

Corporate Presentation

September 2011



Our Vision

*Provide worldwide solution to
manage Neurodegenerative
Disorders*

Alzheimer's – Background

Times Magazine – October 2010



Alzheimer's Disease -Background

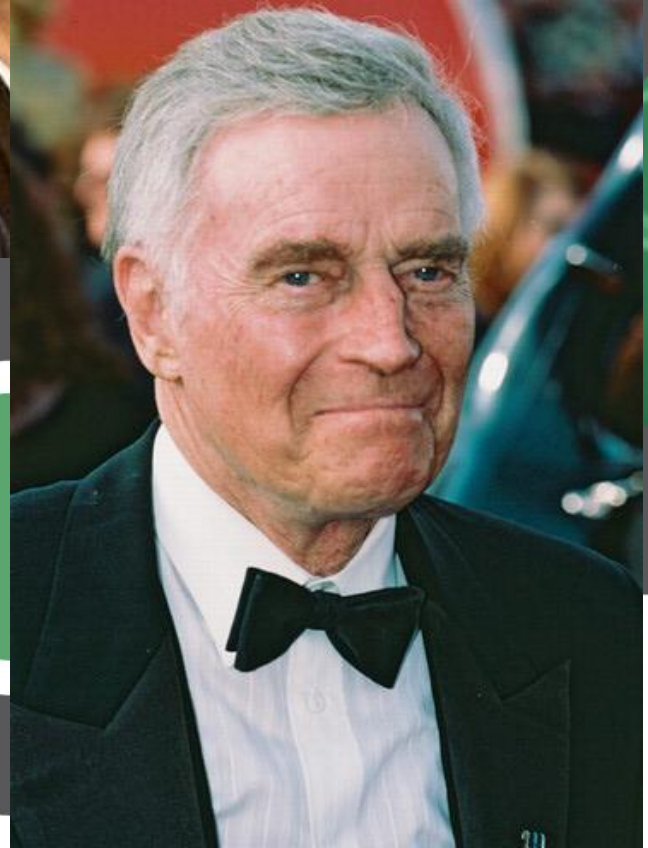
- ⦿ A degenerative and terminal disease
- ⦿ Symptoms include:
 - ⦿ **Memory loss**

And:

- ⦿ Confusion
 - ⦿ Poor judgment
 - ⦿ Decline in executive functions
 - ⦿ Aphasia (language disorders)
 - ⦿ Apraxia (motor disorders)
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- ⦿ Alzheimer's Disease is the result of increasing number of nerve cells deteriorating and dying



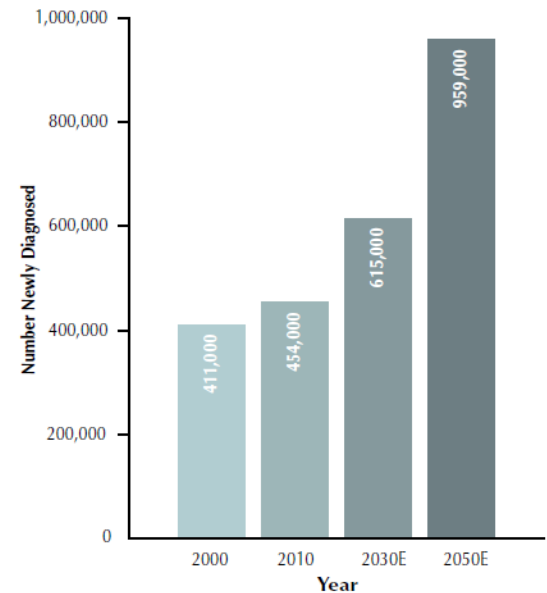
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Alzheimer's Facts and Figures

- 22M people diagnosed with Alzheimer's Disease:
- US annual expenditure today is about **\$170B**
- Numbers to double by 2030; five times by 2050
 - More than 100M Americans will suffer AD
 - US annual expenditure expected at 1 Trillion

US Incidence of Alzheimer's Disease, 2000-2050E

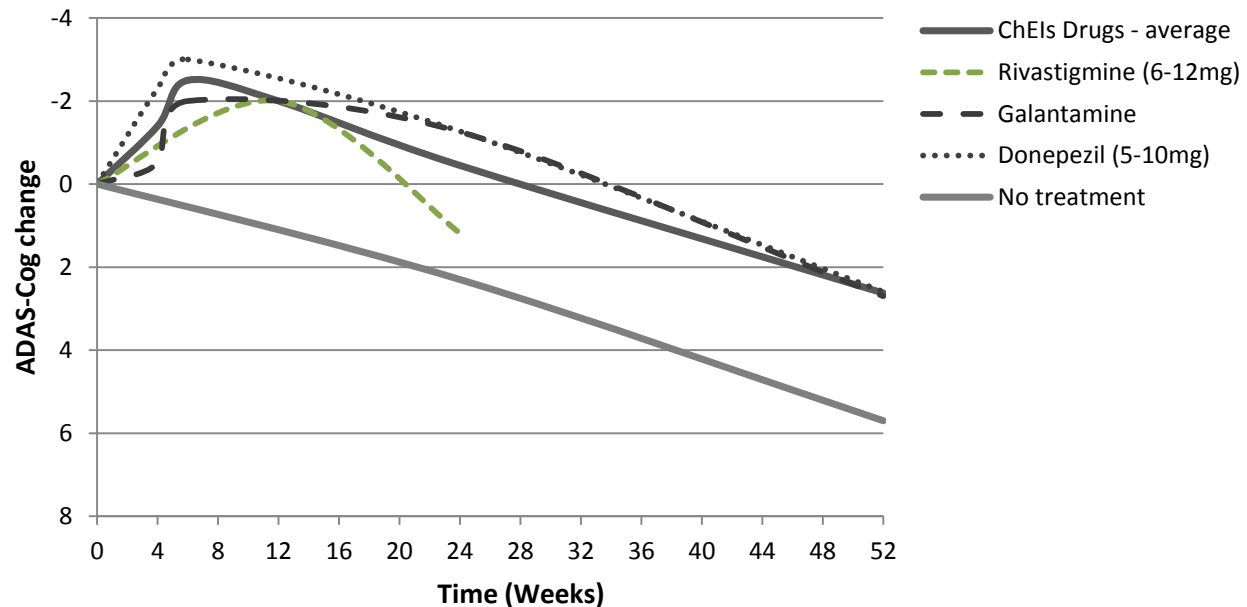


Delaying AD progression by 1 year will reduce the numbers by 12M!

