck & Co validating Bionomics' proprietary drug discovery platform and technologies
- Bionomics is advancing a multi-product pipeline, leveraging core strengths in neuroscience and oncology



APPENDIX: Bionomics Pain Program Partnered with Merck & Co

- Deal validates ionX® & MultiCore® drug discovery platforms
- Future success based revenue streams & royalties secured

Partnership Deal	<ul style="list-style-type: none">▪ Option & license agreement with Merck & Co▪ <u>US\$172m</u> in option exercise fees, development/regulatory milestone payments, plus royalties
Compound Target	<ul style="list-style-type: none">▪ Treatment of chronic & neuropathic pain
Market Size & Positioning	<ul style="list-style-type: none">▪ Pain market: ~US\$22b sales in 2010▪ Neuropathic pain segment expected to grow from ~US\$2.4b in 2010 to~ US\$3.6b by 2020▪ Current medications have limited effectiveness<ul style="list-style-type: none">▪ Estimated that only 1 in 4 patients achieve >50% reduction in pain levels▪ side-effects eg drowsiness, somnolence & dizziness