

SUNTRUST

Date: September 5, 2017

To: McKnight Brain Research Foundation Trustees
Henry H. Raattama, Jr. Legal Counsel

From: Melanie Cianciotto

Subject: MBRF Strategic Planning Conference Call
September 11, 2017 10:00 a.m. – 12:00 p.m.

Enclosed you will find the meeting package for the September 11, 2017 conference call. Included in this package for your review are the following items: the Go To Meeting Invitation, the agenda, final draft of the minutes of the July 25, 2017 strategic planning meeting and other supporting material for the agenda items.

Look forward to speaking to everyone next week!

/mc

Enclosures

Memorandum

Date: September 5, 2017

To: Trustees, McKnight Brain Research Foundation
Melanie A. Cianciotto, Corporate Trustee
Henry H. Raattama, Jr, MBRF legal counsel

From: Debbie Mason, President, Strategists, Inc.

Re: Go To Meeting Invitation

Below is the invitation information for the meeting of the trustees via conference call on Monday, September 11, 2017; 10:00 AM- 12:00 Noon ET

MBRF Trustee Discussion

Mon, Sep 11, 2017 - 10:00 AM - Noon ET

Please join my meeting from your computer, tablet or smartphone - any device that has a speaker and microphone so you can see the visual while we discuss:

<https://global.gotomeeting.com/join/531055061>

You can also dial in using your phone if you do not wish to see the visual documents - by calling:

United States: +1 (872) 240-3412

Please Use the Access Code: 531-055-061

If this is your first GoToMeeting from your device, I recommend you first try a test session to test your computer, tablet or smart phone if you wish to see the visuals and participate from your computer: <http://link.gotomeeting.com/email-welcome>

Debbie

Debbie Mason, APR, CPRC, Fellow PRSA
President
Strategists, Inc.
debbie@strategistsinc.com
954-480-7814
www.strategistsinc.com

**McKnight Brain Research Foundation
Strategic Planning Conference Call
September 11, 2017
10:00 a.m. – 12:00 p.m.**

AGENDA

1. Welcome Dr. Lee Dockery
2. Review of the Minutes, July 25, 2017
3. Overview of Strategic Planning Session Debbie Mason
4. Review duties and functions of corporate trustee,
board chair, vice Chair and additional staff person Debbie Mason
5. Next Steps Dr. Lee Dockery
Debbie Mason
6. Old Business
 - ❖ Budget review for Cognitive Aging and Memory focus group meeting in conjunction with the 2018 inter-institutional meeting
7. New Business
 - ❖ Scientific Director, Evelyn F. McKnight Brain Institute, University of Miami
8. Adjournment Dr. Lee Dockery

MINUTES
MCKNIGHT BRAIN RESEARCH FOUNDATION
BOARD OF TRUSTEES
Strategic Planning Meeting
July 25, 2017

The strategic planning session of the Trustee's meeting of the McKnight Brain Research Foundation (MBRF) was called to order at 8:00 a.m. on July 25, 2017 in the Champion Room of the Holiday Inn University Center located at 1250 W. University Avenue, Gainesville, Florida. (See Agenda – Attachment 1)

The following members were present:

Dr. J. Lee Dockery, Trustee
Dr. Michael Dockery, Trustee
Dr. Richard I. Isaacson, Trustee
Dr. Nina Ellenbogen Raim, Trustee (via Conference call)
Dr. Gene G. Ryerson, Trustee
Dr. Madhav Thambisetty, Trustee
Dr. Robert Wah, Trustee
Ms. Melanie Cianciotto, Corporate Trustee
SunTrust Bank Institutional Investment Solutions

Others attending:

Mr. Henry H. Raattama, Jr., Legal Counsel
Ms. Debbie Mason, President, Strategists, Inc.

1. Welcome and Introductions:

Dr. Lee Dockery, called the meeting to order and welcomed the facilitator, Debbie Mason, President of Strategists, Inc. and thanked her for her continued service as the facilitator for the strategic planning process for the MBRF at the meetings October 14, 2014 and February 6, 2017. (See Biographical Sketch—Attachment 2)

1. Approval of Minutes

The minutes of the February 6, 2017, Board of Trustees Meeting Strategic Planning meeting of the MBRF were reviewed (Attachment 3). The minutes were approved as presented.

Action Item 1: The trustees approved the minutes of the February 6, 2017, Board of Trustees strategic planning meeting as presented (Attachment 3).

2. The Future of the McKnight Brain Research Foundation

To facilitate the continuing discussions regarding the future of the MBRF, Dr. Lee Dockery informed the trustees of his request to Mr. Raattama, MBRF legal counsel, to develop a proposal considering three organizational models for the future operation of the MBRF.

- A. Continue status quo
- B. Reorganize the MBRF, establish an office of /for the MBRF (i.e. Function, Staff, Space)
- C. Termination of the MBRF through transfer of assets to another worthy entity in combination with a scheduled phasing down while completing future obligations of the MBRF.

Mr. Raattama in response to the request developed a very comprehensive report consisting of five potential options for reorganization of the MBRF (Attachment 4).

After discussion by the trustees, the proposal was consolidated into four different options which were discussed separately at length.

- A. Continue as is with reorganization:** No change in governance, reduce trustees' work, establish MBRF office
- B. Change MBRF Governance Structure:** Change MBRF governance structure; closer/synergistic relationships with Institutes, Advisory Board
- C. Partial Wind Down:** Retain assets to fulfill current commitments, transfer balance of assets to a 3rd party, trustees monitor recipient of assets and sponsor mission related programs
- D. Complete Wind Down:** 100% phase out within five years, transfer assets to a 3rd party, recipient continue mission of MBRF via Gift Agreement. Trustees monitor only during wind down.

In Mr. Raattama's report, each of options was thoroughly discussed and with Ms. Mason facilitating the discussion, the trustees reached agreement on the following items:

- A. It is premature to partially wind down or terminate the MBRF
- B. Most successful organizations are led by an individual who provides the driving force to energize the organization in fulfilling its Mission.
- C. A central issue to each of the options is the impending potential for the loss of four of the seven trustees one of whom is the chair and a founding member.
- D. Currently the chair, who will retire July 1, 2019, has performed many of the duties which would be performed by a Chief Executive Officer (CEO) or staff person.
- E. There may be considerable overlap of the duties between the chair, vice chair, corporate trustees and a CEO/staff person.

Action Item 2: The trustees finalized their discussion by requesting Ms. Mason to take the following action:

- A. Create functions of new employee role, as well as review of the current board Chair, Vice chair and corporate trustee's responsibilities and suggest appropriate new or amended roles
- B. Sends deliverables to corporate trustee to distribute to Trustees in late August in preparation for September meeting
- C. Host on September 11th a conference call meeting with Trustees to review deliverables (send invitation to corporate trustee for distribution to trustees)
- D. Make revisions and submit to corporate trustee to include in the November Board package for final discussion and ratification
- E. Prepare draft timeline and process of recruitment if a new staff person or CEO position is approved

3. Succession Planning

The qualifications for new trustees were reviewed as well as the terms of service of the current trustees. Dr. Gene Ryerson's Term expires in April 2018 and Dr. Wah's term expires in August 2018. Each is eligible for nomination and election to a third term if it is desired by them. The trustees unanimously reaffirmed the Qualifications for New Trustee (Attachment 5).

Action Item 3: The trustees unanimously reaffirmed the Qualifications for New Trustee (Attachment 5).

4. Monte Carlo Simulation: The trustees reviewed for information three Monte Carlo simulations (Attachments 6) predicting the MBRF portfolio balance at the end of five, 15 and 30 years adjusted to the rate of return, inflation and standard deviation. The three simulations used the current asset allocation, the recommended asset allocation and a hypothetical asset allocation using all private equity.

Action Item 4: The trustees reviewed for information the Monte Carlo Simulations Report. (Attachment 6).

5. Future Directions: The trustees discussed the future directions of the MBRF within the context of the next steps in reorganizing and formulating the duties between the chair, vice chair, the corporate trustee and the potential of an additional staff person, the qualifications and profile of which haven't been resolved. The trustees, in the discussion which followed, expressed general agreement with the following points of view.

The Vision, Mission and Purpose of the MBRF are the responsibility of the trustees and the trustees are committed to meeting the current obligations for the next three to five years with completing the funding matching endowment with University of Arizona, the renewal of the Research Partnership in Cognitive Aging with the National Institute on Aging (NIA) and the McKnight Scholarships through the American Brain Foundation (ABF).

The trustees discussed the importance of the fiduciary management of the portfolio in preserving and growing the assets of the MBRF to fund initiatives to further the Purpose of the MBRF, either individually or with partners.

Within the construct of the consideration of future funding initiatives, each must be assessed with quantification of the assets available and the spending rates for short, medium and long-term support of the Purpose.

The trustees also recognize the ongoing obligation of the partnership between the MBRF and each of the McKnight Brain Institutes that the investment not be lost. The MBRF branding, marketing, maintenance of relationships, strategic planning, public face of the organization, oversight and monitoring of grants and funded programs, and oversight of corporate trustee relationship are important components of the trustee responsibilities and must be balanced with role and responsibilities of an individual occupying an executive staff position. The trustees voiced the importance of evaluating the progress of the MBRF in meeting its Mission and identifying ways to advance the progress and succeed in the vision to, "Improve the quality of life through the understanding and alleviation of age related memory loss." (See Facilitator's notes, attachment 7)

6. Election of Chair: The two-year term of Dr. Lee Dockery as chair of the MBRF is expiring. There are no term limits to the office of chair. Dr. Lee Dockery was nominated for another two-year term as chair of the MBRF. There were no other nominations and Dr. Lee Dockery was unanimously elected for chair of the board of trustees of the MBRF

Action Item 5: Dr. Lee Dockery was unanimously elected for chair of the board of trustees of the MBRF

6. Election of Vice Chair: The two-year term of Dr. Michael Dockery as vice chair of the MBRF is expiring. There are no term limits to the office of vice chair. Dr. Michael Dockery was nominated for another two-year term as chair of the MBRF. There were no other nominations and Dr. Michael Dockery was unanimously elected for chair of the board of trustees of the MBRF.

Action Item 6: Dr. Michael Dockery was unanimously elected for vice chair of the board of trustees of the MBRF

There being no further business, the meeting was adjourned at 12:00 Noon.

Respectfully Submitted,

Melanie A. Cianciotto
SunTrust Bank, Corporate Trustee

Appendix 1: Summary of Actions, Page 5

Appendix 1: Summary of Actions

MCKNIGHT BRAIN RESEARCH FOUNDATION BOARD OF TRUSTEES Strategic Planning Meeting July 25, 2017

Action Item 1: The trustees approved the minutes of the February 6, 2017, Board of Trustees strategic planning meeting as presented (Attachment 3).

Action Item 2: The trustees finalized their discussion by requesting Ms. Mason to take the following action:

- A. Create functions of new employee role, as well as review of the current board Chair, vice chair and corporate trustee's responsibilities and suggest appropriate new or amended roles**
- B. Sends deliverables to Corporate Trustee to distribute to Trustees in late August in preparation for September meeting**
- C. Host on September 11th a conference call meeting with Trustees to review deliverables (send invitation to corporate trustee for distribution to Trustees)**
- D. Make revisions and submit to Melanie to include in the November Board package for final discussion and ratification**
- E. Prepare draft timeline and process of recruitment if a new staff person or CEO position is approved**

Action Item 3: The trustees unanimously reaffirmed the Qualifications for New Trustee (Attachment 5).

Action Item 4: The trustees reviewed for information the Monte Carlo Simulations Report. (Attachment 6).

Action Item 5: Dr. Lee Dockery was unanimously elected for chair of the board of trustees of the MBRF

Action Item 6: Dr. Michael Dockery was unanimously elected for vice chair of the board of trustees of the MBRF

McKnight Brain Research Foundation
Strategic Planning Meeting
Board Room, Holiday Inn University Center
1250 W. University Avenue, Gainesville, FL
July 25, 2017; 8:00 AM-12:00 Noon
AGENDA

- | | |
|---|-----------------|
| 1. Welcome | Dr. Lee Dockery |
| 2. Review of the Minutes, February 6, 2017 | |
| 3. Overview of Strategic Planning Session | Debbie Mason |
| 4. Future of the McKnight Brain Research | |
| a. Time Limited | |
| b. Perpetuity | |
| 5. Succession Planning | |
| a. Review Terms of service | |
| b. Process of recruitment of new trustees | |
| 6. Review Monte Carlo Simulations | |
| 7. Future Directions | |
| A. Spending policy | |
| 1. Quantify assets available | |
| 2. Establish spending rates for short, medium and long term in support of Purpose | |
| B. Institutes – existing and new | |
| C. Partners – existing and new | |
| D. Public initiatives | |
| E. Monitoring | |
| F. Board support needed | |
| G. Staff support needed | |
| 8. Election of Chair and Vice Chair | |
| 9. Next Steps | |
| 9. Adjournment | Dr. Lee Dockery |

**Debbie Mason, APR, CPRC, Fellow PRSA
President-Strategists, Inc.**

As President of Strategists, Inc., Debbie Mason is passionate about guiding organizations to achieve greater effectiveness through training and consultation in governance, development, branding, marketing, public relations, planning, organizational development and research services. Known as a keen strategist and ideator, Debbie works with large-scale community planning projects, as well as individual corporate, government, foundation and nonprofit clients. Debbie is a licensed Psycho-Geometric™ trainer, an authorized partner and certified trainer of the DiSC® assessment tools, Accredited facilitator of Patrick Lenconi's Five Behaviors of A Cohesive Team™ and a BoardSource trained facilitator.

Debbie Mason's 35 years of experience in management of brand, communications, marketing, sales, development, advocacy, and planning spans the sectors of agency, corporate, automotive and healthcare experience at local, regional and national levels prior her transition to the nonprofit sector. Her experience includes creating small business and large corporate brands from the "ground up," to rebranding complex multi-corporate entities.

Prior to establishing her firm Strategists, Inc. in 2002, Debbie was the founder and president of Mason Strategic Communications (MSC), a communications agency founded in 1995. The agency had offices in Fort Lauderdale and Gainesville, Florida and was one of Florida's largest independent agencies, prior to its sale. Before founding MSC, Debbie served as the (first ever) vice president of corporate communications and then as vice president for the office of the chairman for JM Family Enterprises, Inc., one of the nation's largest privately held corporations (ranked in the top 25 by *Forbes*, with \$13 billion in revenue and more than 4,000 employees across the nation.) At JM Family, she rebranded the parent corporation and its more than 20 subsidiary companies, developed and managed the resulting communications (media, community, partner, etc.) for all stakeholders, led the company through significant crisis response situations (largest chemical spill in Florida, congressional hearing, state license revocation challenges and several dozen high profile law suits), while establishing and managing the charitable giving strategy - which preceded the family foundation.

Before joining JM Family Enterprises, Debbie held senior executive positions in the healthcare industry for a decade managing research, strategic planning, branding, marketing, customer service, communications and sales for hospitals and a variety of healthcare systems and holdings in major metro markets across the United States.

Since 1995, she has worked with hundreds of corporate and nonprofit organizations, communities, and coalitions to affect change. Her multi-year work with the Broward Child Welfare Initiative (BCWI) won a prestigious national award, the Silver Anvil, from the Public Relations Society of America in recognition of achievement in strategic public relations planning and implementation. In 2010, Debbie moved back to Gainesville full time and was selected the following year as the President and CEO of United Way of North Central Florida. She held this position she held until late 2014, when she returned to full-time consulting. Prior to that position, she held the position of Chief Marketing and Development Officer for the United Way of Broward County for several years.

Debbie holds numerous professional credentials in public relations and marketing including Certified Public Relations Counselor from the Florida Public Relations Association; Accredited public relations professional from the Universal Accreditation Board; and has been recognized as a Fellow by the Public Relations Society of America (PRSA).

A dedicated servant leader, she has served her national professional association as chair of the PRSA Foundation national board of directors, as chair of PRSA's Nonprofit/Association Section, 2005 International Conference co-chair and as a national governing board member for the 20,000-member society.

Also, she has served as chair and member of dozens of local nonprofit organizations in the various communities in which she has worked and lived. An active Rotarian, Debbie has been a Paul Harris Fellow in three different Rotary chapters in Florida.

As both a volunteer and as a paid strategist, Debbie has lead strategy to pass more than half dozen referendums in communities in which she has lived in Florida, creating Tourist Development Councils, Children's Services Councils and preserving land for parks and recreation. Her past civic engagement also includes managing more than two dozen candidate campaigns across both political parties.

A frequent author for professional and trade journals, Debbie continues her own learning and research in the areas of organizational development and leadership. She is a contributing writer to *Business in the Heart of Florida*, a peer review editor for the *Nonprofit Quarterly* and active in several professional trade associations.

Debbie earned a Bachelor's degree in Public Relations/Journalism from the University of Florida, where she has served as an adjunct professor and twice served as chairman of the Public Relations Advisory Council of the College of Journalism and Communications. She earned a Master's degree in Communications Management from Syracuse University. She is a past graduate of Leadership Florida (the youngest ever inducted), Leadership St. Lucie, Leadership Gainesville, Leadership America and Leadership Monroe.

Debbie enjoys yoga, painting and spending time with friends and her goofy poodle, Tucker, aka "Mr. Poodlicious." A native Floridian from a family of more than seven generations, Debbie tells folks that she enjoys traveling -- as a vagabond explorer she has visited more than 50 countries -- and she is enjoying her newest adventure exploring Northern California since her move there in late 2016.

MINUTES
MCKNIGHT BRAIN RESEARCH FOUNDATION
BOARD OF TRUSTEES
Strategic Planning Meeting
February 6, 2017

The strategic planning session of the Trustee's meeting of the McKnight Brain Research Foundation (MBRF) was called to order at 8:00 a.m. on February 6, 2017 in the Constellation Room of the Hyatt Regency Orlando International Airport Hotel in Orlando, Florida. (See Agenda – Attachment 1)

The following members were present:

Dr. J. Lee Dockery, Trustee
Dr. Michael Dockery, Trustee
Dr. Richard I. Isaacson, Trustee
Dr. Nina Ellenbogen Raim, Trustee (via Conference call)
Dr. Gene G. Ryerson, Trustee
Dr. Madhav Thambisetty, Trustee
Dr. Robert Wah, Trustee
Ms. Melanie Cianciotto, Corporate Trustee
SunTrust Bank Institutional Investment Solutions

Others attending:

Mr. Henry H. Raattama, Jr., Legal Counsel
Ms. Debbie Mason, President, Strategists, Inc.

1. Welcome and Introductions:

Dr. Lee Dockery, called the meeting to order and welcomed the facilitator, Debbie Mason, President of Strategists, Inc. and introduced her to each of the trustees who had been appointed since the last strategic planning meeting, October 14, 2014 at which she had served as facilitator. (See Biographical Sketch—Attachment 2)

1. Approval of Minutes

The minutes of the October 14, 2014, Board of Trustees Meeting Strategic Planning meeting of the McKnight Brain Research Foundation were reviewed (Attachment 3). The minutes were approved as presented.

Action Item 1: The trustees approved the minutes of the October 14, 2014, Board of Trustees strategic planning meeting as presented (Attachment 3).

2. Trustee Survey Review

In preparation for the Strategic Planning meeting, Ms. Mason in consultation with the chair and vice chair developed a survey document for completion by the trustees in advance of the meeting designed to assess the strengths, weaknesses and future directions of the MBRF. (Attachment 4) Ms. Mason reviewed the results of the survey and provided commentary on some of the questions which solicited written comments by the trustees and are summarized in the following paragraphs. (Attachment 5).

A. Perceived Strengths

1. The outstanding reputation as the principal supporter of research into age-related cognitive impairment
2. The gained momentum in advancing the mission with the establishment of four McKnight Brain Institutes in four Universities, accompanied by five named Endowed chairs and the establishment of Research Partnership in Cognitive Aging with the National Institute on Aging (NIA).
3. Focus on cognitive aging and dedication/skill set of Chair of Trustees
4. Enthusiasm for the mission
5. The committed Purpose of the organization

B. Perceived Weaknesses

1. The challenge in maintaining a focus on age-associated cognitive impairment that is distinct from disease-related cognitive impairment.

Comment: The lines between these two constructs are becoming increasingly blurred with scientific advances and it will become progressively challenging to maintain the research focus of the MBRF on "non-pathological" aging while still supporting science that straddles both "disease" and "normal aging"

2. The MBRF is a small foundation and Age Related Memory Loss doesn't have the visibility that Alzheimer's does.
3. The MBRF does not have a cohesive, proactive plan of how it can fulfill its mission and purpose.
4. Perhaps spreading the focus area too thin across basic science, translational and clinical advancement/interventions
5. Limited knowledge of neurology by trustees
6. Variable commitment and interest by the trustees and generally uninformed regarding the operational framework and grant making environment required for success

C. Greatest Opportunities for the MBRF in Next Five Years.

1. Embrace the advancements in knowledge in disease-related cognitive impairment (e.g.: Alzheimer's disease) that are moving towards earlier preclinical diagnosis before the onset of cognitive impairment and to use this knowledge to further the goals of the MBRF to advance knowledge related to age-associated cognitive impairment
2. The mission of the MBRF is of great public interest, and it is also generating private (University) interest
3. The Ability to advance the corpus of evidence for clinical interventions to mitigate cognitive aging (including prevention and treatment)
4. Fund and direct research in cognitive changes associated with the aging process
5. Partnering with other organizations and institutions in supporting research in cognitive aging and age related memory loss

D. Greatest Obstacles for the MBRF in Next Five Years.

1. A dilution of the science supported by the MBRF.

Comment: In light of the challenges previously described, it is going to be increasingly difficult to maintain a continuing focus on age-related cognitive impairment at the cost of excluding research on disease-related cognitive impairment. This often forces MBRF supported-scientists to devise creative/contrived ways to point out how their work has themes that are relevant to the MBRF's mission even when the overarching goal was to study Alzheimer's disease or dementia.

2. Lack of succession planning considering the potential loss of leadership of the MBRF, either through retirement or limitation on terms of service
3. The amount of monetary support for the institutes and overall mission is not sufficient to affect broad change and progress
4. Failure of the board to appreciate the importance and benefits of funding new projects in cognitive aging
5. Disinterest and continuing reluctance to invest in the Purpose above the requirements by the IRS for minimum distribution.
6. Reluctance and inability to identify and build partnerships

3. Strategic Planning

The review of the board survey as part of their ongoing strategic planning, the trustees reviewed their current strategic plan (Attachment 6) with the assistance of Ms. Debbie Mason, President of Strategists, Inc., as a facilitator. The trustees reviewed the vision and mission statements of the MBRF and revised the goals and strategies previously agreed upon during the October 14, 2014 strategic planning meeting. Ms. Cianciotto will update the strategic plan to reflect the agreed upon changes.

Action Item 1: Ms. Cianciotto will update all of the components of the strategic plan (Attachment 6) to reflect the agreed upon changes and strategies for implementation.

The trustees discussed the following topics relevant to components of the discussion during the strategic planning meeting:

4. Strategic Investments in the Future

Ms. Mason, the facilitator asked the trustees to rate their respective priorities for funding future investments between: (a). Continue to invest in Current institutes and the existing endowed chairs, (b). Add additional institutes with endowed chairs, and (c). Funding of Individuals outside existing institutes. There was general consensus to fund all three with (a) and (b) equally divided with approximately 80% of the funding with the smaller commitment of 20% to funding individuals outside the existing institutes.

5. Questions for the Future? (See Facilitator's notes, attachment 7)

- 5.1 Should the MBRF continue to exist in perpetuity?
- 5.2 Is the foundation willing to spend more than the required 5%, annually? If so, how much?
 - Decide how much of corpus we are willing to invest?
 - Evaluate purchasing power of portfolio
- 5.3 Quantify dollars available and want to spend on short, medium and long term implementation of direction
- 5.4 Should the foundation search for available matching funds or partner organizations
- 5.5 Is the foundation a public facing organization?
- 5.6 Does the foundation have an advocacy role in public policy?
- 5.7 Does the foundation need or want to add administrative support
- 5.8 Succession Planning – each trustee to identify prospective trustees – short term goal of 1.5 years –
 - Maintain a chart of terms of service for each trustee
- 5.9 Define process for reaching short, medium and long term plan
 - Short term is 1.5 yr.
 - Medium term is 3-5 yr.
 - Long term is 5 plus
- 5.10 Establish success parameters for next phases
- 5.11 Consider advisory trustees/consultants and their role

6. Next Steps

The trustees agreed to continue the strategic planning discussions at their July 25-26, 2017 trustees' meeting and the items under paragraph 5 will form the framework for the discussions. In the interim, the trustees will identify potential partnerships and explore the small foundation staffing structure and job descriptions for consideration by the trustees at the April 5, 2017 meeting. Ms. Mason and Dr. Isaacson will send sample job descriptions to Ms. Cianciotto by March 15, 2017 for inclusion in the agenda books.