Current Treatments

- Current paradigm – ChEI drugs

- Have a limited effect on the disease for 3-6 months only
- **Annual expenditure is nearing \$10B**



1. Cochrane Database Syst Rev. 2006 Jan 25;(1):CD005593. Cholinesterase inhibitors for Alzheimer's disease; **Alzheimers Dement.** 2009 Jul 8
2. Patrizia Mecocci, et al. **Int J Geriatr Psychiatry** 2009; 24: 532–538

The Opportunity



*Clear unmet need and lack
of alternative*

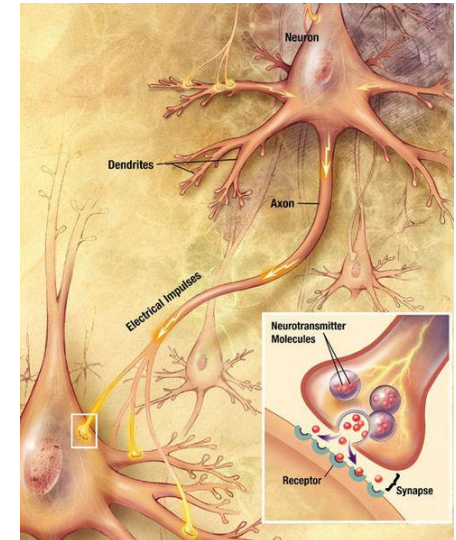
Our Solution – Theory

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LTP: Long Term Potentiation

- Normally, a neuron will fire its synapse in response to an input
 - “one input – one output”
- Long Term Potentiation (LTP) is strengthening the connection between two nerve cells for an extended period of time
 - “one input – long lasting output”



The leading neurological mechanism for learning-memory
is LTP (Long Term Potentiation)

1. Cooke SF, Bliss TV (2006). "Plasticity in the human central nervous system". *Brain* 129 (Pt 7): 1659–73, 2006
2. Bliss TV, Collingridge GL "A synaptic model of memory: long-term potentiation in the hippocampus". *Nature* 361 (6407): 31–39, 1993

LTP is known to degrade in Alzheimer Disease

LTP degrades during normal aging:

- ⦿ Aged rodents have shown increased thresholds for LTP, and more rapid decay if managed to be initiated

LTP degrades even more in Alzheimer's Disease:

- ⦿ Free floating/soluble A β impairs with the LTP mechanism^{1,2}

1. Shankar et al.(2008). "Amyloid-beta protein dimers isolated directly from Alzheimer's brains impair synaptic plasticity and memory". *Nat Med.* 2008 Aug;14(8):837-42
2. Rowan MJ et al. (2003). "Synaptic plasticity in animal models of early Alzheimer's disease". *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* **358** (1432): 821–8

LTP can be re-activated by electromagnetic stimulation

- ① LTP can be induced by High-Frequency EM stimulation
- ① LTP can also be initiated by Non-invasive Transcranial Magnetic Stimulation (TMS) to the brain

When LTP is enhanced, Memory and Learning are restored!



Our Solution – In Practice

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The NeuroAD™ System

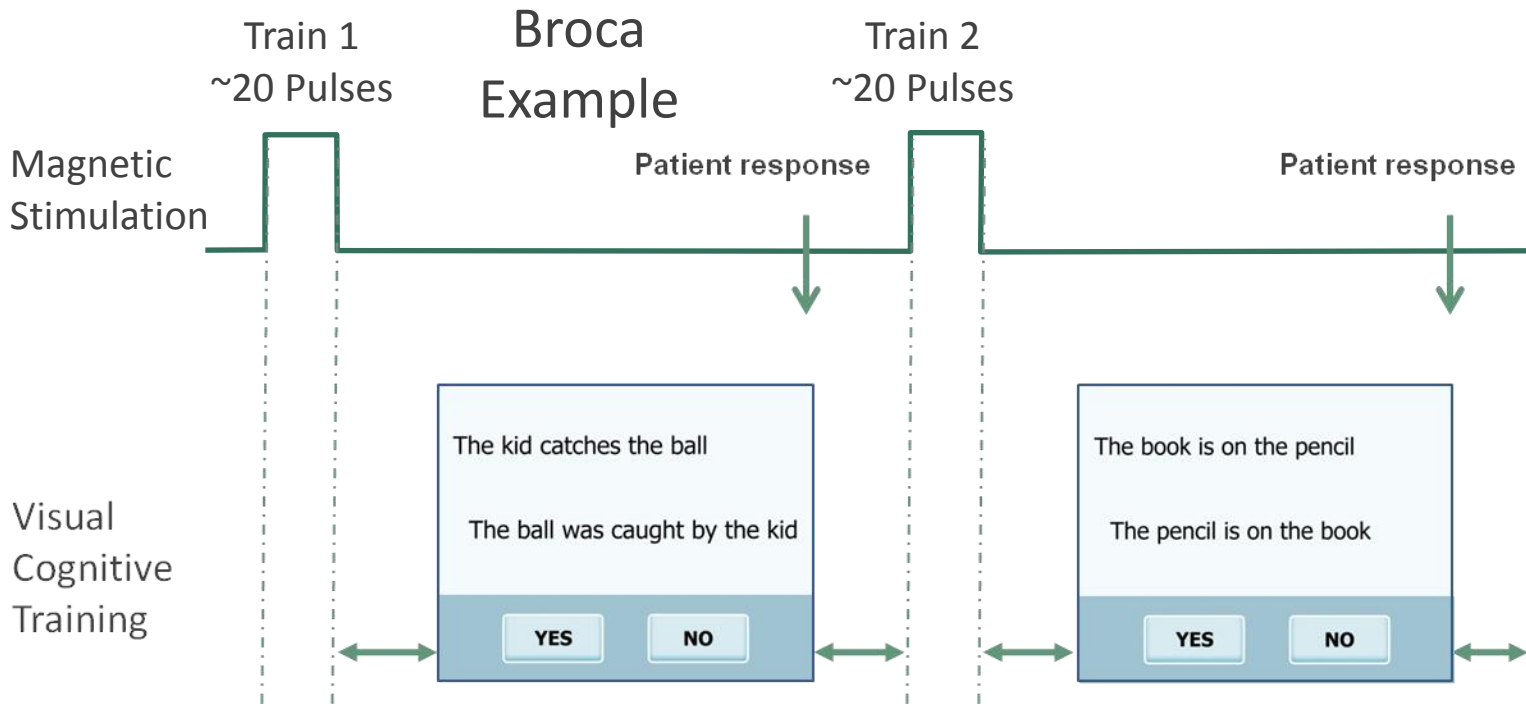


Concurrent LTP Enhancement with
Cognitive Training



NeuroAD™ – Principles

- Interlaced TMS and Cognitive Training , to the same Brain Regions.

