

8 June 2007

MEMORANDUM

TO: Michael Heiberger, Dean

FROM: Jerome M. Feldman, Director

RE: SIVR Annual Activity Report for 2006-2007

CC: David Heath, President
Ann Warwick, Vice President for Development
David Bowers, Vice President for Finance
Debra Berger, Senior Assistant
Zenia Tarkewicz, Staff Assistant

As requested, please find attached the SIVR Annual Activity Report for 2006-2007.

**The Schnurmacher Institute for Vision Research
State University of New York
State College of Optometry**

ANNUAL ACTIVITY REPORT

July 1, 2006 - June 30, 2007

This past year the SIVR activity once again affirmed the Institute's goal supporting and advancing scientific research and knowledge in vision science. The SIVR continued its support of faculty and students engaged in vision research, particularly those members of the Institute whose individual efforts in obtaining external federal grants, e.g., National Eye Institute (NEI) and National Science Foundation (NSF), complement the Institute's overall mission. The SIVR continued to encourage submission of external grant applications to support vision science research.

Summary Information-Major SIVR Activities for 2006-07

1. SIVR Invited Talks and Presentations

As in past years, there were numerous SIVR-supported research invited talks and presentations this year. Many of these were made at various national and international meetings and conferences in vision, including the Association for Research in Vision and Ophthalmology (ARVO), the American Academy of Optometry (AAO), the Optical Society of America (OSA), the Vision Science Society, etc. At ARVO, the largest such conference in the world, 28 presentations were made by 39 SUNY-O faculty and students. Many of these were supported by SIVR funds. Faculty whose research is supported, in part, by the SIVR, also gave invited talks at many prestigious nationally and internationally recognized universities, including Harvard, Princeton, UCLA, U. of Tokyo, Shanghai U., and many others in Europe and Australia.

2. SIVR Pre and Post-doctoral Student Support

The SIVR continues to provide supplementary stipend support for these important Fellowships that are used for graduate student training in research.

3. Publications

There were 41 research publications, many in the most prestigious refereed scientific journals, that were supported, in part, by SIVR funding.

4. External Research Grants

There were six NEI and one NSF research investigator grants, two NEI collaborative

clinical trial grants, and a number of foundation and industry/private grants. Current external grant expenditure approximated \$2,500,000 annually. In addition, a number of invention disclosures (patents pending) were submitted. SIVR bore some of this cost, which has resulted in at least one successful patent.

5. Relative National Standing of SIVR Supported Activities

Our NIH-NEI awards place us 5th in the rankings of all schools and colleges of optometry. The other schools ranked ahead are large University Centers having faculty with dual appointments in academic departments other than optometry. The College also obtained a consultants report on the status of the current and future research efforts at the College. Known as the “Berkeley Report,” it contains valuable suggestions, including a recommendation to hire 4-5 federally funded faculty over the next few years. Increasing the number of NIH funded researchers will greatly help support the College’s proposals for NIH institutional core and training grants. Such grants support the infrastructure of the College and the research enterprise. Other recommendations were to bring on a Director of Clinical Research and to impress upon the OCNYS to target funding support for the College’s research mission. One proposal has already been submitted to the OCNYS regarding an imaging center. As of today, the College is in the final stages of negotiations for a senior research scientist from one of the Ivy league schools.

6. General Proposed Budget Expenditures 2007-08

Appendix II

7. Regular Colloquium Series and the VisioNYC colloquia.

The College was fortunate enough to be asked to act as host for the highly regarded **VisioNYC Colloquium series**. This prestigious event brings together all of the major vision science researchers from the great NYC area four times a year for a colloquium. There are 75-80 attendees from institutions such as Rockefeller U., Columbia, NYU, CCNY, and other prestigious institutions.

For more than 20 years, **our College’s own SIVR Colloquium series** was once again an overwhelming success with both nationally and internally recognized scientists presenting their vision science research to the SUNY community as well as guests from all the major metropolitan schools and colleges involved in vision science research. Listed below are the individual colloquium talks.

Date: **Thursday, July 6, 2006** - 12:15 p.m. - Room 206
Name: **Yi Han, Ph.D.**
Affiliation: University of Houston, Houston, TX
Title: Understanding retinal neural networks: gene / function studies at single neuron level

Date: **Thursday, July 20, 2006** - 12:00 noon - Room 1401
Name: **Jacob Feldman**
Affiliation: Rutgers University
Title: ‘Skeletons in the mist: local and global mechanisms in the representation of shape’

Date: **Thursday, August 10, 2006** - 12:00 noon - Room 1401
ECVP Practice Talk
Name: **Dr. Qasim Zaidi & Dr. Xin Meng**
Affiliation: SUNY, State College of Optometry
Title: Activation of competing perceptual assumptions for 3-D shape

Date: **Tuesday, October 10, 2006** - 11:30 a.m. - Room 206
Name: **Partha Mitra**
Affiliation: Cold Spring Harbor Laboratory
Title: Neural signal processing

Date: **Thursday, November 30, 2006** - 12:00 noon - Room 206
Name: **Joseph Carrol, Ph.D.**
Affiliation: Department of Ophthalmology
University of Wisconsin Milwaukee
Title: ‘Retinal imaging with adaptive optics reveals novel disease mechanisms in color blindness’

Date: **Thursday, February 8, 2007** - 12:00 noon - Room 1401
Name: **Dr. Qasim Zaidi**
Affiliation: SUNY, State College of Optometry
Title: ‘Neural filters for perceptual assumptions’