There being no further business, the strategic planning meeting was adjourned at 3:00 P.M.

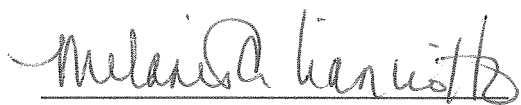
Action Item 1: The trustees approved the minutes of the October 14, 2014, Board of Trustees strategic planning meeting as presented (Attachment 3).

Action Item 2: The trustees agreed to continue the strategic planning discussions at their July 25-26, 2017 trustees' meeting and the items under paragraph 5 will form the framework for the discussions.

Action Item 3: The trustees will identify potential partnerships and explore the small foundation staffing structure and job descriptions for consideration by the trustees at the April 5, 2017 meeting.

Action Item 4: Ms. Mason and Dr. Isaacson will send sample job descriptions to Ms. Cianciotto by March 15, 2017 for inclusion in the agenda books.

Respectfully Submitted,



Melanie A. Cianciotto
SunTrust Bank, Corporate Trustee



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Three Brickell City Centre
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Suite 1100
Miami, FL 33131
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Memorandum

From: Henry H. Raattama
To: Trustees, McKnight Brain Research Foundation
Date: July 10, 2017
Subject: Notes Re: MBRF Proposed Organizational Alternatives

The purpose of this memorandum and accompanying power point display is to present for discussion ideas for MBRF's future organization and management from continuing as is, or to dissolving. There is no intent to prefer a particular option in whole or in part. The ultimate decision may be one of the five options, a mixed and matched decision or something entirely different. The goal for now is to discuss the possibilities without favoring a particular course of action.

Following is a narrative for each of the five options shown in the power point.

- I. **Continue As Is.** This option is to continue as is with no material (each person can define material) changes in MBRF governance or operations. It is noted that 4 (of 7) Trustees may rotate or retire within the next four years. While Trustee rotation is normal, the added possibility of Trustees retiring results in these Trustee changes being more significant than the heretofore normal Trustee rotation, since two of the four are founding Trustees. This option would incorporate the ongoing (2017) strategic planning decisions.
- II. **Continue As Is with the MBRF reinventing itself for the Future.** Reinventing in this case means the changes discussed and agreed upon as part of the 2017 strategic planning. "Probably" because some of these changes are more than the changes associated with typical strategic planning.
 - Governance Change – that is, continue with the current Trustee makeup. The current Trustee makeup was decided in April 2008, reaffirmed in March 2012 and

modified to increase the number of Trustees from 5 to 7 in 2014

- 5 Year Plan – The Trustees decide upon a plan for the next five years. For example, the Trustees will name a new institute with a plan and budget for implementation of the new institute.
- Reduce Trustee day-to-day work load – i.e. – reduce the time devoted to MBRF matters. Options to reduce Trustee burden.
- Establish a MBRF office. This could include hiring a director, office staff, space, etc. The relation with SunTrust would have to be considered and reworked. The goal is to eliminate Trustees having to do day-to-day administrative work, i.e.- correspondence, non-substantive decision-making, etc. Cost would have to be considered:

For Illustration:

Executive Director*	\$ 150,000
Staff	\$ 50,000
Space	\$ 20,000
Miscellaneous (Travel, Supplies, etc.)	\$ 30,000
	<hr/>
	\$ 250,000

* The executive director would be involved with substantive matters in addition to administrative duties. A job description would be needed.

- Delegate investments to a Trustee committee and/or independent manager. For example, delegate to SunTrust all investment responsibility, except asset allocation and spending policy. Full Board of Trustees discuss investments only once a year, but receive regular (monthly or quarterly) reports. Assign two Trustees to monitor investments as closely as the Trustees see fit. The Board of Trustees can delegate fiduciary responsibility (and liability) if delegation is done prudently.
- Site visits now require several days of Trustees' time. The site visits could be structured so that one or two Trustees visit each institute annually, or once every two years. Three Trustees could also monitor the Institutes during the course of the year using, for example, the required annual report. The visiting Trustees report to the other Trustees and recommend changes, if any.
- Depending on many factors, current Trustee meetings may require several days to complete. As functions are delegated, it may be possible to replace in-person, meetings with conference calls. One in-person meeting per year might be adequate to carry out MBRF's business. Assuming the Inter Institutional concept is retained, the annual meeting could be held at the same time and location as the annual Inter Institutional meeting as is now done.

- Budget – At present, there is no formal budget process. A budget process would assist Trustees in focusing and planning the activities for MBRF. A budget would provide a partial roadmap for day-to-day operations.
- Evaluate whether MBRF's accomplishments merit its continuing existence. This process would be very basic.
 - Is the MBRF Mission realistic?
 - Are others better able to accomplish the MBRF Mission?
 - Does the focus on "Clinical" application add or detract from accomplishing the goal? In other words, does pure research come closer to fulfilling the Mission than pure or partial clinical application?
 - Does requiring "clinical application" in the Mission limit the opportunity to achieve amelioration of age-related memory loss (or is it cognition)?

III. **Change Governance Structure.** Currently the MBRF is administered both by elected and founding Trustees. That structure has worked since inception. As founding Trustees rotate off, the historic synergy may be lost. Thus, the MBRF should consider alternative governance structures. This topic usually involves changing control.

- Create a closer relationship with the Institutes. This would involve bringing representatives of the institutes into the Trustee structure. These could be as voting or advisory members. The change would be for the Institute to participate in governance. There are obvious downsides (letting the fox guard the henhouse), but the Trustee decisions may be better and it may institutionalize MBRF, i.e. – perpetual existence.
- Advisory Board. Establish an Advisory Board (pure scientists and clinicians) to review MBRF scientific activities and suggest optional programs or projects. The Trustees are effectively acting as an advisory board currently, but fresh eyes and ideas might generate improved outcomes. This could be in association with the Institutes or separate.
- Self-perpetuation Board. Current Trustee selection is close to self-perpetuation now. Expand the election process and possibly move to staggered terms so a new Trustee joins each year, or something similar. Recognize that there is no correct number of Trustees or terms of years. Founding Trustees would remain until they cease serving as a Trustee.

IV. **Partial Wind Down.** The concept here is that the MBRF would continue with enough assets to support administration (monitoring) and several programs.

- The MBRF would retain \$5,000,000 that should produce \$250,000 per year. \$250,000 should be adequate for administration and allow some funds for small programs such as the Poster Reception (\$25,000) and Inter Institutional meetings

(\$100,000). See Dr. Dockery's memorandum and spread sheets. The spread sheets include currently obligated programmatic distributions, whereas this \$250,000 is only the costs of operations. Thus, the spread sheets are not intended to be consistent with this bullet point.

The balance of the assets (\$40,000,000) will be granted to one or more institutions to carry out the MBRF Mission. A Gift Agreement will be entered into and will be monitored by the TRUSTEES.

- Possible recipients will include institutions the Trustees believe are best able to carry out the MBRF Mission. These might include:
 - U.S. Government, e.g. – NIH;
 - Endow each current institute with a portion of the assets;
 - Identify a new institute, such as Columbia to be endowed; and
 - Mix and match.
- The Trustees would monitor adherence to the Gift Agreement. The Gift Agreement, to the extent possible, should give the Trustee authority to transfer the assets granted to the extent the recipient fails to fulfill the Gift Agreement.

V. **100% Wind Down.** Under this option, MBRF will, within 5 years (or some period) distribute 100% of its assets and cease all operations. Unlike a partial wind down, there will be no MBRF Trustees to monitor the use of funds and the transferees' adherence to the Mission, etc.

- The five-year time period is arbitrary. The period could be any terms or no term, instead final dissolution might occur. When Trustees believe it is appropriate, i.e. – all needed decisions are in place.
- Possible recipients – this would seem to be the same analysis as partial wind down.
- The Trustees would monitor, and possibly modify the Gift Agreement, during the wind down period. Thereafter the reliance must be in the good faith of the transferee unless a monitoring body is identified.
- Consider endowing NIH (\$5MM?) to monitor institutes and recipients. An entity monitor in perpetuity would institutionalize MBRF. Note: this could be combined with partial wind down.



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Miami, FL 33131
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Memorandum

From: Henry H. Raattama
To: Trustees, McKnight Brain Research Foundation
Date: July 10, 2017
Subject: Random Thoughts re MBRF Proposed Organizational Alternatives

The purpose of this memorandum is to provide an overview of topics to consider when contemplating plans for MBRF's future. The goal for now is to discuss the possibilities, without favoring a particular course of action.

- In the future, who will be the driving force to energize MBRF and MBRF activities. Without a driving force, any organization (including MBRF) will flounder if it is not institutionalized.
- Adherence to Mission - In any alternative, it is imperative to strictly adhere to the Mission. Does strict adherence stifle imagination?
- Is it worthwhile to identify and evaluate MBRF's accomplishments?
- Has MBRF made a difference – Are its accomplishments worth the \$56,000,000 MBRF expenditures plus leveraged expenditures totaling approximately \$160,000,000?
- The MBRF has created an infrastructure which has focused scientists on the Mission and offered an opportunity to accomplish the Mission.
- To date, MBRF has partnered with universities and the Federal Government. Is there another type of partner that should be considered, e.g. – a foundation with a

similar mission? This does not really fit in options I – V.

Definitions

Mission Statement: The McKnight Brain Research Foundation strives to:

- Lead in generating interest and support of scientific research in the understanding and alleviation of age-related memory loss^{*}
- Inspire commitment and shared vision in the understanding and alleviation of age-related memory loss
- Partner with research scientists, institutions, and organizations to promote research to understand and alleviate age-related memory loss
- Promote collaboration and communication among research scientists, institutions, and organizations engaged in research in age-related memory loss
- Nurture scientists dedicated to the exploration and innovative research in the understanding and alleviation of age-related memory loss
- Recognize and Reward achievement in discoveries leading to the understanding and alleviation of age-related memory loss

^{*}The specific influence of aging on memory loss

Amended, February 6, 2107

Accomplishments - Anything that tangibly advances the Mission. To a degree, accomplishment is in the eye of the beholder. To some, publishing a peer-reviewed article is an accomplishment, even though it may not advance the Mission. To some, only a break-through that demonstrably advances amelioration of age-related memory loss is an accomplishment. It may be more accurate to use the word "outcomes". The goal is the outcome. Outcome is a current amelioration of age-related memory loss. For example, a published article does not directly ameliorate age-related memory loss; or teaching piano may alleviate age related memory loss; teaching person to play the piano may alleviate age related memory loss.

Future – What MBRF will look like in 5 and 10 years?

McKnight Brain Research Foundation
Qualifications for New Trustee

1. The Board of Trustees must be composed of at least three (3) and not more than seven (7) individual trustees and one (1) Corporate Trustee.
2. A Trustee must have either a Medical Degree or a Ph.D. Degree in one of the Basic Sciences or an equivalent degree in science related fields.
3. It is desirable for a Trustee to have been an active practitioner, an active research scientist, or have experience in administrative medicine or as a medical educator.
4. An additional Trustee or replacement Trustee must be elected by a unanimous vote of the current Trustees.
5. A Trustee must be committed to the Values, Vision, Mission and Code of Ethics of the McKnight Brain Research Foundation.

Approved, April 19-20, 2005, Trustees' Meeting
Reviewed and reaffirmed, April 16-18, 2008, Trustees' Meeting
Reviewed and reaffirmed, March 14, 2012, Trustees' Meeting
Approved October 14, 2014
Reviewed and reaffirmed, July 25, 2017

Current Portfolio

Foundations and Endowments Specialty Practice

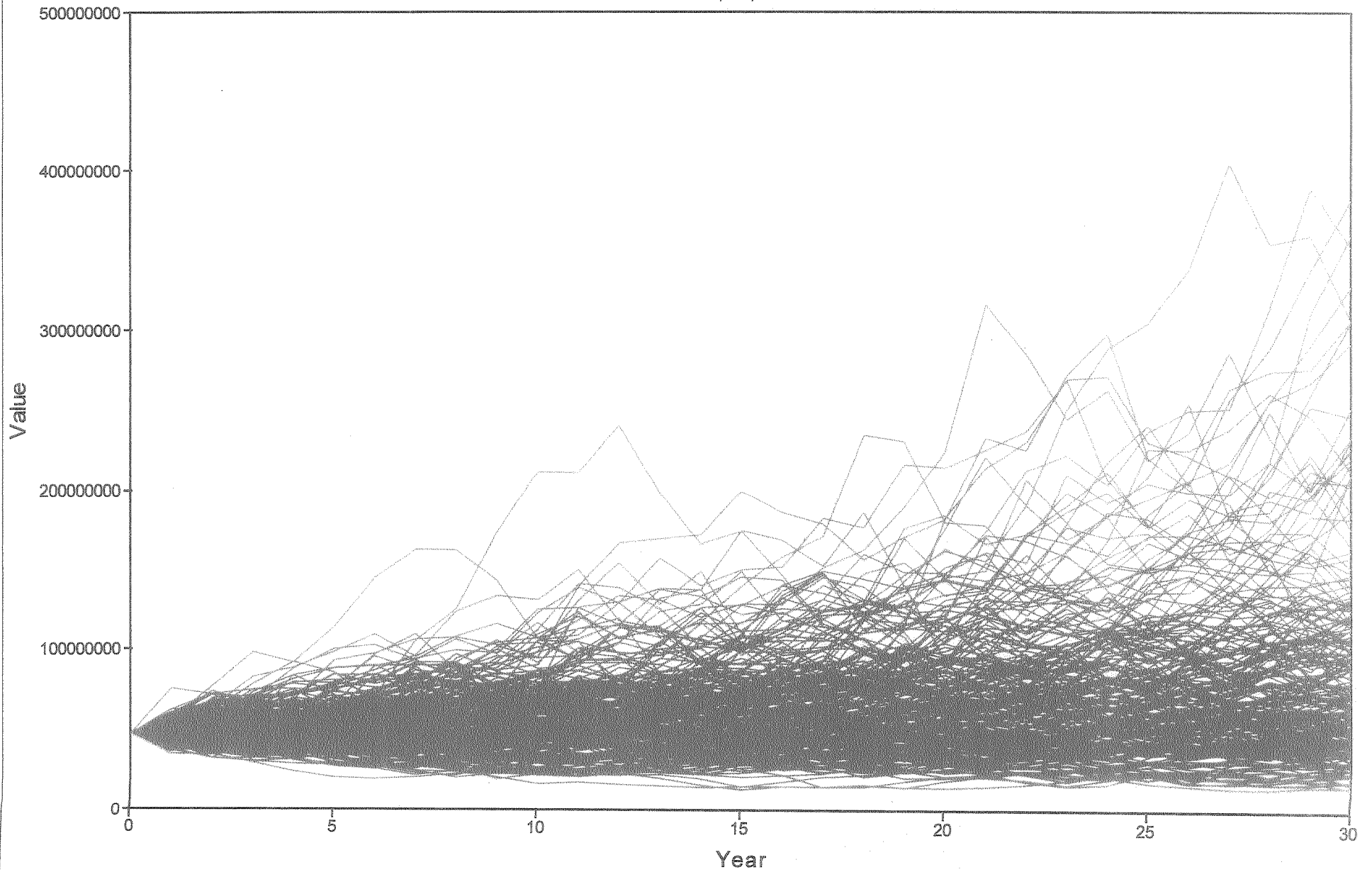


Monte Carlo Simulation

Zephyr Allocation ADVISOR: SunTrust Institutional Investment Solutions

Portfolio Value

Case: Simulation Case Initial Value: 46,500,000 Inflation Rate: 2.50%



Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Portfolio Value

Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Inflation Rate: 2.50%

Simulation Trials

	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
Portfolio Value						
10th Percentile:	72,809,224	91,094,672	108,929,944	126,459,616	145,976,576	165,826,096
25th Percentile:	60,256,168	69,437,968	77,780,472	86,766,152	95,620,784	105,134,584
50th Percentile:	48,843,168	51,456,080	53,827,128	57,365,808	59,892,176	63,188,440
75th Percentile:	39,409,228	38,098,204	37,578,704	37,048,488	37,419,004	37,725,992
90th Percentile:	32,721,056	29,463,574	27,190,982	25,553,262	24,269,718	23,519,980

Flows

Flow 1						
10th Percentile:	(3,470,096)	(4,376,859)	(5,251,405)	(6,130,860)	(7,052,489)	(8,076,332)
25th Percentile:	(2,923,164)	(3,377,908)	(3,793,814)	(4,243,372)	(4,698,739)	(5,204,048)
50th Percentile:	(2,422,160)	(2,542,780)	(2,667,819)	(2,817,658)	(2,973,278)	(3,137,458)
75th Percentile:	(1,999,642)	(1,915,576)	(1,892,903)	(1,862,324)	(1,865,615)	(1,890,861)
90th Percentile:	(1,686,034)	(1,495,952)	(1,374,553)	(1,292,319)	(1,228,775)	(1,180,989)

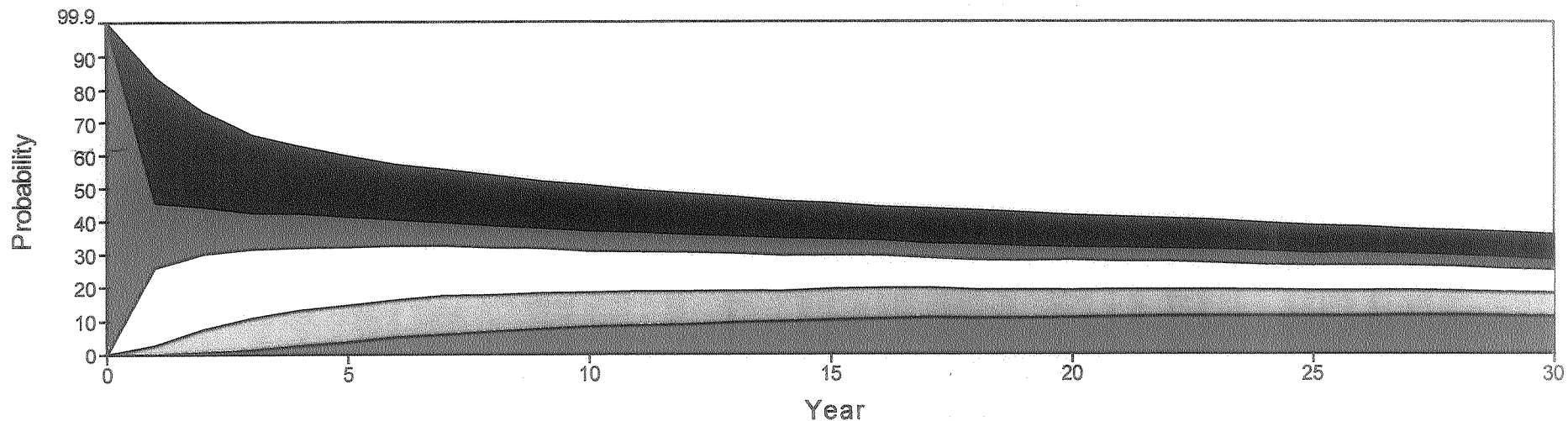
Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Probabilities

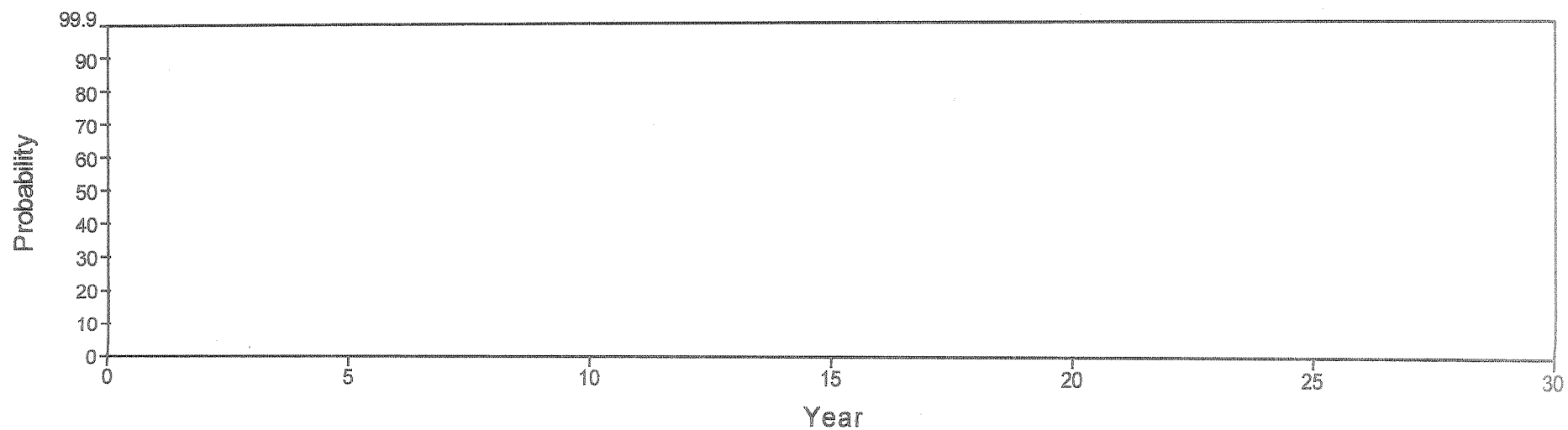
Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Targets inflation adjusted Inflation Rate: 2.50%

Probability of Portfolio Value



\$75.0M or more \$60.0M or more \$50.0M or more \$46.50M or more \$40.0M or more

Probability of Zero Value



Monte Carlo Simulation

Zephyr Allocation ADVISOR: SunTrust Institutional Investment Solutions

Simulation Probabilities

Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Targets inflation adjusted Inflation Rate: 2.50%

Portfolio Probabilities

		Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
Probability of:							
75,000,000	Inflated Target:	84,855,616	96,006,344	108,622,368	122,896,232	139,045,808	157,317,568
	Probability:	4%	8%	10%	11%	11%	11%
60,000,000	Inflated Target:	67,884,496	76,805,080	86,897,896	98,316,984	111,236,640	125,854,056
	Probability:	15%	18%	19%	19%	19%	18%
50,000,000	Inflated Target:	56,570,412	64,004,232	72,414,912	81,930,824	92,697,200	104,878,376
	Probability:	32%	31%	30%	28%	26%	25%
46,500,000	Inflated Target:	52,610,480	59,523,936	67,345,864	76,195,664	86,208,400	97,536,888
	Probability:	41%	37%	34%	32%	30%	28%
40,000,000	Inflated Target:	45,256,328	51,203,384	57,931,928	65,544,656	74,157,760	83,902,704
	Probability:	60%	51%	45%	41%	38%	36%
Probability of Zero Value:							
	Probability:	0%	0%	0%	0%	0%	0%

Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Case

Simulation Case

Inputs

Years to Simulate	30
Trials	10,000
Inflation Rate	2.50%

Distribution

Lognormal Distribution	Mean: 7.35%	StdDev: 15.14%
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Values

Initial Portfolio Value	46,500,000			
Wealth Goal	46,500,000			
Probability Targets	75,000,000	60,000,000	50,000,000	40,000,000

Flows - Beginning of year

Flow 1	Withdrawal	Percent	5.00%	Years 1 - 100
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Filter