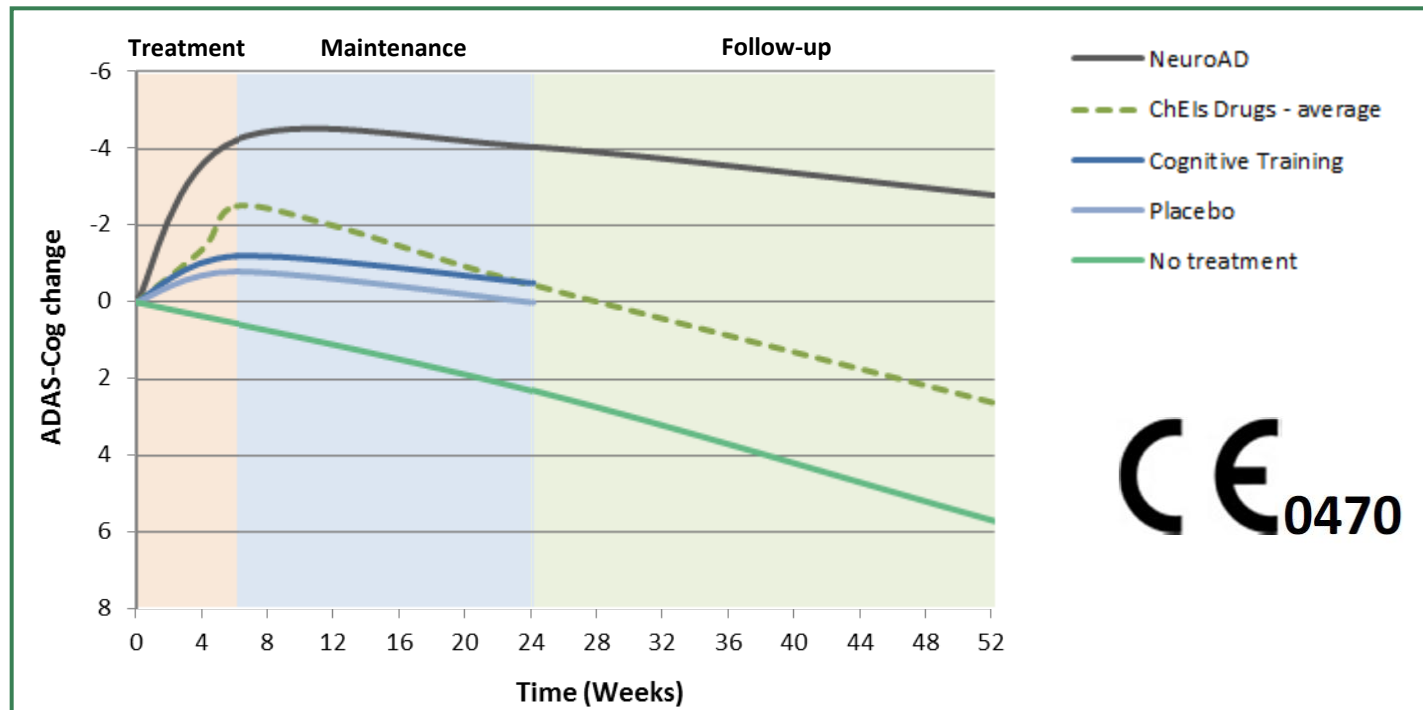


Clinical Trials Results

- **Place:** Neurology Dept., Assaf-Harofe Medical Center, Israel
- **Participants:** Mild-moderate Alzheimer's patients
- **Time:** From July-2009 to Feb-2010 (Pilot), from May-2010 (Double Blind)
- **Treatment:** six weeks, 30 sessions with NeuroAD system
- **Extension:** “maintenance” treatments once-twice a week for up to three months
 - All patients elected to join the extension phase

Comparison to alternative treatments

- NeuroAD treatment seems to be superior to drugs

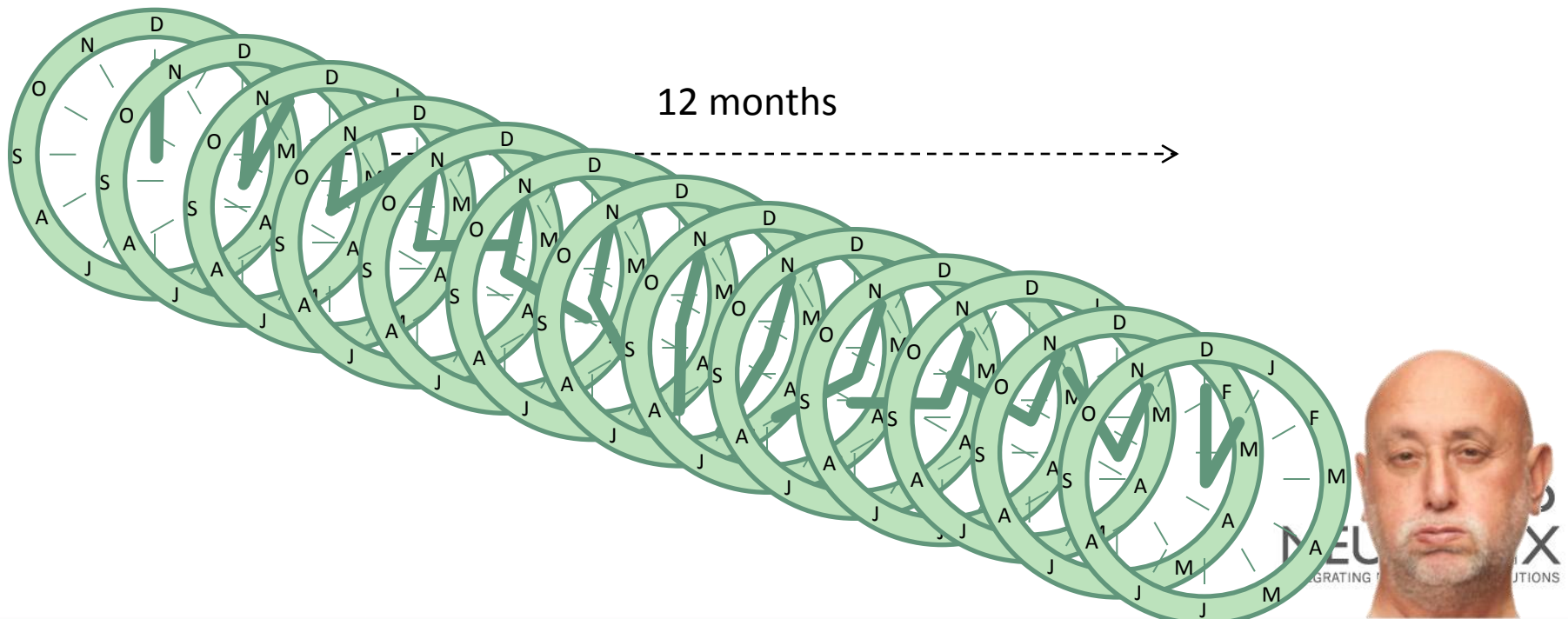


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Note: NeuroAD can be used concurrently with drugs

