

**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS**

WORKSHOP SUMMARY

Meeting Date: October 29, 2013

Department: Administration

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends a motion to receive and file: the Max Planck Florida Corporation Annual Report for Year Ending December 31, 2012.

Summary: On July 22, 2008, the Board of County Commissioners approved the Grant Agreement (R2008-1350) with the Max Planck Florida Corporation. On December 5, 2012, the Max Planck Florida Institute held the Grand Opening for their 100,000 sf permanent facilities. This presentation will highlight accomplishments under the 2012 Annual Report as it relates to their obligations under the Grant Agreement and highlights the ongoing scientific research.

Countywide (HF)

Background and Policy Issues: The Board of County Commissioners approved \$60 Million for the construction of the permanent facilities and \$26.926 Million for operational funding. To date, the County has provided ~~\$6.15~~ Million in funding.

Attachments:

1. Staff Presentation
2. Max Planck Florida Corporation and its Affiliates Annual Report for Year Ending December 31, 2012

Approved By: Sharon G. Boyer 10-29-2013
Assistant County Administrator Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2014	2015	2016	2017	2018
Capital Expenditures					
Operating Costs					
External Revenues					
Program Income					
In-Kind Match (County)					
NET FISCAL IMPACT	0	0	0	0	0

# ADDITIONAL FTE POSITIONS (Cumulative)					
--	--	--	--	--	--

Is Item Included In Current Budget? Yes _____ No _____
Budget Account No.:

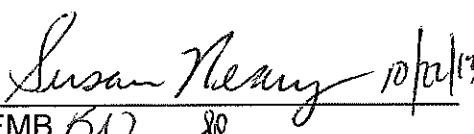
Fund _____ Dept _____ Unit _____ Object _____ Program Code/Period _____

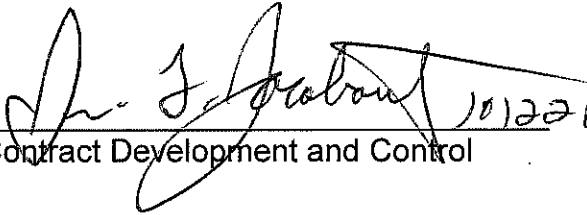
B. Recommended Sources of Funds/Summary of Fiscal Impact:

C. Departmental Fiscal Review: _____

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:


OFMB *KW* *SR*
10/22 *10/22*


Contract Development and Control *10/22/13*

B. Legal Sufficiency:


Chief Assistant County Attorney *10/23/13*

C. Other Department Review:

Department Director

Max Planck Florida Institute for Neuroscience

Update

Board of County Commissioners

October 29, 2013 Workshop



David Fitzpatrick, Ph.D.

Scientific Director & CEO

Matthias Haury, Ph.D.

Chief Operating Officer

William D. Pennell

Vice President of Finance & Administration

Barbara Suflas Noble

President, Max Planck Florida Foundation





Overview

- Max Planck Introduction Video
- History – A Shared Vision
- Grant Agreement
 - County Obligations
 - Max Planck Obligations
- Max Planck Progress to Date
- Scientific Overview
- Questions



History: Max Planck Florida Institute A Shared Vision





Grant Agreement Executed July 22, 2008

- County Obligations
 - \$60 Million for Construction
 - \$26.926 Million for Operational Funds
 - ✓ 2009/2010 - \$4.095 Million
 - ✓ November 2013 - \$4.095 Million
 - November 2014 - \$0
 - November 2015 - \$10.356 Million
 - November 2016 - \$3.028 Million
 - November 2017 - \$5.347 Million



New Facility: One Max Planck Way



- 100,000 Square Feet
- State of the Art Facility
- LEED-NC Certified Gold
- 19.9% Small Business Participation
- Grand Opening - December 5, 2012





Grant Agreement Executed July 22, 2008

■ Max Planck Obligations

- Educational Opportunities
 - Implement Science and Lecture Series
 - Palm Beach County School District Science Literature
 - Voluntary Mentorship Program
 - Cooperative Agreements with Florida Atlantic University
 - Speakers Bureau
 - Internship Program – High School Teachers and College Professors
 - “School Labs” for High School and College Students
- Max Planck Science Tunnel
 - First Quarter 2009



Grant Agreement Executed July 22, 2008

■ Max Planck Obligations (cont.)

- Cooperation with Economic Development Activities
 - Annual Board of Trustees Meeting in Palm Beach County
 - Cooperate with Business Development Board (BDB)
 - Liaison to BDB Life Science Strategies Committee
 - Introductions to International Research Organization
 - Develop Website for Max Planck Florida





Grant Agreement Executed July 22, 2008

■ Max Planck Obligations (cont.)

- Job Creation and Salaries
 - 135 New Palm Beach County Jobs
 - Annual Salary – 130% of Countywide Average
- Hiring Policies – Low Income Opportunities for Training and Employment
- Preference for Palm Beach County Residents
- Local Business Preference



Grant Agreement Executed July 22, 2008

■ Max Planck Obligations (cont.)

- Investment in Royalties in Education
 - Commencement December 1, 2012
 - 3% of Net Royalty Income
 - Funding for Science Related Educational Purposes in Palm Beach County
 - ❖ Potential Student Scholarships in Cooperation with Palm Beach County Conference of Black Elected Officials





Educational Opportunities Update

- Partnership with Scripps & FAU
 - MOU – Collaboration on Neuroscience Saturdays & Internship Program
 - Monthly Neuroscience Faculty Forum (FAU, Scripps & MPFI Host in Rounds)
 - Integrative Biology Ph.D. Program – Rotation in All Institutes Possible
- Max Planck Research Magazine & Bio-Max – School District
 - The Max Planck Research Magazine
 - The Bio-Max Series



Educational Opportunities Update (cont.)

- Public Lectures
 - 7 Since 2011
 - 4 Planned for 2013/14 Season
 - 2 Day Sunposium® with 600 Attendees in Palm Beach
- Internships for PBC School Teachers
 - 2 Day Professional Development Teacher Workshop
 - Internships as Comprehensive Training
- Voluntary Mentorship
 - 11 PBC High School Student Internships
 - MPFI Scientists as Mentors
 - Lectures in PBC High Schools





Educational Opportunities Update (cont.)

- High School & College Students
 - 12 Undergraduates from Palm Beach State College
 - 11 High School Summer Interns
 - Neuroscience Saturday for Tier 1 Schools in Collaboration with Scripps
- Career Fairs
 - Annual Career Fair Events
 - 1st Career Fair held at Grand Opening December 5, 2012
 - 2nd held on October 26, 2013
- Neuroscience Discovery Day – Open House
 - Held Annually in December



Educational Opportunities Update (cont.)

- Neurons & Networking – July 24, 2013
 - More than 200 Local Business Leaders Came to Learn How Scripps, FAU and MPFI Collaborate in the Area of Neuroscience
 - Collaboration with Palm Beach County Life Science Technology Hub Initiative
- Local Chapter for Society of Neuroscience
 - MPFI, FAU, Scripps & Torrey Pines Launched SfN Local Chapter





Economic Development Opportunities Update

- Job Creation and Salaries Update
 - Currently 118 Employees
 - Average Salary \$68,943
 - Palm Beach County Average Salary \$47,779
 - 130% of Average \$62,113
 - 38% Full Time Positions are Palm Beach County Residents



Economic Development Opportunities Update (cont.)

- Business Development Board & Economic Council
 - Showcased MPFI for BDB Events and Tours on Multiple Occasions
 - Collaborated Closely with Economic Council on Several Events Promoting Life Sciences in Palm Beach County



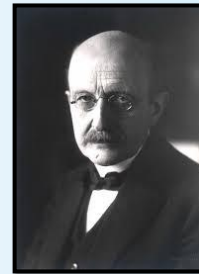


The Max Planck Society

- Germany's Most Successful Research Organization
- An Exceptional Track Record of Scientific Achievement
- Physics, Chemistry, Mathematics, Biology, Medicine



- 84 Institutes
- 17 Nobel Laureates
- 1100 Inventions
- 90 Spin-off Companies



MAX PLANCK
FLORIDA INSTITUTE FOR
NEUROSCIENCE

Only **One** Max Planck Institute Outside of Europe



MAX PLANCK
FLORIDA INSTITUTE FOR
NEUROSCIENCE



in Palm Beach County



Scientific Focus - the Brain

- Most complex living structure in the known universe
- Impacts every aspect of our lives
- The key to understanding who we are and why we behave the way we do
- The key to diagnosis, treatment, and cure of a host of devastating neurological and psychiatric disorders



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Neurological and Psychiatric Disorders

Alzheimer's
Autism
Epilepsy
Schizophrenia
Parkinson's Disease
Bipolar Disorder
Post-Traumatic Stress Disorder
Depression
ADHD
Addiction
Stroke



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Impact of Brain Disorders

- More than 1,000 Disorders of the Brain and Nervous System
- More Hospitalizations than any other disease group, including Heart Disease and Cancer
- Impacts 1.5 Billion People World Wide
- Impacts 100 Million Americans
- Annual Cost of \$700 Billion in the US



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NEUROSCIENCE



What is Limiting Progress on Brain Disorders?

Understanding the **basic science** of brain function.

‘Insight must precede application’

‘You can’t fix it if you don’t know how it works’

Today’s **basic science**:
the foundation for tomorrow’s cures.

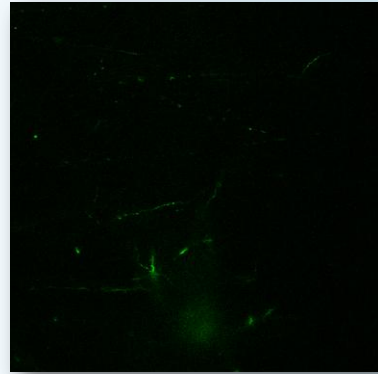


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New Technologies for Imaging Living Neurons

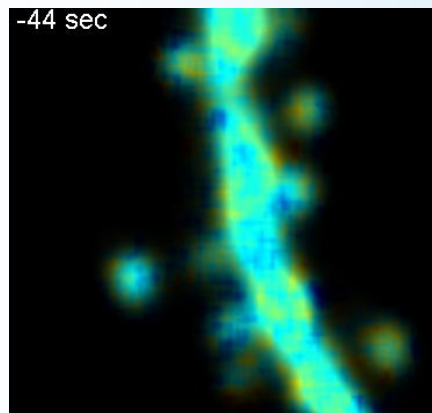
- Combining Physics and Molecular Biology
- A Revolution for Visualizing Brain Structure, Function, and Development
- Critical for Understanding Brain Disorders



MAX PLANCK
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Visualizing the Molecules of Memory



High Low
Activity

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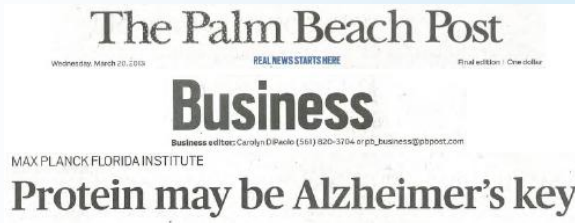
Basic Science Discovery Relevant for Alzheimer's Disease

Centaurin- α 1-Ras-Elk-1 Signaling at Mitochondria Mediates β -Amyloid-Induced Synaptic Dysfunction

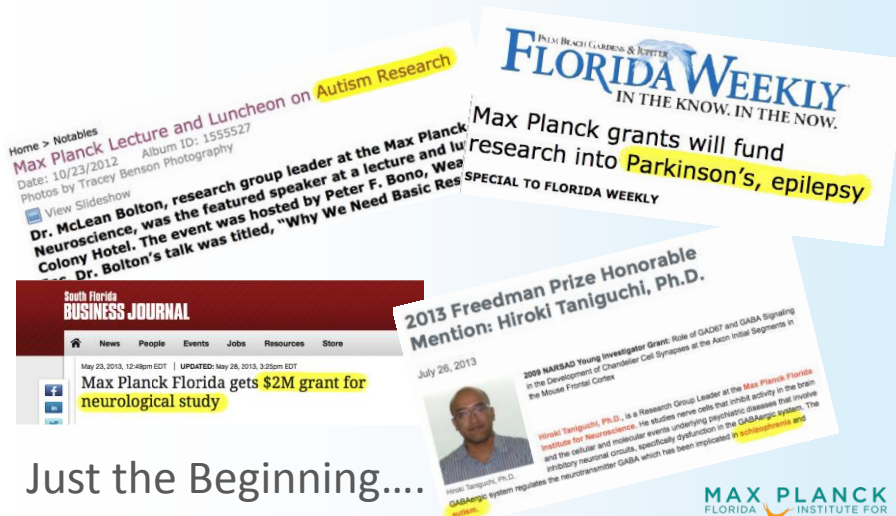
The Journal of Neuroscience, March 20, 2013 • 33(12):5367–5374



Dr. Ryohei Yasuda



Max Planck Florida Discoveries Relevant for Other Brain Disorders



Just the Beginning....





MAX PLANCK
FLORIDA INSTITUTE FOR
NEUROSCIENCE



Thank You



MAX PLANCK FLORIDA CORPORATION

ANNUAL REPORT 2012

2012 BOARD OF TRUSTEES

PROFESSOR DR. PETER GRUSS, CHAIRMAN, DR. DAVID C. AUTH, DR. GÜNTER BLOBEL, GEORGE
ELMORE, JUDGE LOUIS J. FREEH, PROFESSOR DR. HERBERT JÄCKLE, NASSER J. KAZEMINY, DR. HENRY
A. KISSINGER

LEADERSHIP TEAM

DR. DAVID FITZPATRICK, SCIENTIFIC DIRECTOR & CHIEF EXECUTIVE OFFICER, DR. MATTHIAS HAURY,
CHIEF OPERATING OFFICER, BILL PENNELL, VICE PRESIDENT OF FINANCE AND ADMINISTRATION

ONE MAX PLANCK WAY, JUPITER, FL, 33458
(561) 972 9000 - INFO@MPFL.ORG

Max Planck Florida Corporation 2012 ANNUAL REPORT

1. Annual Reporting Requirements

Pursuant to Article VII and Exhibit 5 of the Funding Agreement – Reporting Requirements

a) Audited financial statements that comply with the requirements of Section 7.1 of the Agreement;

Please see attached December 31, 2012 Financial Statements.

b) A proposed budget for Awardee's next fiscal year;

Please see attached MPFI 2013 Budget.

c) A list of Equipment covered by the Security Agreement;

Please see attached OTTED 2012 Equipment List.

d) A Florida Single Audit Report and Agreed Upon Procedures;

Please see attached December 31, 2012 Financial Statements.

e) Annual Science Report;

Please see attached Annual 2012 Science Report.

f) Operations Report, due by March 31, with an update on any material developments between the date of such Operations Report and the date of the prior year's Operations Report. This report should include all information on the items listed in Section 7.2;

Please see attached MPFC 2012 Operations Report.

g) Progress reports with respect to the Performance Expectations set forth in Section 7.4 of the Agreement;

7.4 Performance Expectations: Awardee shall report to OTTED not less than annually on its progress in meeting certain performance expectations that reflect the aspirations of the Florida Governor and Legislature for the benefits accruing to Florida as a result of the Incentive Funds. These reports shall include, but are not limited to, performance expectations addressing the following with respect to Awardee:

- (a) The number and dollar value of research grants obtained by Awardee with respect to Awardee's operations from the Federal Government or sources other than Florida;

Please see attached MPFC 2012 Operations Report.

- (b) The percentage of total research dollars received by Awardee from sources other than Florida, which is used to conduct research activities by Awardee in Florida;

Please see attached MPFC 2012 Operations Report.

- (c) The number or value of patents obtained by Awardee with respect to Awardee's operations;

Not applicable at this time.

- (d) The number or value of licensing agreements executed by Awardee with respect to Awardee's operations;

Not applicable at this time.

- (e) The extent to which research conducted by Awardee's operations results in commercial applications;

Not applicable at this time.

- (f) The number of collaborative agreements reached and maintained with colleges and universities in Florida and with research institutions in Florida;

Please see attached MPFC 2012 Operations Report.

- (g) The number of collaborative partnerships established and maintained with businesses in Florida, including small businesses;

Please see attached MPFC 2012 Operations Report.

- (h) The total amount of funding received by Awardee with respect to Awardee's operations from sources other than OTTED, including a breakdown of amounts received from grants and from other sources;

Please see attached MPFC 2012 Operations Report.

- (i) The number of Commercial Spin-Offs created in Florida as a result of commercialization of the research of Awardee's operations;

Not applicable at this time.

- (j) The establishment and implementation of policies to promote supplier diversity using the guidelines developed by the Office of Supplier Diversity under Section 287.09451, Florida Statutes, and to comply with the ordinances, including any small-business ordinances, enacted by applicable local governments and which are applicable to Awardee;

Please see attached MPFC 2012 Operations Report.

- (k) The designation by Awardee of a representative to coordinate with the Office of Supplier Diversity;

Please see attached MPFC 2012 Operations Report.

- (l) The establishment and implementation of a program to conduct workforce recruitment activities at public and private colleges and universities and community colleges in Florida, regardless of their size, which request the participation of Awardee; and

Please see attached MPFC 2012 Operations Report.

- (m) The designation of a senior-level point of contact for economic development activities related to Awardee's operations.

Please see attached MPFC 2012 Operations Report.

- h) Any proposed changes to Awardee's Business Plan and the reasons therefore.

There are no proposed changes to the Business Plan.

Max Planck Florida Corporation and Affiliate

Financial and Compliance Report
December 31, 2012



McGladrey

Assurance • Tax • Consulting

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Independent Auditor's Report

To the Board of Trustees
Max Planck Florida Corporation
Jupiter, Florida

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of the Max Planck Florida Corporation and Affiliate, which comprise the consolidated statements of financial position as of December 31, 2012 and 2011, and the related consolidated statements of activities, and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Max Planck Corporation and Affiliate as of December 31, 2012 and 2011, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Other Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards and state financial assistance is presented for purposes of additional analysis as required by Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations* and Chapter 10.650, *Rules of the Auditor General of the State of Florida*, and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated April 22, 2013 on our consideration of the Organization's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Organization's internal control over financial reporting and compliance.

McGladrey LLP

West Palm Beach, Florida
April 22, 2013

Max Planck Florida Corporation and Affiliate

**Consolidated Statements of Financial Position
December 31, 2012 and 2011**

	2012	2011
Assets		
Cash	\$ 1,863,345	\$ 743,639
Investments (Note 2)	27,734,005	62,975,590
Grants receivable (Notes 3 and 4)	9,095,243	2,031,479
Contributions receivable, net (Notes 5 and 6)	1,670,948	2,244,000
Prepaid expenses and other assets	344,404	744,290
Accrued interest receivable	3,549,087	3,725,594
Property and equipment, net (Note 7)	82,214,412	60,796,184
Total assets	\$ 126,471,444	\$ 133,260,776
Liabilities and Net Assets		
Accounts payable and accrued expenses	\$ 1,304,579	\$ 4,160,195
Retainage payable	-	3,357,998
Deferred grant revenue	222,216	27,968
Total liabilities	1,526,795	7,546,161
Commitments and Contingencies (Notes 7, 11 and 12)		
Net Assets		
Unrestricted	116,171,634	122,781,513
Temporarily restricted (Note 9)	6,165,050	872,434
Permanently restricted (Notes 8 and 10)	2,607,965	2,060,668
Total net assets	124,944,649	125,714,615
Total liabilities and net assets	\$ 126,471,444	\$ 133,260,776

See Notes to Consolidated Financial Statements.