No Filter

Inflation Rate Categories

Recommended Portfolio

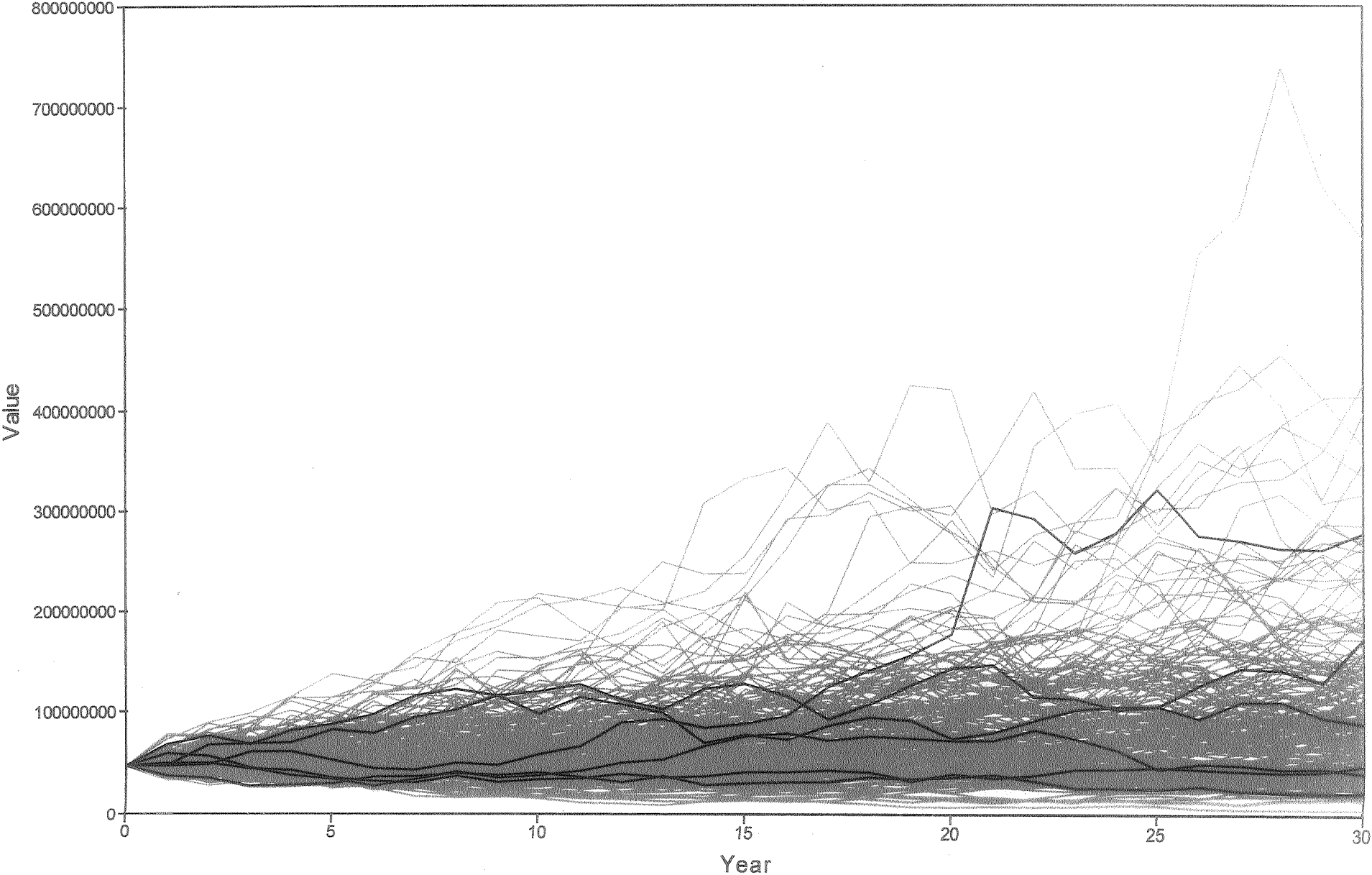
Foundations and Endowments Specialty Practice



Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Portfolio Value
Case: Simulation Case Initial Value: 46,500,000 Inflation Rate: 2.50%



Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Portfolio Value

Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Inflation Rate: 2.50%

Simulation Trials

	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
Portfolio Value						
10th Percentile:	75,670,384	95,205,344	114,885,600	136,063,200	160,483,808	186,041,456
25th Percentile:	61,808,656	71,848,576	81,704,736	92,290,560	101,727,368	112,635,288
50th Percentile:	49,580,156	52,781,360	56,285,608	59,192,288	62,954,420	66,751,704
75th Percentile:	39,713,396	38,619,600	38,285,564	38,185,716	38,669,556	38,854,272
90th Percentile:	32,500,346	29,442,992	27,493,702	25,834,982	24,764,274	24,445,540

Flows

Flow 1						
10th Percentile:	(3,551,781)	(4,566,850)	(5,510,684)	(6,653,117)	(7,670,357)	(8,961,935)
25th Percentile:	(2,982,411)	(3,505,540)	(3,978,267)	(4,539,306)	(5,035,534)	(5,541,503)
50th Percentile:	(2,453,955)	(2,600,622)	(2,773,362)	(2,952,565)	(3,129,626)	(3,290,371)
75th Percentile:	(2,012,546)	(1,936,877)	(1,921,614)	(1,904,796)	(1,923,070)	(1,944,371)
90th Percentile:	(1,684,788)	(1,479,619)	(1,396,616)	(1,309,968)	(1,242,102)	(1,229,022)

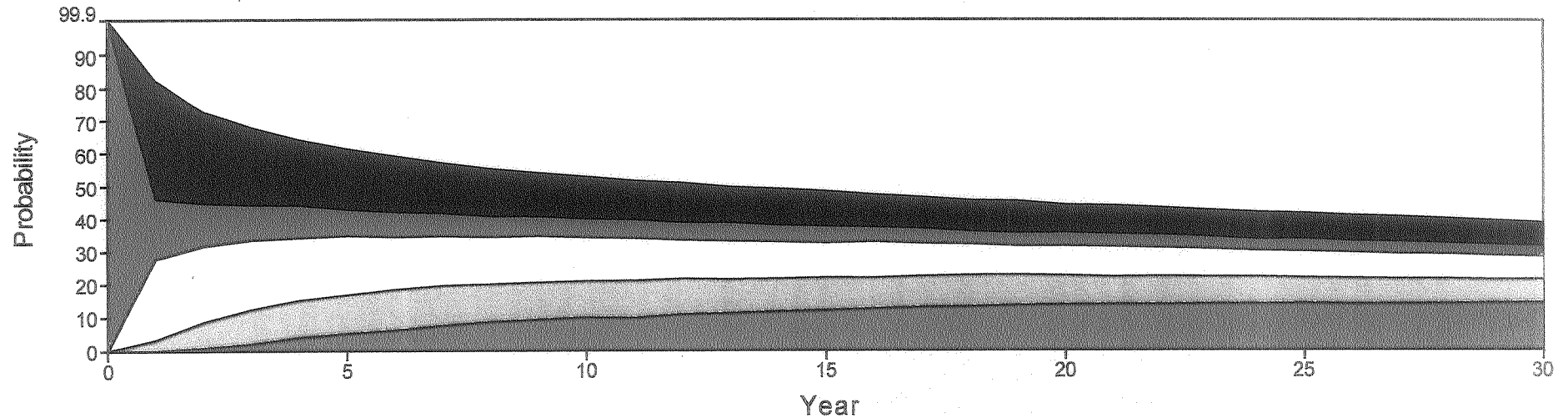
Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Probabilities

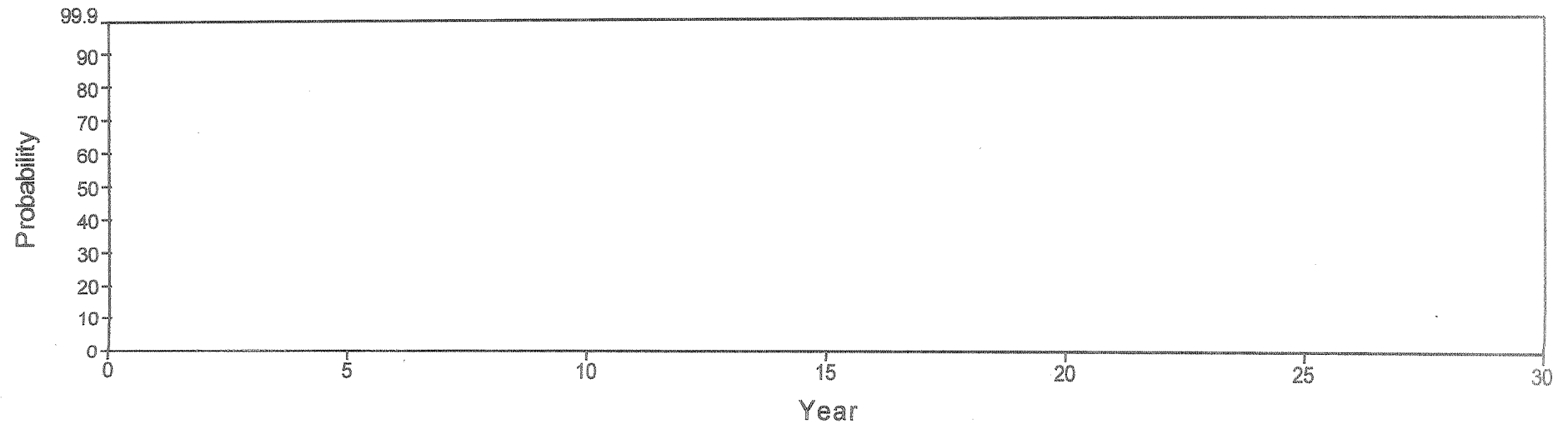
Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Targets inflation adjusted Inflation Rate: 2.50%

Probability of Portfolio Value



■ \$75.0M or more ■ \$60.0M or more □ \$50.0M or more ■ \$46.50M or more ■ \$40.0M or more

Probability of Zero Value



Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Probabilities

Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Targets inflation adjusted Inflation Rate: 2.50%

Portfolio Probabilities

		Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
Probability of:							
75,000,000	Inflated Target:	84,855,616	96,006,344	108,622,368	122,896,232	139,045,808	157,317,568
	Probability:	5%	10%	12%	13%	14%	14%
60,000,000	Inflated Target:	67,884,496	76,805,080	86,897,896	98,316,984	111,236,640	125,854,056
	Probability:	17%	21%	22%	22%	21%	21%
50,000,000	Inflated Target:	56,570,412	64,004,232	72,414,912	81,930,824	92,697,200	104,878,376
	Probability:	35%	34%	32%	31%	30%	28%
46,500,000	Inflated Target:	52,610,480	59,523,936	67,345,864	76,195,664	86,208,400	97,536,888
	Probability:	43%	40%	37%	35%	33%	31%
40,000,000	Inflated Target:	45,256,328	51,203,384	57,931,928	65,544,656	74,157,760	83,902,704
	Probability:	61%	53%	48%	44%	41%	38%
Probability of Zero Value:							
	Probability:	0%	0%	0%	0%	0%	0%

Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Case

Simulation Case

Inputs

Years to Simulate

30

Trials

10,000

Inflation Rate

2.50%

Distribution

Lognormal Distribution

Mean: 7.67%

StdDev: 15.74%

Values

Initial Portfolio Value

46,500,000

Wealth Goal

46,500,000

Probability Targets

75,000,000

60,000,000

50,000,000

40,000,000

Flows - Beginning of year

Flow 1

Withdrawal

Percent

5.00%

Years 1 - 100

Filter

No Filter

Inflation Rate Categories

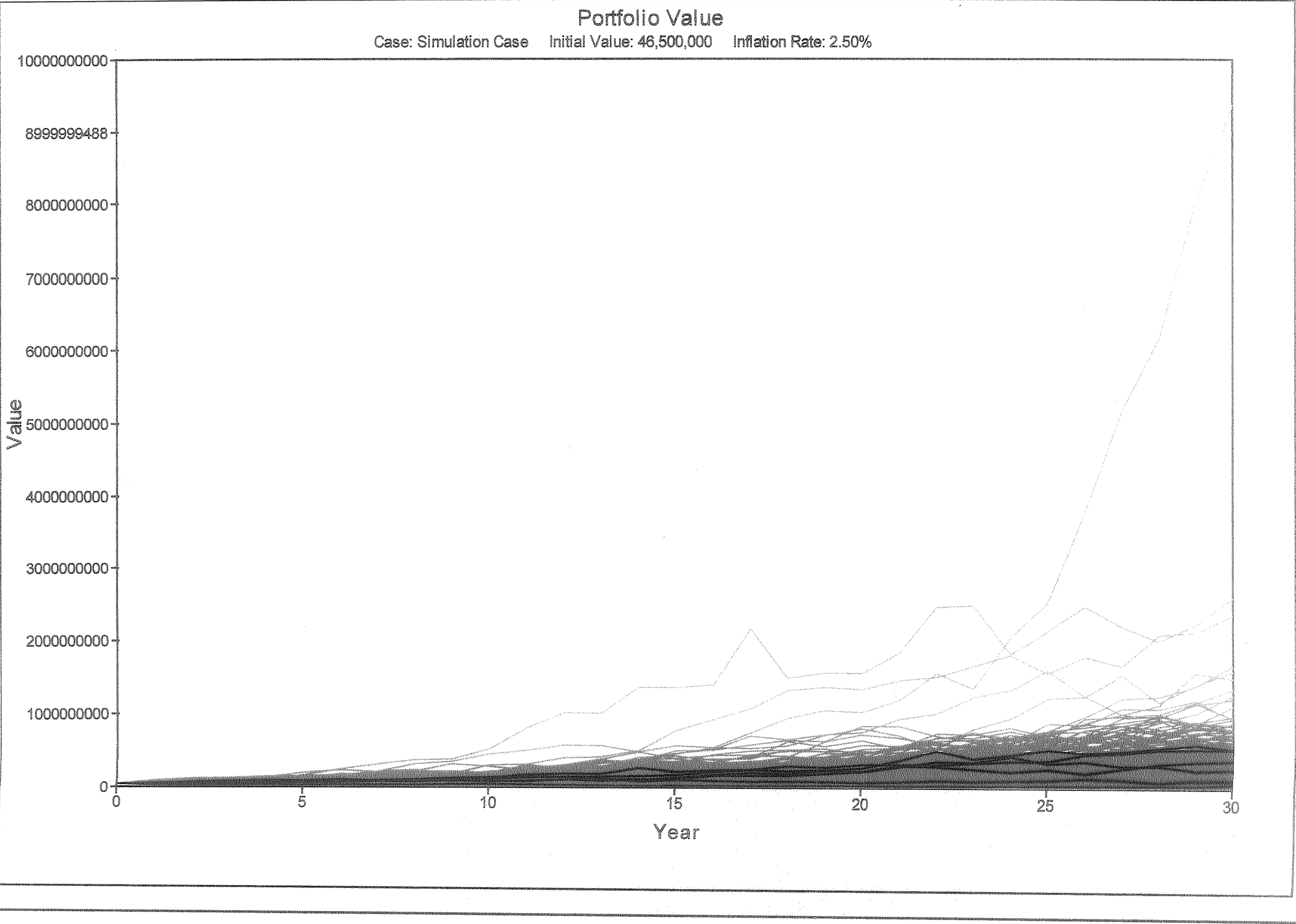
All Private Equity

Foundations and Endowments Specialty Practice



Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions



Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Portfolio Value

Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Inflation Rate: 2.50%

Simulation Trials

	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
Portfolio Value						
10th Percentile:	95,276,160	149,550,352	222,065,536	322,259,456	471,866,656	677,943,488
25th Percentile:	76,577,728	109,021,120	152,898,592	211,227,424	286,658,944	391,251,136
50th Percentile:	59,611,780	76,553,744	100,222,000	128,486,408	164,190,304	214,185,872
75th Percentile:	46,590,732	54,164,544	64,337,384	77,837,744	95,187,048	115,453,640
90th Percentile:	37,180,304	39,797,148	42,958,752	49,549,956	56,997,284	66,445,784

Flows

Flow 1						
10th Percentile:	(4,324,662)	(6,889,114)	(10,236,968)	(15,257,018)	(22,067,028)	(31,401,860)
25th Percentile:	(3,543,673)	(5,085,760)	(7,111,612)	(9,808,697)	(13,460,362)	(18,128,020)
50th Percentile:	(2,830,747)	(3,641,707)	(4,734,736)	(6,125,625)	(7,915,385)	(10,155,188)
75th Percentile:	(2,276,664)	(2,625,962)	(3,124,951)	(3,755,221)	(4,555,127)	(5,547,308)
90th Percentile:	(1,872,060)	(1,931,631)	(2,120,588)	(2,419,262)	(2,760,308)	(3,210,279)

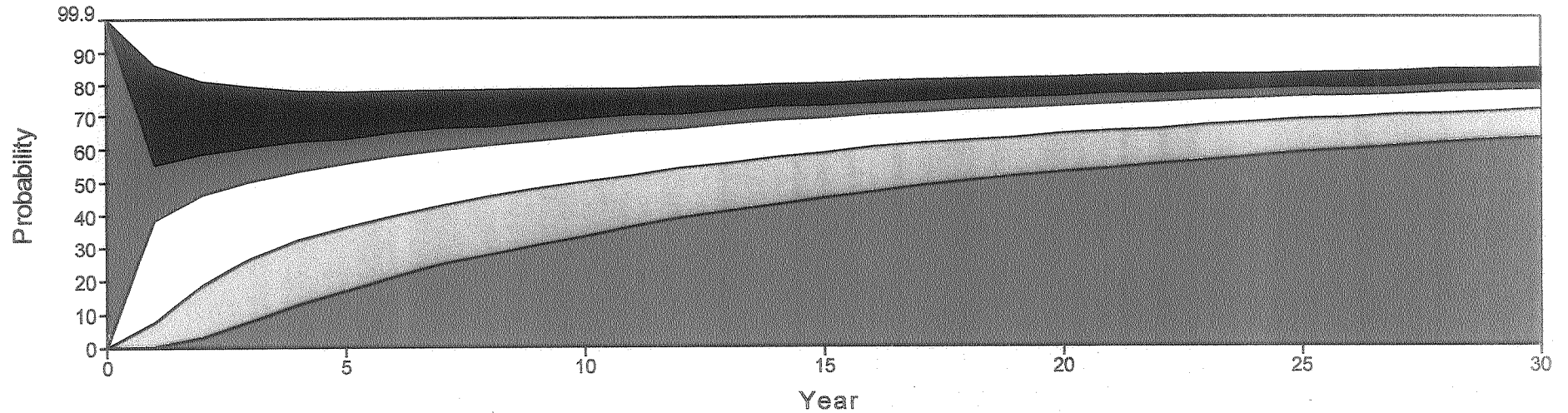
Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Probabilities

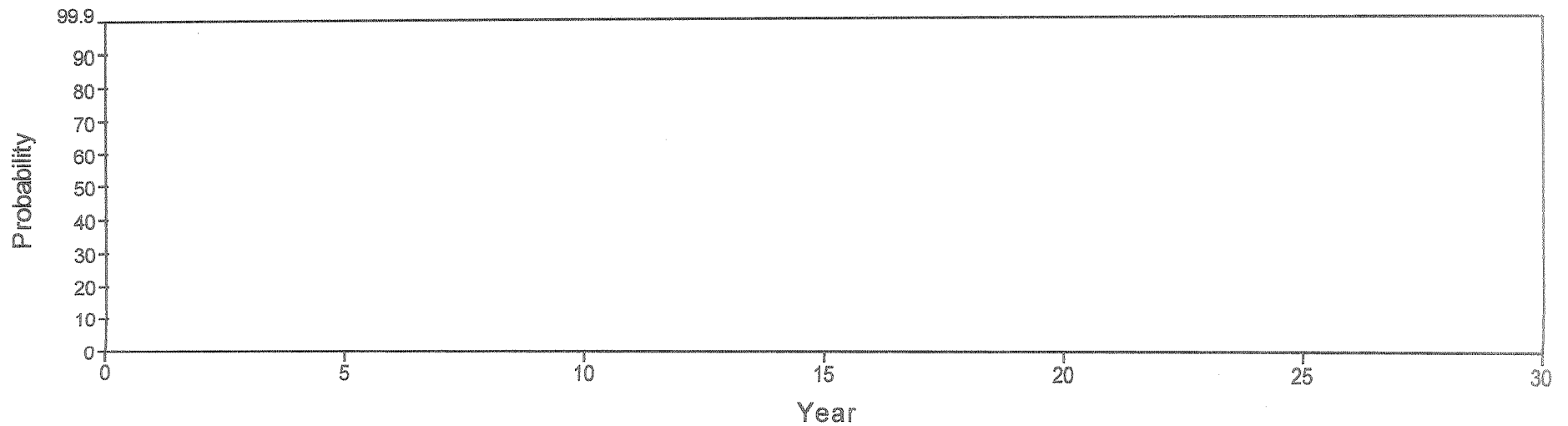
Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Targets inflation adjusted Inflation Rate: 2.50%

Probability of Portfolio Value



■ \$75.0M or more ■ \$60.0M or more □ \$50.0M or more ■ \$46.50M or more ■ \$40.0M or more

Probability of Zero Value



Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Probabilities

Case: Simulation Case Initial Value: 46,500,000 Wealth Goal: 46,500,000 Targets inflation adjusted Inflation Rate: 2.50%

Portfolio Probabilities

		Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
Probability of:							
75,000,000	Inflated Target:	84,855,616	96,006,344	108,622,368	122,896,232	139,045,808	157,317,568
	Probability:	17%	33%	45%	53%	59%	63%
60,000,000	Inflated Target:	67,884,496	76,805,080	86,897,896	98,316,984	111,236,640	125,854,056
	Probability:	36%	50%	58%	64%	69%	72%
50,000,000	Inflated Target:	56,570,412	64,004,232	72,414,912	81,930,824	92,697,200	104,878,376
	Probability:	56%	64%	69%	73%	76%	78%
46,500,000	Inflated Target:	52,610,480	59,523,936	67,345,864	76,195,664	86,208,400	97,536,888
	Probability:	63%	69%	73%	76%	79%	80%
40,000,000	Inflated Target:	45,256,328	51,203,384	57,931,928	65,544,656	74,157,760	83,902,704
	Probability:	77%	78%	80%	82%	83%	85%
Probability of Zero Value:							
	Probability:	0%	0%	0%	0%	0%	0%

Monte Carlo Simulation

Zephyr AllocationADVISOR: SunTrust Institutional Investment Solutions

Simulation Case

Simulation Case

Inputs

Years to Simulate 30
Trials 10,000
Inflation Rate 2.50%

Distribution

Lognormal Distribution Mean: 12.21% StdDev: 18.50%

Values

Initial Portfolio Value 46,500,000
Wealth Goal 46,500,000
Probability Targets 75,000,000 60,000,000 50,000,000 40,000,000

Flows - Beginning of year

Flow 1 Withdrawal Percent 5.00% Years 1 - 100

Filter

No Filter

Inflation Rate Categories

**MCKNIGHT BRAIN RESEARCH
FOUNDATION TRUSTEE
MEETING
JULY 25, 2017**

STRATEGISTS, INC. 2017

REVIEW OF OPTIONS

Wind down - worries mission drift, loss of name and mission – changes focus

Hard work to get momentum and clarity with others with mission – time limited 5-10 years would likely not achieve full potential – need a longer term look – favor perpetuity

Next 5-10 years cognitive aging will scientifically impact clinical treatment – much more likely than in previous 18 years – winding down now premature – table that for future discussion

REVIEW OF OPTIONS

Reinvent option – rational middle path – staying as is – stagnation – go away is another extreme – could give us the best of all options at the moment. Rethink oversight and grant making.

Perpetuity –legacy and mission issues – opportunity in the future favor staying with the organization.

MISSION EFFECTIVENESS

Four components of mission – how well have we met those?

- **Improve quality of life – have not yet advanced this**
- **Understanding of age related memory loss – made progress on this**
- **Alleviation of age related memory loss – have not yet advanced this**
- **Age related memory loss – got this phrase on the map**

MISSION EFFECTIVENESS

Creating the institutes to which MBRF has invested is a significant metric of progress – universities have matched our investment – exist in perpetuity themselves – naming of chairs, written publications

NEXT PHASE OF GROWTH

Existing Commitments

- **Renew partnership in cognitive aging in 19**
- **Arizona - \$3 million**
- **Partnership American Brain Foundation \$1.6 over five years of time**

NEXT PHASE OF GROWTH

5-10 years growing our capital, having other investors donating to our mission, cease reactive decisions – take the lead on having a plan that drives spending investments in grantees and our budget

As is is not static – started gift, institutes, drove national agenda NIH – found opportunities – significant achievements

NEXT PHASE OF GROWTH

Built a fantastic institute – growing our capital – bring in new dollars – build more intuitions and train the next several generations of scientists. Increasing what we've already down and diversity with more institutes with distinct science to add to goals.

Face of our organization is J. Lee Dockery – defacto CEO – without Lee organization would not be what we are – to survive we need a CEO who will do most of Lee's functions.

NEXT PHASE OF GROWTH

Difficult to change the work we do without fundraising – we can't continue on just the money we have now – it will disappear – funded \$57 million, having \$46 million on balance sheet – commitments we have we will erode some of the corpus.

DESIRED OUTCOMES OF NEXT PHASE

Do additional funding, require fundraising to increase funding without eating into corpus –

More public facing, done ok with our current institutes but none are knocking it out of the park – get them moving in right direction or look at different institute

Fund another institute - is it the same as the past four – or is it different? Source of leverage – current model get universities to match – is there a different one in the environment to think about?

DESIRED OUTCOMES OF NEXT PHASE

**Not fundraising – leverage – better word – no
annual campaigns, consumer outreach at this
point – resource raising**

**Frame fundraising as strategic partnerships with
larger or same size organizations that have like
minded missions**

**Maintain what we've created – relationships,
investments, - likely to be 50% of what needs to
be done in the future**

DESIRE OUTCOMES OF NEXT PHASE

Worried about new institutes for the next two years – external grants for American Brain Foundation – good role for us – exploring talent outside of the Institutes

Branding, marketing, communications – need to position cognitive aging and what it is – and our role – fundraising is secondary – capital raising is a better phrase

Finding a CEO is not a silver bullet- board must be able to involved – trustees must motivate organization – administrative stuff easy – thinking, passion and motivation is still board

DESIRED OUTCOMES FOR NEXT PHASE

CEO won't start with a great relationship with the institutes – they won't have knowledge and history - have to have transition from Lee Dockery who has been doing a lot of the tasks that a CEO will do.