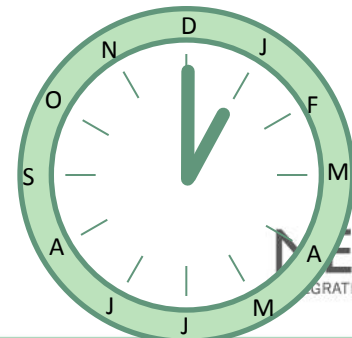
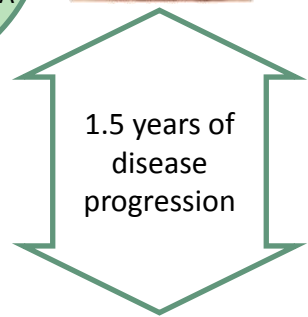
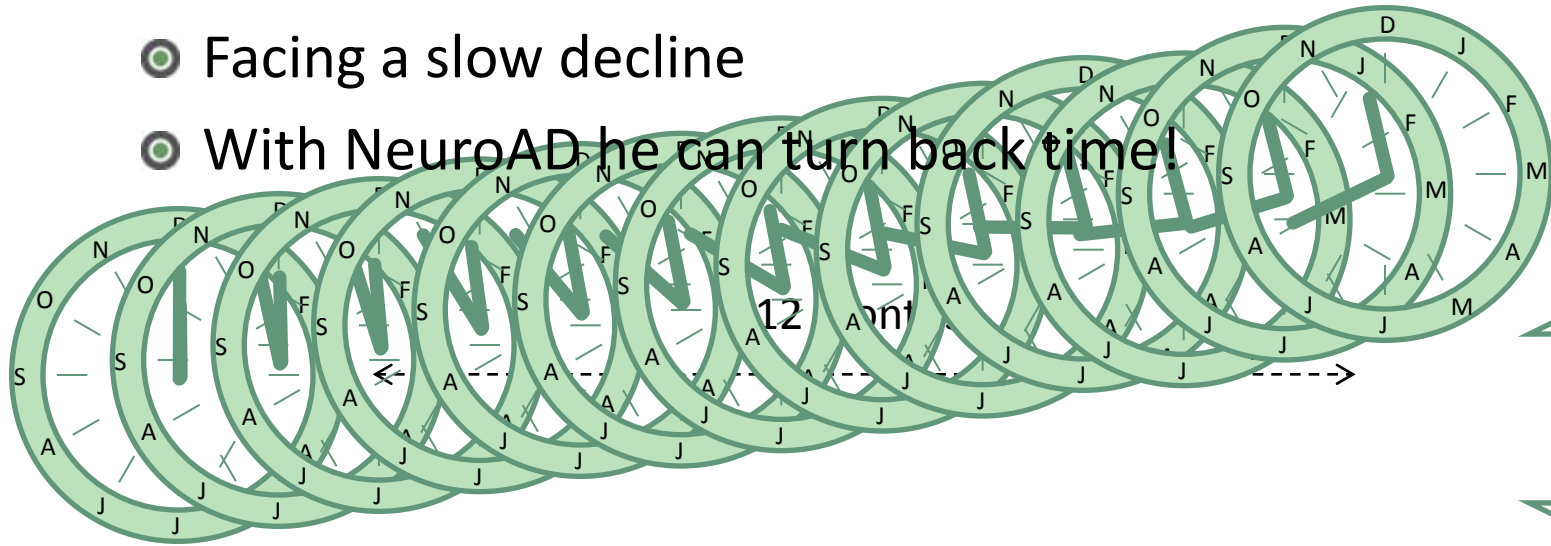
The NeuroAD effect

- An Alzheimer patient who has exhausted the drug paradigm
 - Facing a slow decline



The NeuroAD effect


- An Alzheimer patient who has exhausted the drug paradigm
 - Facing a slow decline
 - With NeuroAD he can turn back time!



CE Clearance for Treatment of Alzheimer Disease



“Intended for treatment of mild-moderate Alzheimer Disease”

EC VERIFICATION CERTIFICATE 

Certificate No.: EU1101404
Order No.: 157762

We hereby certify that an EC verification has been carried out on the series or batch of device(s) listed hereafter following the requirements of the national legislation: Regulation no1890 of 15th December 2005 relating to medical devices, Regulation no 1831 of 16th January 1995 relating to medical devices, transposing directive 93/42/EEC into Norwegian law, and the undersigned is subjected. Confer EEA agreement, proposition no. 100 (1991-92) special edition, volume 2A/3 A, paragraph chapter XXX. We certify that the device(s) hereafter referenced conform to the relevant provisions of the Annex of the aforementioned directive.

Name and address of the manufacturer: **Neuronix Ltd., Yokneam Hi-Tech Park, P.O.B. 016, Yokneam, 20692, Israel**

Name and address of the factory: **Neuronix Ltd., Yokneam Hi-Tech Park, P.O.B. 016, Yokneam, 20692, Israel**

Device category: **Brain stimulation systems**

Models: **NICE XP1**

Serial numbers: **001**

Date/period of testing: **05/09/2010**

Date of the end of validity: **2016-02-01**

Nemko EC notification No.: **0470**

On this basis, presupposed that the provisions in Annex VII are fulfilled, the manufacturer or his European authorised representative may draw up an EC Declaration of Conformity and affix the CE-marking as indicated below followed by the Nemko EC notification number on the conforming product.

Date of issue: 2011-01-17 Date of verification: 2011-01-17

Signature: *Arild R. Hansgard* Signature: *Roy I. Holland*
 Lead auditor / Project engineer Lead auditor / Project handler

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 N-0314 Oslo, Norway | Oslo | Enterprise number: NO 643522430



FDA Clearance Process:

- ⦿ Protocol with 6 weeks treatment + FU
- ⦿ 100-150 patients, multi-center study
- ⦿ Eligible for De-Novo clearance process

Scientific Advisory Board

○ Prof. Alvaro Pascual-Leone (Harvard, USA)

- Prof. of Neurology at Harvard and Director of the Bernstein Allen Center of Noninvasive Brain stimulation. Author of over 350 papers

○ Prof. Steven Ferris (NYU, USA)

- Neuropsychologist, psychopharmacologist and gerontologist who has studied aging and AD for over 30 years contributing over 250 papers. Has participated in FDA advisory committee and NIH review panels

○ Prof. Martin Rabey (Assaf Harofe, Israel)

- Head of Neurology dept. in Assaf HaRofe Hospital, dozens of clinical studies in aging, dementia and AD

○ Prof. Niels Birbaumer (Tubingen, Germany)

- Head of the Neurology dept. at Tubingen University, Germany. Dozens of years of experience in electronic and magnetic stimulations in neurology