Max Planck Florida Corporation and Affiliate

**Consolidated Statements of Activities
Years Ended December 31, 2012 and 2011**

	2012			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenue and other support:				
State grant (Note 3)	\$ -	\$ -	\$ -	\$ -
County grant (Note 4)	14,417,001	-	-	14,417,001
Federal and other grants	806,086	-	-	806,086
Contributions	135,921	6,239,801	553,297	6,929,019
Instruction	61,877	-	-	61,877
Investment income	1,371,672	68,678	-	1,440,350
Net assets released from restrictions	1,021,863	(1,015,863)	(6,000)	-
Total revenue and other support	17,814,420	5,292,616	547,297	23,654,333
Expenses:				
Research	11,648,441	-	-	11,648,441
Instruction	469,003	-	-	469,003
Management and general	8,942,224	-	-	8,942,224
Fund raising	750,471	-	-	750,471
Total expenses	21,810,139	-	-	21,810,139
Changes in net assets before special item	(3,995,719)	5,292,616	547,297	1,844,194
Special item - Lease termination expenses (Note 5)	2,614,160	-	-	2,614,160
Changes in net assets	(6,609,879)	5,292,616	547,297	(769,966)
Net assets, beginning	122,781,513	872,434	2,060,668	125,714,615
Transfer between classifications (Note 8)	-	-	-	-
Net assets, ending	\$ 116,171,634	\$ 6,165,050	\$ 2,607,965	\$ 124,944,649

See Notes to Consolidated Financial Statements.

2011			
Unrestricted	Temporarily Restricted	Permanently Restricted	Total
\$ 34,090,000	\$ -	\$ -	\$ 34,090,000
35,630,076	-	-	35,630,076
103,326	-	-	103,326
750	39,250	1,154,999	1,194,999
106,821	-	-	106,821
281,909	(19,245)	-	262,664
532,357	(532,357)	-	-
70,745,239	(512,352)	1,154,999	71,387,886
7,670,408	-	-	7,670,408
349,440	-	-	349,440
5,395,280	-	-	5,395,280
232,899	-	-	232,899
13,648,027	-	-	13,648,027
57,097,212	(512,352)	1,154,999	57,739,859
57,097,212	(512,352)	1,154,999	57,739,859
65,713,546	2,261,210	-	67,974,756
(29,245)	(876,424)	905,669	-
\$ 122,781,513	\$ 872,434	\$ 2,060,668	\$ 125,714,615

Max Planck Florida Corporation and Affiliate

Consolidated Statements of Cash Flows
Years Ended December 31, 2012 and 2011

	2012	2011
Cash Flows From Operating Activities		
Change in net assets	\$ (769,966)	\$ 57,739,859
Adjustments to reconcile change in net assets to net cash (used in) provided by operating activities:		
Depreciation and amortization	3,778,801	1,985,536
Loss on sale of property and equipment	128,469	899
Abandonment of leasehold improvements	1,510,691	-
In-kind contributions	(6,000,000)	517,109
Contributions restricted	(715,700)	(1,180,000)
Discount on promises to give	(18,330)	40,101
Donation of artwork	(15,000)	-
Unrealized and realized gains (losses) on investments	(233,224)	924,382
(Increase) decrease in:		
Grants receivable	(7,063,764)	29,783,384
Contributions receivable	573,052	(791,899)
Prepaid expenses and other assets	399,886	(153,231)
Accrued interest receivable	176,507	(115,406)
Increase (decrease) in:		
Accounts payable and accrued expenses	(2,855,616)	65,786
Deferred grant revenue	194,248	27,968
Net cash (used in) provided by operating activities	(10,909,946)	88,844,488
Cash Flows From Investing Activities		
Purchase and construction of property and equipment	(24,209,621)	(38,531,536)
Proceeds from sale of property and equipment	30,434	7,043
Purchase of investments	(76,880,194)	(57,445,232)
Sales of investments	112,355,003	5,776,387
Net cash provided by (used in) investing activities	11,295,622	(90,193,338)
Cash Flows From Financing Activities		
Contributions restricted	715,700	1,180,000
Discount on promises to give	18,330	(40,101)
Net cash provided by financing activities	734,030	1,139,899
Net increase (decrease) in cash	1,119,706	(208,951)
Cash:		
Beginning	743,639	952,590
Ending	\$ 1,863,345	\$ 743,639
Supplemental Disclosures of Noncash Investing and Financing Activities		
Purchases and construction of property and equipment in accounts payable	\$ 387,151	\$ 3,450,388
Retainage payable	\$ -	\$ 3,357,998

See Notes to Consolidated Financial Statements

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 1. Nature of the Organization and Significant Accounting Policies

Nature of Organization: Max Planck Florida Corporation (the "Corporation") was organized on September 5, 2007 as a non-profit corporation under the provisions of Chapter 617 of the Florida Statutes. The Corporation began operations during March 2008 upon receipt of a grant from the State of Florida. The Corporation operates exclusively for scientific, charitable and educational purposes and was established to develop and operate in Florida a scientific research institute. Max Planck Society, which operates in Germany, is the sole member of the Corporation.

On February 11, 2010, the Corporation formed Max Planck Florida Foundation (the "Foundation") as a separate fund raising entity to raise and distribute funds for the benefit of the Corporation to further the purpose of developing and operating a scientific research institute in Florida. The Foundation was organized as a non-profit organization under the provisions of Chapter 617 of the Florida Statutes.

A summary of the Organization's significant accounting policies follows:

Basis of presentation: A not-for-profit organization is required to classify its net assets, its revenue and expenses, and gains and losses based on the existence or absence of donor-imposed restrictions. The amounts for each of three classes of net assets (permanently restricted, temporarily restricted and unrestricted) are required to be displayed in a statement of financial position and the amounts of the change in each of the three classes of net assets are required to be displayed in a statement of activities.

Principles of consolidation: The consolidated financial statements include the accounts of the Corporation and the Foundation, collectively, the "Organization." All intercompany accounts and transactions have been eliminated in consolidation.

Net assets: The Organization's resources are classified for accounting and reporting purposes into three net asset categories based on the existence or absence of donor-imposed restrictions. Unrestricted net assets are net assets that are not subject to donor-imposed conditions. Temporarily restricted net assets are net assets subject to donor-imposed stipulations that may or will be met either by actions of the Organization and/or the passage of time. Permanently restricted net assets are subject to donor-imposed stipulations that they be maintained permanently by the Organization. Generally, the donors of these assets permit the Organization to use all or part of the income earned on related investments for general or specific purposes.

Accounting estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Contributions and grants: Unconditional promises (contributions and grants) to give cash or other assets are reported at fair value at the date the agreement is entered into or promise received. The amounts are reported as either temporarily or permanently restricted support if they are received with donor/grantor stipulations that limit the use of the contributed assets. When a donor/grantor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, temporarily restricted assets are reclassified as unrestricted net assets and reported as net assets released from restrictions. Conditional promises (contributions and grants) to give are reported at fair value at the date the condition has been satisfied.

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 1. Nature of Organization and Significant Accounting Policies (continued)

Investment income: Realized gains and losses are recognized at date of disposition based on the difference between the net proceeds received and the purchased value of the investment sold, using the specific identification method. Unrealized gains and losses are recognized for the change in fair value between reporting periods. Interest and dividend income is recognized when earned. Investment income is included in the change in unrestricted net assets, unless its use is temporarily or permanently restricted by donor stipulations or law. When a donor restriction is met, the amount is reclassified and reported as released from restriction.

In addition, the Organization has entered into a Trust Agreement with the State of Florida's State Board of Administration ("SBA") for the management of the Innovation Incentive Funds committed by the State of Florida Governor's Office of Tourism, Trade, and Economic Development ("OTTED") to the Organization (see Note 3). Per the Trust Agreement, all interest and investment income resulting from the investment of the funds is at all times the property of the Organization and will be disbursed to the Organization when it hires its 135th employee on or before March 12, 2015.

Cash: The Organization maintains its cash in bank deposit accounts with four financial institutions which may, at times, exceed federally-insured limits. The Organization has not experienced any losses in such accounts.

Contributions receivable: Unconditional promises to give that are expected to be collected within one year are recorded at net realizable value. Unconditional promises to give that are expected to be collected in future years are recorded at the present value of their estimated future cash flows. The discounts on contributions receivable received are computed using a market rate commensurate with the risk of the contributions receivable in accordance with accounting standards. Amortization of the discount is included in contribution revenue.

Investments: Investments are reported at fair value as further discussed in Note 2. The Organization invests primarily in a combination of debt securities, equity securities and money market funds. Investment securities are exposed to various risks, such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term could materially affect the Organization's investment balance reported in the statement of financial position.

Property and equipment: Property and equipment is stated at cost and depreciated on a straight-line basis over the estimated useful lives of the assets as follows:

	Years
Leasehold improvements	15
Machinery and equipment	5 – 10
Furniture and fixtures	5 – 10
Software	2 – 5

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 1. Nature of Organization and Significant Accounting Policies (continued)

Property and equipment are recorded at historical cost at the date of purchase or fair market value at the date of donation. Assets donated with explicit restrictions regarding their use and contributions of cash that must be used to acquire property and equipment are reported as restricted support. Absent donor stipulations regarding how long those donated assets must be maintained, the Organization reports the expiration of donor restrictions when the donated or acquired assets are placed in service as instructed by the donor. Upon sale or retirement, the costs and related accumulated depreciation are eliminated from the respective accounts and resulting gains or losses are included in the statement of activities. Leasehold improvements are depreciated over the lesser of the lease term or the estimated useful life.

Financial instruments: The carrying value of the Organization's cash and cash equivalents, accounts receivable and accounts payable approximate the fair value of these financial instruments at December 31, 2012 and 2011, due to the short maturity of these instruments.

Income taxes: The Organization is exempt from income taxes under Section 501(c)(3) of the Internal Revenue Code. Accordingly, no provision for income taxes is made in the accompanying financial statements.

Accounting Standards Codification (ASC) 740 addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Organization may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. The guidance on accounting for uncertainty in income taxes also addresses derecognition, classification, interest and penalties on income taxes and accounting in interim periods. The Organization files tax returns in the U.S. federal jurisdiction. The Organization is still subject to U.S. federal tax examinations by tax authorities for all years since its inception. Management evaluated the tax positions for the Organization and concluded that the Organization had taken no uncertain income tax positions that require adjustments to the financial statements to comply with the provisions of the Income Taxes Topic of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("FASB ASC").

Functional expenses: The cost of providing the various activities of the Organization have been summarized in the accompanying statement of activities on a functional basis. Accordingly, certain costs have been allocated among the programs and supporting services benefited. Support services include administration, accounting, facilities, public relations, and human resources.

Subsequent events: The Organization has evaluated its subsequent events (events occurring after December 31, 2012) through April 22, 2013, which represents the date the financial statements were issued.

Recent accounting pronouncement: On June 17, 2011, the state of Florida passed a version of the Uniform Prudent Management of Institutional Funds Act ("UPMIFA"). The effective date of the enacted version of UPMIFA in Florida ("FL UPMIFA") is July 1, 2012. Accordingly, the Organization was required to adopt the provisions of the Donor-Restricted Endowment Fund Topic of the FASB ASC on January 1, 2012. This Standard provides guidance to not-for-profit organizations subject to an enacted version of UPMIFA. The Organization adopted the disclosure requirements of this Standard for the

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 1. Nature of Organization and Significant Accounting Policies (continued)

year ended December 31, 2011 (see Note 8). UPMIFA removed the concept of historical dollar value measurement of endowments under the Uniform Measurement of Institutional Funds Act and provides for standards of prudence to be utilized by organizations in making determinations to appropriate or accumulate donor-restricted endowment funds. UPMIFA also requires that earnings from donor-restricted endowments, unless otherwise instructed by the gift instrument, be classified as donor restricted for legal purposes until they are appropriate for expenditure. Under this Standard, earnings from donor-restricted endowments are reported as temporarily restricted until appropriated.

Note 2. Investments and Fair Value Disclosures

Investments consisted of the following at December 31, 2012 and 2011:

	2012	2011
Money market accounts	\$ 1,666,737	\$ 14,678,681
Mutual funds:		
Debt securities	17,469,911	41,035,443
Equity securities:		
Large cap	3,431,370	2,914,529
Small/med cap	1,956,073	1,676,149
International	1,826,484	1,516,292
Other	1,383,430	1,154,496
Total equity securities	8,597,357	7,261,466
Total mutual funds	26,067,268	48,296,909
Total investments	\$ 27,734,005	\$ 62,975,590

As defined in FASB ASC 820, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Organization uses various methods including market, income and cost approaches. Based on these approaches, the Organization often utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. Based on the observability of the inputs used in the valuation techniques, the Organization is required to provide the following information according to the fair value hierarchy. The fair value hierarchy ranks the quality and reliability of the information used to determine fair values. Financial assets and liabilities carried at fair value will be classified and disclosed in one of the following three categories:

Level 1 – Quoted prices for identical assets and liabilities traded in active exchange markets, such as the New York Stock Exchange.

Level 2 – Observable inputs other than Level 1 including quoted prices for similar assets or liabilities, quoted prices in less active markets, or other observable inputs that can be corroborated by observable market data. Level 2 also includes derivative contracts whose value is determined using a pricing model with observable market inputs or can be derived principally from or corroborated by observable market data.

Level 3 – Unobservable inputs supported by little or no market activity for financial instruments whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation; also includes observable inputs for nonbinding single dealer quotes not corroborated by observable market data.

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 2. Investments and Fair Value Disclosures (Continued)

The Organization has various processes and controls in place to ensure that fair value is reasonably estimated. A model validation policy governs the use and control of valuation models used to estimate fair value. This policy requires review and approval of models, and periodic re-assessments of models to ensure that they are continuing to perform as designed. The Organization performs due diligence procedures over third-party pricing service providers in order to support their use in the valuation process. Where market information is not available to support internal valuations, independent reviews of the valuations are performed and any material exposures are escalated through a management review process.

While the Organization believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

During the years ended December 31, 2012 and December 31, 2011, there were no changes to the Organization's valuation techniques that had, or are expected to have, a material impact on its consolidated financial position or results of operations.

For debt and equity securities, the valuation methodologies used to measure the fair value of these securities is the market value based on quoted market prices, when available, or market prices provided by recognized broker dealers. If listed prices or quotes are not available, fair value is based upon externally developed models that use unobservable inputs due to the limited market activity of the instrument.

In determining the appropriate levels, the Organization performs an analysis of the financial assets that are reported at fair value on a recurring basis. Level 1 instruments carried at fair value, and Level 2 instruments carried at estimated fair value, are comprised of the following at December 31, 2012:

	Level 1	Level 2	Total
Financial assets:			
Money market funds	\$ 1,666,737	\$ -	\$ 1,666,737
Debt securities – mutual funds	-	17,469,911	17,469,911
Equity securities:			
Large cap mutual funds	3,431,370	-	3,431,370
Small/med cap mutual funds	1,956,073	-	1,956,073
International mutual funds	1,826,484	-	1,826,484
Other	1,383,430	-	1,383,430
Total equity securities	8,597,357	-	8,597,357
Total investments	\$ 10,264,094	\$ 17,469,911	\$ 27,734,005

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 2. Investments and Fair Value Disclosures (Continued)

Level 1 instruments carried at fair value, and Level 2 instruments carried at estimated fair value, are comprised of the following at December 31, 2011:

	Level 1	Level 2	Total
Financial assets:			
Money market funds	\$ 14,678,681	\$ -	\$ 14,678,681
Debt securities – mutual funds	-	41,035,443	41,035,443
Equity securities:			
Large cap mutual funds	2,914,529	-	2,914,529
Small/med cap mutual funds	1,676,149	-	1,676,149
International mutual funds	1,516,292	-	1,516,292
Other	1,154,496	-	1,154,496
Total equity securities	7,261,466	-	7,261,466
Total investments	\$ 21,940,147	\$ 41,035,443	\$ 62,975,590

Note 3. State Grants – Innovation Incentive Funds

On March 12, 2008, the Organization entered into an Innovation Incentive Funding Agreement ("Agreement") with the State of Florida Governor's Office of Tourism, Trade, and Economic Development ("OTTED"). The Agreement provides that \$94,090,000 of grant funds has been appropriated by the State of Florida to the Organization for the development of a biomedical research facility comprised of three departments, five research groups, and guest laboratories. The key goals of the appropriation are to promote the growth of a biomedical cluster in Florida and for the Organization to give employment to a significant number of people, including staff, senior scientists and post-doctoral students. As of December 31, 2011 the Organization had received the entire \$94,090,000 of grant funds.

Note 4. Local Grant – Palm Beach County

On July 22, 2008 the Organization entered into a Grant Agreement with Palm Beach County, Florida ("County") for \$86,926,000. The County agreed to fund on a cost reimbursement basis the project costs for the permanent facilities (see Note 5) in an amount not to exceed \$60,000,000. Through December 31, 2012 and 2011, the Organization incurred approximately \$60,000,000 and \$45,582,999, respectively, of such costs. As of December 31, 2012 and 2011, the Organization had a receivable of \$9,042,000 and \$1,937,232, respectively, from the County related to these project costs.

The agreement also provides for additional Operating Funds of up to \$26,926,000 upon satisfaction of conditions. No Operating Funds are to be distributed to the Organization unless certain conditions are met, which as of December 31, 2012 had not been met, therefore no revenue has been recorded. However, a provision in the grant agreement did allow for the Organization to receive up to \$4,100,000 for the purchase of equipment for the temporary facilities once the Organization occupied the temporary facilities. As of December 31, 2011, the Organization had received all of the \$4,100,000 for such purchases.

Max Planck Florida Corporation and Affiliate**Notes to Consolidated Financial Statements****Note 4. Local Grant – Palm Beach County (Continued)**

The remaining \$22,826,000 will be received by the Organization, assuming certain conditions are met, as follows:

November 1,	Amount
2013	\$ 4,095,000
2014	-
2015	10,356,000
2016	3,028,000
2017	5,347,000
Total	<u>\$ 22,826,000</u>

Note 5. Lease Agreement with Florida Atlantic University

Florida Atlantic University ("FAU") agreed to provide temporary space for a period of four years, ending June 2013, and land for the development of a permanent facility. The estimated fair rental value of the use of temporary facilities applicable to future periods is reported as contributions receivable and an increase in temporarily restricted net assets. During occupancy, these temporarily restricted net assets were released from restriction ratably and a corresponding expense was recognized. In addition to the use of the temporary facilities, the Organization paid FAU for the operating expenses of the temporary facilities, such as utilities. For the years ended December 31, 2012 and 2011, the Organization paid \$412,361 and \$834,164, respectively of such costs. In June 2012, the Organization moved from the temporary facilities to the permanent facilities. As part of the lease agreement with FAU for the temporary facilities, the Organization incurred a lease termination expense as well as having to write off all of the leasehold improvements related to these facilities. For the year ended December 31, 2012, the Organization expensed \$2,614,160 of such costs.

On September 10, 2009, the Organization entered into a fifty year sublease agreement with FAU for approximately six acres of land located on FAU's John D. MacArthur Campus in the form of an in-kind contribution for the site of the Organization's permanent facilities. Until occupancy of the permanent facilities occurred, the fair value of the sublease agreement could not be recorded due to certain conditions of the agreement. In May 2012, the Organization obtained a certificate of occupancy and recorded the receipt of a temporarily restricted contribution and land under lease asset of \$6,000,000. The asset will be amortized using the straight line method over the life of the sublease agreement and recorded in the statement of activities as in-kind rent expense. The in-kind rent expense recognized during the year ended December 31, 2012 was \$74,959.