New trustee onboarding shares the history and evolution - fundraising can be looked at different ways

FUNCTION AND FORM FOR FUTURE

**Increase staff in some configuration – ED or CEO
– need an employee – someone to replace the
functions that Lee is providing now -and add
new tasks including:**

- Branding, marketing, maintenance of relationships, strategic planning, face of the organization, oversight of grants, oversee corporate trustee relationship

FUNCTION AND FORM FOR FUTURE

Driving force to rally resources to lead the organization to execute the vision and mission

Qualities of the person – invested, relationship oriented, self motivated, visionary, opportunistic, anticipation of difficult situation, resolve conflict, facilitator, strong character, driving force

Timing – next several months get job description agreed upon, posting, how to recruit and post. Finalize job description by next meeting.

FUNCTION AND FORM FOR FUTURE

Discussion of next steps:

**Debbie create functions of new employee role,
board chair and vice chair**

What new functions would we add to that list

How that affects recruiting of trustees – and staff

**Distribute to everyone – use Go To meeting –
discussion to vet what is on the list, allocate
functions and then add new functions – timing
September 15 ish – finalize at November
meeting**

FUNCTION AND FORM FOR FUTURE

At November meeting- create plan to recruit trustees and staff, timing.

December 1st posting date through mid to end January.

Debbie layout timeline and draft process for consideration

Lee wants to be sure that we have clear process for interviews

After this work, will come the criteria for new trustees, define process for recruiting, onboarding of trustees

CURRENT QUALIFICATIONS OF TRUSTEES

MD or Ph.D.

**Active practitioner, administrative medicine or
medical educator**

Committed to vision, mission, value, codes

Elected by unanimous vote

**Composed of at least 3 and not more than 7 plus 1
corporate trustee**

Reaffirmed on 7.25.17

REVIEW OF TERMS OF SERVICE

Three year terms, renewable three terms by agreement of board and board member.

Terms completed – upcoming deadlines – both willing to serve another term

4/2018 - Gene

8/2018 - Robert

Considerations – neurologists, women, Ph.D. researcher, neuropsychologist, clinical application important focus of mission

FUTURE DIRECTIONS

Budget for staff and infrastructure for 2018

- \$300,000

Invest in current institutes

- \$3M U AZ, \$ for adding additional institutes

Funding additional outside institutes

- 1.6 M over five years to Brain Fdt. Partnership
- NIA \$1 M over five years

FUTURE DIRECTIONS

If Trustees consider a new investment – consider doing so with institute at human translation research (i.e. Columbia \$7.5M which they would match equally)

So many opportunities – picking these strategies – limited funds – start spending down or we start making choices

FOLLOW UP

**Debbie create functions of new employee role,
board chair and vice chair**

**What new functions would we add to that list –
suggestions from Debbie**

How that affects recruiting of trustees – and staff

**Debbie to prepare draft timeline and process of
recruitment**

**Debbie sends deliverables to Melanie to distribute
to Trustees in late August in preparation for
September meeting**

FOLLOW UP

Group to set a September date for a Go To Meeting online/phone meeting to review deliverables submitted by Debbie and react

Debbie to set up and facilitate the Go To Meeting discussion about deliverables – send invitation to Melanie to distribute with deliverables to the group

Group discussion to occur – Debbie to make revisions and submit to Melanie to include in the October/November Board package for final discussion and ratification

Duties of the Corporate Trustee/Secretary ^{Treasurer} for the McKnight Brain Research Foundation (MBRF)

1. Appointed as defined and authorized in the MBRF Trust Agreement
- (E) 2. Interacts with trustees and board chair as necessary via print and electronic communication
3. Interacts with MBRF legal counsel and accounting representatives for tax preparation of the 990-PF, 990-T and 1099-MISC
- (E) 4. Interact with ~~personnel~~ ^{CEO} of the McKnight Brain Institutes (MBI) as necessary
5. Manage all meeting arrangements, including securing meeting location, arranging for meals, arranging for telephones or audio visual equipment as necessary and making trustee hotel reservations
- (E) 6. Prepare the agenda for all board meetings in consultation with the Chair
- (E) 7. Assemble and distribute agenda and support materials and information for trustee meeting packages
8. Travel to and attend trustee meetings and site visits *as requested.*
9. Prepares minutes of trustee meetings *for CEO review.*
- (E) 10. Uploads information to Foundation's secure website
11. Serve as custodian and provide periodic reports to the trustees on the inventory of the Foundation records and maintain the archives for historical records of the Foundation located at the SunTrust offices, 200 S. Orange Avenue, 10th Floor SOAB, Orlando, FL 32801
- (E) 12. Act as liaison between the portfolio managers of the Foundation and the trustees and legal counsel
13. Handle capital calls for private equity holdings and liquidation requests for from equity fund managers approved by the portfolio manager
14. Maintain accounts and disburse payments for the Travel Award Program, Bio-Informatics Core and Neuroimaging Core and Cognitive Aging Test Battery Working Group *and others as authorized by CEO and board.*
- (E) 15. Work with the host institution of the annual Inter-Institutional Meeting: sign contracts, handle deposits and payments for meeting venues, *provides guidance as necessary* *- Trustee*
- (E) 16. Works with personnel of the MBIs to ensure receipt of Annual Reports every year by 1/15 and distributes to trustees for review
17. Handle payment of trustee compensation, taxes, grant commitments, trustee expense reimbursements, travel award payments, inter-institutional meeting participant reimbursements and other expense reimbursements as required
- (E) 18. Handle other correspondence and requests for information regarding the affairs of the Foundation
19. Handle other trustee hotel reservations and travel arrangements as necessary and request by the trustees *after location review is made by CEO*
- (E) 20. Represent the Board at the meetings of Exponent Philanthropy (formerly the Association of Small Foundations) and other organizations as directed by the Board
21. Perform other responsibilities assigned or delegated by the Board. *Stet*

**Duties of Chair
Board of Trustees
McKnight Brain Research Foundation (MBRF)**

1. Represent the Foundation in all communications with individuals, organizations and Institutions. *joint*
2. Serve as spokesperson *joint*
3. Foster relationships with organizations and grant award recipients. *joint*
4. Lead the Foundation in monitoring performance and progress of all grant recipients.
5. Manage all communications with the Foundation—both print and electronic.
6. Supervise the execution of work by all outside contract services.
7. Organize meeting agendas and ^{with CEO} *Chair* preside at meetings.
8. Perform first review of the minutes of meetings before release for review and approval by the trustees. *joint*
9. Serve as first point of contact for all questions from corporate trustee/secretary
10. Act as liaison between the trustees and legal counsel in negotiation of contracts, gift agreements or other legal documents involving the Foundation.
11. Act as liaison between the trustees and the investment manager directly or through the corporate trustee as required.
12. Manage or monitor, in collaboration with the corporate trustee, other business tasks as required, e.g. tax reports, MBRF website, archives, copyright registrations.
13. Monitor compliance with all Gift Agreements, travel awards and grant awards.
14. Implement all actions approved by the Board and perform additional duties assigned by the Board.
15. Lead board member development and succession planning.

Add others

Approved: April 6, 2015

**Duties of Vice Chair
Board of Trustees
McKnight Brain Research Foundation (MBRF)**

- 1. Substitute for Chair**
- 2. Other tasks as assigned by the Chair or designated by the Board**

**Duties of the Corporate Trustee/Secretary for the
McKnight Brain Research Foundation (MBRF)**

1. Appointed as defined and authorized in the MBRF Trust Agreement;
2. Interact with CEO, Trustees and Board Chair, as necessary via print and electronic communications;
3. Interact with MBRF CEO, legal counsel and accounting representatives for tax preparation of the 990-PF, 990-T and 1099-MISC;
4. Interact with the personnel of the McKnight Brain Research Institutes, as directed by the MBRF CEO;
5. Manage all meeting arrangements, including securing meeting location, arranging for meals, arranging for telephones or audio visual equipment as necessary and making trustee reservations (NOTE THIS COULD BE A STAFF FUNCTION if and when MBRF has secretarial support);
6. Travel to and attend Trustee meetings and site visits, as requested;
7. Prepare minutes of Trustee meetings for CEO review and submission to the Board Chair;
8. Serve as custodian and provide periodic reports to the CEO and Trustees on the inventory of the Foundation records, and maintain the archives for the historical records of the Foundation, located at the SunTrust offices, 200 S. Orange Avenue, 10th Floor SOAB, Orlando, FL 32801;
9. Act as a liaison between the portfolio managers of the Foundation and the CEO and legal counsel, for regular reports to the Trustees;
10. Handle capital calls for private equity holdings, and liquidation requests from equity fund managers approved by the portfolio manager;
11. Maintain accounts and disburse payments for the Travel Award Program, Bio-Informatics Core and Neuroimaging Core and Cognitive Aging Test Battery Working Group, and others as authorized by the CEO on behalf of the organization;
12. Handle deposits and payments for meeting venues and provide guidance as necessary to support the CEO in working with the host institution for the Inter-Institutional Meeting;
13. Handle payment of Trustee compensation, taxes, grant commitments, trustee expense reimbursements, travel award payments, Inter-Institutional meeting participant reimbursements, CEO travel reimbursements, and other expense reimbursements, as well as office operational expense payments as required;
14. Handle other Trustee or CEO hotel reservations and travel arrangements as necessary and requested by the Trustees and/or CEO;
15. Perform other responsibilities assigned or delegated by the Board or CEO.

Chair of the Board of Trustees

McKnight Brain Research Foundation

The role of the Chair of the Board of Trustees of the McKnight Brain Research Foundation (MBRF) is to manage and to provide leadership to the Board of Trustees (Board). The Chair is accountable to the Board and acts as a direct liaison between the Board and the President/Chief Executive Officer (CEO) to ensure that the Board's directives and resolutions are executed. The Chair acts as the chief communicator for the Board's decisions to the CEO.

The duties and responsibilities of the Chair in relation to the Board are to:

Lead the Board to carry out its governance functions, ensuring the duties of care, obedience, loyalty and are fulfilled;

Ensure the Board approves and updates policies, including the MBRF Corporate Trust Agreement, for sound and compliant governance of the organization;

Ensure the ongoing recruitment, development, contributions and evaluations of Board members;

Manage the assessment of the performance of the Board and its committees, conduct evaluations of the Board, and make recommendations to the Board annually, regarding the effectiveness of the Board as a whole, as well as the Committees of the Board and individual Trustees;

Preside over regular and special meetings of the Board;

Review and sign minutes of all Board meetings;

Appoint, with Board approval, all committees, task forces and other special project roles of Board members in support of the organization's strategic plan;

Serve as ex-officio member of all committees of the Board;

Serve as an ambassador of the organization and advocate its mission to internal and external stakeholders;

As a Board member, approve the MBRF's annual budget, audit reports, and material business decisions; being informed of, and meeting all, legal and fiduciary responsibilities;

As a Board member regularly review organizational and grantee programmatic outcomes and metrics created by MBRF's CEO for evaluating its impact, and the results of those metrics;

Lead Board member development and succession planning.

The duties and responsibilities of the Chair in relation to the CEO are to:

Act as a liaison between management and the Board;

Serve as a trusted advisor to and provide independent counsel to the CEO;

Partner with the CEO to ensure the Board's directives, policies, and resolutions are carried out in a timely manner;

Ensure that the CEO keeps the Board informed and that sufficient information is provided to enable the Board to develop appropriate decisions;

Establish priorities, and jointly create with the CEO, the agendas for meetings of the Board;

Jointly with CEO, serve as a spokesperson, when appropriate;

Jointly with CEO, foster relationships with organizations and grant recipients;

Coordinate an annual performance review of the CEO.

Qualifications of the Chair of the Board

Vision and capacity to inspire other volunteers;

Objectivity to hear all sides, listen well and manage a forum for input;

Extensive knowledge of the organization and its mission and impact;

Passion for the mission of the organization;

Ability to co-lead with a CEO the strategic planning of the organization;

Ability to lead meetings through consent agendas, issues management and committee management;

Excellent communication skills with the CEO, fellow Board members, grantees and other stakeholder audiences;

Ability to understand and manage with good humor, in partnership with the CEO, the boundaries between the CEO and Board Chair roles and responsibilities.

President/CEO

McKnight Brain Research Foundation

The President/Chief Executive Officer (CEO) is the key management leader of The McKnight Brain Research Foundation (MBRF) and reports directly to the Board of Trustees (Board) through the Chair of the Board. The CEO serves as the lead representative of the organization, and as its primary spokesperson to all stakeholder groups.

The CEO is responsible for overseeing all the strategic planning, operations and administration of the organization's programs, finances, marketing, and grant making of the organization. The CEO serves as the organization's liaison to the Corporate Trustee, providing oversight of the execution of Corporate Trustee duties.

GENERAL RESPONSIBILITIES:

Organization Mission and Strategy:

Work with Board to ensure that the mission is fulfilled in its strategic planning goals;

Implement and oversee grants to programs/organizations that carry out the organization's mission;

Enhance MBRF's image by being active and visible in the identified sectors and communities and by working closely with other professional, public and private organizations related to MBRF's mission;

Ensure effective systems to track progress, regularly evaluate program components and communicate status of successes to the Board and other stakeholders;

Build/expand partnerships, establishing relationships with grantees, other funders of similar work, and leaders at each grant site;

Work with personnel of the MBIs to ensure receipt of Annual Reports each year and distribute to trustees for review in a timely fashion;

Work with the host institution of the annual Inter-Institutional Meeting; sign contracts and forward to Corporate Trustee for payment of deposits and other costs related to the meeting;

Create and implement programmatic strategy to better link and articulate the progress of the grantees in meeting the strategic goals of the MBRF.

Leadership & Management:

Ensure planning and implementation of strategic goals, and operational excellence in administration, finance, grant making and program evaluation, communications, and Board support, including all systems and resources needed to achieve those strategic goals;

Actively engage and energize MBRF's Board members, grantees and other stakeholders;

Report to and work closely with the Board to seek their involvement in policy decisions, and to increase the overall visibility of MBRF throughout the sector;

Develop, maintain, and support a strong Board; serve as ex-officio of each committee; seek and build Board involvement with mission effectiveness;

Interact and communicate with Board Chair and Trustees as necessary via print and electronic communications;

Serve as the primary liaison and oversee/manage the Corporate Trustee/Secretary relationship and interactions for the organization and Board;

Establish and maintain relationships with various organizations throughout the brain research, medical, research and academic circles as identified and utilize those relationships to strategically enhance MBRF's mission;

Represent the Board and organization at the meetings of Exponent Philanthropy, and other organizations as deemed appropriate by the CEO and/or Board;

Represent the Board and organization at grantee site visits and meetings with other stakeholders;

Establish employment and administrative policies and procedures for all day-to-day operations and functions of MBRF;

Serve as MBRF's primary spokesperson to the organization's constituents, media and the general public.

Board Governance:

Work with Board in order to fulfill the organization mission;

Lead and represent MBRF in a manner that supports and guides the organization's mission as defined by the Board;

Responsible for communicating effectively with the Board and providing, in a timely and accurate manner, all information necessary for the Board to function properly and to make informed decisions;

In concert with the Board Chair, prepare the agenda for all Board meetings;

Assemble and distribute Board agenda, support materials and information for Board meeting packages and upload those to Foundation's secure website;

Review and edit minutes prepared by Corporate Trustee, in concert with Board Chair, and then distribute minutes to Board;

Working with the Board Chair, annually ensure that Board members execute all annual personal policy forms (conflict of interest, document retention, travel, etc. as outlined in the Form – 990) for good governance and submit the record of completion of those to the Corporate Trustee.

Financial Performance:

Prepare and submit an annual budget to the Board; ensure preparation by the Corporate Trustee of quarterly financial statements, tax preparation of the 990-PF, 990-T and 1099-MISC, which accurately reflect the financial condition of the organization and its expenditures and investments;

Responsible for fiscal management within the approved budget, ensuring maximum resource utilization, and maintenance of the organization in a positive financial position;

Oversee and ensure Corporate Trustee develops and submits regular performance reports from portfolio manager, and special reports as requested;

Oversee and ensure Corporate Trustee's execution of accounting and payment disbursement for Travel Award Program, Bio-Informatics Core and Neuroimaging Core and Cognitive Aging Test Battery Working Group and others as authorized by CEO and Board;

Oversee and ensure Corporate Trustee's execution of payment of trustee compensation, taxes, grant commitments, trustee and CEO expense reimbursements, travel award payments, inter-institutional meeting participant reimbursement, other expense reimbursements, as well as operational expense invoices;

Perform the final review of the Form 990 and other tax documents as prepared by the Corporate Trustee, before those are submitted to the Board for review and approval;

Execute sound financial decision making for operating expenses.

Organization Operations:

Effectively execute and administer MBRF's operations;

Hire and manage competent, qualified staff and/or consultants;

Sign all notes, agreements, grants, and other instruments made and entered into and on behalf of the organization.

Communications:

Handle all correspondence and requests for information regarding the affairs of the Foundation in a timely and professional manner;

Deepen and refine all aspects of communications—from web presence, social media, and trade media to external relations with the goal of creating a stronger brand for MBRF;

Maintain and regularly update the communications vehicles including the website and others to effectively communicate the mission, and grant investments, outcomes and benefits to society at large;

Use external presence and relationships to garner new opportunities for collaborative funding and national positioning of the importance of age-related cognitive decline;

Professional Qualifications:

An advanced terminal degree in medicine, public health, nursing, basic and life sciences, business and liberal arts and sciences from a recognized university accredited through the US Department of Education and the Council on Higher Education. A master's degree is the minimum requirement for consideration;

Ten or more years of nonprofit senior management experience or comparable experience approved by the Trustees; Comment: do we want to exclude all others? Is "nonprofit" a definite requirement?

Transparent and high integrity leadership;

Past success working with a Board of Directors/Trustees with the ability to cultivate existing Board member relationships;

Ability to convey a vision of MBRF's strategic future to staff, Board, and other stakeholders;

Skills to collaborate with and motivate Board members and other volunteers;

Superior written and verbal communication skills, and public speaking skills; a persuasive and passionate communicator with excellent interpersonal and multidisciplinary project skills;

Strong marketing and public relations experience with the ability to engage a wide range of stakeholders through the use of a broad palate of communications strategies;

Action-oriented, collegial, and adaptable approach to management;

Ability to work effectively in collaboration with diverse groups of medical and research professionals;

Solid, hands-on, budget management skills, including budget preparation, analysis, decision-making and reporting;

Strong organizational planning and delegation skills;

Knowledge of grant making and grant monitoring unique to nonprofit sector;

Demonstrated ability to oversee, collaborate and integrate the work of staff and consultants;

Understanding of and/or experience in healthcare and/or academics;

Passion, idealism, integrity, positive attitude, mission-driven, and self-directed;

Ability to understand and manage with good humor, in partnership with the Board Chair, the boundaries between the Board Chair and CEO roles and responsibilities.

Cianciotto.Melanie

From: J Lee Dockery <jld007@cox.net>
Sent: Thursday, August 31, 2017 3:51 PM
To: 'Hixon, Vicki'
Cc: 'Lazar, Ronald M'; Cianciotto.Melanie; carol@nsma.arizona.edu; 'Luann Snyder'; Pierson.Priscila; 'Hank Raattama'; 1techdoc@gmail.com; generyerson@gmail.com; madhavtr71@gmail.com; Mike.Dockery@OrthoCarolina.com; n39LGC@aol.com; rii9004@med.cornell.edu
Subject: RE: "pre-meeting" for Alabama Inter-Institutional meeting

Dear Vicki,

Thanks for your reply. In view of the lack of coordinated response, even with several reminders since the April 2017, leadership council meeting, the trustees are not impressed there is support for the "pre-meeting". I have asked Melanie to remove the budget request from the agenda for the September 11 conference call meeting of the trustees.

However, if in the meantime, convincing support develops for the collaborative group to meet before the 2018 inter-institutional meeting, the next and last time the budget request can be considered by the trustees is at the November 8, 2017 trustee's meeting.

Your abiding assistance is acknowledged with appreciation!

Lee

J. Lee Dockery, MD
Chair, Board of Trustees
McKnight Brain Research Foundation
jld007@cox.net
352-377-5872

From: Hixon, Vicki [<mailto:VHixon@uab.edu>]
Sent: Wednesday, August 30, 2017 4:48 PM
To: J Lee Dockery <jld007@cox.net>
Cc: Lazar, Ronald M <rlazar@uabmc.edu>; Cianciotto.Melanie <Melanie.Cianciotto@SunTrust.com> (Melanie.Cianciotto@SunTrust.com) <Melanie.Cianciotto@SunTrust.com>; 'carol@nsma.arizona.edu' <carol@nsma.arizona.edu>; Luann Snyder (luann@nsma.arizona.edu) <luann@nsma.arizona.edu>
Subject: RE: "pre-meeting" for Alabama Inter-Institutional meeting

Hi All,

Yes, our summer has slipped away which means another year has almost slipped away!!!

In addition to the information from Carol, Ron Cohen did respond. Dr. Lazar sent out an e-mail to the UAB McKnight faculty regarding possible interest in expanded groups and we are still gathering that information. Dr. Lazar and I have a meeting in the morning and we will be going over some of the details. There is significant interest in having the pre-

meeting so it's just a matter of determining the number wanting to attend. We'll continue to gather the information and get a budget to you.

It's coming together slowly. We just want to make sure we've covered the details so that the Trustees don't have any "surprises" after the event.

Thanks for your patience!

~Vicki

.....
From: J Lee Dockery [mailto:jld007@cox.net]

Sent: Wednesday, August 30, 2017 2:47 PM

To: Hixon, Vicki <VHixon@uab.edu>

Cc: Melanie.Cianciotto@SunTrust.com; carol@nsma.arizona.edu; 'Luann Snyder' <luann@nsma.arizona.edu>

Subject: RE: "pre-meeting" for Alabama Inter-Institutional meeting

Dear, Vicki!

It is hoped you have enjoyed a wonderful summer and plan are underway for a wonderful Labor Day Holiday weekend, which I guess marks the end of summer and the welcome to fall.

I'm just following up on our earlier conversation regarding the budget for the pre-meeting of the collaborative group before the 2018 inter-institutional meeting.

At the last time, we talked **no one** had indicated their plans for early arrival. Dr. Barnes did have the conference call on August 23, at which time individuals were reminded to indicate their intent to attend the pre-meeting working group discussions.

As indicated earlier, the trustees will have a conference call on September 11, at which time the budget request for the pre-meeting group can be considered.

Have a sufficient number of individuals responded to be able to develop a tentative budget for consideration by the trustees?

With appreciation for your assistance and apologies for having to bother you with this request for follow-up,

Lee

McKnight Inter-institutional Meeting				
Pre-Meeting				
Tuesday, April 3 - Wednesday, April 4, 2018				
	Per Person	Total		
Lodging				
20 guests x \$180.00 nightly rate	\$180.00	\$3,600.00		
UAB - Doubletree				
Dinner Tuesday, April 3				
30	\$70.00	\$2,100.00		
Thursday, April 4				
Breakfast: 30 guests	\$45.00	\$1,350.00		
All day coffee service: 30	\$20.00	\$600.00		
Lunch 30 guests	\$38.00	\$1,140.00		
Meeting Space		\$500.00		
Travel				
Taxi service - airport to UAB	\$25.00	\$500.00		
TOTAL		\$9,790.00		

McKnight Inter-institutional Meeting
Birmingham, Alabama
Wednesday, April 4 - Friday, April 6, 2018

	Per Person	Total		
Lodging				
65 guests x 2 nights = 130 x \$180.00 nightly rate	\$180.00	\$23,400.00		
Hotel TBD				
Wednesday, April 4				
Welcome Reception / Dinner 90 guests	\$125.00	\$11,250.00		
Hotel TBD				
Thursday, April 5				
Breakfast: 75 guests	\$45.00	\$3,375.00		
All day coffee service / break: 75	\$9.00	\$675.00		
Lunch 90 guests	\$22.00	\$1,980.00		
Dinner 90 guests	\$120.00	\$10,800.00		
Location TBD				
Friday, April 6				
Breakfast: 75 guests	\$35.00	\$2,625.00		
Box Lunch: 75 guests	\$38.00	\$2,850.00		
Meeting Space & Audiovisual Rental		\$1,500.00		
Printing and supplies		\$500.00		
Travel				
Shuttle Service		\$5,000.00		
Tucson Air: 25 travelers	\$500.00	\$12,500.00		
Miami Air: 20 travelers	\$450.00	\$9,000.00		
Gainesville Air: 20 travelers	\$400.00	\$8,000.00		
Airport meals/ airport parking/ incidentals: 65 guests	\$100.00	\$6,500.00		
Total		\$99,955.00		

Cianciotto.Melanie

From: J Lee Dockery <jld007@cox.net>
Sent: Tuesday, August 22, 2017 6:52 PM
To: Pierson.Priscila; hank.raattama@akerman.com; 1techdoc@gmail.com; generyerson@gmail.com; madhavtr71@gmail.com; Cianciotto.Melanie; Mike.Dockery@OrthoCarolina.com; n39LGC@aol.com; rii9004@med.cornell.edu
Subject: Urgent review: UM McKnight
Attachments: Rao CV 8-17-17.pdf; Rao bio paragraph 8-17-17.pdf; Vision Statement for Miami McKnight Brain Institute 8-21-17.docx

Importance: High

Dear Friends,

Attached below is an email from Ralph Sacco with several attached documents regarding the search for the Scientific Director of the McKnight Brain Institute at the University of Miami.