Our Strategy

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Neuronix in ICAD 2011



Next Steps:

2011:

- Completion of Multi-National, Double Blind Clinical Trial:
 - USA (Beth Israel Deaconess Medical Center, Boston)
 - France (Broca Hospital, Paris)

2012-2013:

- FDA clearance for AD Treatment
- Commercial installments in EU
- Clinical Pilot Study for AD prevention

Next Steps:

2014-2015:

- ⦿ Extensive sales in EU
- ⦿ Start of sales in commercial installations in US
- ⦿ Reimbursement instituted in EU and USA

2016-2017:

- ⦿ Home Use technology

Business Model



Win-Win-Win Strategy

- Distributor:
 - Novel technology – huge unmet need
 - No competition
 - High earnings on each system
 - Recurrent revenues
- Physician (Clinic):
 - Able to treat AD patients!
 - **Allowing self-income (unlike drugs)**
 - Doesn't interfere with on-going therapies
 - Proven safe and effective technology
- Patient and Family:
 - A new hope for AD treatment
 - Proven safe and effective
 - Affordable prices

Business Model – Prices

- Sales Model combines:

- NeuroAD System (Capital Equipment).
- NeuroAD Kit (Recurrent Revenues).

- NeuroAD System Price

- Neuronix Cost (COGS) \$20K
- Neuronix to Distributor \$50K
- Distributor to Clinic \$90K

- NeuroAD Disposable Price per Session

- Neuronix Cost (COGS) \$4
- Neuronix to Distributor \$40
- Distributor to Clinic \$60
- Clinic to Patient \$200


Business Model – Patient



○ Session Price:	\$200
○ 1 st Year - Sessions	
○ Intensive Phase	30
○ Boost Phase	20
○ Total	50
○ 2 nd Year - Sessions	
○ Total	40
○ 1 st Year – Cost (for Patient)	
○ Annual	\$10,000
○ Monthly - Average	\$830
○ 2 nd Year - Cost	
○ Annual	\$8,000
○ Monthly Average	\$670

Business Model – Clinic

1 year investment return



● Number of Annual Sessions (200 Annual Working days*8 Sessions a Day*75% Occupancy)	1,200
● Annual Income @ \$200 per Session	\$240,000
● Annual Disposable Cost @ \$60 per Session First Year free first 12 Patients (360 Sessions) 72,000-21,600 Second Year	\$50,400 \$72,000
● System cost	\$90,000
● Annual System Depreciation (3 years Straight line)	\$30,000
● Annual Income - one NeuroAD System	
● First Year	\$159,600
● Second Year	\$138,000

Business Model – Distributor



System – Sale

Income	\$90,000
Cost	\$50,000
Gross Profit	<u>\$40,000</u>

Disposables - recurrent

Number of Annual Sessions per System	1,200
Income @ \$60 per Session	\$72,000
Cost (COGS) @ \$40 per Session	\$48,000
Gross Profit	<u>\$24,000</u>

3 years Business Model – Distributor (ex. France)

Assumptions	2013	2014	2015
AD Population	800,000	840,000	880,000
Mild-Moderate Patients	60%	60%	60%
Available Market	5%	5%	20%
Market Share	0.5%	2.0%	2.0%
Number of treated Patients	120	504	2112
Sessions			
New patient 30+20; Old patient 40			
1/3 of new patients 50 sessions per annum	2000	6400	26800
2/3 of new patients 30 sessions per annum	2400	7680	32160
Old Patient 40 sessions per annum		4800	20160
Annual Number of Sessions	4400	18880	79120
Number of Sessions included with new System			
Annual sold Kits (Sessions)	4400	18880	79120
Machines			
Annual working days	200		
Daily sessions	8		
Occupancy	75%		
A whole year installed machine sessions qty	1200		
New machine sessions qty (1/2)	600		
New Systems (Annual Sessions/New Machine Sessions qty)	7	17	84
Total Install Base	7	24	108
Disposable Cost to Distributor	\$ 40	\$ 35	\$ 30
Disposable Price to Clinic	\$ 60	\$ 55	\$ 50
System Cost to Distributor	\$ 50,000	\$ 45,000	\$ 40,000
System Price to Clinic	\$ 90,000	\$ 80,000	\$ 70,000

3 years Business Model – Distributor (ex. France)

France Revenues Example	2013	2014	2015	Total
All amounts in \$				3 Years
<u>Revenue</u>				
Systems	630,000	1,360,000	5,880,000	7,870,000
Disposables	264,000	1,038,400	3,956,000	5,258,400
Total Revenue	894,000	2,398,400	9,836,000	13,128,400
<u>Cost of Sales</u>				
Systems	350,000	765,000	3,360,000	4,475,000
Disposables	176,000	660,800	2,373,600	3,210,400
Total Cost	526,000	1,425,800	5,733,600	7,685,400
<u>Gross Profit</u>				
Systems	280,000	595,000	2,520,000	3,395,000
Disposables	88,000	377,600	1,582,400	2,048,000
Gross Profit	368,000	972,600	4,102,400	5,443,000

Market Reference P&L



Cyberonics [CYBX] (K\$)	52 Weeks ended April							
	2011		2010		2009		2008	
Net Sales	190,464		167,776		143,601		121,230	
Cost of Sales	23,020	12%	20,908	12%	20,041	14%	21,092	17%
Gross Profit	167,444	88%	146,868	88%	123,560	86%	100,138	83%
SG&A	89,654	47%	87,941	52%	84,838	59%	85,945	71%
R&D	28,602	15%	22,065	13%	19,733	14%	22,421	18%
Total Operating Expenses	118,256		110,006		104,571		108,366	
Income Loss from Operations	49,188	26%	36,862	22%	18,989	13%	8,228-	7%-

Market Cap \$716M

Business Model

Market Penetration – Optimistic



All Amounts in \$	2013			2014			2015			2016		
	EU	USA	Asia	EU	USA	Asia	EU	USA	Asia	EU	USA	Asia
AD Population	6,000,000	5,000,000	5,250,000	6,250,000	5,250,000	5,500,000	6,500,000	5,500,000	5,750,000	7,000,000	6,000,000	6,000,000
Mild-Moderate Patients	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Available Market	5%	5%	5%	5%	5%	5%	20%	5%	5%	30%	20%	20%
Market Share	0.5%	0.0%	0.0%	2.0%	0.0%	0.5%	2.0%	0.5%	2.0%	2.5%	2.0%	2.0%
Number of treated Patients	900			3750		825	15600	825	3450	31500	14400	14400
Disposable Price	40	40	40	35	35	35	30	30	30	27	27	27
System Price	50,000	50,000	50,000	45,000	45,000	45,000	40,000	40,000	40,000	35,000	35,000	35,000
Revenue - Systems	2750000			5580000		2250000	24640000	2000000	4600000	14770000	27475000	19915000
Revenue - Disposables	528000			3355100		428750	10882200	367500	2635500	28487160	6700050	9035820
Total Revenue	3278000			8935100		2678750	35522200	2367500	7235500	43257160	34175050	28950820
Total												
Number of Patients		900			4575			19875			60300	
Annual Number of Sessions		33000			170750			744000			2277250	
New Systems		55			174			781			1776	
Total Install Base		55			229			1010			2786	
Revenue - Systems		2,750,000			7,830,000			31,240,000			62,160,000	
Revenue - Disposable		528,000			3,783,850			13,885,200			44,223,030	
Total Revenue		3,278,000			11,613,850			45,125,200			106,383,030	