Note 6. Contributions Receivable

Contributions receivable restricted to:

Time restricted

Advancing the Frontiers of Science

Use of long lived assets

Total contributions receivable

2012	2011
\$ 131,733	\$ -
1,539,215	1,415,568
-	828,432
<u>\$ 1,670,948</u>	<u>\$ 2,244,000</u>

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 6. Contributions Receivable (Continued)

Anticipated collections of contributions receivable are summarized as follows as of December 31, 2012 and 2011:

	2012	2011
Amounts expected to be collected in:		
Less than one year	\$ 510,050	\$ 972,752
One year to five years	1,317,000	1,433,551
More than five years	100,000	200,000
Subtotal	1,927,050	2,606,303
Less:		
Discount (4%)	(256,102)	(362,303)
Total contributions receivable	\$ 1,670,948	\$ 2,244,000

Note 7. Property, Plant and Equipment

Property, plant and equipment are summarized as follows for the years ended December 31, 2012 and 2011:

	2011 Ending Balance	Additions	Disposals	Transfers	2012 Ending Balance
Nondepreciable fixed assets					
Construction in process	\$ 49,056,931	\$ 15,403,100	\$ -	\$ 61,563,598	\$ 2,896,433
Artwork	-	32,995	-	-	32,995
Total nondepreciable fixed assets	49,056,931	15,436,095	-	61,563,598	2,929,428
Depreciable fixed assets					
Buildings	-	-	-	61,563,598	61,563,598
Land under lease	-	6,000,000	-	-	6,000,000
Leasehold improvements	1,753,564	-	1,753,564	-	-
Machinery and equipment	12,488,774	5,398,764	244,139	-	17,643,399
Furniture and fixtures	99,875	-	57,406	-	42,469
Software	490,030	31,763	-	-	521,793
Total depreciable fixed assets	14,832,243	11,430,527	2,055,109	61,563,598	85,771,259
Fixed assets, gross	63,889,174	26,866,622	2,055,109	-	88,700,687
Accumulated depreciation and amortization	3,092,990	3,778,801	385,516	-	6,486,275
Fixed assets, net	\$ 60,796,184	\$ 23,087,821	\$ 1,669,593	\$ -	\$ 82,214,412

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 7. Property, Plant and Equipment (Continued)

	2010 Ending Balance	Additions	Disposals	Transfers	2011 Ending Balance
Nondepreciable fixed assets					
Construction in process	\$ 12,461,714	\$ 36,595,217	\$ -	\$ -	\$ 49,056,931
Depreciable fixed assets					
Leasehold improvements	1,733,330	20,234	-	-	1,753,564
Machinery and equipment	6,461,775	6,035,717	8,718	-	12,488,774
Furniture and fixtures	98,376	1,499	-	-	99,875
Software	303,228	186,802	-	-	490,030
Total depreciable fixed assets	8,596,709	6,244,252	8,718	-	14,832,243
Fixed assets, gross	21,058,423	42,839,469	8,718	-	63,889,174
Accumulated depreciation and amortization	1,108,230	1,985,536	776	-	3,092,990
Fixed assets, net	\$ 19,950,193	\$ 40,853,933	\$ 7,942		\$ 60,796,184

Depreciation expense included in the statements of activities amounted to \$3,703,842 and \$1,985,536 for the years ended December 31, 2012 and December 31, 2011, respectively.

Note 8. Endowments

The Organization's endowment consists of two individual funds established for the future growth and development of the Organization. As required by accounting principles generally accepted in the United States of America, net assets associated with endowment funds, including funds designated by the Board of Trustees to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

Interpretation of Relevant Law

The Board of Trustees of the Organization have interpreted the current law, Uniform Management of Institutional Funds Act ("UMIFA"), as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the Organization classifies as permanently restricted net assets: (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations of the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulations are added to the fund. Endowment balances classified as temporarily restricted net assets consist solely of accumulated investment return that has yet to be expended in accordance with the terms of the donor agreement. Endowment balances classified as unrestricted net assets consist of accumulated investment return in which the donor has not restricted the Organization's use of such return or endowments where the Board, rather than the donor, decides to retain and invest in principal with only income to be expended.

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 8. Endowments (Continued)

Endowment net assets for the fiscal year ended December 31, 2012 are as follows:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, as of January 1, 2012	\$ (19,245)	\$ -	\$ 2,060,668	\$ 2,041,423
Contributions	-	-	553,297	553,297
Investment Return:				
Net realized and unrealized losses	-	54,344	-	54,344
Interest and dividend income	-	14,334	-	14,334
	-	68,678	-	68,678
Refund of loss to unrestricted	19,245	(19,245)	-	-
Bad debt on contributions receivable	-	-	(6,000)	(6,000)
Endowment net assets, as of December 31, 2012	\$ -	\$ 49,433	\$ 2,607,965	\$ 2,657,398

Endowment net assets for the fiscal year ended December 31, 2011 was as follows:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, as of January 1, 2011	\$ -	\$ -	\$ -	\$ -
Contributions	-	-	1,154,999	1,154,999
Investment Return:				
Net realized and unrealized losses	-	(22,240)	-	(22,240)
Interest and dividend income	-	2,995	-	2,995
	-	(19,245)	-	(19,245)
Change in donor restriction	-	-	905,669	905,669
Excess loss to unrestricted	(19,245)	19,245	-	-
Endowment net assets, as of December 31, 2011	\$ (19,245)	\$ -	\$ 2,060,668	\$ 2,041,423

Endowment Funds with Deficiencies

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the level that the donor or UMIFA requires the Organization to retain as a fund of perpetual duration. In accordance with GAAP, deficiencies of this nature are reported in unrestricted net assets. The deficiency in the donor-restricted endowment funds at December 31, 2011 was \$19,245. The deficiency in the donor-restricted endowment funds at December 31, 2011 resulted from unusually unfavorable market fluctuations caused by the downturn in the economy as a whole. The deficiency in the donor-restricted endowment funds was fully restored as of December 31, 2012.

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 8. Endowments (Continued)

Return Objectives and Risk Parameters

The Organization has adopted investment and spending policies for endowment assets that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain the purchasing power of the endowment assets. Endowment assets include those assets of donor-restricted funds that the Organization must hold in perpetuity or for a donor-specified period(s) as well as board-designated funds. Under this policy, as approved by the Board of Trustees, the endowment assets are invested in a manner outlined in the investment policy adopted by the Board of Trustees. This investment policy's purpose is to provide guidance to the Investment Managers regarding the Organization's objectives and goals with regard to the endowment investing. Specifically it outlines the risk tolerance areas of the Organization as well as defining the limitations in the portfolio of investments. The Organization expects its endowment funds, over time to provide an average rate of return that permits a predictable and sustainable spending rate of the average market value of endowment assets by achieving annual growth in value at a rate equal to the sum of the annual spending rate and the annual rate of inflation.

Strategies Employed for Achieving Objectives

To satisfy its long-term rate-of-return objectives, the Organization relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The Organization targets a diversified asset allocation to achieve its long-term return objectives within prudent risk constraints.

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 9. Temporarily Restricted Net Assets and Net Assets Released from Restrictions

The temporarily restricted net assets of the Organization related to use of facility are a result of contributions and other inflows of assets whose use by the Organization is limited by donor-imposed stipulations that were fulfilled upon the completion of the construction of the Organization's permanent research and teaching facility on the Jupiter campus of FAU. The temporarily restricted net assets of the Organization related to the use of facility is a result of the agreement with FAU previously discussed in Note 5.

Changes in temporarily restricted net assets are summarized as follows for the years ended December 31, 2012 and 2011.

Nature of Restriction	2012				
	Beginning Balance	Additions	Investment Income, net	Satisfaction of Restrictions	Ending Balance
Use of facility	\$ 828,432	\$ -	\$ -	\$ (828,432)	\$ -
Land under lease	-	6,000,000	-	(74,959)	5,925,041
Timing	-	201,733	-	(70,000)	131,733
Advancement	44,002	38,068	68,678	(42,472)	108,276
	<u>\$ 872,434</u>	<u>\$ 6,239,801</u>	<u>\$ 68,678</u>	<u>\$ (1,015,863)</u>	<u>\$ 6,166,050</u>

Nature of Restriction	2011				
	Beginning Balance	Additions	Reclassifications and Investment Loss, net	Satisfaction of Restrictions	Ending Balance
Use of facility	\$ 1,345,541	\$ -	\$ -	\$ (517,109)	\$ 828,432
Advancement	915,669	39,250	(895,669)	(15,248)	44,002
	<u>\$ 2,261,210</u>	<u>\$ 39,250</u>	<u>\$ (895,669)</u>	<u>\$ (532,357)</u>	<u>\$ 872,434</u>

Note 10. Permanently Restricted Net Assets

Income from the following principal balance of permanently restricted net assets is available to support the Organization's programs:

	2012	2011
Friends and Frontiers Campaigns	<u>\$ 2,607,965</u>	<u>\$ 2,060,668</u>

Max Planck Florida Corporation and Affiliate

Notes to Consolidated Financial Statements

Note 11. Contingency

Grants require the fulfillment of certain conditions as set forth in the grant agreement. Material failure to comply with the terms of the grant could result in the return of the funds to grantors. Although this is a possibility, management deems the likelihood of a material noncompliance remote.

Note 12. Foundation Contribution Agreement

On October 1, 2010, the Corporation entered into a financing agreement with the Foundation whereby the Corporation shall make a contribution to the Foundation in the amount of \$1,890,000 due in four equal semi-annual installments. The amount of the contribution may be reduced, at any time, at the discretion of the Corporation. The agreement also states the Chairman of the Board of Trustees of the Corporation shall be authorized to make one or more additional contributions to the Foundation in the 2011-12 fiscal year, at his or her sole discretion, in an amount not to exceed \$500,000.

During 2012 and 2011, the Corporation had contributed \$945,000 and \$472,000 to the Foundation, respectively, which is eliminated upon consolidation of the statements of activities. As of December 31, 2012, all payments due under the Contribution Agreement have been made to the Foundation.

Note 13. Society Future Funding

On December 5, 2012, the Organization and the Max Planck Society of Germany (the Society) announced an expected funding agreement where the Society will provide €32 million over 4 years to the Organization. As of December 31, 2012, the promise to give, and a contract agreement, had not been received in a form where recognition would be appropriate. The expected funding agreement calls for annual funding amounts of €8 million (approximately \$10,400,000 at current exchange rates) from 2014 through 2017.



McGladrey

**Independent Auditor's Report
on The Supplementary Information**

To the Board of Trustees
Max Planck Florida Corporation
Jupiter, Florida

We have audited the consolidated financial statements of the Max Planck Florida Corporation and Affiliate as of and for the year ended December 31, 2012, and have issued our report thereon, dated April 22, 2013, which contained an unmodified opinion on those financial statements (see page 1 and 2). Our audits were performed for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying supplementary information is presented for purposes of additional analysis and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audits of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

McGladrey LLP

West Palm Beach, Florida
April 22, 2013

Max Planck Florida Corporation and Affiliate

**Consolidating Statement of Financial Position
December 31, 2012**

Assets	MPF Corporation	MPF Foundation	Eliminating Entries	Consolidated
Current Assets				
Cash	\$ 1,109,451	\$ 753,894	\$ -	\$ 1,863,345
Investments	26,726,547	1,007,458	-	27,734,005
Grants receivable	9,095,243	-	-	9,095,243
Contributions receivable, net	-	1,670,948	-	1,670,948
Prepaid expenses and other current assets	333,102	11,302	-	344,404
Due from related party	115,610	-	(115,610)	-
Accrued interest receivable	3,549,087	-	-	3,549,087
Property and equipment, net	82,184,703	29,709	-	82,214,412
Total assets	\$ 123,113,743	\$ 3,473,311	\$ (115,610)	\$ 126,471,444
Liabilities and Net Assets				
Current Liabilities				
Accounts payable and accrued expenses	\$ 1,282,772	\$ 21,807	\$ -	\$ 1,304,579
Retainage payable	-	-	-	-
Deferred grant income	222,216	-	-	222,216
Due to related party	-	115,610	(115,610)	-
Total current liabilities	1,504,988	137,417	(115,610)	1,526,795
Contingency				
Net Assets				
Unrestricted	115,669,469	502,165	-	116,171,634
Temporarily restricted	5,939,286	225,764	-	6,165,050
Permanently restricted	-	2,607,965	-	2,607,965
Total net assets	121,608,755	3,335,894	-	124,944,649
Total liabilities and net assets	\$ 123,113,743	\$ 3,473,311	\$ (115,610)	\$ 126,471,444

Max Planck Florida Corporation and Affiliate

**Consolidating Statement of Activities
Year Ended December 31, 2012**

	MPF Corporation	MPF Foundation	Eliminating Entries	Consolidated
Revenue and other support:				
State grant	\$ -	\$ -	\$ -	\$ -
County grant	14,417,001	-	-	14,417,001
Federal grants	806,086	-	-	806,086
Contributions	6,059,428	1,814,591	(945,000)	6,929,019
Instruction	61,877	-	-	61,877
Investment income	1,371,274	69,076	-	1,440,350
Net assets released from restrictions	-	-	-	-
Total revenue and other support	22,715,666	1,883,667	(945,000)	23,654,333
Expenses:				
Research	11,648,441	-	-	11,648,441
Instruction	469,003	-	-	469,003
Management and general	8,247,427	694,797	-	8,942,224
Contributions to Foundation	945,000	-	(945,000)	-
Fund raising	511,811	238,660	-	750,471
Total expenses	21,821,682	933,457	(945,000)	21,810,139
Changes in net assets before special item	893,984	950,210	-	1,844,194
Special item - Lease termination expenses	2,614,160	-	-	2,614,160
Changes in net assets	(1,720,176)	950,210	-	(769,966)
Net assets, beginning	123,328,931	2,385,684	-	125,714,615
Net assets, ending	\$ 121,608,755	\$ 3,335,894	\$ -	\$ 124,944,649

Max Planck Florida Corporation and Affiliate

**Consolidating Statement of Cash Flows
Year Ended December 31, 2012**

	MPF Corporation	MPF Foundation	Eliminating Entries	Total
Cash Flows From Operating Activities				
Change in net assets	\$ (1,720,176)	\$ 950,210	\$ -	\$ (769,966)
Adjustments to reconcile change in net assets to net cash provided by (used in) operating activities:				
Depreciation and amortization	3,771,447	7,354	-	3,778,801
Loss on sale of property and equipment	128,469	-	-	128,469
Abandonment of leasehold improvements	1,510,881	-	-	1,510,881
In-kind contributions	(6,000,000)	-	-	(6,000,000)
Contributions restricted	-	(715,700)	-	(715,700)
Discount on promises to give	-	(18,330)	-	(18,330)
Donation of artwork	-	(15,000)	-	(15,000)
Unrealized and realized gains on investments	(178,880)	(54,344)	-	(233,224)
(Increase) decrease in:				
Grants receivable	(7,063,764)	-	-	(7,063,764)
Contributions receivable	828,432	(255,380)	-	573,052
Prepaid expenses and other current assets	389,827	10,259	-	399,886
Accrued interest receivable	176,507	-	-	176,507
Due from related parties	(115,610)	100,388	15,222	-
Increase (decrease) in:				
Accounts payable and accrued expenses	(2,870,853)	15,037	-	(2,855,816)
Deferred income	194,248	-	-	194,248
Due to related parties	(100,388)	115,610	(15,222)	-
Net cash provided by (used in) operating activities	(11,050,050)	140,104	-	(10,909,946)
Cash Flows From Investing Activities				
Purchase and construction of property and equipment	(24,209,621)	-	-	(24,209,621)
Proceeds on sale of property and equipment	30,434	-	-	30,434
Purchase of investments	(76,014,960)	(865,234)	-	(76,880,194)
Sales of investments	111,917,028	437,976	-	112,355,003
Net cash used in investing activities	11,722,881	(427,258)	-	11,295,622
Cash Flows From Financing Activities				
Contributions restricted	-	715,700	-	715,700
Discount on promises to give	-	18,330	-	18,330
Net cash provided by financing activities	-	734,030	-	734,030
Net increase in cash	672,831	446,875	-	1,119,706
Cash:				
Beginning	436,620	307,019	-	743,639
Ending	\$ 1,109,451	\$ 753,894	\$ -	\$ 1,863,345
Supplemental Disclosures of Noncash Investing and Financing Activities				
Purchases and construction of property and equipment in accounts payable	\$ 387,151	\$ -	\$ -	\$ 387,151
Retainage payable	\$ -	\$ -	\$ -	\$ -

Max Planck Florida Corporation and Affiliate

**Schedule of Expenditures of Federal Awards and State Financial Assistance
Year Ended December 31, 2012**

Federal Grantor/Pass-Through Grantor/Program Title	CFDA Number	Contract Number	Expenditures
Research and Development Cluster			
U.S. Department of Health and Human Services			
National Institutes of Health			
Direct Programs			
Vision Research	93.867	1F32EY022001-01	\$ 33,502
Vision Research	93.867	7R01EY011488-16	194,704
Vision Research	93.867	5R01EY006821-26	75,990
Vision Research	93.867	7R01EY006821-25	256,468
Total U.S. Department of Health and Human Services			<u>560,664</u>
Total Research and Development Cluster			<u>560,664</u>
Total expenditures of federal awards			<u>\$ 560,664</u>

State Grantor/Pass-Through Grantor/Project Title	CSFA Number	Contract Number	Expenditures
Office of Tourism, Trade, and Economic Development			
Innovation Incentive Fund	40.017		<u>\$ 25,543,979</u>
Total expenditures of state financial assistance			<u>\$ 25,543,979</u>

See Notes to Schedule of Expenditures of Federal Awards and State Financial Assistance

Max Planck Florida Corporation and Affiliate

Notes to Schedule of Expenditures of Federal Awards and State Financial Assistance

Note 1. Basis of Presentation

The accompanying Schedule of Expenditures of Federal Awards and State Financial Assistance (the "Schedule") presents the activity of all federal awards and state projects of the Organization for the year ended December 31, 2012. The information in this Schedule is presented in accordance with the requirements of OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations* and Chapter 10.650, *Rules of the Auditor General of the State of Florida*. Because the schedule presents only a selected portion of the operations of the Organization, it is not intended to and does not present the consolidated financial position, changes in net assets or cash flows of the Organization.

Note 2. Summary of Significant Accounting Policies

Expenditures reported in the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations* and Chapter 10.650, *Rules of the Auditor General of the State of Florida*, wherein certain types of expenditures are not allowable or are limited as to reimbursement.