Since my reply he has scheduled a conference call to discuss the appointment of Dr. Rao and to receive feedback from the trustees. Please review and let me know your thoughts in preparation for our discussion scheduled for September 6th.

Also, please scroll down to the bottom on this email to view the relevant email exchanges between Dr. Sacco and Dr. Rao.

With best wishes to all and appreciation for your review and timely reply,

Lee

From: J Lee Dockery [mailto:jld007@cox.net]
Sent: Tuesday, August 22, 2017 10:44 AM
To: RSacco@med.miami.edu
Subject: FW: UM McKnight

Good morning, Ralph!

Thank you for your note and supporting documents regarding the candidacy of Dr. Stephen Rao for the Scientific Director position of the Evelyn F. McKnight Brain Institute at the University of Miami.

I will look forward to speaking with you regarding the search following your return from vacation after September 2, 2017.

In the meantime, the trustees will be mindful of the request for confidentiality.

With best wishes for a wonderful vacation and a Happy Labor Day celebration to follow,

Lee

From: Sacco, Ralph L [<mailto:rsacco@med.miami.edu>]

Sent: Monday, August 21, 2017 8:00 PM

To: J. Dockery <jld007@cox.net>

Subject: FW: UM McKnight

Lee,

I hope you are well and enjoying the remains of your Summer. I want to provide you with an update on our search for the McKnight Sci Director. Our search committee has cast a wide net, screened quite a number of applicants, conducted many phone call interviews and interviewed 2 candidates in-person. The committee has unanimously approved that we move forward to recruit Stephen Rao. His CV, Bio and vision statement are attached. His work on imaging, cognitive aging, physical activity, inflammation and population screening for memory disorders really align nicely with the McKnight mission. I attached some documents for you to review and hope you will agree. I wanted to give you an early chance to review his credentials while we start the negotiations. I am still not certain how much he has fully disclosed to Cleveland Clinic, so we are trying to keep some things confidential.

I leave tomorrow evening for vacation and wanted to set up a phone call with you when I return after Sept 2nd.

Look forward to discussing him with you. Thanks as always for your continued support.

Best,
Ralph

--
Ralph L. Sacco MD MS FAHA FAAN
Professor and Olemberg Chair of Neurology
Executive Director McKnight Brain Institute
Chief of Neurology Jackson Memorial Hospital
Director, UM Clinical & Translational Science Institute
Senior Associate Dean for Clinical & Translational Science
Miller School of Medicine, University of Miami
President, American Academy of Neurology 2017-19
Office: 305-243-7519

From: "Rao, Ph.D, Stephen" <RAOS2@ccf.org>

Date: Thursday, August 17, 2017 at 1:49 PM

To: "Ralph L. Sacco MS MD FAHA FAAN" <rsacco@med.miami.edu>

Subject: RE: Follow-up

Ralph,

I too enjoyed meeting with you and your wonderful faculty last week. I'm delighted that the committee has decided to move forward with my candidacy. I've attached the most recent version of my CV as well as a bio-paragraph. Updating the vision statement will require some additional time. I should be able to work on it tomorrow and get it to you over the weekend.

I look forward to working with you as well.

Best, Steve

Stephen M. Rao, PhD
Ralph and Luci Schey Endowed Chair
Director, Schey Center for Cognitive Neuroimaging
Editor-in-Chief, *Journal of the International Neuropsychological Society*
Associate Editor, *American Psychologist*
Professor, Cleveland Clinic Lerner College of Medicine of CWRU
Lou Ruvo Center for Brain Health
Neurological Institute
Cleveland Clinic
9500 Euclid Avenue / U10
Cleveland, OH 44195
216-444-1025 (voice)
216-445-7013 (fax)

From: Sacco, Ralph L [<mailto:rsacco@med.miami.edu>]
Sent: Thursday, August 17, 2017 12:55 PM
To: Rao, Ph.D, Stephen <RAOS2@ccf.org>
Cc: Lee, Rebecca G <Rglee@med.miami.edu>
Subject: Follow-up

Steve,

Great to see you again and discuss future opportunities. I met with the committee and we all agree that this would be a great fit for our McKnight Institute and would like to move forward. Based on our conversations, Rebecca and I will start a draft offer letter to get moving.

I will also want to speak with the McKnight Trustees soon. Please send me your most updated CV, a bio-paragraph, and maybe a revised vision statement (based on some of our discussions) that I could share with the trustees.

I will be away between Aug 23 and Sept 1, so we may not be able to get all of this accomplished, but at least start taking steps in the right direction.

I really look forward to working with you.

Best,
Ralph

Ralph L. Sacco MD MS FAHA FAAN
Professor and Olemberg Chair of Neurology
Executive Director McKnight Brain Institute
Chief of Neurology Jackson Memorial Hospital
Director, UM Clinical & Translational Science Institute
Senior Associate Dean for Clinical & Translational Science

Miller School of Medicine, University of Miami
President, American Academy of Neurology 2017-19

Please consider the environment before printing this e-mail

Cleveland Clinic is currently ranked as the No. 2 hospital in the country by U.S. News & World Report (2017-2018). Visit us online at <http://www.clevelandclinic.org> for a complete listing of our services, staff and locations. Confidentiality

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Stephen M. Rao, Ph.D., ABPP-Cn is the Ralph and Luci Schey Endowed Chair and Director of the Schey Center for Cognitive Neuroimaging at the Cleveland Clinic and Professor, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. He obtained his Ph.D. in Clinical Psychology from Wayne State University (Detroit) and completed a predoctoral internship at Rush-Presbyterian-St. Luke's Medical Center (Chicago). Prior to joining the Cleveland Clinic in May of 2007, he was Director of the Functional Imaging Research Center and Professor of Neurology (Neuropsychology) at the Medical College of Wisconsin (Milwaukee). He has authored over 175 scientific papers/book chapters and edited four books. His current research areas involve the application of advanced neuroimaging techniques (task-activated and resting-state fMRI; diffusion tensor imaging) to understand the disruption of brain circuits mediating memory, attention, motor control, temporal information processing, and conceptual reasoning in normal aging and in individuals in the preclinical stage of Alzheimer's and Huntington's diseases, patients with multiple sclerosis, and military personnel with blast-related traumatic brain injury. More recently, his lab has developed and validated self-administered iPad-based apps for testing neuroperformance in multiple sclerosis patients and for mass screening of cognitive dysfunction in older patients attending primary care clinics. He has been a recipient of a National Institutes of Health Research Career Development Award and has received funding from the National Institute of Neurological Disorders and Stroke, National Institute of Mental Health, National Institute on Aging, US Department of Defense, CHDI Foundation, Charles A. Dana Foundation, and National Multiple Sclerosis Society. He is the Editor-in-Chief of the *Journal of the International Neuropsychological Society* published by Cambridge University Press and Associate Editor of *American Psychologist* and former Editor of *Neuropsychology* published by the American Psychological Association (APA), and a member of the editorial boards of eight other journals. He currently serves on the APA Publications and Communications Board and has served as President of the International Neuropsychological Society (INS), INS Board of Trustees, and Chair of the scientific program committee for the INS annual scientific meeting, as well as on the Board of Directors of the American Board of Clinical Neuropsychology.

CURRICULUM VITAE

August, 2017

Stephen M. Rao, Ph.D.

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Schey Center for Cognitive Neuroimaging
Neurological Institute
Cleveland Clinic
9500 Euclid Ave. / U10
Cleveland, OH 44195
216-444-7747 (Fax: 216-445-7013)
E-mail: raos2@ccf.org

Place of Birth:

Providence, Rhode Island

Marital Status:

Married - Rebecca Winner
Children: Jess and Julia

Education:

1974	B.A., University of Rhode Island
1978	M.A., Wayne State University
1979	Ph.D., Wayne State University

Graduate Training and Fellowship Appointments:

1974 - 1975	Predoctoral Fellowship, funded by National Institute of Mental Health Public Health Service.
1975 - 1978	Clinical Practica: Department of Psychology, Veterans Administration Hospital, Allen Park, Michigan; Department of Neurology, Wayne State University Medical School, Detroit, Michigan; Psychology Clinic, Department of Psychology, Wayne State University, Detroit, Michigan; Department of Psychology, Salvation Army Harbor Light Substance Abuse Treatment Center, Detroit, Michigan; Department of Psychology, Rehabilitation Institute, Detroit, Michigan
1978 - 1979	Predoctoral Internship in Clinical Neuropsychology (APA Approved), Department of Psychology and Social Sciences, Rush- Presbyterian-St. Luke's Medical Center, Chicago, Illinois.

<i>Faculty Appointments:</i>	1979 - 1985	Assistant Professor of Neurology (Neuropsychology), Medical College of Wisconsin, Milwaukee, Wisconsin.
	1979 - 1985	Assistant Professor of Psychiatry and Mental Health Sciences, Medical College of Wisconsin.
	1985 - 1991	Associate Professor of Neurology (Neuropsychology), Medical College of Wisconsin.
	1985 - 2002	Associate Professor of Psychiatry and Mental Health Sciences, Medical College of Wisconsin.
	1988 -	Clinical Associate Professor of Psychology, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin.
	1991 - 2007	Professor of Neurology (Neuropsychology), Medical College of Wisconsin, with tenure.
	1995 - 2007	Professor of Cell Biology, Neurobiology, and Anatomy, Medical College of Wisconsin.
	2000 -	Adjunct Professor (Associate Member), Department of Psychology, Rosalind Franklin University, North Chicago, Illinois
	2002 - 2007	Professor of Psychiatry and Mental Health Sciences, Medical College of Wisconsin.
	2007 -	Adjunct Professor, Department of Neurology, Medical College of Wisconsin.
	2007 -	Ralph and Luci Schey Chair, Cleveland Clinic.
	2007 -	Staff, Department of Psychiatry and Psychology, Cleveland Clinic.
	2007 -	Staff, Department of Neurosciences, Lerner Research Institute, Cleveland Clinic.
	2009 -	Professor of Medicine, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University.

Hospital and Administrative Appointments:

- 1985 - 1991 Director of Clinical Training, Postdoctoral Training Program in Clinical Neuropsychology, Section of Neuropsychology.
- 1991 - 1998 Co-Director (with Dr. Thomas Hammeke), Section of Neuropsychology, Department of Neurology.
- 1991 - 1993 Director of Clinical Neuroscience Research, Department of Neurology.
- 2002 - 2007 Director, Functional Imaging Research Center, Medical College of Wisconsin.
- 2002 - 2007 Assistant Program Director, General Clinical Research Center, Medical College of Wisconsin.
- 2007 - Staff, Neurological Institute, Cleveland Clinic.
- 2007 - Director, Schey Center for Cognitive Neuroimaging, Cleveland Clinic.

Specialty Certification:

- 1980 - 1990 National Register of Health Service Providers in Psychology
- 1984 - Diplomate in Clinical Neuropsychology (ABPP-ABCN)
- 1984 - Certified ABPP-ABCN Examiner

Licensure:

- 1979 - 2007 Licensed Psychologist, State of Wisconsin (#804)
- 2007 - Licensed Psychologist, State of Ohio (#6348)

Awards, Honors:

- 1974 B.A. with High Distinction, University of Rhode Island.
- 1986 Research Career Development Award, National Institute of Neurological Disorders and Stroke.
- 1988 Margaret Bernauer Psychology Research Award, Wisconsin Psychological Association.
- 1998 Fellow, Division 40 (Neuropsychology), American Psychological Association

- | | |
|------|---|
| 2004 | Distinguished Neuropsychologist Award, American Academy of Clinical Neuropsychology |
| 2010 | Copernicus Prize, Polish Neuropsychological Society, June, 2010. |

Memberships in Professional and Honorary Societies:

American Psychological Association (1975 -).
 International Neuropsychological Society (1979 -).
 American Association for the Advancement of Science (1979 -).
 Wisconsin Psychological Association (1983 - 2007).
 Midwest Neuropsychology Group (1979 -).
 Association of Medical School Professors of Psychology (1986 -).
 American Psychological Society (1989 -).
 Society for Neuroscience (1992 -).
 Society of Magnetic Resonance in Medicine (1993 -).
 Cognitive Neuroscience Society (1997 -).
 Organization of Human Brain Mapping (2001 -).

Hospital Appointments:

Milwaukee County Medical Complex, Milwaukee (1979 - 1995).
 Columbia Hospital, Milwaukee (1981- 1985).
 Froedtert Memorial Lutheran Hospital, Milwaukee (1981- 2007).
 Milwaukee Psychiatric Hospital, Milwaukee (1987 - 1988).
 Cleveland Clinic (2007 -).

Editor-in-Chief:

Neuropsychology (2007 - 2013)
Journal of the International Neuropsychological Society (2014-2018)

Associate Editor:

Journal of the International Neuropsychological Society (1999 - 2006)
Archives of Scientific Psychology (2012 - 2016)
American Psychologist (2016 -)

Editorial Board:

Acta BioMedica (2007 -)
Archives of Scientific Psychology (2012 -)
Archives of Clinical Neuropsychology (2016 -)
Brain and Cognition (2000 -)
Brain Imaging and Behavior (2006 -)
International Journal of MS Care (1999 -)
Journal of Clinical and Experimental Neuropsychology (1989 - 1995)
Journal of the International Neuropsychological Society (1994 - 1999)
Journal of Neurologic Rehabilitation (1994 -)
Neuropsychology (1992 - 1998)
Neuropsychology Review (2006 -)

NMR in Biomedicine (1997 -)

Ad Hoc Reviewer:

Acta Neurologica Scandinavica
Annals of Neurology
Applied Neuropsychology
Archives of Clinical Neuropsychology
Archives of Neurology
Biological Psychiatry
Brain
Brain and Cognition
Brain and Language
Brain Imaging and Behavior
Brain Research Bulletin
Brain Research Interactive
British Journal of Clinical Psychology
Cahiers de Psychologie Cognitive (Current Psychology of Cognition)
Canadian Journal of Rehabilitation
Cerebral Cortex
Cognitive and Behavioral Neurology
Developmental Neuropsychology
Experimental Brain Research
Health Psychology
Human Brain Mapping
International Journal of Psychiatry in Medicine
Journal of Cognitive Neuroscience
Journal of Consulting and Clinical Psychology
Journal of Nervous and Mental Disease
Journal of the Neurological Sciences
Journal of Neuropsychiatry and Clinical Neurosciences
Journal of Neurophysiology
Multiple Sclerosis
Neurocase
NeuroImage
Neurology
Neuron
Neuropsychiatry, Neuropsychology, and Behavioral Neurology
Neuropsychologia
Neuroscience Letters
Perceptual and Motor Skills
Psychiatry Research: Neuroimaging
Psychological Assessment: A Journal of Consulting and Clinical Psychology
Science

The Clinical Neuropsychologist
The Lancet Neurology

External Examiner, Doctoral Dissertation:

University of British Columbia, Vancouver, B.C., Canada
University of Melbourne, Melbourne, Australia
University of Oslo, Oslo, Norway
University of Dalhousie, Halifax, Nova Scotia, Canada

National Advisory Committees:

Member, Board of Governors, International Neuropsychological Society (1996 - 1999).
Member, Medical Advisory Board, National Multiple Sclerosis Society (1987 - 1998).
Member, Board of Directors, American Board of Clinical Neuropsychology (1993 - 1998).
Member, Task Force on Clinical Rating Scales, National Multiple Sclerosis Society (1994 - 1997).
Chairman, Program Committee for the 1992 International Neuropsychological Society Meeting, San Diego.
Member, Program Committee for the 1991, 1997, and 1998 International Neuropsychological Society meetings.
Member, Multiple Sclerosis Cognitive Functions Study Group, National Multiple Sclerosis Society (1984 - 1988).
Ad-hoc Grant Reviewer, National Institutes of Health (1994 -).
Ad-hoc Grant Reviewer, Veterans Administration (1989 -).
Ad-hoc Grant Reviewer, National Multiple Sclerosis Society (1990 -).
Ad-hoc Grant Reviewer, Multiple Sclerosis Society of Canada (1992).
Ad-hoc Grant Reviewer, Medical Research Council of Canada.
President-Elect, International Neuropsychological Society (2008 – 2009).
Incoming President, International Neuropsychological Society (2009 – 2010).
President, International Neuropsychological Society (2010 – 2011).
Chair-Elect and Chair, American Psychological Association Council of Editors (2010 - 2012).
Member, Neuropsychology/Cognition Subgroup, NINDS Multiple Sclerosis Common Data Elements Task Force (2011-2012).
Member, APA Task Force on Scientific Replication in the Literature (2013 - 2014).
Member, APA Task Force on Retraction of Published Articles (2013 - 2014).
Elected Member, Publications and Communications Board, American Psychological Association (2015 – 2019).

Research Grants, Contracts, Awards:

Active:

NIH R01AG022304 “Immune Mechanisms Underlying the Neuroprotective Effects of Physical Activity in Human and Mouse Models of Genetic Risk

	for Alzheimers Disease,” National Institute on Aging, NIH. Total direct costs (2017-2022): \$5,915,303; <i>20% effort</i> , Principal Investigator (MPI: Bruce Lamb).
NIH R01 AG022304	"fMRI as an Imaging Biomarker for Preclinical Alzheimer's Disease,” National Institute on Aging, NIH. Total direct costs (2010 – 2018, NCE): \$1,825,097; <i>12% effort</i> , Principal Investigator.
NIH R01 NS077946	“Validation of HD-HRQOL,” National Institute for Neurological Disorders and Stroke, NIH. Total direct costs (20013-2017): \$17,898; <i>1% effort</i> , Co- Investigator (Noelle Carlozzi, Principal Investigator).
NMSS RG4931A1	“MRI-DTI and Functional Connectivity as Measures of Disease Progression in MS”, National Multiple Sclerosis Society. Total direct and indirect costs (2013 – 2017): \$685,575; <i>3% effort</i> , Co-Investigator (Mark Lowe, Principal Investigator).
BIOG1508SR	“Multiple Sclerosis Performance Test Clinical Studies”. Biogen. Total direct and indirect costs (2014 – 2019): \$1,160,105; <i>10% effort</i> , Principal Investigator.
Completed:	
NIH U01 NS082083	"Functional Connectivity in Premanifest Huntington's Disease.” National Institute for Neurological Disorders and Stroke, NIH. Total direct costs (2012-2016, NCE): \$1,300,000; <i>15% effort</i> , Principal Investigator.
NMSS PP1863	“Validation of an iPad App for Assessing Cognition in MS”, National Multiple Sclerosis Society. Total direct and indirect costs (2010 – 2014): \$43,820; <i>1% effort</i> , Principal Investigator.
NIH K23HD060689	“Functional Electrical Stimulation Mediated Neuroplasticity,” Eunice Kennedy Shriver National Institute of Child Health,. Total direct and indirect costs (2011 – 2015): \$39,429; <i>1% effort</i> , Co-Investigator (Lynne Sheffler, Principal Investigator).
NIH R01CA175100	“Revving Up Exercise for Sustained Weight-Loss by Altering Neurological Reward”, Total direct costs (2007-2013): \$15,192; <i>5% effort</i> , Co- Investigator (Nora Nock, Principal Investigator).
CHDI Foundation	“Changes in Cross-sectional and Longitudinal Resting State Connectivity in pre-clinical Huntington's Disease,” Research

Grant Program. Total direct costs (2011 – 2013): \$42,289; *1% effort*, Principal Investigator.

Nancy Davis Center “fMRI & DTI in Multiple Sclerosis”. Total direct costs (2007-2013): \$33,600; *5% effort*, Principal Investigator.

Biogen Idec, Inc. “An examination of the long term outcomes of cognitive functioning, neuroimaging, and disease course in multiple sclerosis (MS): A 15 year follow-up among participants originally enrolled in the Phase III investigation of Avonex..” Total direct costs (2009-2013): \$36,400; *2% effort*, Principal Investigator.

NIH R01 NS054893 “Cognitive and Functional Brain Changes in Preclinical Huntington’s Disease (HD),” National Institute for Neurological Disorders and Stroke, NIH. Total direct costs (2007-2013): \$1,381,000; *20% effort*, Co-Principal Investigator (Jane Paulsen, Principal Investigator).

NIH R01 NS040068 “Neurobiological Predictors of Huntington’s Disease,” National Institute for Neurological Disorders and Stroke, NIH. Total direct costs (2007-2013): \$316,022; *5% effort*, Co- Investigator (Jane Paulsen, Principal Investigator).

DoD W81XWH-10-1-0609 “Neuromimaging of Brain Injuries and Disorders at Cleveland Clinic,” TATRC, U.S. Department of Defense. Total direct and indirect costs (2010 – 2012): \$700,000; *10% effort*, Principal Investigator.

Dan T. Moore Foundation “fMRI & DTI in Traumatic Brain Injury“. Total direct costs (2007-2012): \$200,000; *5% effort*, Principal Investigator (Michael Phillips, Co-PI).

CHDI Foundation “MRI Evaluation in Preclinical Huntington’s Disease, “ Research Grant Program. Total direct costs (2008 – 2012): \$903,400; *12% effort*, Principal Investigator (Jane Paulsen, Co-Principal Investigator).

NIH RC1 AG035775 “Neural Effects of Exercise, Cognitive, or Combined Training in AD At-Risk Elders,” National Institute on Aging, NIH. Total direct costs (2009 – 2012): \$714,904; *15% effort*, Principal Investigator.

DoD W81XWH-08-2-0124 “Neural and Behavioral Sequelae of Blast-Related Traumatic Brain Injury,” PTSD/TBI Research Program, CDMRP, U.S. Department of Defense. Total direct costs (2008 – 2012):

	\$900,000; <i>15% effort</i> , Principal Investigator (Harvey Levin, Co-Principal Investigator).
Biogen Idec, Inc.	"An examination of two-year outcomes of cognitive functioning, neuroimaging, and disease course in multiple sclerosis (MS) participants enrolled in the Phase III investigation of interferon-beta 1a (Avonex®)" Total direct costs (2010-2011): \$28,000; <i>2% effort</i> , Principal Investigator.
NMSS RG 4110-A-2	"fMRI & DTI evaluation of hippocampal damage and episodic memory loss in MS," National Multiple Sclerosis Society. Total Direct Costs (2008-2009): \$540,320; <i>15% effort</i> , Co- Investigator (Michael Phillips, Principal Investigator).
NIH R56 AG022304	"fMRI as an Imaging Biomarker for Preclinical Alzheimer's Disease," National Institute on Aging, NIH. Total direct costs (2009 – 2010): \$325,000; <i>12% effort</i> , Principal Investigator.
NIH R01 AG022304	"fMRI of the Person Identity Network: Aging and APOE," National Institute on Aging, Total direct costs (2003 – 2009): \$1,212,500; <i>20% effort</i> , Principal Investigator.
Advancing a Healthier WI	"Early Detection of Alzheimer's Disease Using Functional MRI", Medical College of Wisconsin; Total direct costs (2004 – 2007): \$250,000; <i>10% effort</i> , Principal Investigator.
High Q Foundation	"Neurobiological Predictors of Huntington's Disease," University of Iowa subcontract; Total direct costs: (2004-2006): \$220,000; <i>10% effort</i> , Principal Investigator.
NIH M01 RR00058	"General Clinical Research Center," National Center for Research Resources, NIH (Michael Dunn, M.D., Principal Investigator). Total direct costs (2002 - 2007): \$10,000,000; <i>25% effort</i> , Assistant Program Director.
NIH R01 MH60668	"Functional Neuroanatomy of Human Fear Conditioning," National Institute of Mental Health, NIH (Fred Helmstetter, Ph.D., Principal Investigator). Total direct costs (2002 - 2005): \$625,000; <i>10% effort</i> , Principal Investigator of Subcontract.
Dana Foundation	"Functional MRI as a Predictor of Motor Outcome and Cognitive Risk from Posteroventral Pallidotomy in Parkinson's Disease", Imaging Brain Diseases to Develop New Therapies, Charles A. Dana Foundation. Total direct costs (2000-2003): \$99,924; <i>5% effort</i> , Principal Investigator.