Business Model

Market Penetration – Pessimistic



All Amounts in \$	2013			2014			2015			2016		
	EU	USA	Asia	EU	USA	Asia	EU	USA	Asia	EU	USA	Asia
AD Population	6,000,000	5,000,000	5,250,000	6,250,000	5,250,000	5,500,000	6,500,000	5,500,000	5,750,000	7,000,000	6,000,000	6,000,000
Mild-Moderate Patients	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Available Market	5%	5%	5%	5%	5%	5%	20%	5%	5%	30%	20%	20%
Market Share	0.2%	0.0%	0.0%	0.8%	0.0%	0.2%	0.8%	0.0%	0.8%	1.3%	0.2%	0.8%
Number of treated Patients	360			1500		330	6240		1380	16380	1440	5760
Disposable Price	40	40	40	35	35	35	30	30	30	27	27	27
System Price	50,000	50,000	50,000	45,000	45,000	45,000	40,000	40,000	40,000	35,000	35,000	35,000
Revenue - Systems	1100000			2250000		900000	9840000		1840000	14000000	3080000	7980000
Revenue - Disposables	211200			1337000		171500	4357200		1054200	12889800	570240	3610440
Total Revenue	1311200			3587000		1071500	14197200		2894200	26889800	3650240	11590440
Total												
Number of Patients		360			1830			7620			23580	
Annual Number of Sessions		13200			68300			285500			890000	
New Systems		22			70			292			716	
Install Base		22			92			384			1100	
Revenue - Systems		1,100,000			3,150,000			11,680,000			25,060,000	
Revenue - Disposable		211,200			1,508,500			5,411,400			17,070,480	
Total Revenue		1,311,200			4,658,500			17,091,400			42,130,480	

Business Model Profit & Loss

Optimistic



All Amounts in \$	2012	2013	2014	2015	2016
Revenue		3,278,000	11,614,000	45,125,000	106,383,000
Cost of Sales		1,230,000 38%	3,644,000 31%	13,203,000 29%	25,867,000 24%
Gross Profit		2,048,000 62%	7,970,000 69%	31,922,000 71%	80,516,000 76%
R&D	3,355,000	3,100,000 95%	3,500,000 30%	9,000,000 20%	16,000,000 15%
M&S	548,000	1,150,000 35%	3,830,000 33%	14,890,000 33%	35,110,000 33%
G&A	775,000	850,000 26%	1,160,000 10%	4,510,000 10%	8,510,000 8%
Operating Profit/Loss	4,678,000-	3,052,000-	520,000- 4%	3,522,000 8%	20,896,000 20%