**Independent Auditor's Report
on Internal Control Over Financial Reporting
and on Compliance and Other Matters Based on an
Audit of Financial Statements Performed in Accordance
With Government Auditing Standards**

To the Board of Trustees
Max Planck Florida Corporation
Jupiter, Florida

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of the Max Planck Florida Corporation and Affiliate (the "Organization"), as of and for the year ended December 31, 2012, and the related notes to the consolidated financial statements, which collectively comprise the Organization's basic financial statements, and have issued our report thereon dated April 22, 2013.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Organization's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control. Accordingly, we do not express an opinion on the effectiveness of the Organization's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Organization's consolidated financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

McGladrey LLP

West Palm Beach, Florida
April 22, 2013



**Independent Auditor's Report
on Compliance With Requirements That Could Have
a Direct and Material Effect on Each Major Federal Program
and State Project and on Internal Control Over Compliance in
Accordance With OMB Circular A-133 and Chapter 10.650,
*Rules of the Auditor General of the State of Florida***

To the Board of Trustees
Max Planck Florida Corporation
Jupiter, Florida

Report on Compliance for Each Major Federal Program

We have audited Max Planck Florida Corporation and Affiliate (the "Organization")'s compliance of the with the types of compliance requirements described in the *OMB Circular A-133 Compliance Supplement* and the requirements described in the Executive Office of the Governor's State Projects, Compliance Supplement that could have a direct and material effect on the Organization's major federal program and the major state project for the year ended December 31, 2012. The Organization's major federal program and major state project are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with the requirements of laws, regulations, contracts, and grants applicable to its federal programs.

Auditor's Responsibility

Our responsibility is to express an opinion on compliance for the Organization's major federal program and major state project based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations* and Chapter 10.650, *Rules of the Auditor General of the State of Florida*. Those standards, OMB Circular A-133, and Chapter 10.650 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program or major state project occurred. An audit includes examining, on a test basis, evidence about the Organization's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Organization's compliance.

Opinion on Each Major Federal Program and State Project

In our opinion, the Organization complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on its major federal program and major state project for the year ended December 31, 2012.

Report on Internal Control Over Compliance

Management of the Organization is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Organization's internal control over compliance with the types of requirements that could have a direct and material effect on its major federal program and its major state project to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for its major federal program and major state project and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Organization's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program or state project on a timely basis. *A material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program or state project that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of OMB Circular A-133 and Chapter 10.650. Accordingly, this report is not suitable for any other purpose.

McGladrey LLP

West Palm Beach, Florida
April 22, 2013

Max Planck Florida Corporation and Affiliate

**Schedule of Findings and Questioned Costs
Year Ended December 31, 2012**

I. Summary of Independent Auditor's Results

Financial Statements

A. Type of auditor's report issued:

Unqualified Opinion

B. Internal Controls over financial reporting:

-	Material weakness(es) identified?	<u> </u> Yes	<u> X </u> No
-	Significant deficiency(ies) identified that are not considered to be material weaknesses?	<u> </u> Yes	<u> X </u> No

C. Noncompliance material to financial statements noted?

 Yes X No

Federal Awards

D. Type of auditor's report issued on compliance for major federal programs:

Unqualified Opinion

E. Internal control over major federal programs:

-	Material weakness(es) identified?	<u> </u> Yes	<u> X </u> No
-	Significant deficiency(ies) identified that are not considered to be material weaknesses?	<u> </u> Yes	<u> X </u> No

F. Any audit findings disclosed that are required to
be reported in accordance with Section 510(a)
of Circular A-133?

 Yes X No

G. Identification of major federal programs:

CFDA Numbers

various

Name of Federal Program

Research and Development Cluster

H. Dollar threshold used to distinguish between type A and type B program:

\$300,000

I. Auditee qualified as a low-risk auditee?

 Yes X No

(Continued)

Max Planck Florida Corporation and Affiliate

Schedule of Findings and Questioned Costs (Continued)
Year Ended December 31, 2012

State Financial Assistance

J. Type of auditor's report issued on compliance for major state projects:

Unqualified Opinion

K. Internal control over major state projects:

- Material weakness(es) identified?
- Significant deficiency (ies) identified
that are not considered to be
material weaknesses?

_____ Yes X No

_____ Yes X No

L. Any audit findings disclosed that are required to
be reported in accordance with Chapter 10.650

Rules of the Auditor General of the State of Florida?

_____ Yes X No

M. Identification of major state projects:

CSFA Numbers

Name of State Projects

40.017

Innovation Incentive Program

N. Dollar threshold used to distinguish between type A and type B program:

\$766,319

Max Planck Florida Corporation and Affiliate

Schedule of Findings and Questioned Costs (Continued)
Year Ended December 31, 2012

II. Financial Statement Findings

None noted

III. State Financial Assistance Findings and Questioned Costs

None noted

IV. Management Letter

A separate management letter was issued.

Max Planck Florida Corporation and Affiliate

**Summary of Prior Year Audit Findings
Year Ended December 31, 2012**

None reported.

Max Planck Florida Institute for Neuroscience
Statement of Activities
2008 - 2013

<u>Statement of Activities</u>	<u>2008</u> <u>Actual</u>	<u>2009</u> <u>Actual</u>	<u>2010</u> <u>Actual</u>	<u>2011</u> <u>Actual</u>	<u>2012</u> <u>Forecasted</u>	<u>2012</u> <u>Budget</u>	<u>2013</u> <u>Budget</u>
Revenue, gains & other support:							
State Grant	\$ 30,000,000	\$ -	\$ 30,000,000	\$ 34,090,000	\$ -	\$ -	\$ -
County Grant	131,983	2,171,753	11,749,187	35,630,076	14,417,001	648,293	4,095,000
Federal Grants	-	-	-	103,326	891,287	350,000	1,777,688
Contributions	-	2,994,235	190,980	1,194,999	833,450	100,000	1,330,000
Investment Income	1,417,522	1,604,538	1,275,824	262,664	1,203,735	210,000	550,000
Other Income	-	-	20,590	87,339	20,000	40,000	30,000
Cooperation Agreements	-	-	-	-	-	-	470,000
Core Facilities Recharges	-	-	-	19,482	75,000	301,056	300,000
Total Revenues, Gains & Other Support	31,549,505	6,770,526	43,236,581	71,387,886	17,440,473	1,649,349	8,552,688
Expenses and losses:							
Research	-	123,969	3,020,726	5,035,809	6,658,852	9,321,309	9,976,537
Scientific Support	-	-	1,435,494	2,634,599	5,640,597	5,898,475	5,644,912
Instruction	-	-	79,741	349,440	-	-	-
Management & General	957,866	2,879,358	4,675,231	5,406,514	9,158,218	8,134,673	6,706,236
Development	-	134,346	275,125	221,665	1,120,239	1,253,508	1,556,340
Total Expenses and Losses	957,866	3,137,673	9,486,317	13,648,027	22,577,906	24,607,964	23,884,025
Changes in Net Assets	30,591,639	3,632,853	33,750,264	57,739,859	(5,137,433)	(22,958,615)	(15,331,337)
Beginning Net Assets	-	30,591,639	34,224,492	67,974,756	125,714,615	127,239,497	120,577,182
Ending Net Assets	\$ 30,591,639	\$ 34,224,492	\$ 67,974,756	\$ 125,714,615	\$ 120,577,182	\$ 104,280,882	\$ 105,245,845

Max Planck Florida Institute for Neuroscience
Statement of Financial Position
2008 - 2013

	2008	2009	2010	2011	2012	2012	2013
	Actual	Actual	Actual	Actual	Budget	Forecasted	Budget
Assets							
Cash	\$ 29,318,387	\$ 25,893,548	\$ 952,590	\$ 743,639	\$ 200,000	\$ 625,000	\$ 400,000
Investments	-	-	12,568,829	63,313,292	10,094,512	30,491,798	17,370,985
Grants receivable	131,983	227,965	31,814,863	2,031,479	-	9,042,000	375,000
Contributions receivable, net	-	2,449,034	1,969,210	2,244,000	-	1,664,137	1,889,268
Prepaid expenses and other current assets	1,903	42,157	591,059	744,290	100,000	200,000	200,000
Due from MPF Foundation	-	-	-	-	100,000	-	-
Accrued interest receivable	1,282,093	2,656,640	3,272,486	3,387,892	3,401,293	3,387,892	3,387,892
Property and equipment, net	39,906	4,851,774	19,950,193	60,796,184	92,385,077	76,706,355	83,127,700
Total assets	\$ 30,774,272	\$ 36,121,118	\$ 71,119,230	\$ 133,260,776	\$ 106,280,882	\$ 122,117,182	\$ 106,750,845
Liabilities and Net Assets							
Accounts payable and accrued expenses	\$ 182,633	\$ 1,896,626	\$ 2,826,564	\$ 4,160,195	\$ 2,000,000	\$ 1,515,000	\$ 1,505,000
Retainage payable	-	-	317,910	3,357,998	-	-	-
Deferred grant revenue	-	-	-	27,968	-	25,000	-
Total liabilities	182,633	1,896,626	3,144,474	7,546,161	2,000,000	1,540,000	1,505,000
Net Assets							
Unrestricted	30,591,639	31,675,458	65,713,546	122,781,513	104,280,882	117,486,324	101,457,287
Temporarily restricted	-	2,549,034	2,261,210	872,434	-	165,000	200,000
Permanently restricted	-	-	-	2,060,668	-	2,925,858	3,588,558
Total net assets	30,591,639	34,224,492	67,974,756	125,714,615	104,280,882	120,577,182	105,245,845
Total liabilities and net assets	\$ 30,774,272	\$ 36,121,118	\$ 71,119,230	\$ 133,260,776	\$ 106,280,882	\$ 122,117,182	\$ 106,750,845

Max Planck Florida Institute for Neuroscience
Statement of Cash Flows
2008 - 2013

	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Budget	2012 Forecasted	2013 Budget
Cash Flows From Operating Activities:							
Change in net assets:	\$ 30,591,639	\$ 3,632,853	\$ 33,750,264	\$ 57,739,859	\$ (22,958,615)	\$ (5,137,433)	\$ (15,331,337)
Adjustments to reconcile change in net assets to net cash provided by (used in) operating activities:							
Depreciation and amortization	-	67,935	1,040,295	1,985,536	5,564,824	4,190,292	7,466,132
Loss on sale of property and equipment	-	-	-	899	-	-	-
In-Kind contributions	-	-	478,804	517,109	-	828,432	-
Contributions restricted for advancement	-	-	(200,000)	(1,180,000)	-	-	-
Contributions restricted for purchases of property and equipment	-	(724,689)	-	-	-	(700,000)	(850,000)
Contributions restricted for use of facilities	-	(1,824,345)	-	-	-	-	-
Discount on promises to give	-	-	9,020	40,101	-	35,000	42,700
Unrealized and realized gains on investments	-	-	(635,681)	924,382	-	-	-
(Increase) decrease in:							
Grants receivable	(131,983)	(95,982)	(31,586,898)	29,783,384	-	(7,010,521)	8,667,000
Contributions receivable	-	-	1,020	(791,899)	-	(1,420,464)	(187,300)
Prepaid expenses and other assets	(1,903)	(40,254)	(548,902)	(153,231)	-	544,290	-
Accrued interest receivable	(1,282,093)	(1,374,547)	(615,846)	(115,406)	(12,400)	-	-
Increase (decrease) in:							
Accounts payable and accrued expenses	147,496	909,877	(1,252,605)	65,786	(4,200,000)	(6,003,193)	10,000
Deferred grant revenue	-	-	-	27,968	-	2,968	-
Net cash provided by (used in) operating activities	29,323,156	550,848	439,471	88,844,488	(21,606,191)	(14,670,629)	(182,805)
Cash Flows From Investing Activities:							
Purchases and construction of property and equipment	(4,769)	(4,075,687)	(13,638,261)	(38,531,536)	(36,201,683)	(20,100,463)	(13,887,477)
Proceed from sale of property and equipment	-	-	-	7,043	57,907,874	-	-
Purchase of investments	-	-	(8,998,920)	(57,445,232)	-	-	-
Sales of investments	-	-	22,396,190	5,776,387	-	33,987,453	13,037,981
Net cash used in investing activities	(4,769)	(4,075,687)	(240,991)	(90,193,338)	21,706,191	13,886,990	(849,496)
Cash Flows From Financing Activities:							
Contributions restricted for advancement	-	100,000	200,000	1,180,000	-	700,000	850,000
Discount on promises to give	-	-	(9,020)	(40,101)	-	(35,000)	(42,700)
Net cash provided by (used in) financing activities	-	100,000	190,980	1,139,899	-	665,000	807,300
Net increase (decrease) in cash	29,318,387	(3,424,839)	389,460	(208,951)	100,000	(118,639)	(225,001)
Cash:							
Beginning	-	29,318,387	563,130	952,590	743,639	743,639	625,000
Ending	\$ 29,318,387	\$ 25,893,548	\$ 952,590	\$ 743,639	\$ 843,639	\$ 625,000	\$ 400,000

OTTED Summary – equipment reported 2009 – present

First Quarter – 2009

NONE

Second Quarter - 2009

Laboratory Machinery & Equipment:

Autoclave	\$ 12,000
Air Conditioning and Chilled Water Unit	\$ 8,000
Autowatering System	\$ 10,000
Cage Washer	\$ 20,000
Camera System	\$ 4,000

Second Quarter 2009 - Total

\$ 54,000

Third Quarter – 2009

Computer Equipment:

AS Double Blade Enclosure with disk array enclosure	\$ 39,237
Power Edge R610 x 2	\$ 10,061
Power Edge R900 x 4	\$ 134,992
Precision T5500 Workstations x 6	\$ 50,254
UPS Back-Up System	\$ 68,472

Laboratory Machinery & Equipment:

Stereotaxic Alignment Instrument	\$ 8,425
Digital Manipulator with Display Console	\$ 9,495
Automatic Microtome	\$ 11,583
Camera	\$ 5,338
Olympus Warning System	\$ 8,149
Condenser	\$ 6,375
Microscope	\$ 6,375
Refrigerator	\$ 6,380

OTTED Summary – equipment reported 2009 – present

Microbalance Unit	\$ 15,919
Biological Safety Cabinet (Fume Hood)	\$ 7,255
Biological Safety Cabinet (Fume Hood)	\$ 8,586
Freezer	\$ 5,251
Mobile Animal Transfer Station x2	\$ 14,736
Confocal Microscope	\$ 542,957
<u>Laboratory Software and Licenses:</u>	
NeuroLucida Software	\$ 19,851
Surveyor Software	\$ 8,162
Visage Imaging Software	\$ 19,080
Scientific Volume Imaging Software	\$ 77,935

Third Quarter 2009 - Total**\$ 1,084,868****Fourth Quarter - 2009**Computer Equipment:

LAN CONTROLLER X2	\$ 4,770
Access Points	\$ 9,840
Network Hardware	\$ 7,924
Storage Area Network	\$ 72,501
Server	\$ 19,691
Server package	\$ 95,092
Computer Switching Package x2	\$ 17,676

Laboratory Machinery & Equipment:

Lab Freezers x2	\$ 1,190
Vapor Pressure Osmometer	\$ 6,795
Instruments Pipette Puller	\$ 7,950

OTTED Summary -- equipment reported 2009 -- present

Video Conferencing System	\$ 9,666	
Eye Tracking Lab System	\$ 14,255	
Fisher Scientific Freezer	\$ 5,967	
Waste Management Disposal Unit	\$ 8,157	
Projector	\$ 5,976	
Filling Station	\$ 19,613	
Microscope Lens	\$ 6,281	
Amplifier	\$ 12,608	
Oscilloscopes	\$ 6,826	
Control Units	\$ 6,785	
Binocular Microscopes x4	\$ 31,230	
Aluminum Frame Workstations x2	\$ 39,043	
Manipulators x4	\$ 121,071	
Amplifiers x4	\$ 20,942	
Manipulators x2	\$ 32,013	
Signal Generators x2	\$ 55,497	
Microscope System	\$ 124,849	
	Fourth Quarter 2009 -- Total	\$ 764,208
	Total 2009	\$ 1,903,076

First Quarter 2010**Computer & AV Equipment:**

1 AV System	\$ 17,828
1 PowerEdge R710 Server	\$ 10,924
1 Power Vault MD 1000 Rack	\$ 8,872
1 Dell Precision T5500 Workstation	\$ 9,108

OTTED Summary -- equipment reported 2009 -- present

1 Computer Tape Back Up Library System \$ 50,976

1 Base, PHOBO Computer System \$ 5,207

Laboratory Machinery & Equipment:

2 Isolators \$ 12,910

1 Light Microscope \$ 108,339

1 Electrode Puller \$ 15,950

2 Mouse Rack Systems \$ 70,000

1 Horizontal Pipette Puller \$ 8,080

1 Microelectrode Amplifier \$ 63,746

2 Microelectrode Amplifiers + Software \$ 38,396

4 Olympus Microscopes \$ 147,410

3 Cage Systems \$ 61,138

1 Stereotaxic Micromanipulator & Stand \$ 5,800

1 Osmometer \$ 7,109

1 Olympus BX51 WI Microscope \$ 20,527

1 Leica MZ6 Microscope \$ 8,174

1 Portal System for two Optical Units \$ 42,812

First Quarter 2010 - Total \$ 713,306

Second Quarter -- 2010**Computer & AV Equipment:**

1 Dell Precision T5500 Workstation \$ 6,496

1 Dell PowerEdge M610 Blade Server \$ 5,542

Laboratory Machinery & Equipment:

1 H. Saur Micromanipulator \$ 7,095

1 Cambridge CED Power 1401 Electronic Lab \$ 14,815

OTTED Summary – equipment reported 2009 – present

1 Fisher Isotemp Ultra Low Temp Freezer	\$ 5,975
1 Rothacher Combi-Vet Anesthesia System	\$ 5,044
2 Rapp Opto Flash Lamp Systems	\$ 22,150
1 Olympus BX51 WIF Microscope	\$ 21,996
2 Micromanipulators - MP-285/R	\$ 15,067
1 Till Imaging System	\$ 29,347
1 Fisher MP 1387 Series A2 Tissue Culture Hood	\$ 7,994
1 Sutter P1000 MP Puller	\$ 7,266
1 Sutter Micro Manipulator MPC385 Kit	\$ 31,532
1 Hunt Optics C2741-62 Camera Controller	\$ 8,966
2 Duplex Work Benches w/digital displays	\$ 31,613

Second Quarter 2010 - Total**\$ 220,898****Third Quarter – 2010****Computer & Telephone/AV Equipment:**

1 Dell Precision T5500 Workstation	\$ 6,803
1 Zultys MX 250 Telephony PBX System	\$ 59,936

Laboratory Machinery & Equipment:

1 Westcor Vapro Vapor Pressure Osmometer	\$ 7,109
1 ML 880 PowerLab & Labchart Pro	\$ 15,700
1 Amega Scientific Centralized Temp System	\$ 14,051
1 Luigs & Neumann Remote Control System	\$ 9,122
2 Sigmann HR2 Slicers	\$ 12,480
2 Allentown Stainless Steel Cage Systems	\$ 12,518
1 Tecniplast 9CS54 Changing Station	\$ 8,144
1 Scionics PyRAT v2.0 Software	\$ 67,000

OTTED Summary – equipment reported 2009 – present

1 Micro Optics QICLICK Digital Camera System \$ 5,067

Third Quarter 2010 - Total \$ 217,930

Fourth Quarter – 2010

Computer & Telephone/AV Equipment:

1 PowerEdge 4322DS Server \$ 6,994

Laboratory Machinery & Equipment:

22 Custom Bosch Scientific Workstations \$ 36,930

3 Vibration Isolation Tables \$ 13,260

1 KOPF Stereotaxic Instrument \$ 5,770

Other Fixed Assets:

Office Furniture \$ 30,943

1 Peterbuilt Heavyduty Truck \$ 138,257

Fourth Quarter 2010 - Total \$ 232,154

Total 2010 \$ 1,384,288

Grand Total \$ 3,287,364

First Quarter - 2011

Computer & Telephone/AV Equipment

3 Dell Latitude E4310 Computers \$ 5,532

Greyson Technologies Antivirus Software \$ 14,894

Laboratory Machinery & Equipment:

1 VWR Centrifuge Bundle \$ 6,249

First Quarter 2011 – Total \$ 26,675

OTTED Summary – equipment reported 2009 – present

Second Quarter - 2011

Computer & Telephone/AV Equipment:

2 Mercury T104 computer workstations	\$ 6,600
1 Dell Blade Server Enclosure	\$ 45,235
Upgrade – Dallasstone Library Tape System	\$ 85,539

Laboratory Machinery & Equipment:

1 Labreview Pro Development System	\$ 5,105
1 Leica M220 F12 Microscope for Ophthalmology	\$ 16,739
1 Pantera Area Scan Camera	\$ 9,377
1 Nikon Water Dipping APO Objective Lens	\$ 5,054
1 UPS System for Zeiss LSM780	\$ 5,489
1 Nikon CF175 LWD Microscope Lens	\$ 5,060
1 Leica M80 Stereomicroscope System	\$ 6,059
1 Pulse Splitter – Reynard Corp	\$ 7,697
1 Allentown Ferret Caging System	\$ 6,550
Upgrade – Leica Microscope System #49	\$ 65,577

Second Quarter 2011 - Total

\$ 270,081

Third Quarter - 2011

Computer & Telephone/AV Equipment:

1 Netbackup 7.0 Software	\$ 97,229
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Laboratory Machinery & Equipment:

1 Spatial Light Modulator	\$ 5,055
1 Nikon CF175 LWD Lens	\$ 5,060
1 Monochrome Digital Camera	\$ 5,095
1 Upgrade HyD detector Leica Microscope	\$ 67,139

OTTED Summary – equipment reported 2009 – present

1 Inspira Ventilator	\$ 7,079
3 Sutter – Multimanipulator systems	\$ 29,823
1 Nanodrop 2000 Spectrophotometer	\$ 8,998
1 Pantera Area Scan Camera	\$ 9,230
1 Digidata 1440A Data Acquisition System	\$ 10,369
1 Olympus BX51 Microscope	\$ 10,745
1 Leica SM2010R Sliding Microtome	\$ 13,133
1 Nucleofector Core Unit	\$ 17,423
1 Axon Multiclamp Amplifier	\$ 24,891
1 Prairie Two-Photon Imaging Kit/Specimen Stage	\$ 90,784
1 Mai Tai Laser	\$ 121,376
1 Zeiss LSM 780 Confocal Microscope	\$ 583,060
1 Tecnai G2 Spirit BioTWIN Electron Microscope	\$ 609,500
Partial Payment – Ventilated Cage Rack System	\$ 494,506

Third Quarter 2011 - Total**\$ 2,110,495****Fourth Quarter - 2011****Computer & Telephone/AV Equipment:**

Isilon Q36000X Storage System	\$ 148,135
Juniper Network Infrastructure	\$ 842,475
SolidCAM Mill 5 Axis Software	\$ 11,480
SolarWinds Server Monitoring Software	\$ 16,000

Laboratory Machinery & Equipment:

Prototype Tree Shrew Cage System	\$ 7,511
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OTTED Summary – equipment reported 2009 – present

Stainless Steel Single Side Rack System	\$ 28,426	
IsoCage System	\$108,637	
QICLICK Camera	\$ 6,001	
IR CCD Camera – ½"	\$ 6,173	
Axon Axoporator 800A	\$ 6,744	
Robotic Micromanipulators – 2	\$ 15,010	
Kramer Fluorescence for Leica M80&M220	\$ 8,435	
Ventilated Cage Rack System	\$ 8,636	
Specimen Stage	\$ 10,150	
Pantera Area Scan Camera	\$ 10,603	
Digicare Lifewindow 6000 Monitor	\$ 11,435	
Multimanipulator Sys w/Zeiss Axio Examiner	\$ 11,640	
Square Wave Electroporator	\$ 15,175	
Leica M220 F12 for Ophthalmology Microscope	\$ 15,401	
Primate Eye Tracking Lab	\$ 15,555	
Olympus BX51WIF Microscope	\$ 17,401	
Multiclamp 700 B Systems - 2	\$ 46,155	
Axio Examiner Z1 Demo Kit	\$ 39,786	
TILL Polychrome V Monochromator Illumin. Sys.	\$ 93,713	
In Vivo Multiphoton Laser Scanner	\$ 97,383	
Custom Two-Photon Imaging system	\$163,080	
Leica EM UC7 - KMR3 Microscope system	\$396,232	
Fourth Quarter 2011 - Total		\$ 2,157,372
Total 2011		\$ 4,564,623
Grand Total		\$ 7,851,987

OTTED Summary – equipment reported 2009 – present

First Quarter - 2012

Laboratory Machinery & Equipment:

FluorChem E-System	\$ 24,644
Digicare Lifewindow 6000V	\$ 8,183
Stepone Plus 96 Well RT PCR System	\$ 29,190
Fixed Stage Microscope Axio Examiner	\$ 45,556
Model 692 Dual Ultra Precise Stereotaxic Instrument	\$ 8,908
20X Objective & DIC Slider	\$ 7,110

First Quarter 2012 - Total \$ 123,591

Second Quarter - 2012

Prairie Technologies Piezo Z-Axis Driver	\$ 13,725
2 Universal Presentation Racks	\$ 10,637
Clarus C Gas Generator	\$ 125,740
Freeze Fracture Etch Device	\$ 251,377
CO2 Incubator	\$ 5,869
Elevating downdraft/backdraft workstation	\$ 18,300
Lab Sterilizer – pit mounted	\$ 266,935
Ferret Cage System	\$ 7,824
Vacuulan Lab Vacuum Network	\$ 164,908
Mobile Animal Transfer Station	\$ 10,080

Second Quarter 2012 - Total \$ 875,395

OTTED Summary – equipment reported 2009 – present**Third Quarter - 2012**

CO2 Incubators (2)	\$ 15,608
Band Saw	\$ 17,895
MIRAO Electromagnetic Deformable Mirror & Software	\$ 42,433
Tecniplast Cage System	\$ 90,566
Narishige Intl. Microgrinder	\$ 5,130
Sutter MP-78 Controllers (4)	\$ 44,640
VWR SYM ULT Freezer	\$ 7,807
C-1000 Touch Cyclers (3)	\$ 16,850
Glassware Dryer	\$ 20,142
Hamamatsu Photosensor Modules (4)	\$ 34,653
Pelco Vacuum System	\$ 7,496
Custom ST-UT2 Double Table	\$ 18,068
Mai Tai HP TI & HP DS TI Lasers	\$ 204,488
Custom RS2000 Doubler Table Top System	\$ 36,897
Oscillators for Mai Tai	\$ 53,112
Weiler E30X750 Precision Lathe	\$ 129,093
TCSPC Imaging Modules	\$ 52,170
Electro Kinetic Transfection System	\$ 20,215
Sharp LMV-MP-2 Milling Machine	\$ 26,415
Tunnel Washer	\$ 329,636
Rack Washer	\$ 217,454
Watering System	\$ 101,018
Chameleon Ultra II Lasers (2)	\$ 240,000
Backdraft Grossing Workstation	\$ 17,304

OTTED Summary – equipment reported 2009 – present

Lifewindow Monitor	\$ 8,183	
Multi Manipulator Systems (2)	\$ 31,696	
Pipette Puller Systems (2)	\$ 14,782	
Nikon CFI- 75 LWD 16X Objective Lens (2)	\$ 10,083	
CCD QICLICK Cameras (3)	\$ 15,263	
4FT. Biological Tables (2)	\$ 15,170	
New Brunswick E24R Shakers (2)	\$ 17,152	
Eppendorf Centrifuge & Rotor	\$ 9,646	
Olympus BX51-W1 Microscopes (4)	\$121,773	
VWR Neg. 80 Freezer	\$ 10,374	
Helios Gene System	\$ 23,254	
Advantagenc Pro Bundle	\$ 7,115	
Cryostar NX70 – Cryostat	\$ 42,226	
VWR Ultra Low Temp Freezer	\$ 11,863	
Prairie Ultima – Uncaging Galvanometer upgrade	\$ 7,775	
Third Quarter 2012 - Total		\$ 2,095,445

Fourth Quarter - 2012

Vacuum Bedding Dispensing System (final payment)	\$ 156,634
Videomicroscope	\$ 8,055
Vibrotome - Leica Microsystems	\$ 13,898
6 - CO2 Incubators W/Regulators & Tanks - NuAire Inc.	\$ 30,460
Forma Cryo Tank & Racks	\$ 9,264
Ananti J-E Centrifuge	\$ 31,110
4 - Photosensor Modules w/ PMT Tube	\$ 34,652
Solidworks Software	\$ 5,538

OTTED Summary – equipment reported 2009 – present

IQ LAS 4010 Promo 5node - GE Healthcare	\$ 52,569
Vbrick Rich Media Studio Audio Visual Equipment	\$ 308,494
Isolon Network Infrastructure Upgrade	\$ 199,830
3 PCLAMP & 3 MUTICLAMP Systems	\$ 69,241
Olympus Fluorescence Illuminator	\$ 15,575
2 - C1000 Touch Cyclers	\$ 10,900
Olympus BX53 Microscope	\$ 51,736
Digicare Lifewindow System	\$ 7,993
Ventilator	\$ 6,974
Horizontal Saw	\$ 9,762
Bio Safety Cabinet	\$ 31,120
Leica M165 FC Microscope	\$ 37,391
Olympus CKX41 SF5 Microscope	\$ 12,553
KOPF Stereotaxic Instrument	\$ 6,495
Ultima IV in Vivo Laser Scanning Microscope	\$ 397,022
2 - Chameleon Ultra Lasers	\$ 240,000
Pantera Area Scan Camera	\$ 9,383
OPMI Pico/S100 Suspension System	\$ 22,586
Neurolucida Software	\$ 8,725
EVO Change Station	\$ 5,642
Dental Stereo Microscope	\$ 23,433
Leica Stereotaxic Instrument	\$ 5,938
Downdraft Workstation	\$ 18,125
Single Photon Counting System	\$ 53,683
5 - Focus Controllers	\$ 56,260

OTTED Summary – equipment reported 2009 – present

4 -302RM Drivers & EO Modulators	\$ 87,555
3 - Optical Table Systems	\$ 53,000
Freeze Fracture Etch Device final payment	\$ 27,931
ATT Booster Antenna	\$ 32,737
Dual Comp. Patch Clamp Amplifier System	\$ 20,475

Fourth Quarter 2012 - Total **\$ 2,172,739**

Total 2012 **\$ 5,267,170**

Grand Total **\$13,119,157**

2012 Write Offs

Autoclave	\$ 12,000
Air Conditioning and Chilled Water Unit	\$ 8,000
Autowatering System	\$ 10,000
Cage Washer	\$ 20,000
Camera System	\$ 4,000
UPS Back-Up System	\$ 68,472
Camera	\$ 5,338
Video Conferencing System	\$ 9,666
Projector	\$ 5,976
1 AV System	\$ 17,828
2 Mouse Rack Systems	\$ 70,000
Office Furniture	\$ 30,943

Total Write Offs **(\$ 262,223)**

Net Grand Total **\$12,856,934**



MAX PLANCK FLORIDA CORPORATION

ANNUAL SCIENTIFIC REPORT 2012

For Year Ended December 31st, 2012

Introduction

The 2012 Annual Scientific Report of Max Planck Florida Corporation serves to report on the scientific operations of the Max Planck Florida Institute for Neuroscience as pertinent to the Funding Agreement with the State of Florida, Executive Office of the Governor's Office of Tourism, Trade and Economic Development ("OTTED").

In 2012 the Max Planck Florida Institute for Neuroscience (MPFI) finally moved from the temporary location on the MacArthur Campus into its new 100,000-square-foot state-of-the-art research facility. The new building accommodates nearly 58,000 square feet of laboratory space with three research wings and guest labs for visiting scientists. Nine research groups are currently exploring the answers to the most fundamental questions about the mechanisms of the brain, which will ultimately provide the foundation for the development of new treatments for a broad range of brain disorders such as Parkinson's disease, Alzheimer's disease and many others.

After having completed the move over the summer of 2012, the Grand Opening Ceremony was celebrated on December 5th 2012 in the presence of Jeff Atwater, Chief Finance Officer of Florida, Cornelia Quennet-Thielen, German State Secretary of the Federal Ministry of Education and Research, Prof. Peter Gruss, Max Planck Society President, and Dr. David Fitzpatrick, the Max Planck Florida Institute Scientific Director and CEO. Furthermore, the Board of Palm Beach County Commission Chairman Steven Abrams, Jupiter Mayor Karen Golanka, Florida Atlantic University (FAU) President Dr. Mary Jane Saunders and Max Planck Florida Foundation Chairman George Elmore also participated in the opening ceremony.

At the event, representatives from Germany and the Max Planck Society jointly announced a substantial contribution of \$40 million to the Institute over the next four years to support additional scientific research.



Scientific Highlights 2012

Recruitment

With the recruitment of the third Scientific Director, Dr. Ryohei Yasuda (June 1, 2012) a fifth and sixth Group Leader, Dr. Hyungbae Kwon (July 1, 2012) and Dr. Hiroki Taniguchi (August 1, 2012) the institute is on track with regards to the stipulated recruiting of scientific staff for 2012. The initial Scientific Director, Dr. Bert Sakmann, relocated back to the MPI Neurobiologie in Martinsried, Germany, but continues to operate a Guest Lab in the Institute.

Ryohei Yasuda – Scientific Director

Prior to joining Max Planck Florida Institute (MPFI), Dr. Yasuda was an assistant professor in the Department of Neurobiology at Duke University. In this role, he led a research laboratory, which examined the molecular basis of synaptic plasticity. A biophysicist by training, Dr. Yasuda has made a number of significant discoveries, including groundbreaking work in developing molecular imaging technologies. Dr. Yasuda is a frequently requested speaker with an exceptional publication record.

Hyungbae Kwon – Research Group Leader

Dr. Kwon joined MPFI from the Department of Neurobiology at Harvard Medical School, where he served as a post-doctoral fellow in the laboratory of Dr. Bernardo Sabatini, a Howard Hughes Medical Institute investigator. Prior to working with Dr. Sabatini at Harvard Medical School, Dr. Kwon received his PhD in Dr. Pablo Castillo's lab at the Albert Einstein College of Medicine. He is the recipient of numerous honors and publishes in the most prestigious journals.

Hiroki Taniguchi – Research Group Leader

Dr. Taniguchi comes to the Institute from the Cold Spring Harbor Laboratory, where he was a research investigator in the lab of Dr. Z. Josh Huang. Prior to his position at Cold Spring Harbor Laboratory, Dr. Taniguchi received his PhD from the National Institute for Basic Biology in Japan and was a postdoctoral fellow in Dr. Peter Scheiffele's lab at Columbia. Recognition of Dr. Taniguchi's accomplishments includes fellowships from the Toyobo Biotechnology Foundation; the Riken Institute and the National Alliance for Research on Schizophrenia and Depression. He was recently awarded a PRESTO grant from the Japanese Government to pursue his studies on the development and function of neural circuits and also has an outstanding publication record.



Research Progress

Functional Architecture and Development of Cerebral Cortex

David Fitzpatrick, PhD – Scientific Director & Chief Executive Officer

Last year was a busy one for the Fitzpatrick lab, with a move into the new facility, recruitment of a new postdoctoral fellow, a new graduate student, and a new technician to complement the existing research team. Scientifically the team received new grant funding, published several papers and conference abstracts, and started a number of new collaborations.

Research in the Fitzpatrick lab is focused on the structure, function, and development of circuits in the cerebral cortex, the largest and most complex area of the brain whose function is critical for sensory perception, motor control and cognition. They use the visual cortex as a model system for addressing these issues.

One area of research is aimed at understanding how visual experience influences the early development of circuits in visual cortex. The vast majority of synapses in the cerebral cortex develop at a time in which experience can influence circuit formation, but the mechanisms responsible for experience-dependent development of cortical circuits remain poorly understood.

The Fitzpatrick lab has discovered that visual experience with the motion of objects during a narrow window of time early in development is critical for the development of the neural circuits that represent the direction of object motion. With the latest cutting-edge imaging technologies now available at the MPFI, they are able to literally watch the changes in the activity of neural circuits in visual cortex as animals learn to perceive the direction of a moving stimulus. They have discovered that there are dramatic changes in the patterns of neuronal activity in visual cortex that are responsible for learning to see motion, and are exploring which elements of the cortical circuit are responsible for these changes.

The most recent experiments indicate that there are rapid changes in the synapses associated with a specific class of neurons that employ the inhibitory neurotransmitter GABA, and we are probing the mechanisms that underlie these changes. The results of this work are relevant for understanding a variety of neurodevelopmental disorders (for example autism) that result from alterations in the normal mechanisms that mediate experience-dependent construction of cortical circuitry.

Another area of research is directed at elucidating the functional anatomy of synaptic connections in the cerebral cortex. The typical pyramidal neuron in the cerebral cortex receives between 5,000-12,000 synaptic contacts, but we are still far from (1) understanding the cortical 'wiring diagram' that specifies 'who is talking to whom' within this complex network of cortical connections, and (2) how these connections influence the overall pattern of activity in the circuit.



Dr. Fitzpatrick's team is using two approaches to define the functional wiring diagram of cortical circuits. The first employs state of the art optogenetic techniques that allow using patterns of light to selectively stimulate specific populations of neurons and measure the impact on other neurons. The second employs novel 2-photon imaging techniques in combination with genetically encoded sensors to determine the properties of individual synapses that innervate a given pyramidal cell. Together these approaches will provide novel insights into the fundamental principles that underlie cortical circuits, information that is essential for determining how neurological and psychiatric disorders alter cortical function.

Neuronal Signal Transduction

Ryohei Yasuda, PhD – Scientific Director & Research Group Leader

The Yasuda Lab started in June 2012 and while having been busy setting up labs and recruiting staff, the group has quickly become productive and is already successfully publishing data generated in the Institute.

One focus of the lab is to better understand activity-dependent changes in synaptic strength, which are believed to be the cellular basis of learning and memory. Cascades of biochemical reactions in postsynaptic compartments called dendritic spines trigger diverse forms of synaptic plasticity, which is the process of modifying neural transmission strength and important for memory formation. These cascades are mediated via signaling networks consisting of hundreds of species of proteins. They are studying the operational principles of such signaling networks by monitoring and manipulating signaling components with high spatiotemporal resolution. Based on the latest 2-photon fluorescence lifetime imaging techniques, the team is now in the process of developing and using highly sensitive biosensors that report signaling activity in single dendritic spines.

Previously, Dr. Yasuda's group has succeeded in monitoring activity of several signaling proteins in single spines undergoing synaptic plasticity, resulting in new insights into how the spatiotemporal dynamics of signaling are organized during synaptic plasticity. They are now scaling up this effort to develop many more sensors with sensitivity sufficient for imaging in single dendritic spines. In addition, they are developing photo-inducible protein activators and inhibitors, which allow to rapidly manipulate activity of signaling elements. Their recent development of a photo-inducible kinase inhibitor demonstrated, with the temporal resolution of seconds, the duration of kinase activity required for inducing synaptic plasticity. Finally, they will apply these techniques to studies in live animals in order to directly address the signaling mechanisms underlying animal learning and memory. By monitoring and manipulating activity of signaling components with high spatiotemporal resolution, Dr. Yasuda's goal is to disentangle this complicated signaling network so as to understand the functional mechanisms underlying synaptic plasticity, learning and memory.