Date: **Thursday, March 8, 2007** - 12:00 - Room 1401
Name: **Ben Backus, Ph.D.** (candidate for faculty position)
Affiliation: Department of Psychology
University of Pennsylvania
Title: ‘A role for associative learning in the construction of visual appearance’

Date: **Thursday, March 22, 2007** - 12:05 p.m. - Room 1401
Name: **Dr. Huseyin Boyaci** (candidate for faculty position)
Affiliation: University of Minnesota
Title: ‘Contextual influences on early visual processing’

Date: **Wednesday, April 11, 2007** - 12:00 noon - Room 1401
Name: **Vivien Chevaleyre, Ph.D.** (candidate for faculty position)
Affiliation: Albert Einstein College of Medicine
Title: ‘Role of dendritic transmitter release in the CNS’

Date: **Friday, April 20, 2007** - 12:15 p.m. - Room 1401

Name: **Dr. Samuel Solomon**
Affiliation: University of Sydney, Australia
Title: "Regulation of chromatic sensitivity in the primate visual system"

Date: **Monday, April 30, 2007** - 12:00 noon - Room 1401

Name: **Dr. Jose Capo-Aponte**
Affiliation: SUNY, State College of Optometry
Title: "Differential Roles of Potassium-Chloride Cotransporter Isoforms in Cell Volume Maintenance and Proliferation of Corneal Epithelial Cells"

Date: **Thursday, May 3, 2007** - 12:00 to 3:00
Practice Talks: 12:00 to 1:00 - Room 1401
Poster Session: 1:00 to 3:00 - 15 fl.

Name: **11th Annual ARVO / VSS Practice Talks and Poster Presentation Session**

Affiliation: SUNY, State College of Optometry
Title: **Zan Pan:** "Transient Receptor Potential Vanilloid 4 (TRPV4) mediation of hypotonic stress in Human Corneal Epithelial Cells"
Andrea Li: "3-D curvature aftereffects invariant to texture pattern"

Date: **Thursday, May 17, 2007** - 12:00 noon - Room 206

Name: **Prof. Larry Palmer**
Affiliation: University of Pennsylvania, School of Medicine
Title: "Precision of spike timing in the geniculocortical system of the cat"

Date: **Friday, May 18, 2007** - 12:00 noon - Room 1401

Name: **Pascal Mamassian, Ph.D.**
Affiliation: CNRS & University Paris 5
Title: "Visual Perception from a Bayesian Perspective"

Date: **Friday, May 18, 2007** - 3:00 p.m. - Room 1401

Name: **Fan Zhang**
Affiliation: SUNY, State College of Optometry
Title: "Roles of Calcium Signaling and Protein Kinase C Activation in Mediating Receptor Control of Corneal Epithelial Renewal"

Date: **Monday June 4, 2007** - 12:00 noon - Room 206

Name: **David Williams, Ph.D.**
Affiliation: University of Rochester
Title: "In Vivo High Resolution Imaging of the Retina with Adaptive Optics"

Date: **Friday, June 8, 2007** - 12:00 noon - Room 206

Name: **Dr. Andrea Li**
Affiliation: CUNY Queens College, Department of Psychology
Title: "Neural basis of 3-D shape aftereffects"

Appendix I Research Grants

Current Federally funded multi-year vision research grants

Phil Kruger, NEI (Stimuli for Accommodation -Dioptic and Non-Dioptic Cues)

Jose Manuel Alonso, NEI (Functional Connectivity in Primary Visual Cortex)

Jose Manuel Alonso, NEI (Selective Attention at Early Stages of Visual Processing) –no cost extension

Peter Reinach, NEI (Control of Corneal Epithelial Cell Proliferation)

Qasim Zaidi, NEI (Mechanisms of Color Detection);

Barry Lee, NEI (Information Transfer Via Retinal Ganglion Cells)

Qasim Zaidi, NEI (Neural Basis of Shape From Texture)

Ken Ciuffreda and Jerry Feldman, NEI (Summer Research Training for Optometry Students)

Harry Wyatt, NEI (A rapid pupillometric test for glaucoma)

Current NEI Clinical Research Trials (sub-contracts)

Jeff Cooper, NEI CITT Convergence Insufficiency Treatment Trial

Bob Duckman and Jeffrey Cooper, NEI subcontract (The Amblyopia Treatment Study)

David Libassi and Ralph Gundel, NEI (CLEK, Keratoconus Observational Study)

Clinical Research Funded by Foundations and Industry

Neera Kapoor and Ken Ciuffreda, Langeloth Foundation (Improving Walking Ability in Stroke Patients Using Optical Rehabilitation)

David Krumholz, Ciba Vision (Repeatability of the Correlation Between Glucose Levels in Tears and Blood)

Peter Reinach, Boston Pharmaceutical- Cell signals

Appendix II

SIVR EXPENDITURE BUDGET

July 1, 2007- June 30, 2008

Schnurmacher Endowment

Direct Research Support (includes Yager Award)	\$ 4,000
Post-doc Research Support	\$ 33,000
Salaries – Research	\$ 12,000
SIVR Colloquium	\$ 3,000
Biological Research Facility Support	\$ 20,000
<i>*SUNY Empire Innovation Program</i> (Clinical Human Perception and Binocular Vision Lab)	\$ 19,000
Broker Fees	\$ 9,000
Total Budget:	\$100,000

Approved by:

Dr. Jerry Feldman, Director

Date

Dr. Steven H. Schwartz, Dean

Date

Ann Warwick, Vice President for Development

Date