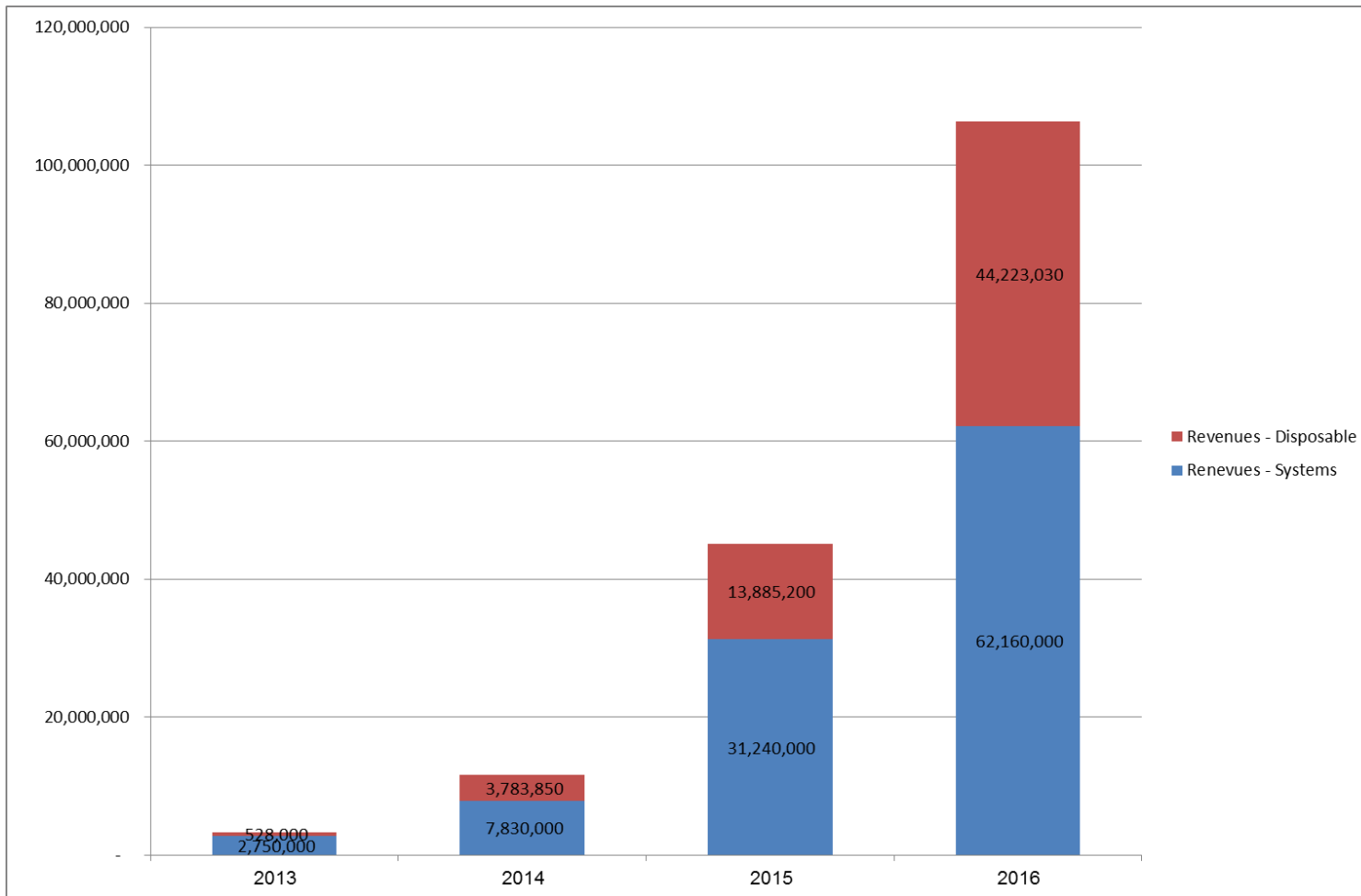
Business Model - Profit & Loss

Pessimistic

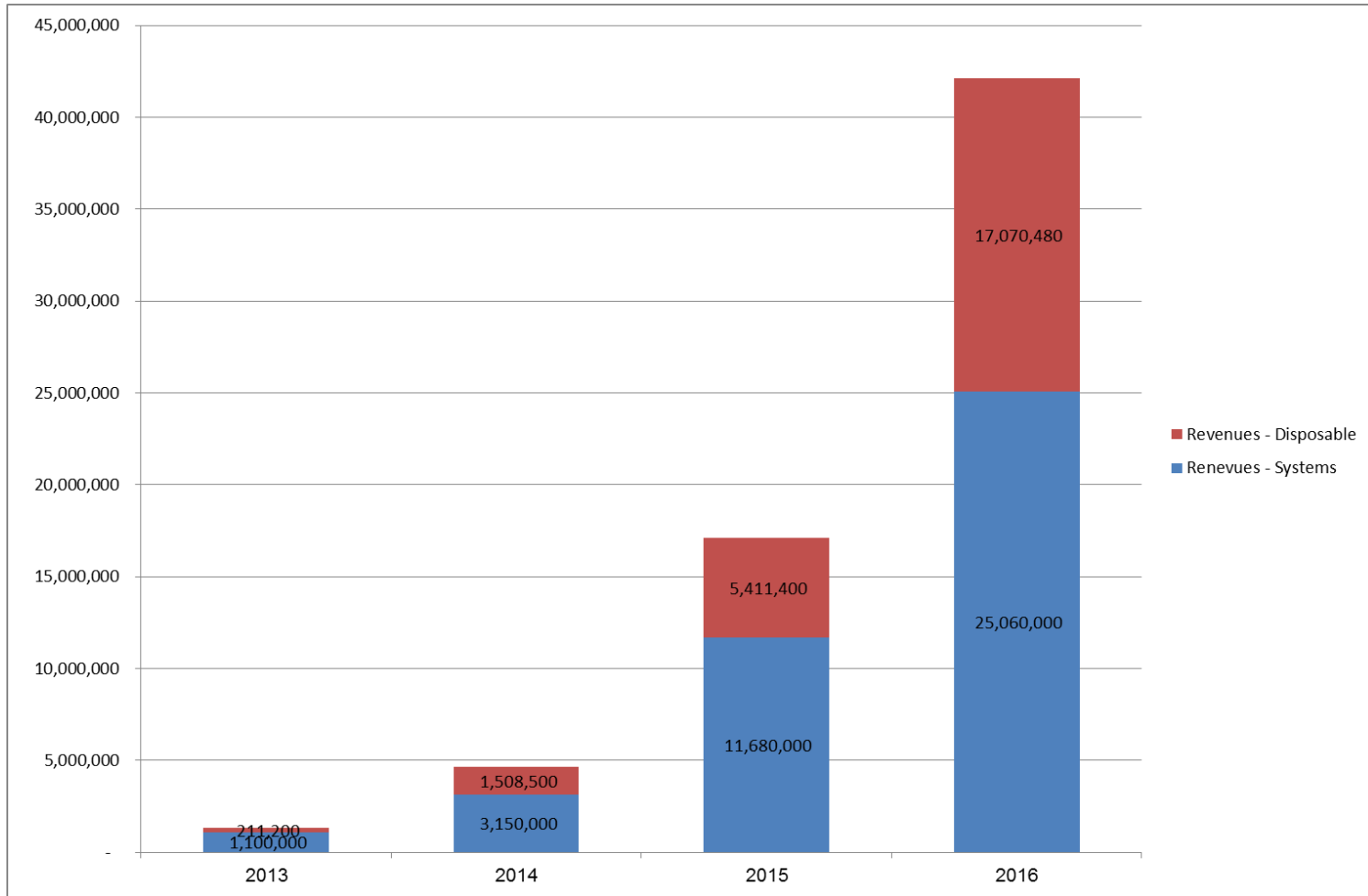


All Amounts in \$	2012	2013	2014	2015	2016
Revenue		1,311,000	4,659,000	17,091,000	42,130,000
Cost of Sales		490,000 37%	1,465,000 31%	4,951,000 29%	10,372,000 25%
Gross Profit		821,000 63%	3,194,000 69%	12,140,000 71%	31,758,000 75%
R&D	3,355,000	2,800,000 214%	2,800,000 60%	4,300,000 25%	6,300,000 15%
M&S	548,000	920,000 70%	1,860,000 40%	5,640,000 33%	12,640,000 30%
G&A	775,000	850,000 65%	1,160,000 25%	2,050,000 12%	5,060,000 12%
Operating Profit/Loss	4,678,000-	3,749,000-	2,626,000-	150,000 1%	7,758,000 18%