Disorders of Neural Circuit Function

McLean Bolton, PhD – Research Group Leader

The Bolton Lab focuses on research understanding how brain circuitry is altered by genetic disorders. The brain is composed of hundreds of distinct types of neurons arranged in highly specialized areas with specific patterns of synaptic connections and unique intrinsic properties that determine their functional properties. In disorders such as Huntington's Disease, Parkinson's Disease, Alzheimer's Disease, Schizophrenia, Autism, and Epilepsy, synaptic connections and intrinsic properties of specific populations of neurons are altered leading to circuit imbalances and functional deficits. Research in the lab has employed the latest electrophysiological and imaging techniques to study alterations in circuit structure and function in mouse models of neurological and psychiatric disorders. Understanding these changes and the cellular and molecular mechanisms that underlie them holds the promise of new therapeutic advances.

In the course of 2012 the team has recruited two additional lab members, bringing the lab towards full capacity. They have established several collaborations within MPFI and with different research groups from Scripps and Duke University and are actively presenting their research to the general public. Dr. Bolton is very active in the MFPI Outreach Program, presented on several occasions to audiences in Palm Beach County and participated in the BRAIN BEE competition as referee.

Mechanisms of Synaptic Signaling and Computation

Jason Christie, PhD – Research Group Leader

Neurons are likely the most complex cell in the body with differentiated structures including a soma, dendrites, and axons. This structural diversification endows a specialized functionality within each of these neuronal elements. Dendrites receive synaptic responses (input) while axons transmit this synaptic information to release sites (output). Thus, in the simplest sense, neurons are computers: they process input to form useful output, in this way enabling the brain to transform and transmit information necessary to support basic functions such as perception and memory formation.

The Christie lab seeks to understand how this transformation of input to output occurs in individual neurons. Initially, they are focusing on the role of axons in this process. In the standard perception of neuron physiology, axons transfer excitatory signals from the cell body to distal release sites in the form of action potentials (APs), a stereotyped, invariant pulse that ensures a reliable trigger for neurotransmission. Contrary to this rather simplistic notion, the group's recent results reveal a more nuanced and dynamic role for AP signaling in axons - and suggests that axons, like dendrites, may play a role in the transformation of information.

The breakthrough in the lab has been the development of new imaging technology that allows the direct observation of AP signaling in axons. Using these newly developed imaging methods, Dr. Christie finds that the axonal AP is far from being invariant, rather it is (1) determined in a highly



localized manner, (2) is subject to alteration depending on location and preceding activity, and (3) these properties may be an important element influencing synaptic transmission. Ongoing work will help resolve how axons utilize these properties in the transformation of input to output.

This research is pivotal for our basic understanding of how neuronal signal transmission occurs in the healthy brain, and may have a considerable impact on our further understanding of learning and memory formation – which is obviously a key element for the development of new treatments for many neurodegenerative diseases.

Cellular Basis of Neural Circuit Plasticity

Hyungbae Kwon, PhD – Research Group Leader

The group of Hyungbae Kwon joined the MPFI in July 2012 and so far has recruited a postdoc, a graduate student, and a technician providing for a balanced and productive start-up team. The lab focuses on understanding molecular and cellular mechanisms of experience-dependent neural circuit modification using a mouse model. The research uses cutting-edge imaging/physiology techniques such as two-photon imaging and photolysis of neurotransmitters at the level of single synapses to define molecular and physiological mechanisms in synapse/circuit development.

At his previous position at Harvard Medical School Dr. Kwon succeeded for the first time in imaging the moment of new synapse formation in real time - making it now possible to understand mechanisms by which two neurons are connected each other. In addition, he found that this fundamental process is perturbed in a mouse model of autism spectrum disorders, suggesting imbalanced connections among neurons may underlie various psychiatric disorders such as autism.

As an independent Research Group leader at MPFI, Dr. Kwon continues to immerse himself in the field of experience-dependent neuronal regulation and human neuropsychiatric disorders. He recently developed novel innovative laser-based optical technologies to probe synaptic properties and circuit plasticity in a brain in a healthy and normal behaving animal. This technology is very powerful and cutting edge as it allows imaging and manipulating functional neuronal connections at a single neuron or synapse level, something so far impossible to achieve. With the possibility to now analyze each individual neuron's behaviors within a given brain circuit, we can now understand what the basic elements of feature detection are.

This new level of resolution in brain research will allow defining the basis of neural circuit organizing principles *in vivo* and opens entirely new avenues for developing treatments for a number of the most devastating human brain disorders.



Cellular Organization of Cortical Circuit Function

James Schummers, PhD – Research Group Leader

The cerebral cortex is the outer shell of the brain, which is the seat of sensation, movement, cognition and language. The Cellular Basis of Cortical Circuit Function lab is focused on the study of how the circuit of cells in the visual part of the cerebral cortex function to enable vision. Dr. Schummers' team studies the activity of both the neurons and the astrocytes (non-neuronal cells) in the visual cortex. These experiments are accomplished by using state-of-the-art scanning laser microscopes to take pictures of fluorescently cells inside the living brains of laboratory animals. The aim is to gain a detailed knowledge of how the brain circuits represent visual information to generate vision, something that electronic circuits (computers) are not yet able to do. The group hopes that the understanding gained from these studies in the visual cortex will provide powerful insight into the general principles used in other cortical areas involved in cognition, language and auditory data processing.

In 2012, the lab went through a period of tremendous growth, with the hiring of a lab manager/research technician (Palm Beach County resident, and FAU graduate), and two internationally trained postdocs. One postdoc is studying the functional roles of astrocytes in visual cortex, and the other is studying the dynamics of neuron responses to complex natural movies. In addition, Dr. Schummers mentored a high-school student from Suncoast High School as part of the MPFI summer internship program. His project was to develop a new computer interface to allow the user to collect and analyze camera images of brain activity. An intern from FAU will be continuing to work in the lab over the next year.

One of the main activities in the lab in 2012 was to devise novel technologies to enable cutting edge microscopies of brain activity. This work is done in collaboration with Dr. Yan in the MPFI Optical Microscopy Core Facility. In this line, the group has been developing a novel method to improve the speed of 3D microscope data collection. They are at present preparing a patent application for this new methodology.

Development and Function of Inhibitory Neural Circuits

Hiroki Taniguchi, PhD – Research Group Leader

The Taniguchi lab arrived in the MPFI in August 2012, and is still busy with the setup of the laboratory, purchasing of equipment, preparing of reagents and recruitment of staff (two technicians and two postdocs).

The group focuses on the understanding of development and function of inhibitory neural circuits. Higher order functions in the mammalian neocortex such as learning and memory require various types of computational strategies performed by neural circuits. GABAergic inhibitory interneurons,



which have the largest degree of diversity in morphology, physiology and connectivity, are fundamental and critical components in a cortical circuit module to regulate synaptic integration, timing of neuronal firing and network oscillation. Specific subtypes of cortical interneurons with particular physiological and biochemical profiles display the stereotyped and selective innervation of distinct subcellular compartments such as axon initial segment (AIS), soma, proximal dendrite and distal dendrite. Such ultimate neuronal specificity is likely essential for each subclass of inhibitory interneurons to exert a unique inhibitory control on target neurons. Therefore, understanding development and organization of GABAergic local circuits is a key step to gain a deeper insight into the functional assembly of cortical circuitry.

Among a large number of known GABAergic neuron subtypes, the chandelier cell (ChC) is an exceptionally homogeneous subclass with respect to overall morphology and connectivity. A single ChC forms a characteristic axonal arbor with many vertical branches, which contain strings of synaptic boutons, called synaptic cartridges exclusively aligned along AISs, the sites of spike initiation, of multiple pyramidal neurons. This peculiar connectivity may allow ChCs to have decisive influence on neuronal spiking in a group of pyramidal neurons, thereby regulating synchrony and oscillation of network activity, which may contribute to higher brain functions such as working memory. The striking stereotypy and specificity in connectivity as well as potential functional significance make the ChC an excellent model system to study how a subtype of GABAergic interneurons establishes subcellular synapse organization and whether alterations in subcellular synaptic specificity affect a specific mode of inhibition.

Dr. Taniguchi's team is asking several fundamental questions about inhibitory local circuits at molecular and cellular levels, using ChCs as a model system. They are pursuing the following main projects with state-of-the-art genetic approaches and imaging techniques. 1) Identification of genes that determine the fate of ChCs. 2) Imaging the process of AIS specific innervation by ChCs. 3) Functional and structural characterization of connectivity of ChCs.

Answering these questions will then allow them to gain a better understanding into the normal role of the Chandelier Cells, as well as their involvement in complex brain disorders such as epilepsy.

Molecular Mechanisms of Synaptic Function

Samuel M. Young, Jr., PhD – Research Group Leader

The group of Dr. Young has been one of the pioneer laboratories starting at the MPFI already at its temporary facility on the FAU campus. Since the move to the new building, the group has increased its further recruited additional staff and is now composed of two post docs, two graduate students and one technician. The research of Dr. Young is focused on gaining a better understanding of the cellular and molecular mechanisms of synaptic function. Synapses are highly specialized sites of contact between neurons, consisting of a pre- and postsynaptic side. They are the fundamental units of information transfer between nerve cells. Understanding the most complex problems in synaptic biology requires multidisciplinary approaches, which allow for precise quantitative measurements.



The team therefore combines electrophysiological, Ca^{2+} imaging and recombinant viral vectors to study interactions among key synaptic proteins in modulating synaptic transmission, plasticity, development and maintenance. In particular, they are focused on the roles of intracellular calcium in the mechanisms of their actions in relationship to synaptic proteins and their regulation of synaptic transmission and plasticity. They use the calyx of Held nerve terminal, a giant presynaptic terminal in the auditory brainstem, as a model system. This glutamatergic synapse, allows simultaneous electrical recordings and optical Ca^{2+} imaging of the pre- and postsynaptic compartments. This makes it an ideal model to dissect the pre- and post-synaptic components of synaptic transmission, short-term plasticity, synapse development and maintenance.

In the long term, Dr. Young aims to unravel the physiological mechanisms of synaptic function and thereby uncover the key elements and ultimate causes of neurological disorders, such as Alzheimer's, Huntington's Disease, mental retardation and synaptopathies.

Dr. Young is also highly engaged in teaching advanced neurophysiology courses at FAU, and has active collaborations with scientists at Scripps, FAU and other prestigious research institutions such as Janelia Farms. He furthermore works on a joint project on Parkinson's disease with the pharma company Boehringer Ingelheim.

Electron Microscopy Core Facility

Naomi Kamasawa, PhD – Core Facility Manager

The MPFI Electron Microscopy (EM) Facility is one of the major core facilities of MPFI providing support, training and service for researchers at MPFI, Scripps Florida Institute and FAU. The facility was started-up in September 2011 and is equipped with a transmission EM and other sample preparation instruments (a high-pressure freezing system, an automatic freeze-substitution device, cryo-preparation system, ultramicrotome and a freeze-fracture system). It provides state-of-the-art visualization technologies based on collaborative interactions with individual researchers. Since September 2012, a scanning EM (SEM) on-site demonstration equipment was installed for evaluation of two new cutting edge applications: correlative light-electron microscopy and serial block face SEM.

In 2012, more than ten dedicated collaborative projects were conducted in different research areas ranging from Neuroscience, Cell Biology and Biochemistry, both with MPFI and Scripps Researchers. The core facility contributed substantially to several publications and participated in grant applications. On-going research projects are aimed at developing dedicated cutting edge technologies to visualize brain structures. One example is a correlative light – electron microscopy technology, allowing to observe the exact same cells under a fluorescence microscope and subsequently with EM. The serial block face SEM technology is another newly introduced technology made available on the campus. This technology allows investigators to employ an SEM equipped with an *in-situ* microtome which can automatically slice and image, thereby generating real 3D images with EM resolution.



The EM facility has been also contributing to showcase the MPFI cutting-edge technology to non-scientific guests and visitors.

Guest Laboratories

Digital Neuroanatomy

Prof. Dr. Bert Sakmann – Inaugural Scientific Director

Dr. Marcel Oberlaender – Research Group Leader Guest Laboratory

One key challenge in neuroscience research is to elucidate mechanistic principles of how the brain integrates sensory information from its environment to generate behavior. At present, experimental methods to directly monitor sensory-evoked streams of excitation throughout the brain, at cellular and millisecond resolution are lacking. To overcome these limitations, the 'Digital Neuroanatomy Group' seeks to develop an alternative reverse engineering approach. The novel approach comprises reconstructing the detailed 3D structure of neural circuits, quantifying local and long-range synaptic connectivity and simulating sensory-evoked signal flow within the resultant anatomically realistic network models.

During the past year, one key in succeeding in this challenging task is that Dr. Sakmann and his collaborators designed and developed novel techniques to obtain the necessary anatomical data to reconstruct neuronal network models and to simulate signal flow within them. In addition to pursuing the long-term goal of reverse-engineering structure and function of the rat brain, Dr. Sakmann's unique methods and approaches led to multiple outstanding discoveries in 2012 that relate neuronal structure to function.

In a hallmark study, Oberlaender et al. combined single neuron recordings of sensory-evoked function in anesthetized and awake animals, with the above described methods to reconstruct neural circuits. Specifically, they reconstructed the morphologies of all recorded neurons and embedded them into an anatomically realistic model of the cortex. This allowed correlating the neurons' morphology with the respective activities in anesthetized and awake states, revealing surprisingly high relationships between the two quantities. Thus, Oberlaender et al. showed for the first time, how the various functional responses of individual neurons in the living animal can be explained, and in part even be predicted, by structural parameters of the underlying neural circuits.

Furthermore Oberlaender et al. combined functional recordings in the thalamus *in vivo*, with reconstructions of individual thalamocortical axons. In contrast to the long-held belief that thalamocortical wiring is fixed after a critical period during development, Oberlaender et al. showed that after short periods of sensory deprivation, thalamocortical axons were reduced by up to 40%. They showed that this massive loss in connectivity was paralleled by strengthening of the remaining thalamocortical synapses. This allowed dismissing a decade-old belief that structural/functional



changes between thalamus and cortex are limited to a critical period during development, a finding that will largely influence future studies of learning and memory in adults.

Jupiter Neuroscience Community

The Jupiter Neuroscience Community is an informal association of scientists from the MPFI, the Scripps Florida Research Institute and FAU, who actively collaborate and share access to equipment and expertise across the different institutions. Neuroscience Faculty from Scripps and Max Planck are regularly exchanging scientific ideas and discussing opportunities for collaborative projects, as well as engaging in networking during joint social events. The campus also closely interacts with the Torrey Pines Institute for Molecular Studies and the Vaccine and Gene Therapy Institute of Florida (VGTI), located in Port St. Lucie.

A highlight brought forward by the Jupiter Neuroscience Community is the joint MPFI/FAU Integrative Biology and Neuroscience (IBAN) Graduate Program, which as part of the first year curriculum includes classroom and laboratory instruction in cellular, molecular, and systems neuroscience, courses in scientific communication and statistics, and laboratory rotations with select faculty from MPFI, FAU, Scripps Florida, and Torrey Pines Institute for Molecular Studies. In 2012 the five students were enrolled in this very competitive and highly interdisciplinary program, two of them were hosted in MPFI laboratories.

The Jupiter Neuroscience Community also serves undergraduate students. A total of 13 undergraduate students from FAU and two from Duke University did internships and got introduced to the cutting-edge research at MPFI in the course of 2012.

In an effort to promote the development of interregional collaboration in the training of young scientists, the MPFI in association with the International Brain Research Organization (IBRO) hosted a symposium at the Lifelong Learning Complex on the FAU Jupiter campus on March 6-7, 2012.

This event served as the inauguration of an MPFI-IBRO postdoctoral training program, the Latin American Fellows Program for Neural Circuit Research, being administered by MPFI. The program operates as part of IBRO's Interregional Initiative, involving the United States/Canada and Latin American Regional Committees, and sponsors selected neuroscience postdoctoral fellows from Latin American countries. The Symposium was attended by nearly 250 participants, with poster presentations at the PGA National Resort, and not only generated a high-level of international exposure and business for the region, but also fostered collaboration between neuroscientists from the two regions, contributing to strengthen neuroscience research and training in Latin America.

Scientific Outreach

The Max Planck Florida Institute for Neuroscience is particularly engaged to communicate its mission and research outcomes to the general public and especially the younger generation through special educational efforts.



Besides receiving regularly visitors and showing its scientific facilities in the new building, MPFI staff frequently give scientific lectures in local communities and businesses on state and national level. For example, Dr. David Fitzpatrick spoke at the Public Lecture Series "Frontiers of Science" of FAU about "Illuminating Brain Circuits", as well as in the German Center for Research and Innovation in New York. He also presented the Institute at several luncheons and other events to local business leaders. Dr. Claudia Hillinger participated in the Groundbreaking Ceremony of South Florida Science Museum, in the Palm Beach County Business Development Board Familiarization Program (BDB-FAM) panel discussions, and presented at the International Science, Partnering and Investment Forum: Gateway for Global Life Sciences, as well as at numerous other South Florida business events.

Dr. David Fitzpatrick also joined the Life Sciences Target Industry Cluster Task Force sponsored by Workforce Florida, Inc., in 5with the Executive Office of Florida Governor Rick Scott, to examine ways to increase the footprint of the Life Sciences industry in Florida by enriching the economic climate as well as fostering talent development. Representatives from the MPFI are furthermore actively collaborating and participating in several Association and Organizations such as Business Development Board, BioFlorida, Enterprise Florida, Life Science South Florida, Florida Research Consortium, Life Science Technology Hub and others.

MPFI is also actively engaged in providing career development and life-long learning opportunities to young scientists, both through participation in events (e.g. Career Days) organized by different South Florida universities, as well as by hosting its own events. One example is the above mentioned MPFI/IBRO Neural Circuits Symposium, and the MPFI Human Resources team frequently presented at University 'Career Days', for example at Florida Atlantic University, University of Central Florida and Palm Beach State College.

A highlight of outreach activities towards the younger generation was certainly the inaugural Max Planck Florida Institute Brain Bee competition co-funded by the Mary and Robert Pew Public Education Fund as well as the Quantum Foundation, and judged by Dr. David Fitzpatrick, Dr. McLean Bolton and Dr. James Schummers. The International Brain Bee Competition is a worldwide not-for-profit neuroscience competition for high-school students, attempting to motivate students to learn about the brain, to capture their imaginations, and to inspire them to pursue careers in biomedical brain research. The first place finisher, an 11th-grader at Suncoast Community High School in Riviera Beach, went on to the National Brain Bee Competition in Baltimore, Maryland.

The MPFI High-School Summer Research Internship Program provides opportunities for selected young students to get a first insight into the world of scientific research through a real hands-on experience aimed at motivating them for a future career in the field of Science and Technology. Several Group Leaders presented their research in local Palm Beach County high-schools, and attended their career orientation workshops (e.g. Suncoast High-School, Benjamin School and others)..

In efforts to reach out to the general public, the Institute organized a dedicated and well-attended scientific lecture series at the Royal Poinciana Chapel lecture hall in Palm Beach, Florida, featuring selected research scientists from Max Planck Institutes in Germany.



The exhibition *Images of Science* at the Miami Science Museum (April – August 2012), was opened with participation of Dr. Claudia Hillinger on March 28th, 2012 in the presence of Joseph L. Falk, Vice Chair, Board of Trustees, Miami Science Museum and Eva Alexandra Countess Kendeffy, Consul General, German Consulate General, Miami. The *Images of Science* Exhibition features a collection of 40 scientific research images presented by the Max Planck Society's and exhibited at several locations in South Florida since 2011.