- NIH P01 MH51358 "Functional MRI of Temporal Information Processing," Project III (James S. Hyde, Ph.D., Program Director), National Institute of Mental Health, NIH. Total direct costs (1999 - 2004): \$767,357; *30% effort*, Principal Investigator.
- NIH R01 MH57836 "Cognition & Methylphenidate: FMRI Study of ADHD Adults", National Institute of Mental Health, NIH. Total direct costs (1998 - 2003): \$990,465; *30% effort*, Principal Investigator.
- NIH R01 MH57836-03S1 "Cognition & Methylphenidate: FMRI Study of ADHD Adults", National Institute of Mental Health, NIH. Minority Supplement Awarded to Richard Mulligan. Total direct costs (2001 - 2003): \$73,130; *0% effort*, Principal Investigator.
- NIH P01 MH51358 "Functional Magnetic Resonance Imaging of Human Motor Control," Project III (James S. Hyde, Ph.D., Program Director), National Institute of Mental Health, NIH. Total direct costs (1995 - 1999): \$620,202; *40% effort*, Principal Investigator.
- NIH R01 DA09465 "Functional MRI of Human Drug Abuse" (Elliot A. Stein, Ph.D., Principal Investigator), National Institute of Drug Abuse, NIH. Total direct costs (1994 - 1999): \$965,000; *10% effort*, Co-Investigator.
- NMSS RG 2605-A-4 "Natural History of Neurobehavioral Dysfunction in MS," National Multiple Sclerosis Society. Total direct costs (1994 - 1997): \$243,556; *25% effort*, Principal Investigator.
- NIH R01 NS22128 "Neuropsychology of Multiple Sclerosis," National Institute of Neurological Disorders and Stroke, NIH. Total direct costs (1990 - 1992): \$263,879; *50% effort*, Principal Investigator.
- NMSS RG 2206-A-3 "Clinical-Pathologic Correlation in Multiple Sclerosis," National Multiple Sclerosis Society. Total direct costs (1990 - 1992): \$128,042; *25% effort*, Principal Investigator.
- NMSS RG 2028-A-2 "Evaluation of Cholinergic Pharmacotherapy for Memory Loss in Multiple Sclerosis," National Multiple Sclerosis Society. Total direct costs (1988 - 1989): \$20,000; *10% effort*, Principal Investigator.
- NIH K04 NS01055 "Neuropsychology of Multiple Sclerosis," Research Career Development Award, National Institute of Neurological Disorders and Stroke, NIH. Total direct costs (1986 - 1991): \$268,000; *100% effort*, Principal Investigator.

- NIH R01 NS22128 "Neuropsychology of Multiple Sclerosis," National Institute of Neurological Disorders and Stroke, NIH. Total direct costs (1985 - 1990): \$533,583; **50% effort**; Principal Investigator.
- NIH RG 1435-A-1 "Neuropsychological Evaluation of Plasmapheresis in Combination with Cyclophosphamide and ACTH on Multiple Sclerosis in Acute Exacerbations," National Multiple Sclerosis Society. Total direct costs (1982 - 1985): \$66,122; **25% effort**, Principal Investigator.

Invited Lectures, Workshops, Site Visits:

Invited Workshop on the Neuropsychological Sequelae of Closed Head Injury, University of Wisconsin-Stout, Menomonie, Wisconsin, December, 1983.

Visiting Professor, Department of Psychology, University of Arizona, Tucson, April, 1986.

Invited Speaker, Symposium on Mental Disorders, Cognitive Deficits and their Treatment in Multiple Sclerosis, sponsored by the Clinical Neuropsychiatric Research Unit, Odense University Hospital, Odense, Denmark, November, 1987.

Invited Speaker, Consensus Conference: Symptomatic Management of Multiple Sclerosis, sponsored by the Consortium of Multiple Sclerosis Comprehensive Care Clinics, Teaneck, New Jersey, April, 1988.

Invited Speaker, Professional Development Conference, sponsored by the National Multiple Sclerosis Society, Fort Lauderdale, Florida, November, 1988.

Invited Speaker, National Audio Conference on Cognitive and Emotional Aspects of Multiple Sclerosis, sponsored by the National Multiple Sclerosis Society, May 23-24, 1989.

Visiting Professor, Cognitive Neuroscience Unit, Medical Neurology Branch, National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, June, 1989.

Invited Speaker, Department of Neurology Grand Rounds, University of Kentucky Medical Center, Lexington, Kentucky, October, 1989.

Invited Speaker, Fairview Multiple Sclerosis Center, Minneapolis, Minnesota, October, 1989.

Invited Speaker, Department of Psychiatry Grand Rounds, Cleveland Clinic, Cleveland, Ohio, October, 1989.

Invited Speaker, Psychiatry Grand Rounds, Veterans Administration Medical Center, Tomah, Wisconsin, February, 1990.

Invited Speaker, National Multiple Sclerosis Society Annual Issues Forum, Miami Beach, May, 1990.

Invited Workshop, National Academy of Neuropsychologists Annual Conference, Reno, Nevada, November, 1990.

Invited Speaker, Cognitive Neuroscience Rounds and Department of Neurology Rounds, Ohio State University, Columbus, November, 1990.

Invited Speaker, Cognitive Neuroscience Section, Medical Neurology Branch, National Institute of Neurological Disorders and Stroke, NIH, Bethesda, November, 1990.

Distinguished Visiting Professor, Wilford Hall USAF Medical Center, Lackland Air Force Base, San Antonio, January, 1991.

Invited Speaker, MS Update for Professionals, sponsored by the Presbyterian Healthcare System and National Multiple Sclerosis Society, Dallas, March, 1991.

Invited Keynote Speaker, Workshop on Neuropsychological Rehabilitation in MS, sponsored by the European Committee for Treatment and Research in Multiple Sclerosis and the European Charcot Foundation, Munich, May, 1991.

Invited Speaker, Consensus Conference: Outcome Evaluation in Multiple Sclerosis, sponsored by the Consortium of Multiple Sclerosis Comprehensive Care Clinics, Halifax, Nova Scotia, June, 1991.

Invited Speaker, Multiple Sclerosis Update Seminar sponsored by the Baylor College of Medicine and the University of Texas, Houston, October, 1991.

Invited Workshop, National Academy of Neuropsychologists Annual Conference, Dallas, November, 1991.

Invited Speaker, Second Annual Symposium on Neurologic Rehabilitation, sponsored by the University of Utah School of Medicine and the Jimmie Heuga Center, Beaver Creek, Colorado, December, 1991.

Invited Speaker, Neurology Grand Rounds, University of Kansas Medical Center, Kansas City, January, 1992.

Invited Speaker, Professional Seminar sponsored by the National Multiple Sclerosis Society, Dallas, January, 1992.

Invited Speaker, Professional Symposium on Multiple Sclerosis, sponsored by the Central Florida Chapter of the National Multiple Sclerosis Society and the Orlando Regional Medical Center, Orlando, March, 1992.

Invited Speaker, Professional Seminar sponsored by the Medical Staff of the Caylor-Nickel Medical Center, Bluffton, Indiana, March, 1992.

Invited Keynote Speaker, Conference on Social and Psychological Aspects of Multiple Sclerosis, sponsored by Brunel University and held at St. Catherine's College, Oxford University, United Kingdom, January, 1993.

Invited Speaker, Functional Magnetic Resonance Imaging, Institute of Neurology, The National Hospital at Queen Square, London, January, 1993.

Invited Speaker, Department of Neuropsychiatry, St. Thomas's Hospital, London, January, 1993.

Invited Speaker, Annual Meeting of the Chicago Neurological Society, Kohler, Wisconsin, February, 1993.

Invited Speaker, Department of Neurology, University of Alabama - Birmingham, March, 1993.

Invited Speaker, Workshop on Functional MRI of the Brain: Diffusion, Perfusion, Oxygenation and Metabolism, sponsored by the Society of Magnetic Resonance in Medicine, Arlington, Virginia, June, 1993.

Invited Speaker, Conference on What Do We Know About Multiple Sclerosis Care, sponsored by the Consortium of MS Centers, Denver, June, 1993.

Invited Speaker, Symposium on What's New in Multiple Sclerosis, World Congress of Neurology, Vancouver, British Columbia, September, 1993.

Invited Speaker, Neurobehavioral Features of Multiple Sclerosis, Department of Neurology, Evanston Hospital, Evanston, Illinois, November, 1993.

Invited Speaker, Neurobehavioral Aspects of Multiple Sclerosis, Department of Psychology, University of Wisconsin-Milwaukee, Milwaukee, November, 1993.

Invited Speaker, Functional Magnetic Resonance Imaging, Department of Psychology, Chicago Medical School, North Chicago, Illinois, November, 1993.

Invited Speaker, Functional Magnetic Resonance Imaging, Psychology Service, Veterans Affairs Medical Center and the University of New Mexico, Albuquerque, November, 1993.

Invited Speaker, Functional Magnetic Resonance Imaging, Departments of Psychology, Psychiatry, and Neurology, University of Arizona, Tucson, November, 1993.

Invited Speaker, Workshop on Outcomes Assessment in MS Clinical Trials, sponsored by the National Multiple Sclerosis Society. Charleston, South Carolina, February, 1994.

Invited Speaker, Symposium on Minding the Human Brain via Functional Magnetic Resonance Imaging (E. Marg, organizer), annual meeting of the American Association for the Advancement of Science. San Francisco, February, 1994.

Invited Speaker, Functional Magnetic Resonance Imaging, Rush-Presbyterian-St. Luke's Medical Center, Chicago, May, 1994.

Invited Speaker, Functional Magnetic Resonance Imaging, University of Florida Health Sciences Center, Gainesville, June, 1994.

Invited Speaker, Functional Magnetic Resonance Imaging, Institute of Neurology, The National Hospital at Queen Square, London, June, 1994.

Invited Speaker, Functional Magnetic Resonance Imaging, Department of Psychiatry, University of California at San Diego, San Diego, July, 1994.

Invited Plenary Speaker, The Emerging Alliance of Functional Magnetic Resonance Imaging and Cognitive Neuroscience: Status Report and Future Directions, Second Annual Meeting of the Society of Magnetic Resonance, San Francisco, August, 1994.

Invited Speaker, Functional Magnetic Resonance Imaging of the Human Brain, Division of Cerebral Circulation Research, National Cardiovascular Center, Osaka, Japan, December, 1994.

Invited Workshop Presenter, Functional Magnetic Resonance Imaging of the Human Brain, Annual Meeting of the International Neuropsychological Society, Seattle, February, 1995.

Invited Speaker, Neurobehavioral Aspects of Multiple Sclerosis, Kennedy-Krieger Center for Mental Retardation, Johns Hopkins University, Baltimore, March, 1995.

Invited Speaker, Functional Magnetic Resonance Imaging of the Human Brain, Rotman Research Institute, Baycrest Centre for Geriatric Care, Toronto, Canada, March, 1995.

Invited Speaker, Neuropsychological Assessment of Multiple Sclerosis Patients, MS Forum, Rome, Italy, April, 1995.

Invited Workshop, Neurobehavioral Aspects of Multiple Sclerosis, National Academy of Neuropsychologists Annual Conference, San Francisco, November, 1995.

Invited Speaker, Functional MRI, Restoring Brain Function: A Multidisciplinary Approach, conference sponsored by the University of Illinois at Chicago, Chicago, December, 1995.

Invited Speaker, Functional MRI, Neuroimaging: Bridge Between Basic and Clinical Neuroscience - A Critical Review, American College of Neuropsychopharmacology, San Juan, Puerto Rico, December, 1995.

Invited Speaker, Functional MRI, Department of Psychology, Brigham Young University, Provo, Utah, February, 1996.

Invited Session Chair, Functional Neuroimaging: Advances and Applications, Rotman Research Institute, Baycrest Centre for Geriatric Care, Toronto, March, 1996.

Invited Speaker, Functional MRI and Neurobehavioral Consequences of MS, Institute of Neurology, University of Parma, Parma, Italy, June, 1996.

Invited Speaker, Functional MRI of Cognitive Processes, International Symposium on Brain Mapping, Oiso, Japan, September, 1996.

Invited Speaker, Neurobehavioral Aspects of Multiple Sclerosis, Department of Neurology, Montreal Neurological Institute, Montreal, Canada, September, 1996.

Site Visit, Member of Cognitive Neuroscience External Review Team, Montreal Neurological Institute, Montreal, Canada, September, 1996.

Invited Speaker, Neurobehavioral Aspects of Multiple Sclerosis, Department of Neurology, Kansas Medical Center, November, 1996.

Invited Speaker, Correlations between MRI and Cognitive Dysfunction, Workshop on the Role of Magnetic Resonance Techniques in Understanding and Managing Multiple Sclerosis, Oxford University, Oxford, United Kingdom, January, 1997.

Invited Speaker, What can FMRI Tell Us About Motor Control?, McDonnell-Pew Program in Cognitive Neuroscience, Oxford University, Oxford, United Kingdom, June, 1997.

Invited Speaker, Cognitive Impairment in MS, 14th International Congress of EEG and Clinical Neurophysiology, Florence, Italy, August, 1997.

Invited Speaker, Cognitive Impairment in MS, Workshop sponsored by the National Capital Chapter of the National Multiple Sclerosis Society, Bethesda, Maryland, September, 1997.

Invited Workshop, Functional MRI, Colorado Neuropsychological Society, Denver, Colorado, October, 1997.

Invited Workshop Presenter, Functional MRI: An Introduction and Review of Applications to Neuropsychology, National Academy of Neuropsychologists Annual Conference, Las Vegas, Nevada, November, 1997.

Invited Presentation, Functional MRI, Neuroscience Program, Michigan State University, Lansing, Michigan, February, 1998.

Invited Presentation, Functional MRI, Psychiatry Department, Ohio State University, Columbus, Ohio, May, 1998.

Invited Workshop Presenter, Cognitive Neuroimaging Research: Design and Interpretation, organized and sponsored by the National Institute of Mental Health, Washington, D.C., September, 1998.

Invited Presentation, Cognitive Dysfunction in Multiple Sclerosis, Annual Meeting of the Consortium of Multiple Sclerosis Centers, Cleveland, October, 1998.

Invited Presentation, fMRI of Selective Attention, Cognitive Neuroimaging Conference, Michigan State University, October, 1998.

Invited Workshop, Cognitive Dysfunction in Multiple Sclerosis, Annual Meeting of the International Neuropsychological Society, Durban, South Africa, June, 1999.

Invited Presentation, Applications of Functional MRI, Workshop on Magnetic Resonance Imaging of Brain Function, Center for Magnetic Resonance Research and Department of Neurology, University of Minnesota, Minneapolis, October, 1999.

Invited Presentation, Cognitive Dysfunction in Multiple Sclerosis, European Congress for the Treatment of Multiple Sclerosis, Toulouse, France, September, 2000.

Invited Workshop, Applications of Functional Neuroimaging to Forensic Neuropsychology, American Board of Clinical Neuropsychology, Chicago, IL, October, 2000.

Invited Workshop, Cognitive Dysfunction in Multiple Sclerosis, National Academy of Neuropsychology, Orlando, FL, November, 2000.

Invited Presentation, "Recalling Memories From Our Past: New Insights from Event-Related fMRI Studies of the Medial Temporal Lobe." University of Florida. Gainesville, FL, March, 2001.

Invited Presentation, "Recalling Memories From Our Past: New Insights from Event-Related Functional MRI Studies of the Medial Temporal Lobe." University of Chicago. Chicago, IL, April, 2001.

Co-Organizer and Lecturer, "Cognitive and Psychiatric Disorders in Multiple Sclerosis," Sero Symposia International, Taormina, Italy, June, 2002.

Invited Lecture, "How Does the Brain Represent Time," International Neuropsychological Society Meeting, Stockholm, Sweden, July, 2002.

Invited Lecture, "Cognitive Disturbance in Multiple Sclerosis," Top Seminars Sclerosi Multipla, Milan, Italy, June, 2003.

Invited Lecture, "Exploring the Inner Universe: Functional Magnetic Resonance Imaging (fMRI) of the Healthy and Diseased Brain," 18th Annual Conference of the Human Anatomy and Physiology Society, Calgary, Alberta, Canada, June, 2004

Keynote speaker, "Cognitive decline in MS: Neuropsychological, neuroimaging and genetic factors influencing prognosis and treatment," 10th European Charcot Foundation Symposium (Cognitive decline in Multiple Sclerosis. Biological, clinical and therapeutic aspects), Taormina, Sicily, Italy, November, 2004.

Two-Day Workshop on "Multiple Sclerosis" and "Functional MRI," Distinguished Visiting Professor Series, Walter Reed Army Medical Center, Washington, D.C., April, 2005.

Invited Lecture, "Biological and Clinical Aspects of Cognition in Multiple Sclerosis," 10th Anniversary Day of the Multiple Sclerosis Center at Sheba Medical Center, Tel-Hashomer, Israel, May, 2005.

Co-Chair, "Neuropsychology in MS – Introduction" and "NP and Imaging in MS - History and Concepts," Controversies in Neuropsychology of Multiple Sclerosis, sponsored by Sero Symposia International, Boston, MA, October, 2005.

Invited Lecture, "Exploring the Inner Universe: Functional Magnetic Resonance Imaging (fMRI) of the Healthy and Diseased Brain," Department of Psychology, Purdue University, Lafayette, IN, October, 2005.

Invited Lecture, "Neural Systems Supporting Time Perception and Reproduction: Implications for Parkinson's and Huntington's Diseases," Neurology Rounds, Dartmouth Medical School, Hanover, NH, March, 2006.

Keynote Lecture, "Role of fMRI in Preclinical Detection of Neurodegenerative Disorders," Massachusetts Neuropsychological Society, Boston, MA, June, 2007.

Invited Speaker, "Introduction to fMRI Design and Statistical Analysis Issues," fMRI: An Introductory Course, Medical College of Wisconsin, Milwaukee, WI, June, 2007.

Invited Lecture. "Role of fMRI In Rehabilitation," Braintree Rehabilitation Hospital, Braintree, MA, June, 2007.

Invited Workshop, "Clinical fMRI: Overview of fMRI and History of fMRI CPT Codes," 13th Annual Meeting of the Organization for Human Brain Mapping, Chicago, IL, June, 2007.

Invited Presentation, "Role of fMRI in Preclinical Detection of Neurodegenerative Disorders," Annual Meeting the American Psychological Association, Division 40, San Francisco, CA, August, 2007.

Invited Workshop, "Role of fMRI in Preclinical Detection of Neurodegenerative Disorders," Houston Neuropsychological Society, Houston, TX, October, 2007.

Invited Speaker, "Current Cognitive Issues in MS," Symposium sponsored by Biogen Idec, Athens, Greece, November, 2007.

Invited Speaker, "Cognitive Dysfunction in Multiple Sclerosis," New York University Neurology Grand Rounds, New York, NY, February, 2008.

Invited Workshop, "Cognitive Dysfunction in Multiple Sclerosis: An Update," 18th Annual Nelson Butters' West Coast Neuropsychology Conference, San Diego, CA, April, 2008.

Invited Speaker, "Current Cognitive Issues in MS," Symposium sponsored by Biogen Idec, Buenos Aires, Argentina, April, 2008.

Invited Speaker, "Introduction to fMRI Design and Statistical Analysis Issues" and "Role of fMRI in Preclinical Detection of Neurodegenerative Disorders," fMRI: An Introductory Course, Medical College of Wisconsin, Milwaukee, WI, June, 2008.

Invited Symposium Speaker, "Neuroimaging and Cognition in Multiple Sclerosis," Joint Meeting of the International Neuropsychological Society and Sociedad de Neuropsicología de Argentina, Buenos Aires, Argentina, July, 2008.

Invited Symposium Co-Chair, "Methodological Issues In Examining Cognition Across CNS Disorders," Joint Session sponsored by the International Society for CNS Clinical Trials and Methodology and the American Society for Experimental NeuroTherapeutics, Arlington, VA, March, 2009.

Invited Satellite Symposium Chair, "Overcoming Vocational Barriers to Improve Quality of Life: Tools for the Multiple Sclerosis Patient," annual meeting of the Consortium of Multiple Sclerosis Centers, Atlanta, May, 2009.

Invited Workshop Presenter, "Can fMRI Detect the Preclinical Stages of Neurodegenerative Disorders?," annual meeting of the American Academy of Clinical Neuropsychology, San Diego, June, 2009

Invited Session Co-Chair, "Cognition," 25th Congress of the European Committee for Treatment and Research in Multiple Sclerosis, Dusseldorf (Germany), September, 2009.

Invited Presenter at CE Course, "The Detection of Cognitive and Psychological Deficits Early in the Course of MS," 6th Annual Progress in Understanding Multiple Sclerosis & Parkinson Disease, Kiawah Island, S.C., September, 2009.

Invited Presentation, "Neuropsychology of MS: A 25 Year History." Sponsored by the Italian Multiple Sclerosis Society, Genoa, Italy, November, 2009.

Invited Presentation, "Semantic Memory in Preclinical AD." National Institute on Aging sponsored meeting, Assessment of Cognition in Early Dementia, Bethesda, MD, March-April, 2010.

Invited Presentation, "Can fMRI Detect the Prodromal Stage of Neurodegenerative Disorders." Cognitive Neuroscience Society Satellite Symposium, Montreal, Quebec, CA, April, 2010.

Invited Presentation, "Preclinical Detection of Alzheimer's Disease." Psychiatry Grand Rounds, MetroHealth Medical Center, Cleveland, OH, May, 2010.

Invited Presentation, "DTI: Lessons from Multiple Sclerosis" (presented by Ken Sakaie). US Department of Defense and University of Chicago sponsored meeting, Diffusion MRI of Traumatic Brain Injury Roadmap Workshop, Chicago, IL, June, 2010.

Invited CE Workshop, "fMRI: A Primer for the Clinical Neuropsychologist." Annual Meeting of the American Academy of Clinical Neuropsychology, Chicago, IL, June, 2010.

Invited Presidential Address, "Preclinical Detection of Neurodegenerative Disorders." Annual Mid-Year Meeting of the International Neuropsychological Society, Krakow, Poland, June-July, 2010.

Invited Speaker, "Preclinical Detection of Neurodegenerative Disorders", Butler Hospital, Brown University, Providence, RI, August, 2010.

Invited Workshop, "Neuroimaging Correlates of Cognitive Dysfunction in Multiple Sclerosis", Annual meeting of the National Academy of Neuropsychology, Vancouver, British Columbia, Canada, October, 2010.

Invited Presidential Address, "Strategies for Preclinical Detection and Prevention of Alzheimer's Disease." 39th Annual Meeting of the International Neuropsychological Society, Boston, MA, February, 2011.

Invited Speaker, "Can We Predict and Eventually Prevent Alzheimer's disease?" Psi Chi Sheldon Lachman Memorial Lecture, Wayne State University, Detroit, MI, April, 2011.

Invited Speaker, "Using Neuropsychological Testing with MRI to Diagnose Cognitive Impairments in MS," New York Academy of Sciences conference on Cognitive Dysfunction in Multiple Sclerosis: New Approaches to Diagnosis and Treatment, New York, NY, June, 2011.

Invited Satellite Broadcast, "Multiple Sclerosis, Cognition, and Brain Imaging: Understanding Cognitive Dysfunction." VA Employee Education System, Salt Lake City, Utah, July, 2011.

Invited Grand Rounds Speaker, "Strategies for Preclinical Detection and Prevention of Alzheimer's Disease." Department of Psychiatry, Cleveland Clinic, April, 2012.

Invited Speaker, "Evaluating Brain Reorganization Interventions in Healthy Aging." Reprogramming the Human Brain Symposium, University of Texas at Dallas, Dallas, Texas, April, 2012.

Invited Speaker, "Neuroimaging: New Applications," Advances in Neurological Therapeutics, Cleveland Clinic, Las Vegas, September, 2012

Invited Speaker, "Combining fMRI and Genetic Markers to Identify Cognitively Intact Elders at Risk for Alzheimer's Disease," Advancing Diagnoses and Treatment of Psychiatric and Neurological Disorders: Moving Functional Imaging into the Clinic, NINDS, Bethesda, February, 2013.

Invited Speaker, "Functional Connectivity in Premanifest Huntington's Disease," 2013 NINDS Huntington's Disease Biomarker and Diagnostic Criteria Workshop, NINDS, Bethesda, February, 2013.

Invited Speaker, "Strategies for the Preclinical Detection and Prevention of Alzheimer's Disease." The Neuroscience of Mental Health, Kent State University, Kent, OH, April, 2013.

Invited Speaker, "Innovations in the Assessment of Cognition in MS", Neurology Grand Rounds, Wayne State University, Detroit, MI, February, 2014.

Invited Speaker, "Tracking Brain Changes in Cognitively Intact Elders with Varying Genetic Risk for AD: Results of a 5 year Longitudinal fMRI Study", Behavioral Neuroscience Seminar, University of Illinois at Chicago, Chicago, IL, March, 2014.

Invited Speaker, "Tracking Functional Brain Changes in Cognitively Intact Elders at Varying Genetic Risk for Alzheimer Disease", Institute of Gerontology, Wayne State University, Detroit, MI, April, 2014.

Invited Keynote Speaker, "Tracking Functional Brain Changes in Cognitively Intact Elders at Varying Genetic Risk for Alzheimer Disease", Midwest Neuropsychology Group Annual Meeting, Medical College of Wisconsin, Milwaukee, WI, May, 2014.