Business Model Revenue – Optimistic

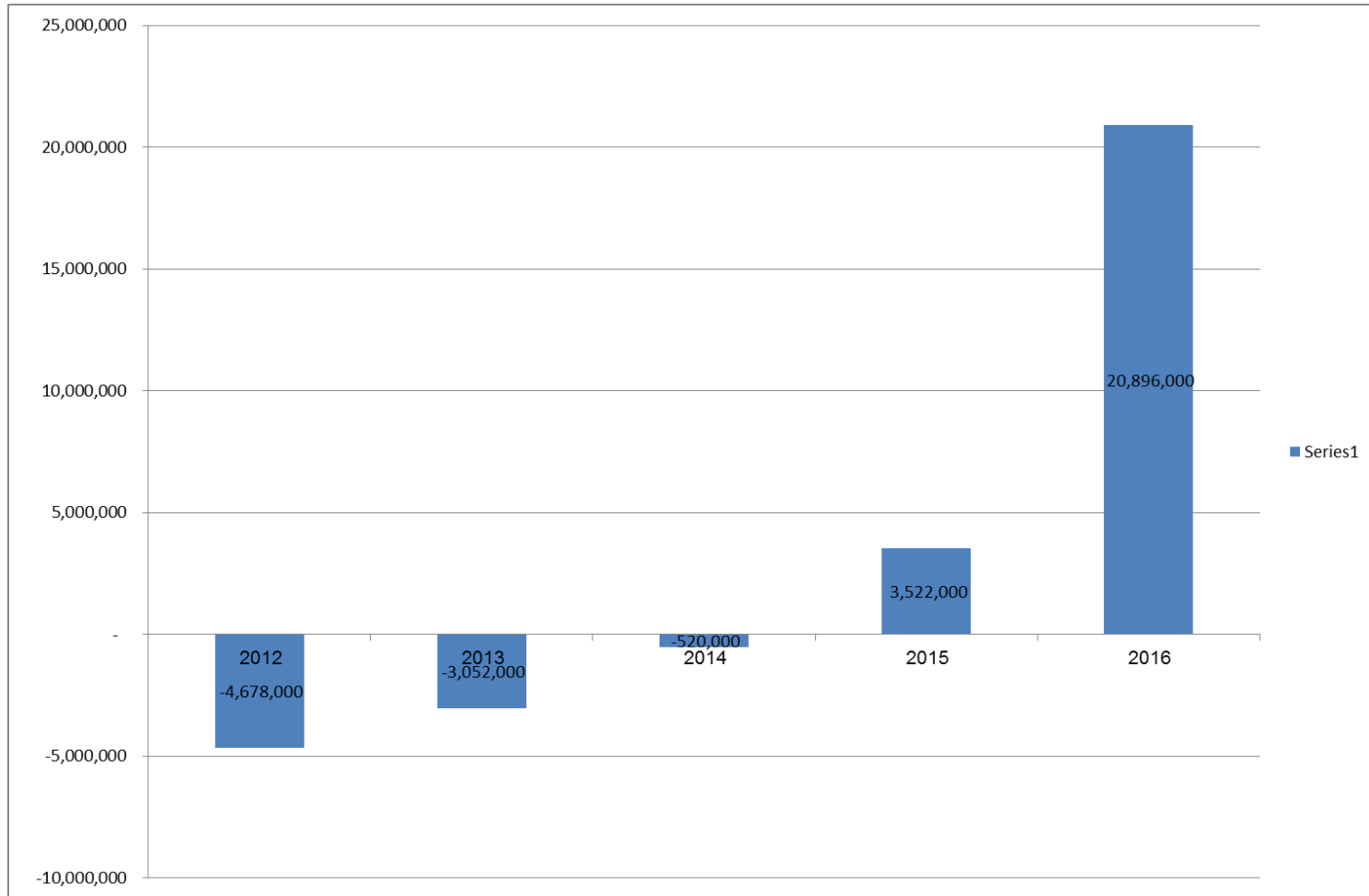


Business Model Revenue – Pessimistic



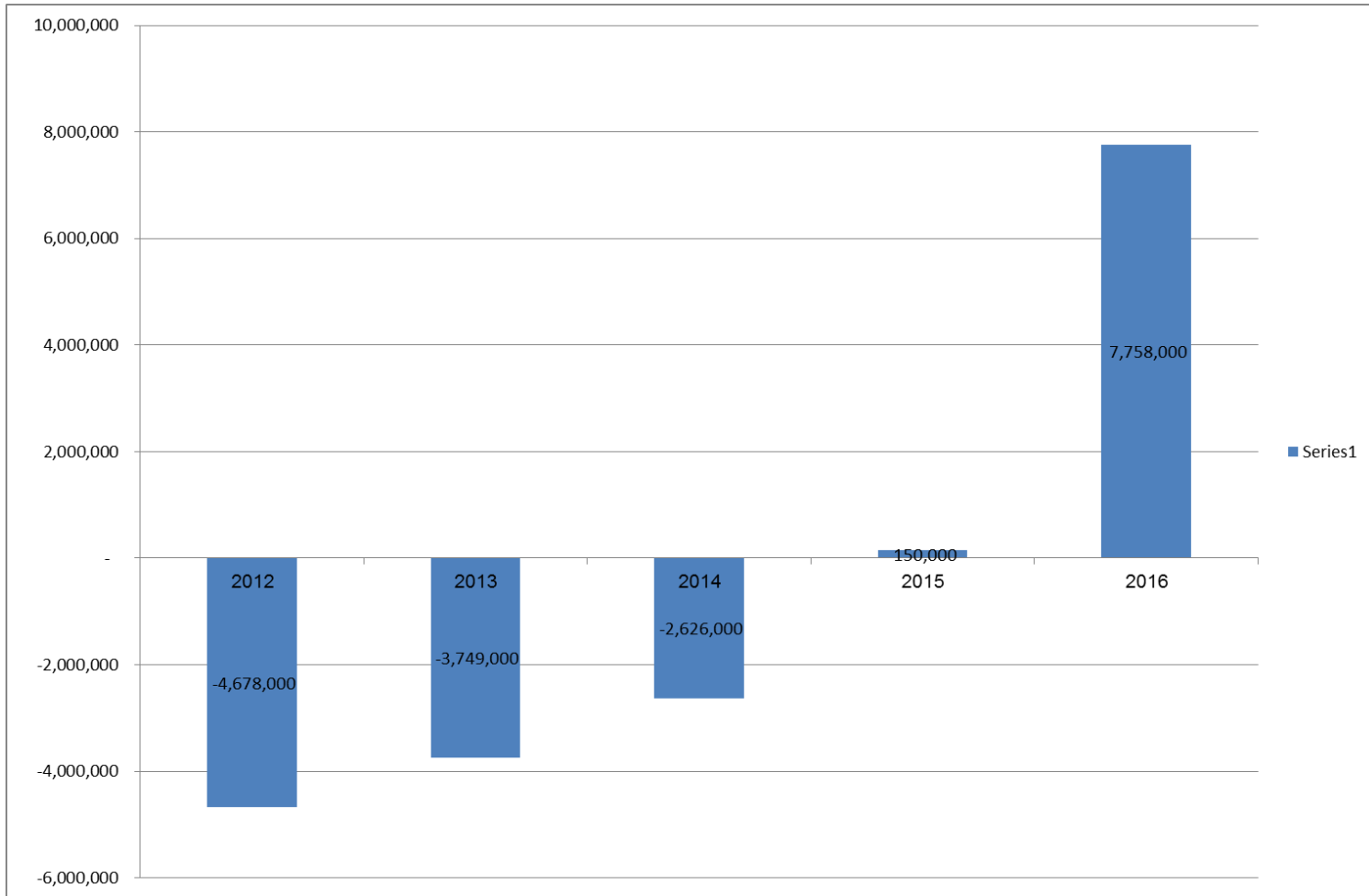
Business Model – P&L

Optimistic



Business Model – P&L

Pessimistic



Cash needs



	Optimistic	Pessimistic
Operations 2012-2014	8.3	11.0
Working Capital	1.6	0.6
Spare	2.0	2.0
Total	11.9	13.6

All amounts in Million US\$

Thank you for your time

www.neuronixmedical.com