Other outreach activities included the 'Battle of the Brain' in December, where nearly 30 students from Palm Beach County high schools participated and presented their research to a panel of judges during *Neuroscience Discovery Day*, which was part of the Grand Opening of the Max Planck Florida Institute. Over 3,000 guests and families came to visit the Institute and participate in the first *Neuroscience Discovery Day* on December 8. The all-day celebration, sponsored by the Quantum Foundation, featured tours of the new 100,000-sq.-ft. research facility, scientific lectures and a panel discussion on careers in science. Inside the main event tent, both kids and adults alike enjoyed interactive brain-related activities such as "Puzzle Your Brain," "What's That Smell?" and "Build a Neuron."

Grants Awarded in 2012

National Institute of Health (1R21EY023408-01)

New Molecular Tools to Characterize Cortical Circuit Function in Non-Murine Mammals

David Fitzpatrick, PhD, Samuel Matthew Young, PhD

July 1, 2102 – June 30, 2013

Amount: \$522,500

New technologies that have made it possible to visualize specific classes of neurons, and to monitor and manipulate their activity *in vivo*, are transforming our understanding of neural circuit function and development. While the range of tools for molecular circuit visualization and manipulation continues to grow at an explosive rate in the mouse, the development of comparable tools for the study of circuits in non-murine mammals lags far behind. The goal of this application is to begin to bridge this technology gap by developing a recombinant viral vector for use in non-murine mammals that will permit *in vivo* expression of molecular reporters and effectors using cell-type specific promoters. Success in generating this construct will open the door to a battery of cell type specific molecular tools that will be of tremendous value for the study of cortical and subcortical structures in a wide range of mammalian species including primates.

Japan Science and Technology Foundation (JST)

Local Connectomics: Cell Type Specific and Developmental Dissection of Inhibitory

Hiroki Taniguchi, PhD

October 1, 2011 – September 30, 2014

Amount: 52,000,000 yen (equivalent to \$565,000) over 3 years



GABAergic inhibitory neurons play a critical role in cortical functions but their connectivity in neural circuits is largely unknown. In this project the group will develop a new genetic methods to visualize details of inhibitory local circuits in mouse neocortex.

Cure Citizens United for Research in Epilepsy (CURE)

Towards a chandelier cell-based cure for epilepsy

Hiroki Taniguchi, PhD

1/1/2013 – 12/31/2013

Amount: \$100,000

The chandelier cell (ChC) is the most potent inhibitory neurons that innervate axon initial segments of pyramidal neurons. This project intends to rescue the seizure phenotype in epilepsy model mice by transplantation of ChC progenitors. The team will also profile mRNAs enriched in ChC progenitors.

Michael J. Fox Foundation

Design of HdAd Type 5 LRRK2 Expression Vectors

Samuel M Young, Jr., PhD

March 1, 2012 – March 1, 2013

The goal of this project is to design an HdAd LRRK2 expression vector that can be used by all Parkinson disease researchers. In particular, it aims at identifying the sequence elements and designing a transgene expression cassette to express LRRK2 that can be incorporated into a Helper-dependent Adenoviral vector for *in vivo* studies.

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1. Postsynaptic signaling during plasticity of dendritic spines. Murakoshi H, **Yasuda D** (2012) *Trends. Neurosci*. 35: 135-43.
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4. Non-viral direct conversion of fibroblasts to neuronal cells: an effective serial transfection strategy. Adler AF, Grigsby CL, Kulangara K, Wang H, **Yasuda R**, Leong KW (2012) *Mol. Ther. Nucleic Acids* 1, e32; doi:10.1038/mtna.2012.25.



5. Studying signal transduction in single dendritic spines. **Yasuda R.** (2012) *Cold Spring Harb. Perspect. Biol.* doi:pii: a005611. 10.1101/cshperspect.a005611.
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9. Trans-Synaptic Signaling by Activity-Dependent Cleavage of Neuroligin-1. Peixoto R, Kunz PA, **Kwon HB**, Mabb AM, Sabatini BL, Philpot BD, Ehlers MD, (2012) *Neuron* 76:396-409
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Max Planck Florida Corporation 2012 OPERATIONS REPORT

Pursuant to the requirements of the Funding Agreement with the State of Florida, Executive Office of the Governor's Office of Tourism, Trade and Economic Development ("OTTED"), Max Planck Florida Corporation ("MPFC") respectfully submits this Operations Report for the period of January – December 2012.

7.2 Operations Report. Awardee shall prepare the Operations Report each year and deliver such Operations Report to OTTED not later than ninety (90) days after the end of the Report Period to which such Operations Report pertains. The Operations Report shall include, but not be limited to, the following information:

(a) An accounting of the expenditures of Incentive Funds for each Report Period and financial commitments made by Awardee during the Report Period;

Expenditures of Incentive funds for 2012:

All \$94,090,000 of state funding was received by MPFC prior to 2012. Initial funding in the amount of \$10 million was received on May 21, 2008, and MPFC operations began as of that point (inception). The Second Disbursement was received on November 18, 2008, in the amount of \$20 million. The Third Disbursement of \$30 million was received on January 31, 2011. The Fourth Disbursement of \$24.09 million was received on June 16, 2011. The Fifth Disbursement of \$10 million was received on December 6, 2011, completing the initial commitment of the state. Spending of OTTED funds in 2012, as shown in MPFC's audited financial statements as of December 31, 2012, came from these five receipts and totaled \$25,543,979 per the Schedule of State Financial Assistance. Financial commitments include general and scientific operating expenses related to the operations of the temporary facility and our new permanent facility, new scientific equipment to establish laboratories, consulting & contract services, salaries/wages and employee benefits, public relations and fundraising initiatives, recruitment and meetings/convention related travel. Some OTTED funds were also used to pay for the construction of the new facility in excess of funding from Palm Beach County.

(b) Data regarding the activities and performance of Awardee during such Report Period and detailing the progress of Awardee in meeting its Business Plan, including but not limited to:

(i) Information on the number and salary level of Jobs created by Awardee within Awardee's operations.

During 2012 MPFC hired 36 new employees and terminated 10 employees for a net hire of 26 new full-time employees, with an average salary of \$56,672. Of these new hires 11 (31%) of the 36 were Palm Beach County residents and an additional 1 (3%) of the 36 was a Florida resident at their time of hire. In total, as of December 31, 2012, MPFC now employs 88 full time employees, and 11 part-time student interns for a total of 99 employees. Of the 88 total full time employees, 34 (39%) were Palm Beach County residents and an additional 9 (10%) were Florida residents at their time of hire, for a total of 43 out of the 88 (49%) being Florida residents at the time of their hire. Please see the attached 2012 New Hires Listing for the details of this year's hires.

In addition to the 88 full-time employees, the institute also has 6 FTE's as of December 31, 2012, which brings the MPFC total jobs up to 94 as of December 31, 2012. There were 2 FTE's due to the student interns working at the institute along with 4+ FTE's due to our vendor security contractors working at the facility.

The salary level for all 88 full time positions is well above the average salary projected in the Business Plan approved by OTTED. The average annual salary paid by Max Planck Florida Corporation is \$68,871, which is 21% above the 130% (\$56,919) target called for in the agreement.

On June 1, 2012 MPFC hired our third Scientific Director, Dr. Ryohei Yasuda; on July 1 we hired our fifth Group Leader, Dr. Hyungbae Kwon; and on August 1 we hired our sixth Group Leader, Dr. Hiroki Taniguchi, all into senior management positions. With the hiring of Dr. Yasuda, our initial Scientific Director, Dr. Bert Sakmann, relocated back to the MPI Neurobiologie in Martinsreid, Germany, leaving a guest lab still active here in Jupiter. As of December 31, 2012 our two Scientific Directors' and all six Group Leaders' laboratories were well established and actively conducting research activities.

(ii) A description of the status of the performance expectations set forth in Section 7.4 of this Agreement and the Disbursement Conditions.

(a) The number and dollar value of research grants obtained by Awardee with respect to Awardee's operations from the Federal Government or sources other than Florida;

The Institute was awarded three (3) grants in late 2011 that were active during 2012, as follows:

- A Human Frontier Science post-doctoral fellowship for Dr. Yishai Elyada titled "Functional Architecture and Development of Visual Cortex" which ran from October 25, 2011 – May 31, 2012 in the amount of \$37,077.
- A NEI project R01 grant for Dr. David Fitzpatrick titled "Functional Organization of Visual Cortex" which ran from November 1, 2011 – June 30, 2012 in the amount of \$376,800.

- A NEI project RO1 grant for Dr. David Fitzpatrick titled "Development of Direction Selectivity in Visual Cortex" which runs from November 1, 2011 – February 28, 2014 in the amount of \$295,246.

During 2012 the Institute was awarded an additional four (4) grants that were also active during 2012, along with one (1) grant that was to begin January 1, 2013, as follows:

- A NEI project RO1 grant for Dr. David Fitzpatrick titled "Functional Organization of Visual Cortex" which runs from July 1, 2012 – June 30, 2013 in the amount of \$517,987.
- A NEI Fellowship for Gordon Smith titled "Circuit Mechanisms Governing the Development of Direction Selectivity" which runs from January 9, 2012 – April 8, 2013 in the amount of \$48,398.
- A Michael J. Fox Foundation grant for Dr. Samuel Young titled "Design of HdAd Type 5 LRRK2 Expression Vectors" which runs from April 1, 2012 – April 10, 2013 in the amount of \$20,240.
- A Japanese Science Technology Agency grant for Dr. Hiroki Taniguchi titled "Local Connectomics: Cell Type Specific and Developmental Dissection of Inhibitory Local Neural Circuits" which runs from August 1, 2012 – March 31, 2013 in the amount of \$289,250.
- A Citizens United for Research in Epilepsy (CURE) grant for Dr. Hiroki Taniguchi titled "Towards a Chandelier Cell-based Cure for Epilepsy" which runs from January 1, 2013 – December 31, 2013 in the amount of \$100,000.

- (b) The percentage of total research dollars received by Awardee from sources other than Florida, which is used to conduct research activities by Awardee in Florida;

In 2012 MPFC received a total of \$880,307 from sources out of state to conduct research here in Florida, which was 5.8% of our total revenues of \$15,223,087.

- (c) The number or value of patents obtained by Awardee with respect to Awardee's operations;

Not applicable at this time.

- (d) The number or value of licensing agreements executed by Awardee with respect to Awardee's operations;

Not applicable at this time.

- (e) The extent to which research conducted by Awardee's operations results in commercial applications;

Not applicable at this time.

- (f) The number of collaborative agreements reached and maintained with colleges and universities in Florida and with research institutions in Florida;

There are presently three agreements in place as of December 31, 2012:

- 1) Cooperative Agreement with Florida Atlantic University dated July 30, 2008.**
- 2) Cooperative Agreement with Scripps Research Institute executed on April 22, 2010.**
- 3) Cooperative Agreement with Femtonics Kft. and the Institute of Experimental Medicine of Hungarian Academy of Sciences dated December 17, 2012.**

Additionally, collaborative discussions are ongoing with the following Florida institutions, colleges and universities:

- **Vaccine Gene Therapy Institute Florida**
- **Torrey Pines Institute for Molecular Studies**
- **University of Central Florida**
- **Jupiter Medical Center**

- (g) The number of collaborative partnerships established and maintained with businesses in Florida, including small businesses;

MPFI was engaged in two collaborative partnerships with Florida businesses during 2012: 1) with the Scripps Research Institute to provide and share services for veterinary professional services, IT support and space for electron microscopy equipment, and 2) with Pace Machine & Tool, Inc., a small business partner, to provide labor and space for our mechanical workshop milling machine and other support services. After moving into our new permanent facility in late June the Pace partnership was no longer needed along with the portion of the partnership with Scripps for space for the electron microscopy equipment which also was not needed; however, the collaboration with Scripps Florida on the veterinary professional services and IT support continues.

- (h) The total amount of funding received by Awardee with respect to Awardee's operations from sources other than OTTED, including a breakdown of amounts received from grants and from other sources;

In 2012 we received \$14,417,001 from Palm Beach County for construction and equipment; \$880,307 of grants revenue for research purposes; \$772,936 of charitable contributions; \$186,630 of support for instruction, meetings, seminars and symposiums; and \$406,290 of investment income.

- (i) The number of Commercial Spin-Offs created in Florida as a result of commercialization of the research of Awardee's operations;

Not applicable at this time.

- (j) The establishment and implementation of policies to promote supplier diversity using the guidelines developed by the Office of Supplier Diversity under Section 287.09451, Florida Statutes, and to comply with the ordinances, including any small-business ordinances, enacted by applicable local governments and which are applicable to Awardee;

Policies are in place to promote supplier diversity per the Florida state guidelines. MPFC continues to reach out to Small Business Enterprises, including notifying the Palm Beach County's Office of Small Business Assistance of all RFP's and advertising in community publications. As part of the construction of the new facility MPFC had a 15% goal of total SBE expenditures on this \$60 million facility and the project ended with actual SBE participation of 19.9%, with 49 companies in total participating, 42 of which were Palm Beach County local participants.

- (k) The designation by Awardee of a representative to coordinate with the Office of Supplier Diversity;

**Allen Lee
Purchasing Manager
Office: (561) 972-9050
Fax: (561) 972-9002
Email: allen.lee@mpfi.org**

- (l) The establishment and implementation of a program to conduct workforce recruitment activities at public and private colleges and universities and community colleges in Florida, regardless of their size, which request the participation of Awardee; and

MPFC has an ongoing program of attending local and statewide recruitment programs. In 2012 MPFC attended: the February 16, 2012 spring Career Fair hosted by Florida Atlantic University in Boca Raton; the May 9, 2012 UCF Florida Statewide Career Fair in Orlando; the September 13, 2012 FAU fall Career Fair in Boca Raton; and the October 4, 2012 Palm Beach State College Career Fair in Palm Beach Gardens.

- (m) The designation of a senior-level point of contact for economic development activities related to Awardee's operations.

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(iii) Information on the positions and funds required to be committed for equipment for such positions by means of the next anticipated Disbursement of Incentive Funds.

We have received all Disbursements of Incentive Funds other than the Final Disbursement, which occurs upon the hire of our 135th full time employee on or before March 12, 2015. Accordingly this provision no longer applies. However, please see the attached 2013 Budget; projections are on track for the 2013 Budget.

(iv) Commencing with the Operations Report for the Report Period ending 2011, report a description of the status of Awardee's relocation from its temporary facilities to its permanent Florida facilities and the progress of construction activities for any other Florida facilities, as described in the Business Plan.

MPFC moved into our newly completed 100,000 square foot facility during the month of June 2012, with all the animals in our Animal Resource Center (ARC) moving into the facility in July. Total cost for the new building to-date approximates \$64.5 million and it has been awarded the LEED Gold Certificate for sustainable construction in view of its various energy efficiency measures.

The official Grand Opening of the permanent facility was held on December 5, 2012 with 450 guests and dignitaries in attendance. The Institute is the only institute of the German Max Planck Society outside of Europe, which has 83 other institutes, 80 of which are located in Germany. At the Grand Opening an announcement was made that the MPFC would be receiving over \$40 million in new contributions from Germany and the Max Planck Society in years 2014-2017 to support additional scientific research. On Saturday December 8 the Institute welcomed over 3,000 guests and families from the local community to a "Neuroscience Discovery Day" event which included tours of the facility, scientific lectures, a panel discussion on careers in science, live music and other activities.

(v) Commencing with the Operations Report for the Period during which Awardee commences activities at its permanent facility, a description of the status of Awardee's activities in its permanent facility, including its educational and outreach programs.

Normal research operations in the two Scientific Director's and six Group Leader's labs are ongoing as we grew from year-end 2011's 62 employees past year-end 2012's 88 employees on our way to an institute of 135+ employees (the institute has 96 full-time and 11 part-time employees as of March 29, 2013). All labs are fully up and running and are producing research results, some of which are beginning to be published in appropriate research journals. During the fourth quarter of 2012 the MPFC surpassed the scientific and administrative equipment goal of \$16,830,000 using OTTED & PBC funding sources, having cumulatively spent \$17,219,157 through December 31, 2012.

Please see the attached 2012 Listing of "Public Relations, Presentations, Speaking Engagements, Meetings, Community Outreach & Educational Efforts" along with the Listing of "Seminars" for the details of this year's activities.

- (c) Such internal information regarding Awardee as OTTED may reasonably request to confirm Awardee's compliance with the terms of this Agreement.

Extensive outreach efforts were made by MPFC during 2012 to various community organizations and businesses, trade associations, scientific symposiums, governmental representatives, schools, colleges, universities and institutions (see the above two referenced listings).

MPFC's website (www.maxplanckflorida.org) was launched in August 2008. Contents include information about the Max Planck Florida Corporation, the Max Planck Society, the Science Tunnel, recent news items, employment opportunities and postings for Requests for Proposals.

Max Planck Florida Corporation

Public Relations, Presentations, Speaking Engagements, Meetings, Community Outreach & Educational Efforts
2012

First Quarter

- MPFI continued the monthly scientific seminar series with eleven total presentations given in the First Quarter – see attached seminar list.
- MPFI hosted Gray Swoope, the Secretary of Commerce and President & CEO of Enterprise Florida and Mr. Matt Lowell, Business Development Manager of Enterprise Florida to a private meeting and tour of the temporary and new facilities on February 22, 2012.
- MPFI held our second Public Lecture Series of seminars this spring with three lectures at the Royal Poinciana Chapel lecture hall in Palm Beach, Florida:
 - February 15th – Dr. David Fitzpatrick, Max Planck Florida Institute, Jupiter, Florida presented “Illuminating Brain Circuits”.
 - March 7th – Dr. Tobias Bonhoeffer, Max Planck Institute of Neurobiology, Munich, Germany presented “How the Brain Stores Information”.
 - On March 27th – Dr. Sami K. Solanki, Max Planck Institute for Solar System Research, Katlenburg-Lindau, Germany presented “Exploring our Fiery Star, the Sun”.
- Speaking engagements by Institute Scientists during the quarter included:
 - January 6th – Dr. David Fitzpatrick was invited as a guest speaker at the Florida Atlantic University Frontiers of Science titled “Illuminating Brain Circuits”.
 - January 11th – Northern Trust, North Palm Beach presentation by Dr. David Fitzpatrick.
 - January 15th – Ballen Isles, Presentation by Dr. Claudia Hillinger.
 - On January 23rd – Dr. James Schummers attended the SPIE Photonics West Symposium in San Francisco to give a scientific presentation.
 - January 31st – German Center of Research and Innovation, NYC presentation by Dr. David Fitzpatrick.
 - February 2nd – Dr. David Fitzpatrick was invited as a guest speaker at John Hopkins University, Baltimore, Maryland.
 - February 9th – MPFI hosted in house scientific presentation by Dr. Samuel Young, Jr.
 - February 20th – Dr. Oberlander gave a scientific presentation at MPI for Biological Cybernetics in Tübingen titled “Sensory-Evoked Signal Flow in 3D Reconstructions of Anatomically Realistic Neural Networks”.
 - February 27th – External Affairs luncheon at Frenchman’s Creek presentation by Dr. Claudia Hillinger.
 - March 1st – FAM program – Dr. Claudia Hillinger attended panel discussion
 - March 7th – JP Morgan Event and Luncheon at the Capital Grill in PBG presentation by Dr. Claudia Hillinger.
 - March 13th – Dr. Samuel Young attended the Gene Therapy Workshop seminar series at the University of Florida to give a scientific presentation titled “Molecular Mechanisms of Making

Vesicles Competent for Exocytosis and Their Impact on Synaptic Transmission and Plasticity in the CNS".