Invited Keynote Speaker, "Tracking Functional Brain Changes from Hours to Years Post-Concussion", Innovation and TBI: From Research to Clinical Practice, Sunnybrook Hospital, Toronto, CA, June, 2014.

Invited Conference Organizer:

Co-Chairperson (with M. Ron and O. Lyon-Caen), Workshop on "Neuro-behavioural Disorders in Multiple Sclerosis: Diagnosis, Natural History, Underlying Pathology, and Therapeutic Intervention," sponsored by the National Multiple Sclerosis Society and the International Federation of Multiple Sclerosis Societies, Bergamo, Italy, June, 1992.

Medical College of Wisconsin Committees:

Department of Neurology Five Year Review Committee (Dr. Herbert Swick, Chair), February, 1982.

Five Year Intramural Review Committee, Department of Physiology (Dr. Zeljko Bosnjak, Chair), November, 1989.

Department of Neurology Faculty Recruitment Committee (Dr. L. Cass Terry, Chair), 1990 to 1992.

Department of Neurology Executive Committee (Dr. L. Cass Terry, Chair), 1991 -1993.

Department of Neurology Promotions Committee (Dr. Jane Madden, Chair), 1992 to present.

MCW Strategic Research Planning Committee (Senior Associate Dean William R. Hendee, Chair), 1992 to 1993.

Appointed to Graduate Faculty of the Biophysics Research Institute (Dr. James S. Hyde, Director), 1992 to present.

Search Committee, Director of Biophysics Research Institute (Dr. William Campbell, Chair), 1999 - 2000.

Translation Research Committee (Dr. Theodore Kotchen, Chair), 2000 to present.

MCW Strategic Research Planning Committee (Senior Associate Dean William R. Hendee, Chair), 2001.

Search Committee, Chair of Department of Psychiatry (Dr. Alan David, Chair), 2002 - 2003.

CTSA Planning Committee (Dr. Theodore Kotchen, Chair), 2005 to 2007.

MCW Strategic Research Planning Committee (Senior Associate Dean David Gutterman, Chair), 2006.

Cleveland Clinic Committees:

Member, K12 Multidisciplinary Clinical Research Training Program (MC RTP) Multidisciplinary Advisory Committee, 2007 to present.

Member, Neurological Institute Research Committee, 2007 to 2012.

Member, Research Program Strategic Planning Committee, Neurological Institute, 2007 to 2008.

Member, Search Committee, Director of Center for Brain Health, Neurological Institute, 2007 to 2008.

Member, Planning Committee, Center for Brain Health, Neurological Institute, 2007 to 2008.

Member, Search Committee, Health Psychologist, Mellen Center, 2007 to 2009.

Director of Search Committee, Neuropsychologist, Mellen Center, 2007 to 2012.

Member, Mellen Business Review/Commitment Flow Down Committee, 2008.

Member, Neurological Institute Compliance Committee, 2009 to present.

Director of Search Committee, Neuropsychologist, Lou Ruvo Center for Brain Health, 2011.

Member, Search Committee, Director of Lou Ruvo Center for Brain Health (Cleveland site), 2012.

Director of Research, Lou Ruvo Center for Brain Health in Cleveland, 2012 to present.

Member, Neurological Institute Research Council, 2012 to present.

Regional Committees:

Member, Board of Trustees, National Multiple Sclerosis Society, Wisconsin Chapter (1990 - 2003).

Member, Long-Range Planning Committee, National Multiple Sclerosis Society, Wisconsin Chapter (1990 - 1992).

Member, Clinical Advisory Committee, National Multiple Sclerosis Society, Wisconsin Chapter (1987 - 2007).

Member, Medical/Scientific Board, Wisconsin Alzheimer's Information and Training Center (1986 - 1989).

Member, Medical Advisory Board, Myasthenia Gravis Foundation, Wisconsin Chapter (1988 - 1992).

Chairperson, Medical-Research Advisory Committee, Multiple Sclerosis Society of Milwaukee (1988 - 1990).

Member, Institutional Review Board, Cardinal Stritch College (1988 - 1992).

Member, Research Award Committee, Wisconsin Psychological Association (1990 - 1998).

Member, Professional Advisory Board, Alzheimer's Association - Cleveland Area Chapter (2008 -).

Hospital Committees:

Member, Research and Human Subjects Review Committee, Curative Rehabilitation Center (1981 - 1989).

Member, Institutional Review Board, Froedtert Memorial Lutheran Hospital, 2000 - 2002.

Medical College of Wisconsin Teaching:

Lecturer, Integrated Medical Neuroscience Course for First-Year Medical and Graduate Students, Medical College of Wisconsin, 1991 to present.

Lecturer, Graduate Systems Neuroscience Course, Medical College of Wisconsin, 1994 to present.

Lecturer, Neurobehavioral Science Course for Neurology and Psychiatry Residents, 1991 to present.

Lecturer, Neuroanatomy Course, Department of Anatomy, Medical College of Wisconsin, Fall, 1981 to 1990.

Instructor, "Neuropsychological Assessment of Adults: An Introduction to Theory and Practice," Medical College of Wisconsin, Milwaukee, Fall, 1982, 1983, 1984, 1985, 1987, 1990, 1993.

Workshop, "The Neuropsychology of Closed Head Injury: Issues in Assessment and Treatment," Medical College of Wisconsin, Milwaukee, Wisconsin, April, 1984.

Seminar Organizer, "Understanding and Treating Persons with Multiple Sclerosis: Medical, Psychological and Rehabilitation Perspectives," Medical College of Wisconsin, Milwaukee, Wisconsin, March, 1985.

Instructor, "Advanced Topics in Clinical Neuropsychology," Medical College of Wisconsin, Milwaukee, Wisconsin, Spring, 1989.

Course Director, "Functional Magnetic Resonance Imaging: An Introductory Course," three-day workshop attracting an international audience of neuroscientists. Medical College of Wisconsin, Milwaukee, Wisconsin, Spring, 1997 to present.

Course Director, "Advanced Course in Functional Magnetic Resonance Imaging," four-day workshop attracting an international audience of neuroscientists. Medical College of Wisconsin, Milwaukee, Wisconsin, Fall, 2005 to present.

Weekly Seminar Series Director, "fMRI Brownbag Seminar," Medical College of Wisconsin, Milwaukee, Wisconsin, 1993 to present.

Major Adviser for Doctoral Dissertations and Master's Theses of Clinical Psychology graduate students, 1985 to present.

Informal instruction of Neurology residents, medical students, postdoctoral fellows and graduate psychology research and clinical assistants, Medical College of Wisconsin, Milwaukee, Wisconsin, September, 1979 to present.

Cleveland Clinic Teaching:

Co-organized a two-day CME conference, entitled "Neuroimaging in Traumatic Brain Injury," with Micheal Phillips (Cleveland Clinic) and Harvey Levin (Baylor College of Medicine), held October 30-31, 2008 at the Inter-Continental Hotel and Bank of America Conference Center.

Three hour workshop, "From Cognitive Neuroscience to Patient Care: Applications of Functional MRI Neuroimaging." Presented to third year CCLCM medical students, February, 2010.

Seminar Leader, "Central Processing of the Nervous System (Association Cortex)." Neurological and Behavioral Sciences 1 course to first year CCLCM medical students, April, 2010, 2011.

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ORIGINAL PAPERS (# indicates study conducted by mentored student or fellow)

1. Rao, S.M., Swonger, A.K., and Smith, N. (1976). The effects of Δ -8- and Δ -9-Tetrahydrocannabinol (THC) on the performance of rat shuttle-box avoidance behavior. *Research Communications in Psychology, Psychiatry, and Behavior*, 1, 381- 390.
2. Glaros, A.G. and Rao, S.M. (1977). Bruxism: A critical review. *Psychological Bulletin*, 84, 767-781. (Reprinted in *Der Zahnarzt*). PMID: 331380.
3. Glaros, A.G. and Rao, S.M. (1977). Effects of bruxism: A review of the literature. *Journal of Prosthetic Dentistry*, 28, 149-157. (Reprinted in *Der Zahnarzt*). PMID: 330842.
4. Rao, S.M. and Glaros, A.G. (1979). Electromyographic correlates of experimentally induced stress in bruxists and normals. *Journal of Dental Research*, 58, 1872-1878. PMID: 290652.
5. Rao, S.M., Rourke, D., and Whitman, R.D. (1981). Spatiotemporal discrimination of frequency in the right and left visual fields: A preliminary report. *Perceptual and Motor Skills*, 53, 311-316. PMID: 7290879.
6. Rao, S.M. and Bieliauskas, L. (1983). Cognitive rehabilitation two and one half years post right temporal lobectomy. *Journal of Clinical Neuropsychology*, 5, 313- 320. PMID: 6643685.
7. Rao, S.M. and Hammeke, T.A. (1984). Hypothesis testing in patients with chronic progressive multiple sclerosis. *Brain and Cognition*, 3, 94-104. PMID: 6537244.
8. Rao, S.M., Hammeke, T.A., Huang, J.Y.S., Lloyd, D., McQuillen, M.P., and Khatri, B.O. (1984). Memory disturbance in chronic progressive multiple sclerosis. *Archives of Neurology*, 41, 625-631. PMID: 6721737.
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10. Rao, S.M., Glatt, S., Hammeke, T.A., McQuillen, M.P., Khatri, B.O., Rhodes, A.M., and Pollard, S. (1985). Chronic progressive multiple sclerosis: Relationship between

- cerebral ventricular size and neuropsychological impairment. *Archives of Neurology*, 42, 678-682. PMID: 3874618.
11. Rao, S.M. (1985). MS and cognitive functions: An overview. *MS Quarterly Report*, 4, 6-8.
 12. Rao, S.M. (1986). Neuropsychology of multiple sclerosis: A critical review. *Journal of Clinical and Experimental Neuropsychology*, 8, 503-542. PMID: 3805250.
 13. Rao, S.M., Hammeke, T.A., & Speech, T.J. (1987). Wisconsin Card Sorting Test performance in relapsing-remitting and chronic-progressive multiple sclerosis. *Journal of Consulting and Clinical Psychology*, 55, 263-265. PMID: 3571684.
 14. Leo, G.J., and Rao, S.M. (1988). Effects of intravenous physostigmine and lecithin on memory loss in multiple sclerosis: Report of a pilot study. *Journal of Neurologic Rehabilitation*, 2, 123-129.
 15. Rao, S.M., Mittenberg, W., Bernardin, L., Haughton, V., and Leo, G.J. (1989). Neuropsychological test findings in subjects with leuko-araiosis. *Archives of Neurology*, 46, 40-44. PMID: 2910260.
 16. Rao, S.M., Leo, G.J., Haughton, V.M., St. Aubin-Faubert, P., and Bernardin, L. (1989). Correlation of magnetic resonance imaging with neuropsychological testing in multiple sclerosis. *Neurology*, 39, 161-166. PMID: 2915783.
 17. Rao, S.M., St. Aubin-Faubert, P., and Leo, G.J. (1989). Information processing speed in patients with multiple sclerosis. *Journal of Clinical and Experimental Neuropsychology*, 11, 471-477. PMID: 2760182.
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 19. Rao, S.M., Bernardin, L., Leo, G.J., Ellington, L., Ryan, S., and Burg, L. (1989). Cerebral disconnection in multiple sclerosis: Relationship to atrophy of the corpus callosum. *Archives of Neurology*, 46, 918-920. PMID: 2757533.
 20. #Mittenberg, W., Hammeke, T.A., and Rao, S.M. (1989). Intrasubtest scatter on the WAIS-R as a pathognomonic sign of brain injury. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 1, 273-276.
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29. #Speech, T.J., Rao, S.M., Osmon, D.C., and Sperry, L.T. (1993). A double-blind controlled study of methylphenidate treatment in closed head injury. *Brain Injury*, 7, 333-338. PMID: 8358406.
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- language dominance using functional MRI: A comparison with the Wada test. *Neurology*, 46, 978-984. PMID: 8780076.
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123. Seidenberg, M., Woodard, J.L., Nielson, K.A., Guidotti, L., Gander, A., Durgerian, S., Zhang, Q., Antuono, P., & Rao, S.M. (2008, February). Semantic memory activation in individuals at risk for developing Alzheimer's disease: Relationship to family history and APOE ϵ 4. 36th Annual Meeting of the International Neuropsychological Association, Waikoloa, Hawaii.

124. Seidenberg, M., Guidotti, L., Nielson, K.A., Woodard, J.L., Gander, A., Durgerian, S., Zhang, Q., Franczak, M., Antuono, P., & Rao, S.M. (2008, February). Semantic knowledge of famous names in Mild Cognitive Impairment. 36th Annual Meeting of the International Neuropsychological Association, Waikoloa, Hawaii.
125. Woodard, J.L., Durgerian, S., Zhang, Q., Gander, A., Nielson, K.A., Seidenberg, M., Guidotti, L., Franczak, M., Antuono, P. & Rao, S.M. (2008, February). Functional recruitment during fame discrimination in patients with mild cognitive impairment. 36th Annual Meeting of the International Neuropsychological Association, Waikoloa, Hawaii.
126. Woodard, J.L., Nielson, K.A., Seidenberg, M., Durgerian, S., Zhang, Q., Antuono, P., & Rao, S.M. (2009, February). Prediction of cognitive decline in older adults over 1.5 years with functional MRI. Presented at the 37th Annual Meeting of the International Neuropsychological Association, Atlanta. *Journal of the International Neuropsychological Society*, 15, S1, 53.
127. Guidotti, L., Seidenberg, M., Lancaster, M., Rosen, A., Zhang, Q., Nielson, K.A., Woodard, J.L., Durgerian, S., & Rao, S.M. (2009, February). Age-related temporal gradient of famous Names: A semantic priming study. Presented at the 37th Annual Meeting of the International Neuropsychological Association, Atlanta. *Journal of the International Neuropsychological Society*, 15, S1.
128. Lancaster, M., Seidenberg, M., Guidotti, L., Rosen, A., Douville, K., Nielson, K.A., Woodard, J.L., Durgerian, S., & Rao, S.M. (2009, February). Attributes of famous face recognition and naming. Presented at the 37th Annual Meeting of the International Neuropsychological Association, Atlanta. *Journal of the International Neuropsychological Society*, 15, S1.
129. Butts, A., Durgerian, S., Nielson, K.A., Woodard, J.L., Seidenberg, M., Hantke, N., Lancaster, M., & Rao, S.M. (2009, May). Functional resting state connectivity in individuals at-risk for Alzheimer's disease. Presented at the 21st Annual Meeting of the Association for Psychological Science, San Francisco.
130. Smith, J.C., Nielson, K.A., Woodard, J.L., Seidenberg, M., Durgerian, S., Rao, S.M. (2009, May). Physical activity is associated with greater functional brain activation during a semantic memory task in older adults at risk for Alzheimer's disease. Presented at the 56th Annual Meeting of the American College of Sports Medicine, Seattle, WA.
131. Hantke, N., Nielson, K.A., Woodard, J.L., Seidenberg, M., Durgerian, S., Zhang, Q., Gross, W., Butts, A., Guidotti, L. & Rao, S.M. (May, 2009). Common neural systems associated with famous face and name recognition revealed using event-related fMRI. Presented at the annual meeting of the Midwest Neuropsychology Group, Milwaukee, WI.
132. Butts, A., Woodard, J.L., Nielson, K.A., Seidenberg, M., Durgerian, S., Hantke, N., Lancaster, M., & Rao, S.M. (May, 2009). Functional recruitment in patients with Mild

Cognitive Impairment. Presented at the annual meeting of the Midwest Neuropsychology Group, Milwaukee, WI.

133. Durgerian, S., Woodard, J.L., Seidenberg, M., Nielson, K.A., Antuono, P., Guidotti, L., Zhang, Q., Lancaster, M., Hantke, N., Butts, A., & Rao, S.M. (2009, June). Risk factors for AD: relationship between task activation and resting state connectivity. To be presented at the 15th Annual Meeting of the Organization for Human Brain Mapping, San Francisco. *Neuroimage*, 47, S1, p S91.
134. Rao, S.M. & Levin, H. (2009, September). Neural and behavioral sequelae of blast-related traumatic brain injury. Presented at the Military Health Research Forum, Kansas City, Missouri.
135. Rao, S.M., Woodard, J.L., Nielson, K.A., Seidenberg, M., Durgerian, S., Antuono, P., Schiffer, R. (2009, October). Prediction of cognitive decline in healthy older individuals using task-activated fMRI, hippocampal volumes, and APOE status. 2nd Annual Meeting of the Clinical Trials on Alzheimer's Disease (CTAD), Las Vegas, NV.
136. Nielson, K.A., Smith, J.C., Woodard, J.L., Seidenberg, M., Hantke, N., Butts, A., Durgerian, S., Guidotti, L., Antuono, P., & Rao, S.M. (2010, February). Contributions of physical activity and risk for Alzheimer's disease to semantic memory networks in healthy elders. Invited presentation at the Dallas Aging and Cognition Conference, University of Texas, Dallas
137. Butts, A., Durgerian, S., Nielson, K.A., Hantke, N., Lancaster, M., Guidotti, L., Woodard, J.L., Seidenberg, M., Antuono, P., & Rao, S.M. (2010, February). Resting state functional connectivity: influence of AD risk factors. 38th Meeting of the International Neuropsychological Society, Acapulco, Mexico. *Journal of the International Neuropsychological Society*, 16, S1.
138. Lancaster, M., Guidotti, L., Seidenberg, M., Nielson, K.A., Woodard, J.L., Durgerian, S., Antuono, P., & Rao, S. M. (2010, February). Influence of risk factors for AD on white matter integrity.: 38th Meeting of the International Neuropsychological Society, Acapulco, Mexico. *Journal of the International Neuropsychological Society*, 16, S1.
139. Hantke, N., Nielson, K.A., Butts, A., Guidotti, L., Woodard, J.L., Seidenberg, M., Durgerian, S., Antuono, P., Lancaster, M., & Rao, S.M. (2010, February). Event-related fMRI of episodic and semantic memory in cognitively intact elders: Patterns of activation as a function of risk factors for Alzheimer's disease. 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico. *Journal of the International Neuropsychological Society*, 16, S1 TBA. **Recipient of the Laird S. Cermak Award for Outstanding Research in Memory and Memory Disorders.**
140. Novitski, J., Guidotti, L., Lancaster, M., Seidenberg, M., Nielson, K.A., Woodard, J.L., Durgerian, S., Antuono, P., & Rao, S. M. (2010, February). Temporal gradients in younger and older adults: semantic knowledge of recent and remote famous names. 38th

Meeting of the International Neuropsychological Society, Acapulco, Mexico. *J. International Neuropsychological Society*, 16, S1.

141. Guidotti, L., Seidenberg, M., Nielson, K.A., Woodard, J.L., Durgerian, S., Antuono, P., & Rao, S. M. (2010, February). Semantic knowledge and recognition accuracy for famous names from different time epochs and memory decline in asymptomatic elderly. 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico. *Journal of the International Neuropsychological Society*, 16, S1.
142. Butts, A., Durgerian, S., Hantke, N., Lancaster, M., Guidotti, L., Woodard, J.L., Seidenberg, M., Antuono, P., Rao, S.M., & Nielson, K.A. (2010, February). The influence of Alzheimer's disease risk on resting state functional connectivity in healthy elders and those with mild cognitive impairment. Invited presentation to the Dallas Aging and Cognition Conference, Dallas, TX, February 1, 2010.
143. Woodard, J.L., Nielson, K.A., Seidenberg, M., & Rao, S.M. (2010, March). Prediction of cognitive decline in healthy older individuals using task-activated fMRI, hippocampal volumes and APOE status. Presentation at the 4th David Wekstein Conference, Longitudinal Studies of Aging and AD, Lexington, KY.
144. Smith, J.C., Nielson, K.A., Woodard, J.L., Seidenberg, M., Durgerian, S., Antuono, P., Butts, A., Hantke, N., Lancaster, M., & Rao, S.M. (2010, March). Physical activity is associated with enhanced semantic memory activation in older APOE-ε4 carriers. Poster at the Milwaukee Area Society for Neuroscience poster session, Milwaukee, WI.
145. Rao, S.M., Lee, J.-C., Strober, L., Simon, J., Fisher, E., & Rudick, R. (2010, April). Predicting cognitive decline in multiple sclerosis: Implications for clinical trial design. Presented at the 62nd Annual Meeting of the American Academy of Neurology, Toronto, Ontario, Canada.
146. Butts, A., Nielson, K.A., Durgerian, S., Woodard, J.L., Seidenberg, M., Hantke, N., Lancaster, M., & Rao, S.M. (2010, August). Semantic memory activation change over 18 months in cognitive decline. Presentation at the annual meeting of the American Psychological Association, San Diego, CA. **Recipient of the APA Division 40 Cognitive Neuroscience Student Research Award.**
147. Hantke, N., Nielson, K.A., Woodard, J.L., Durgerian, S., Seidenberg, M., Smith, J.C., Butts, A., Lancaster, M., Matthews, M. & Rao, S.M. (2011, February). Comparison of semantic and episodic memory activation in predicting cognitive decline in older adults. Presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA.
148. Butts, A.M., Nielson, K.A., Hantke, N., Lancaster, M., Durgerian, S., Woodard, J.L., Seidenberg, M., Smith, J.C., Matthews, M. & Rao, S.M. (2011, February). White matter integrity as predictor of cognitive decline in asymptomatic elders. Presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA.

149. Smith, J.C., Verber, M.D., Nielson, K.A., Antuono, P., Hanson, R.J., Mattes, A.J., Butts, A.M. & Hantke, N.C. (2011, February). Effects of walking exercise on white matter integrity in amnesic mild cognitive impairment. Presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA.
150. Matthews, M.A., Durgerian, S., Seidenberg, M., Nielson, K.A., Woodard, J.L., Smith, J.C., Lancaster, M.A., Butts, A.M., Hantke, N.C. & Rao, S.M. (2011, February). Cortical and subcortical volumetric differences between cognitively stable and declining older adults. Presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA.
151. Sugarman, M.A., Woodard, J.L., Nielson, K.A., Smith, J.C., Seidenberg, M., Durgerian, S., Butts, A., Hantke, N., Lancaster, M., Matthews, M. & Rao, S.M. (2011, February). Prediction of future cognitive decline using brief measures of physical and cognitive activity in healthy older adults. Presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA.
152. Lancaster, M.A., Durgerian, S., Seidenberg, M., Nielson, K.A., Woodard, J.L., Smith, J.C., Matthews, M., Butts, A.M., Hantke, N. & Rao, S.M. (2011, February). White matter disruption in asymptomatic individuals at risk for Alzheimer's disease. Presented at the 39th Annual Meeting of the International Neuropsychological Society, Boston, MA.
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154. Matthews, M.A., Seidenberg, M., Woodard, J.L., Durgerian, S., Nielson, K.A., Smith, J.C., Lancaster, M.A., Butts, A.M., Hantke, N.C., & Rao, S.M. (2012, February). Person-identity semantics predicts cognitive decline in cognitively intact older participants. Presented at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA.
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156. Lancaster, M.A., Durgerian, S., Seidenberg, M., Woodard, J.L., Nielson, K.A., Smith, J.C., Matthews, M.A., Butts, A.M., Hantke, N.C., & Rao, S.M. (2012, February). Longitudinal white matter changes and cognitive decline in healthy elderly. Presented at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA.

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158. Woodard, J.L., Seidenberg, M., Nielson, K.A., Sugarman, M.A., Smith, J.C., Durgerian, S., Butts, A.M., Lancaster, M.A., Foster, M.K., Hantke, N.C., Matthews, M.A., & Rao, S.M. (2012, February). Measures of episodic forgetting complement structural and functional MRI for detection of cognitive decline in Apolipoprotein E ϵ 4 carriers. Presented at the 40th Annual Meeting of the International Neuropsychological Society, Montreal, CA.
159. Rao, S.M., Koenig, K.A., Lowe, M.J., Lin, J., Harrington, D.L., Liu, D., Sakaie, K., and Paulsen J.S. (2012, April). Resting-state functional connectivity in prodromal Huntington's disease. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.
160. Matthews, M.A., Seidenberg, M., Woodard, J.L., Durgerian, S., Nielson, K.A., Smith, J.C., Lancaster, M.A., Butts, A.M., Hantke, N.C., & Rao, S.M. (2012, April). Five-year changes in brain volume and episodic memory in cognitively intact elders with and without an APOE $\epsilon\epsilon$ allele. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.
161. Nielson, K.A., Sugarman, M.A., Woodard, J.L., Seidenberg, M., Smith, J.C., Durgerian, S., and Rao, S.M. (2012, April). The contribution of blood serum biomarkers to the prediction of cognitive decline by fMRI and apolipoprotein-E in healthy older adults. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.
162. Lancaster, M.A., Durgerian, S., Seidenberg, M., Woodard, J.L., Nielson, K.A., Smith, J.C., Matthews, M.A., Butts, A.M., Hantke, N.C., & Rao, S. M. (2012, April). Prediction of longitudinal white matter change in healthy elderly individuals. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.
163. Butts, A.M., Nielson, K.A., Hantke, N., Lancaster, M., Seidenberg, M., Woodard, J.L., Smith, J.C., Matthews, M., Sugarman, M., Durgerian, S., Rao, S. M (2012, April). Distinguishing future cognitive decline in healthy elders using two methods for measuring hippocampal volumes. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.
164. Smith, J.C., Nielson, K.A., Woodard, J.L., Seidenberg, M., Durgerian, S., Butts, A.M., Hantke, N.C., Lancaster, M.A., and Rao S.M. (2012, April). Longitudinal associations between physical activity, cognitive status, and brain function in older adults at genetic risk for Alzheimer's Disease. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.