- March 28th - Dr. David Fitzpatrick was invited as a guest speaker at the Torrey Pines Institute for Molecular Studies, Port St. Lucie, Florida.
- Education Outreach events held during the quarter included:
 - January 5th - Dr. James Schummers gave a scientific presentation to high school students at the Benjamin School, Palm Beach Gardens.
 - January 11th - A Science Teacher Focus Group to design a Teacher Workshop was presented by Jessica Herbst at the District of Palm Beach County.
 - January 13th - Dr. Ana Fiallos, Dr. James Schummers and Dr. Jason Christie attended the Suncoast High School Career Showcase informing students of MPFI educational opportunities.
 - January 2012 - May 2012 - Dr. Sam Young participated in teaching Advanced Neurophysiology at Florida Atlantic University - Jupiter Campus
- Symposiums, Meetings, Exhibits, and Competitions held during the quarter included:
 - January 16th - Dr. Claudia Hillinger and Dr. Ana Fiallos attended a local radio station show called "Dolphin Dialogues" to discuss Educational Outreach programs, the Graduate Program, the new building and other Foundation events.
 - January 23rd - Dr. Ivan Baines participation in Life Sciences South Florida meeting as part of LSSF Executive Committee.
 - On February 4th - MPFI hosted the first brain bee competition which was judged by Dr. David Fitzpatrick, Dr. McLean Bolton and Dr. James Schummers. The first place finisher went on to the National Brain Bee Competition in Baltimore, Maryland.
 - February 16th Eion Ramcharan attended the FAU Career Day.
 - February 29th - Dr. David Fitzpatrick joined the Life Sciences Target Industry Cluster Task Force sponsored by Workforce Florida, Inc., in cooperation with the Executive Office of Florida Governor Rick Scott, to examine ways to increase the footprint of the Life Sciences industry in Florida by enriching the economic climate as well as fostering talent development.
 - March 6-7 - MPFI/IBRO Neural Circuits Symposium - MPFI, in association with the International Brain Research Organization (IBRO), hosted a symposium at the Lifelong Learning Complex on the Jupiter Campus of Florida Atlantic University (FAU) with presentations by Dr. Yasuda, Dr. Kwon and Dr. Taniguchi.
 - March 16th - Dr. Ivan Baines participation in Life Sciences South Florida meeting as part of LSSF Executive Committee.
 - March 23rd - Dr. Ivan Baines participation in Life Sciences South Florida meeting as part of LSSF Executive Committee.
 - March 27th Bruce Heider attended a Career Fair at Palm Beach State College.
 - March 28th - Dr. Claudia Hillinger participated in the Opening Event of Images of Science at the Miami Science Museum with Joseph L. Falk, Vice Chair, Board of Trustees, Miami Science Museum, Eva Alexandra Countess Kendeffy, Consul General, German Consulate General, Miami
 - March 29th - Dr. Claudia Hillinger participated in C-Suite meeting, Business Development Board of Palm Beach County

Second Quarter

- MPFI continued the monthly scientific series with five total presentations given in the Second Quarter – see attached seminar list.
- Speaking engagements by Institute Scientists during the quarter included:
 - April 17th - Dr. Jason Christie spoke at Ballen Isles Community as part of MPFI's Foundation Outreach Program.
 - April 20, 2012 - Dr. David Fitzpatrick spoke at the University of Miami (Neuroscience PhD Program)
 - April 23, 2012 - Dr. David Fitzpatrick spoke at the "Frontiers of BioScience" Symposium, Buenos Aires, Argentina
 - May 21 - Dr. Sam Young participated in the Sachs Science, Partnering & Investment Forum (SPI 2012) in West Palm Beach, FL and was the Keynote speaker for the Gateway for the Global Life Sciences, Neuroscience Panel.
 - May 24 - Dr. Sam Young and Dr. Claudia Hillinger participated in the Scripps Howard Institute on the Environment and Science, continuing education for journalists at Scripps Florida.
 - June 1st - Dr. Marcel Oberlaender gave a scientific presentation at the INCF workshop, Stockholm titled: "From Cellular/Network Models to Tissue Simulation".
 - June 8, 2012 - Dr. David Fitzpatrick spoke at the Instituto de Neurociencias UMH-CSIC, Alicante, Spain
 - June 11, 2012 - Dr. David Fitzpatrick spoke at the Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary
- Education Outreach events held during the quarter included:
 - April 17th - Presentation at Ballen Isles by Dr. Claudia Hillinger and Dr. Jason Christie
 - May 14th - Bruce Heider attended the resume critique portion of Dare to Be Prepared, presented by the FAU Career Development Center with over 120 students in attendance.
 - June 11th - July 20th - Max Planck High School Summer Research Internship Program began in the second quarter. We accepted three high school students from Palm Beach County schools (Suncoast Community High School, Jupiter High School and Atlantic Community High School).
 - June 28-August 24 / MPFI's inaugural program, Neuroscience Undergraduate Research Fellowship (NURF), kicked off with two undergraduate students attending, one from Emory University and one from Northwestern University.
- Symposia, Meetings, Exhibits, and Competitions held during the quarter included:
 - April - August 2012: Exhibit "Images of Science" at the Miami Science Museum
 - Dr. Claudia Hillinger attended the Groundbreaking Ceremony of South Florida Science Museum
 - April 25th - 27th - Dr. Claudia Hillinger was appointed to the Leadership Florida Executive Class, and she participated in meetings at Coral Gables
 - May 6th - 8th - Dr. Claudia Hillinger participated in the Annual Meeting of the German American Chamber of Commerce, Huntsville, Alabama
 - May 9th - Bruce Heider attended the Statewide Job Fair at University of Central Florida.
 - May 18th - Dr. Claudia Hillinger was nominated as a finalist for the Business Award in the category Health Care/Science Award of the Chamber of Commerce of the Palm Beaches

- May 21st & 22nd - Dr. Claudia Hillinger presented and participated in a panel discussion showcasing the Florida Life Sciences at the International Science, Partnering and Investment Forum: Gateway for Global Life Sciences, at the Palm Beach County Convention Center
- May 24th - Dr. Claudia Hillinger presented to the Scripps Howard Science Journalism Institute, a group of national science writers familiarizing with the Life Sciences in Florida
- May 25th - Dr. Claudia Hillinger attended a luncheon with the Florida Commissioner on Education
- June 30th - Dr. Claudia Hillinger received the Distinguished German American Award of Excellence by the German American Business Chamber in Miami.

Third Quarter

- MPFI continued the monthly scientific seminar series with eight total presentations given in the Third Quarter - see attached seminar list.
- Speaking engagements by Institute Scientists during the quarter included:
 - September 11th - Dr. Marcel Oberlaender gave a scientific presentation at the INCF Congress of Neuroinformatics, Munich titled: "Beyond the Cortical Column - Structural Organization Principles in Rat Vibrissal Cortex".
 - September 11th - Robert Egger gave a scientific presentation at the INCF Congress of Neuroinformatics in Munich titled: "3D Reconstruction and Standardization of the Rat Vibrissal Cortex for Precise Registration of Single Neuron Morphology".
- Symposiums, Meetings, Exhibits, and Competitions held during the quarter included:
 - September 13th - Bruce Heider attended FAU Career Day.

Fourth Quarter

- MPFI continued the monthly scientific seminar series with thirteen total presentations given in the Fourth Quarter - see attached seminar list.
- Speaking engagements by Institute Scientists during the quarter included:
 - October 2nd - Dr. Ryohei Yasuda gave a presentation at Jupiter Neuroscience Faculty Forums.
 - October 15th - Dr. Marcel Oberlaender gave a scientific presentation at Neuroscience 2012 titled: "Beyond the Cortical Column - Structural Organization Principles in Rat Vibrassal Cortex".
 - October 15th - Robert Egger gave a scientific presentation at Neuroscience 2012 titled: "Title Not Yet Decided".
 - November 5th - Dr. David Fitzpatrick gave a presentation at FALAN Congress - Cancun, Mexico titled "Building cortical representations with experience: insights from visual cortex".
 - November 6th - Dr. Samuel Young was invited to visit the Department of Neurophysiology at Gunma University in Japan and gave a scientific presentation titled "Recombinant Adenoviral Vectors for Neuroscience Applications".
 - November 8th - Dr. Samuel Young was invited to give a lecture at the Okazaki Synapse Research workshop in Okazaki, Japan and gave a scientific presentation titled "Molecular Mechanism of Synaptic Vesicle Exocytosis and their roles in the Regulation of Synaptic Transmission and Plasticity in the CNS".

- November 12th - Dr. Samuel Young was invited to give a lecture at Doshisha University in Kyoto, Japan and gave a scientific presentation titled "Molecular Mechanisms of Synaptic Vesicle Exocytosis and their roles in the Regulation of Synaptic Transmission and Plasticity in the CNS".
- November 13th - Dr. David Fitzpatrick gave a presentation at the Frenchman's Creek titled "Unlocking the Mysteries of the Brain".
- November 16th - Dr. David Fitzpatrick gave a presentation to the Palm Beach Business Group titled "Unlocking the Mysteries of the Brain".
- November 19th - 20th - Dr. David Fitzpatrick was invited to give a lecture at the Symposium of the Biology and Medicine Section in the MPS in Berlin, Germany titled "Building Cortical Representations with Experience".
- December 11th - Dr. Ryohei Yasuda gave a presentation at Kyushu University, School of Medical Sciences in Fukuoka City, Japan titled "Imaging Signal Transduction in Single Dendritic Spines".
- December 13th - Dr. Ryohei Yasuda gave a presentation at the Symposium - Molecular Biology Society of Japan in Fukuoka City, Japan titled "Imaging Signal Transduction in Single Dendritic Spines".
- December 14th - Dr. Ryohei Yasuda gave a talk at Kyoto University in Kyoto, Japan titled "Imaging Signal Transduction in Single Dendritic Spines".
- December 17th - Dr. Ryohei Yasuda gave a presentation at the National Institute for Physiological Science in Okazaki, Japan titled "Imaging Signal Transduction in Single Dendritic Spines".
- December 18th - Dr. Ryohei Yasuda gave a presentation at RIKEN Brain Science Institute in Saitama, Japan titled "Imaging Signal Transduction in Single Dendritic Spines".
- December 20th - Dr. Ryohei Yasuda gave a presentation at Tokyo University Department of Neurophysiology titled "Imaging Signal Transduction in Single Dendritic Spines".
- Education Outreach events held during the quarter included:
 - December 8th - Battle of the Brains, a scientific poster competition sponsored by the Mary & Robert Pew Public Education Fund. Nearly 30 students from Palm Beach County high schools participated and presented their research to a panel of judges during Neuroscience Discovery Day.
- Symposia, Meetings, Exhibits, and Competitions held during the quarter included:
 - October 4th - Bruce Heider attended a Career Fair at Palm Beach State College.
 - October 13th - 17th - Society for Neuroscience (SfN) annual meeting held in New Orleans was attended by several Faculty members: Drs. Christopher Baker, McLean Bolton, Bill Bosking, Jason Christie, Rebekah Corlew, Yishai Elyada, David Fitzpatrick, Sharon Huang, Naomi Kamasawa, Marcel Oberlaender, James Schummers, Gordon Smith, Long Yan & Scientific staff: Robert Egger, Ana Fiallos, Jessica Herbst, Amanda Jacob, Matt Rowan, Theo Walker, Dan Wilson, Jenny Yu

Max Planck Florida Corporation

2012 Seminar List

Date	Title of Seminar	Speaker
	First Quarter ~ January 1 – March 31	
January 9, 2012	"Smaug 1 mRNA – silencing foci respond to NMDA and modulate synapse formation"	Dario Maschi, Post Doc Candidate, University of Buenos Aires, Argentina
January 10, 2012	"Neural migration – relevance for development, evolution and disorders of cerebral cortex"	Dr. Pasko Rakic, Yale University
January 12, 2012	"Using Connectomics to reveal Circuit Motifs"	Dr. Jeff Lichtman, Harvard University
February 9, 2012	"Visualizing circuits in the visual system"	Dr. Josh Sanes, Harvard University
February 21, 2012	"Plasticity and Columnar Organization in the Ferret Visual Cortex Depends on Age and Local Geometric Structure"	David Whitney, Post Doc Candidate, Carnegie Mellon University
February 23, 2012	"Disentangling electrical and chemical synaptic signaling in a network of inhibitory interneurons"	Dr. R. Angus Silver, University College, London
March 1, 2012	"What happens before and after exocytosis"	Dr. Erwin Neher, MPI, Göttingen
March 19, 2012	"Basal forebrain cholinergic system: physiological properties and connectivity"	Cagri Unal, Post Doc Candidate, Rutgers University
March 22, 2012	"Morphological and functional remodeling at the developing calyx of Held synapse"	Dr. Lu-Yang Wang, University of Toronto
March 23, 2012	"Involvement of the Mesolimbic Dopaminergic System in Cardiovascular Regulation and Drug Addiction"	Dr. Helaine De Brito-Gariepy, Weill Cornell Medical College
March 29, 2012	"Assembly of Auditory Brainstem Neural Circuits"	Dr. George Spirou, WVU School of Medicine
	Second Quarter ~ April 1 – June 30	
April 19, 2102	"Rewiring thalamocortical circuitry during adulthood"	Dr. Randy M. Bruno, Assistant Professor, Dept. of Neuroscience, Columbia University
April 27, 2012	"Fast 3D two photon imaging of neural network function in the intact mouse brain"	Dr. Benjamin Grewe, Postdoctoral Research fellow, Dept. of Biology and Physics, Stanford University
May 3, 2012	"Actin Badly: Neurological Disorders Associated with Abnormal Synaptic Cytoskeletal Signaling"	Dr. Scott Soderling, Duke University Medical Center
May 7, 2012	"3D and 4D Image Visualization & Analysis"	Biplane-Sponsor Imaris Workshop

May 15, 2012	"Slowly inactivating component of Na ⁺ -current in the peri-somatic region of hippocampal CA1 pyramidal neurons"	Dr. Yul Park, The University of Texas at Austin
	Third Quarter ~ July 1 – September 30	
July 24, 2012	"The Molecular Mechanism of the Mammalian Circadian Clock: New Insights and New Challenges:	Dr. Gregor Eichele, Director & Scientific Member, Max Planck Institute for Biophysical Chemistry, Göttingen
July 26, 2012	"RESOLFT Nanoscopy in Life Sciences: unraveling the mysteries with low light levels"	Dr. Ilaria Testa, Postdoc, Dept. of NanoBiophotonics Max Planck Institute for Biophysical Chemistry, Göttingen
July 31, 2012	"The Role of Ionotropic Glutamate Receptors in CNS Glia"	Aiman Saab, Post Doc Candidate, Dept. of Neurogenetics Max Planck Institute of Experimental Medicine, Göttingen
August 2, 2012	"The binocular machine in the brain revealed by imaging cells, synapses and vessels <i>in vivo</i> "	Dr. Prakash Kara, Assistant Professor, Medical University of South Carolina
September 6, 2012	"Molecular machinery to control excitatory synaptic transmission"	Susumu Tomita, PhD, Associate Professor, Dept. of Cellular & Molecular Physiology, Yale School of Medicine
September 20, 2012	"Studying olfactory coding by exhaustive calcium imaging"	Dr. Timothy E. Holy, Associate Professor, Dept. of Anatomy & Neurobiology, Washington University in St. Louis
September 24, 2012	"The development of cholinergic and GABAergic synapses between starburst amacrine cells and direction selective ganglion cells in mammalian retina"	Kyongmin Kim, Post Doc Candidate, Dept. of Physiology and Biophysics, The University of Arkansas for Medical Sciences
September 27	"Development and functions of the medium-sized spiny neurons in the striatum"	Dr. Teruko Danjo, Post Doc Candidate, Department of Systems Biology, Osaka Bioscience Institute, Osaka, Japan
	Fourth Quarter ~ October 1 – December 31	
October 11, 2012	"A Critical Mediator for Activity-Dependent Synapse Elimination in Developing Cerebellum"	Dr. Takayasu Mikuni, Postdoc, Dept. of Neurophysiology, University of Tokyo
October 11, 2012	"Fast two-photon in vivo and in vitro imaging in near-cubic-millimeter volume up to sub-millisecond temporal resolution"	Dr. Balázs Rózsa, Head, Two-Photon Imaging Center Institute of Experimental Medicine, HAS, Budapest and Pázmány Péter Catholic University, Budapest
October 18, 2012	"Functional architecture of the mouse olfactory bulb"	Dr. Yoav Adam, Postdoc Candidate Department of Neurobiology, The Hebrew University

October 18, 2012	"Comparing the dynamics of on-going coherent activity in the awake and anesthetized primate"	Dr. Amiram Grinvald, Director, The Grodetsky Center for Research of Higher Brain Functions, Weizmann Institute of Science, Rehovot and External Scientific Director, Max Planck Institute for Medical Research, Heidelberg
October 19, 2012	"High resolution quantitative localization of voltage-dependent calcium channels in the brain by immunogold electron microscopy"	Dr. Ryuichi Shigemoto, Professor Division of Cerebral Structure; National Institute for Physiological Sciences Okazaki, Japan
October 22, 2012	"The development of cholinergic and GABAergic synapses between starburst amacrine cells and direction selective ganglion cells in mammalian retina"	Dr. Kyongmin Kim, Postdoc Candidate Department of Physiology and Biophysics, The University of Arkansas for Medical Sciences
November 9, 2012	"Ex vivo analysis of alterations in the physiological properties of amygdala neurons in a rat model of post-traumatic stress disorder"	Dr. Sonal Goswami, Postdoc Candidate Rutgers, The State University of New Jersey
November 14, 2012	"An E3 ligase cascade of Cdh1-APC/Smurf1 controls axon growth in the mammalian brain"	Dr. Madhuvanthi Kannan, Postdoc Candidate Dept. of Molecular and Cellular Neurobiology Max Planck Inst. Of Experimental Medicine
November 16, 2012	"Neuronal and Network Mechanisms of Ictogenesis"	Sally P. Duarte, PhD, Postdoc Candidate Department of Neurobiology and Anatomy, University of Rochester
November 29, 2012	"Principles of Rodent Surgery, Anesthesia, Analgesia & Peri-operative Care"	Dr. Marcel Perret –Gentil, University Veterinarian Director, The University of Texas at San Antonio, South Texas Accelerated Research Therapeutics
December, 17, 2012	"Stuff You Need to Know: The IACUC Isn't Making This Up!"	Molly Greene, BA, CPIA IACUC Advisor , Office of the Vice President for Research and Graduate Studies & J.R. Haywood, PhD Assistant Vice President for Regulatory Affairs, Office of the Vice President for Research and Graduate Studies Past Chair of the Department of Pharmacology and Toxicology Michigan State University

December 18, 2012	"Building sparse representations for odors: Circuit dynamics and synaptic plasticity"	Gilles Laurent, DVM, PhD Director and Managing Director Max Planck Institute for Brain Research Frankfurt/Main, Germany
December 20, 2012	"Protein Synthesis at Synapses"	Erin Schuman, PhD, Director, Max Planck Institute for Brain Research Frankfurt/Main, Germany