165. Koenig, K.A., Beall, E.B., Lin, J., Mathew, B., Stone, L., Bermel, R.A., Rao, S., Trapp, B., Phillips, M.D., Lowe, M.J. (2012, May) Strength of connectivity to the anterior cingulate predicts processing speed in Multiple Sclerosis. Poster presented at the meeting of the Cognitive Neuroscience Society, Chicago, IL, USA.
166. Woodard, J.L., Seidenberg, M., Nielson, K.A., Sugarman, M.A., Smith, J.C., Durgerian, S., Butts, A.M., Lancaster, M.A., Foster, M.K., Hantke, N.C., Matthews, M.A., & Rao, S.M. (2012, April). Episodic memory measures complement structural and functional MRI for predicting cognitive decline in apolipoprotein E $\epsilon 4$ carriers. Presented at the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.
167. Figueroa, C. M., Hazlett, K. E., Nielson, K.A., Woodard, J.L., Smith, J.C., Seidenberg, M., Durgerian, S., Hantke, N.C., Sugarman, M.A., Kay, C.D., Kandah, C.C., Norman, A.L., Lancaster, M.A., Matthews, M.A., and Rao, S.M. (February, 2013). Predictive ability of intraindividual variability in healthy elders at risk for Alzheimer's disease. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
168. Hazlett, K.E. Figueroa, C. M., Hazlett, K. E., Nielson, K.A., Durgerian, S., Woodard, J.L., Smith, J.C., Seidenberg, M., Hantke, N.C., Sugarman, M.A., Kay, C.D., Kandah, C.C., Norman, A.L., Lancaster, M.A., Matthews, M.A., and Rao, S.M (February, 2013). Longitudinal change in parahippocampal cortical thickness as a function of cognitive decline and gene risk for Alzheimer's disease. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
169. Kandah, C.C., Kay, Christina, D., Seidenberg, M., & Woodard, J.L. (February, 2013). Recent and remote recognition: brand names, famous names and television shows. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
170. Kay, C., Seidenberg, M., Kandah, C.C., Matthews, M.A., Lancaster, M.A., Durgerian, S., Nielson, K.A., Smith, J.C., Woodard, J.L., Smith, J.C., Figueroa, C.M., Hazlett, K.E., Hantke, N.C., Sugarman, M., Norman, A.L., & Rao, S.M. (February, 2013). Fine motor variability, APOE- $\epsilon 4$, and longitudinal memory outcome in healthy elders. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
171. Nielson, K.A., Woodard, J.L., Hazlett, K.E., Figueroa, C.M., Seidenberg, M., Smith, J.C., Durgerian, S., Hantke, N.C., Sugarman, M.A., Kay, C.D., Kandah, C.C., Norman, A.L., Lancaster, M.A., Matthews, M.A., & Rao, S.M. (February, 2013). Episodic memory, hippocampal activation during encoding, and eventual cognitive decline in elders: the importance of correct rejections. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.

172. Norman, A.L., Woodard, J.L., Nielson, K.A., Seidenberg, M., Smith, J.C., Durgerian, S., Sugarman, M.A., Figueroa, C.M., Hantke, N.C., Hazlett, K.E., Kandah, C.C., Kay, C.D., Lancaster, M.A., Matthews, M.A., & Rao, S.M. (February, 2013). Changes in verbal learning across trial and time: predicting cognitive decline in older adults over five years. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
173. Smith, J.C., Nielson, K.A., Woodard, J.L., Seidenberg, M., Durgerian, S., Hantke, N., Lancaster, M.A., Matthews, M.A., Sugarman, M., Figueroa, C., Hazlett, K., Kay, C., Norman, A., Kandah, C. & Rao, S.M. (February, 2013). Longitudinal associations between physical activity, cognitive decline, and hippocampal volume in healthy APOE- ϵ 4 carriers. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
174. Sugarman, M.A., Woodard, J.L., Nielson, K.A., Smith, J.C., Seidenberg, M., Durgerian, S., & Rao, S.M. (February, 2013). Rapid forgetting in the prediction of future cognitive decline in healthy older adults. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
175. Woodard, J.L., Nielson, K.A., Seidenberg, M., Smith, J.C., Durgerian, S., Sugarman, M.A., Norman, A.L., Lancaster, M.A., Matthews M.A., Kandah, C.C., Kay, C.D., Figueroa, C.M., Hazlett, K.E., & Rao, S.M. (February, 2013). Use of automated hippocampal subfield segmentation for predicting probability of cognitive decline in healthy older adults. Presentation at the 41st Annual Meeting of the International Neuropsychological Society, Waikoloa HI [submitted]. Journal of the International Neuropsychological Society, TBA.
176. Bonner-Jackson, A., Durgerian, S., Woodard, J.L., Nielson, K.A., Seidenberg, M., Smith, J.C., Butts, A., Lancaster, M.A., Matthews, M.A., Sugarman, M.A., Kay, C.D., Kandah, C.C., Hantke, N.C., Norman, A.L., Hazlett, K.E., Figueroa, C. M., Rao, S.M. Longitudinal Changes in Semantic Memory Activation in Healthy Elders at Genetic Risk for Alzheimer's Disease: Results of a 5 Year fMRI Study. Presentation at the 42nd Annual Meeting of the International Neuropsychological Society, Seattle, WA, February, 2014. Journal of the International Neuropsychological Society, p. 155.
177. Kandah, C.C., Seidenberg, M., Matthews, M.A., Srnka, K., Rosado, D., Woodard, J.L., Nielson, K.A., Smith, J.C., Durgerian, S., Rao, S.M. Longitudinal Performance on the Mini-Mental State Exam (MMSE) and the Mattis Dementia Rating Scale-2 (DRS). Presentation at the 42nd Annual Meeting of the International Neuropsychological Society, Seattle, WA, February, 2014. Journal of the International Neuropsychological Society, p. 160.

178. Lancaster, M.A., Seidenberg, M., Durgerian, S., Nielson, K.A., Woodard, J.L., Smith, J.C., Matthews, M.A., Butts, A., Hantke, N.C., Kay, C.D., Kandah, C.C., Hazlett, K.E., Figueroa, C. M., Michael, S.A., Norman, A.L., Rao, S.M. Longitudinal White Matter Changes across the Alzheimer's Disease Risk Continuum: A Diffusion Tensor Imaging Study. Presentation at the 42nd Annual Meeting of the International Neuropsychological Society, Seattle, WA, February, 2014. *Journal of the International Neuropsychological Society*, pp. 233-4.
179. Kay, C.D., Seidenberg, M., Durgerian, S., Smith, J.C., Woodard, J.L., Nielson, K.A., Lancaster, M.A., Matthews, M.A., Kandah, C.C., Hantke, N.C., Hazlett, K.E., Figueroa, C. M., Sugarman, M.A., Norman, A.L., Rao, S.M. Motor Timing Intraindividual Variability and Structural Volumes in Healthy Aging and Mild Cognitive Impairment. Presentation at the 42nd Annual Meeting of the International Neuropsychological Society, Seattle, WA, February, 2014. *Journal of the International Neuropsychological Society*, p. 234.
180. Matthews, M.A., Seidenberg, M., Woodard, J.L., Nielson, K.A., Smith, J.C., Durgerian, S., Lancaster, M.A., Kandah, C.C., Kay, C.D., Butts, A., Hantke, N.C., Figueroa, C. M., Hazlett, K.E., Norman, A.L., Sugarman, M.A., Rao, S.M. Different Contributions of Family History and Genetic Risk on 5-year Cognitive Changes in Healthy Older Adults. Presentation at the 42nd Annual Meeting of the International Neuropsychological Society, Seattle, WA, February, 2014. *Journal of the International Neuropsychological Society*, pp. 249-50.
181. Hantke, N.C., Nielson, K.A., Durgerian, S., Woodard, J.L., Seidenberg, M., Smith, J.C., Rao, S.M. Multi-Voxel Pattern Analysis of Famous and Non-Famous Names in Older Adults. Presentation at the 42nd Annual Meeting of the International Neuropsychological Society, Seattle, WA, February, 2014. *Journal of the International Neuropsychological Society*, p. 188.

Predoctoral Students:

Student	Pre/ Post	Training Period	Deg	Yr	Institution	Research Project, Current Position of Former Students
Speech, Thomas	Pre	85-89	BS	1976	University of Wisconsin - Steven Point	<i>Stimulant Medication in the Treatment of Chronic Head Injury</i> Private Practice in Clinical Neuropsychology, Milwaukee, WI
Unverzagt, Frederick	Pre	88-91	BA	1982	Southern Illinois University	<i>Oral Physostigmine in the Treatment of Memory Loss in Multiple Sclerosis</i> Professor of Psychiatry, University of Indiana School of Medicine, Indianapolis, IN
Patterson, Kathleen	Pre	91-93	BA	1969	Marquette University	<i>Emotion Processing in Multiple Sclerosis</i> Staff Neuropsychologist, VA Medical Center – Milwaukee; Assistant Professor, Department of Psychiatry and Behavioral Medicine, Medical College of Wisconsin, Milwaukee, WI
Bernardin, Linda	Pre	87-95	BS	1983	University of Wisconsin - Oshkosh	<i>A Prospective, Longitudinal Study of the Neuropsychological Significance of Leukoaraiosis</i> Clinical Neuropsychologist, Agnesian Health Care, Fond du Lac, WI
Leveroni, Catherine	Pre	96-99	BA	1990	Trinity College (Hartford)	<i>Neural Systems Underlying the Recognition of Familiar and Newly Learned Faces</i> Director, Clinical Neuropsychology Track, Massachusetts General Hospital; Instructor, Harvard Medical School, Boston, MA
Sweet, Larry	Pre	96-01	BA	1992	University of Minnesota	<i>A Functional Magnetic Resonance Imaging Study of Verbal Working Memory In Multiple Sclerosis Patients</i> Assistant Professor, Department of Psychiatry & Human Behavior, Brown University, Providence, RI
Mayer, Andy	Pre	96-01	BA	1994	SUNY - Buffalo	<i>A Functional Magnetic Resonance Imaging Study of Endogenous and Exogenous Visual-Spatial Attention</i> Research Scientist, MIND Institute, Albuquerque, NM

Bobholz, Julie	Pre	92-98	MA	1991	Loyola College (Baltimore)	<i>Cognitive Decline in Multiple Sclerosis: An Eight Year Longitudinal Study</i> Assistant Professor, Medical College of Wisconsin, Milwaukee, WI
Dorflinger (Vongher), Jill	Pre	99-06	BS	1996	Quinnipiac College	<i>fMRI Study of Working Memory in Adults With ADHD</i> Clinical Assistant Professor, Psychology Department, University of Illinois at Chicago, Chicago, IL
Mulligan, Rick	Pre	98-07	BA	1993	University of Chicago	<i>Response Inhibition in Children and Adults with Attention Deficit Hyperactivity Disorder: An fMRI Study</i> Postdoctoral Fellow, Brown University
Vassileva, Jasmin	Pre	99-02	BA	1995	McGill University	<i>A functional magnetic resonance imaging study of verbal working memory in adults with attention deficit hyperactivity disorder</i> Research Assistant Professor, Department of Psychiatry, University of Illinois at Chicago, Chicago, IL
Zimelman, Janice	Pre	98-04	BS	1985	University of Wisconsin - Madison	<i>Neural Activation Patterns of Temporal Information Processing in Presymptomatic Huntington's disease</i> Project Staff, Cleveland Clinic, Cleveland, OH
Douville, Kelli	Pre	97-08	BA	1998	Marquette University	<i>Famous Faces and Landmarks: An FMRI Investigation</i>

Postdoctoral Trainees:

Trainee	Pre/Post	Training Period	Deg	Yr	Institution	Current Position of Former Trainee
DiGiulio, Diane	Post	89-90	PhD	1989	Chicago Medical School	Private Practice in Clinical Neuropsychology, Milwaukee, WI
Flynn, Angela	Post	90-92	PhD	1990	Washington State University	Private Practice in Clinical Neuropsychology, Denver, CO
Swanson, Sara	Post	90-92	PhD	1990	Washington State	Professor of Neurology, Section of Neuropsychology,

					University	Medical College of Wisconsin, Milwaukee, WI
Unverzagt, Frederick	Post	91-92	PhD	1991	Southern Illinois University	Professor of Psychiatry, University of Indiana School of Medicine, Indianapolis, IN
Anderson, Brad	Post	91-92	PhD	1991	Chicago Medical School	Clinical Neuropsychologist, VA Hospital, Topeka, KA
Arnett, Peter	Post	92-94	PhD	1992	University of Wisconsin - Madison	Associate Professor, Dept. of Psychology, Pennsylvania State University, State College, PA
Lisk, Louanne	Post	93-94	PhD	1993	Chicago Medical School	Private Practice in Clinical Neuropsychology, Lake Mills, WI
Bobholz, Julie	Post	98-00	PhD	1998	Chicago Medical School	Assistant Professor, Section of Neuropsychology, Medical College of Wisconsin, Milwaukee, WI
Woodley, Scott	Post	96-97	PhD	1996	Northwestern University	Private Practice in Clinical Neuropsychology, WI
Bernardin, Linda	Post	94-95	PhD	1994	University of Wisconsin - Milwaukee	Clinical Neuropsychologist, Agnesian Health Care, Fond du Lac, WI
Cunningham, Joseph	Post	95-97	PhD	1995	Illinois Institute of Technology	Neuropsychology Service, St. Luke's Medical Center, Milwaukee, WI
Springer, Jane	Post	95-97	PhD	1995	University of Cincinnati	Private Practice in Clinical Neuropsychology, Cincinnati, OH
Rosen, Allyson	Post	94-97	PhD	1993	Case Western Reserve University	Instructor, Department of Psychiatry and Behavioral Science, Stanford University, Palo Alto, CA
Chen, Annabel	Post	99-01	PhD	1999	Purdue University	Assistant Professor, Department of Psychology, National Taiwan University, Taiwan
Leveroni, Catherine	Post	99-01	PhD	1999	Chicago Medical School	Director, Clinical Neuropsychology Track, Massachusetts General Hospital; Instructor, Harvard Medical School, Boston, MA
Elsinger, Cathy	Post	00-03	PhD	2000	Pennsylvania State Univ.	Chief Operating Officer, Nordic NeuroLabs, Milwaukee, WI
Zimbelman, Janice	Post	04-07	PhD	2004	Medical College of WI	Project Staff, Cleveland Clinic, Cleveland, OH

Vision Statement for Miami McKnight Brain Institute

Stephen M. Rao, PhD, Candidate for Scientific Director

As a candidate for the Scientific Director of the Evelyn F. McKnight Brain Institute at the University of Miami, I would like to provide my vision should I be appointed. I have carefully reviewed the Annual Progress Reports of the past two years prepared by Drs. Wright and Rundek. From these reports, it is clear that the Miami McKnight Brain Institute is already a highly collaborative, integrative, translational and multi-disciplinary institute. Its mission to discover the causes, conduct treatment and prevention of age-related memory loss and cognitive decline and enhance brain health overlaps extensively with my scientific interests and experience. I strongly endorse the vision that the institute should become a leader in finding the causes, treatment and prevention of age-related cognitive disorders by integrating translational, clinical and population research programs with educational activities. As scientific director, I would not only support the superb ongoing projects as outlined in the annual reports, but would also incorporate my ongoing research programs developed during my work at the Cleveland Clinic. In the following sections, I will briefly summarize my academic credentials and then discuss various directions that I would like to take to enhance the already successful Miami McKnight Institute,

I am currently the Ralph and Luci Schey Chair and Director of the Schey Center for Cognitive Neuroimaging at the Cleveland Clinic and am a Professor in the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. I obtained my Ph.D. in Clinical Psychology from Wayne State University (Detroit) and completed a predoctoral internship at Rush-Presbyterian-St. Luke's Medical Center (Chicago). Prior to joining the Cleveland Clinic in May of 2007, I was the Director of the Functional Imaging Research Center and Professor of Neurology (Neuropsychology) at the Medical College of Wisconsin (Milwaukee). I have authored over 175 scientific papers/book chapters and edited four books. My current research areas involve the application of advanced neuroimaging techniques (task-activated and resting-state fMRI; diffusion tensor imaging) to understand the disruption of brain circuits mediating memory, attention, motor control, temporal information processing, and conceptual reasoning in normal aging and in individuals in the preclinical stage of Alzheimer's and Huntington's diseases, patients with multiple sclerosis, and military personnel with blast-related traumatic brain injury. More recently, my lab has developed and validated self-administered iPad-based apps for testing neuroperformance in multiple sclerosis and for mass screening of cognitive dysfunction in older patients attending primary care clinics. I have been a recipient of a National Institutes of Health Research Career Development Award and have had continuous funding for my lab since the early 1980's. I have had grants from the National Institute on Aging, National Institute of Neurological Disorders and Stroke, National Institute of Mental Health, US Department of Defense, CHDI Foundation, Charles A. Dana Foundation, and National Multiple Sclerosis Society. I am the Editor-in-Chief of the *Journal of the International Neuropsychological Society* published by Cambridge University Press, Associate Editor of *American Psychologist* and former Editor of *Neuropsychology* published by the American Psychological

Association (APA), and a member of the editorial boards of eight other journals. I currently serve on the APA Publications and Communications Board and have served as President of the International Neuropsychological Society (INS), INS Board of Governors, and Chair of the scientific program committee for the INS annual scientific meeting, as well as on the Board of Directors of the American Board of Clinical Neuropsychology.

The following summarizes areas of future development for the institute:

Physical Activity (PA), Immune Mechanisms, and Cognitive Decline in the Elderly. I have recently been awarded a 5-year, \$8.8 million competing renewal grant from the National Institute on Aging (R01AG022304; years 11-15) to study the effects of PA in inducing neuroprotective effects in healthy elders. During the previous funding period (yrs. 6-10), my lab published a series of functional and structural MRI studies that have shown that sedentary, cognitively intact older individuals have significantly reduced fMRI activation of memory regions, altered radial diffusivity in white matter tracts, and significant declines in episodic memory and hippocampal volume over 18-months compared to individuals who engage in regular PA. Thus, we demonstrated a specific neuroprotective effect of PA in older healthy persons.

Based on these exciting new findings, we proposed a longitudinal project to better understand the mechanisms that might explain this neuroprotective effect. The newly funded study will be conducted both in cognitively intact elders. For the proposed interdisciplinary project, our overall hypothesis postulates that PA counteracts negative inflammatory effects and other innate immune pathways, thereby reducing the risk of cognitive decline in healthy elders. This project will uniquely employ functional/structural MRI, PET amyloid imaging, cerebrospinal fluid (CSF)/blood biomarkers, and comprehensive cognitive testing in humans.

By moving this grant from the Cleveland Clinic to the University of Miami, I will also be able to test additional hypotheses regarding the neuroprotective effects of PA on aging. Specifically, the University of Miami is a world leader in examining the effects of the vascular system on cognition. I will be in a position to take advantage of this extensive expertise to examine the mediating role of PA on the vascular system in preventing cognitive decline in older healthy persons.

Translational Studies in Aging. The R01 grant cited above will also involve a translational component involving mechanistic studies in novel transgenic mouse models of aging. This animal project is analogous to the human project by determining the impact of voluntary wheel running PA across age (3 months, 6 months, and 9 months). We intend to conduct parallel observational studies that employ similar outcome measures in both humans and mice. Key indices include TREM2+ cells, expression of proinflammatory markers, and spatial memory performance. This study should provide key insights into potential mechanisms linking exercise, inflammation, aging, and cognition that could ultimately be targeted therapeutically. Such a study would complement the existing large number of animal projects at the University of

Miami's McKnight Brain Institute that examine the neural effects of aging on cognitive processes.

Population Health: Self-Administered Computerized Cognitive Testing of Older Patients in a Primary Care Setting. When an older patient is seen for their annual check-up by their primary care physician, blood pressure is routinely measured. In contrast, cognitive function is rarely, if ever, assessed. Routine cognitive screening assessments would enable appropriate referrals for follow-up dementia evaluation/intervention should the older person's performance perform below age-appropriate expectations. A normal performance on routine cognitive screening tests conducted in the primary care clinic would not only reassure patients but also reduce overall medical costs by eliminating inappropriate referrals to tertiary care dementia specialists.

Over the past four years at the Cleveland Clinic, I have lead a team consisting of clinical neuropsychologists, neurologists, primary care physicians, biomedical engineers, computer scientists, and clinical and administrative support staff in developing self-administered iPad assessment tools that are fully integrated into clinical practice. With the growing interest in integrated care and shift to a population health based reimbursement model in the US, there will be an increased need for reliable and valid cognitive screening measures that can be incorporated seamlessly into a standard medical visit with minimal disruption of service delivery flow or need for additional personnel. Our overall goal is to measure cognition as often as blood pressure during routine medical visits.

To address this need, we developed the 16-minute Cleveland Clinic Computerized Cognitive Battery (C4B), which consists of three self-administered iPad-based measures of episodic learning and delayed recall, information processing speed, and a measure of sequencing and switching executive functions. Results from these measures are integrated instantaneously into the electronic medical record in a meaningful way allowing for immediate and useful feedback to the entire clinical team. We are currently in the process of completing normative and validation studies, thus setting the stage for integrating the C4B into primary care clinics. Patients will take the C4B in the clinic waiting room with the iPad on their lap and test instructions presented via noise-cancelling headphone sets. Testing is conducted prior to their visit so that the caregiver professional has access to both the raw and norm-corrected scores during the same clinic visit. We are currently in the process of developing a carepath to guide the clinical staff in the correct interpretation of the cognitive test results and how to proceed with follow-up evaluation and prescribing treatment and prevention interventions.

If I were to become the McKnight Scientific Director, I would implement a similar system in the primary care clinics at the University of Miami. Once this is accomplished, I would export this population health system for identifying age-related cognitive disorders to the three other McKnight Institutes. The four McKnight Institutes and the Cleveland Clinic could form a network that will serve as an international population-based model for the identification of aging-related memory and cognitive disorders in the primary care setting.

Expansion of Neuroimaging Research. Currently, neuroimaging research conducted at the Miami McKnight Brain Institute involves primarily structural MRI. I would expand the capabilities of the institute to conduct task-activated fMRI, resting-state fMRI and DTI to examine functional and structural brain connectivity, and PET imaging using FDG, amyloid and tau radiotracers. Such expanded capabilities will not only allow the Miami McKnight Brain Institute to be competitive in obtaining NIH funding, but will also allow the Miami institute to join the other McKnight institutes in conducting advanced neuroimaging studies on aging and cognition. With the assistance of the MR physics colleagues at my current institution, I have had considerable success in running multi-site neuroimaging studies. The MR physics support at the University of Miami is exceptional.

Expansion of Interactions with the Neurology Program. As noted above, the neurology department, under the direction of Dr. Sacco, is recognized for its team of internationally renowned investigators in cerebrovascular disease and stroke. I believe their vast expertise is underutilized and represents an area of great potential for expanding our understanding of vascular cognitive impairment in an aging population. My goal would be to merge the population health cognitive screening described above with the state-of-the-art vascular screening methods to gain a better understanding of the cerebrovascular contributions to cognitive decline in patients being treated in a primary care setting. The goal would be to export these methods to the other three McKnight Institutes so as to develop fundable collaborative research projects. The Miami McKnight Brain Institute will also work closely with the cognitive neurology program in research and clinical services provided to assess preclinical AD and other aging-related cognitive disorders.

Expansion of the Neuropsychology Clinical Training Program. I am a board-certified clinical neuropsychologist, have edited two of the leading journals in the field, and have held various national leadership roles in promoting clinical neuropsychology. I look forward to working with Dr. Levin to further expand the already exceptional clinical neuropsychology training program at the University of Miami. I will apply my expertise in clinical neuropsychology and particularly in the assessment of cognition in older adults to our clinical trainees. The population health cognitive screening project outlined above will greatly expand the need for neuropsychological evaluation and treatment services. In collaboration with Dr. Levin, the Miami McKnight Brain Institute will develop innovative models for delivering clinical neuropsychological services. Such a program will attract the top candidates for clinical neuropsychological training to the University of Miami.