

SEEDS: “You Choose” Awards

**“The Inside Scoop: Insights from NIH Program
Officers”**

Joy Lincoln, PhD
Assistant Professor
Molecular and Cellular Pharmacology
Miller School of Medicine

305-243-9613
jlincoln@med.miami.edu

Abstract

Obtaining grants from the National Institutes of Health is essential for a successful career in the biomedical sciences yet requires knowledge and insights typically gained only through networking with funded peers and officials at NIH itself. Such networking often bypasses women or minority faculty. We propose to host several forums on navigating the NIH system. Each forum will include a presentation by an invited Program Officer from an NIH Institute, an interactive Panel Discussion, and a social event. Follow-up questionnaires will assess the value and impact of these events.

Goals

Our overall goal is to help “demystify the application and review process, clarify federal regulations and policies, and highlight current areas of special interest or concern”¹ especially for junior faculty and minorities. We will provide opportunities for Faculty to meet with and hear from NIH Program Officers selected from key Institutes, who will share their “behind-the-scenes” expertise on obtaining funding from the NIH. Program Officers are the people “in the trenches” at NIH and can offer unique insights to the grant process that are often never written down. We propose that the use of the SEEDS funds in this manner will provide a cost-effective way to positively impact the widest number of Faculty. Actual topics for presentation and discussion will be chosen by the faculty but are anticipated to include:

- Up-to-date information on current NIH Programs and on new Programs initiated this year.
- Anticipated future research priorities of the NIH.
- Practical information on how to navigate the NIH grant application process. This discussion will be particularly targeted to new Faculty, and would include basics such as how to select the most appropriate Study Section and Institute for your proposal.
- The amount and quality of Preliminary Data needed and the scope of the proposed Budget.
- How to obtain constructive feedback from local peers and mentors, and how to respond to criticism effectively or write a rebuttal to a revised application.
- Current changes to the process of grant application and resubmission.
- How to write/manage useful Progress Reports.
- Addressing specific diversity issues, challenges and opportunities affecting women and minority Faculty.

A committee composed of the P.I. and collaborators, Drs. Joy Lincoln, Mary Lou King, Sandra Lemmon, Fulvia Verde and Nirupa Chaudhari, will execute the proposed plan of action. We will identify appropriate NIH Program Directors, with emphasis on those Institutes that fund many junior, women and minority Faculty. We will extend invitations to each and schedule up to five forums over a two-year period. Several days in advance of each Forum, we will poll Faculty and assemble a set of questions and discussion topics (see examples above). The program for each Forum will include:

- A 1-hour presentation by the Program Officer, with particular emphasis on the topics selected.
- A 60-90 min discussion and question and answer period with a Panel that includes the Program Officer and 2-3 senior/successful UM Faculty
- A social hour/reception at the home of one of the committee members for 10-15 faculty members whose research is in the focus area of the NIH Program Officer's institute. This will allow constructive one-on-one interaction and networking with faculty members' current or potential Program Officer.

- ¹ Taken from an NIH bulletin announcing the 2009 NIH Regional Seminars.

How the funds will further my career and scholarly goals:

As a new investigator and new faculty member at the University of Miami, I am learning to juggle the diverse responsibilities and opportunities in my portfolio. My primary goal, of course, is to establish my own teaching and research career. I also see a tremendous opportunity with the SEEDS "You Choose" program, to simultaneously increase the effectiveness of biomedical science careers for several of my faculty colleagues, especially those in minority groups. Scientific success, at every level of tenure, is measured by quality and productivity. This can only be achieved once you have been triumphant in 'cracking the code' of funding institutions. As a new investigator, this has been a very daunting task – so many choices, so many questions and so many rules! I have learnt from my established peers and collaborators that no matter what stage you are in your career, these points remain, but there are just different choices, questions and rules.

To ensure this interactive series between junior faculty, minorities and NIH Officers benefits a wide range of faculty needs, the program will be in collaboration with senior UM colleagues including Drs. Chaudhari, King, Lemmon and Verde. Working with this highly motivated team and networking with experienced Program Officers, many careers will be advanced, including those like me who are inexperienced faculty members, as well as more established faculty looking for ways to remain competitive. Advancing my, and my colleagues' education in the NIH grant process will surely strengthen the vitality of science here at UM and support the NSF's strategic goals of increasing the strength of women and minority faculty in the sciences and engineering.

As a new climber on the tenure track ladder, learning and gaining insights into the NIH grant system will positively influence my grant writing experience in many ways including selecting the right projects when submitting my applications, understanding practical information when navigating the NIH system, and managing the review and post award processes. In addition to these short-term objectives I am confident that this education early in my career will effectively 'mold' me into the NIH system. This in turn will allow me to build strong foundations and develop into an effective researcher and mentor in supporting the next generation of faculty members.

Budget

We are seeking support to host up to 5 forums during a two-year period featuring different program officers from NIH². The estimated costs of each forum would be:

Travel expenses for speaker, including roundtrip airfare (DC-Miami):	\$400
1 night hotel:	\$200
Coffee break & Reception food:	\$300
Total per event	\$900
Total for five events	\$4500

We have requested cost sharing from the Office of Research, but also anticipate that other programs/departments would be willing to contribute to these forums.

² No honoraria are budgeted, since federal government employees are not able to accept such payments.

Joy Lincoln, PhD, NSF BIOSKETCH

Professional Preparation

INSTITUTION AND LOCATION	DEGREE	YEARS
University of Durham, UK	BSc, Honors Biomedical Sciences	1995-1998
University of Durham, UK	Ph.D. Development and Molecular Biology	1998-2002
Cincinnati Children's Hospital Medical Center Cincinnati, OH, USA	Postdoctoral training: Cardiac Development	2002-2006

Appointments

2006-Present	Assistant Professor, University of Miami
2002-2006	Postdoctoral Fellow, Cincinnati Children's Hospital Medical Center
1998-2002	Graduate Student, University of Durham, UK
1998-2002	Teaching Assistant, University of Durham, UK

Publications

5 selected publications

1. Levay, A.K., Peacock, J.D., Lu Y., Hinton Jr., Koch, M., R.B., Kadler, K.E., Lincoln, J. Scleraxis is required for cell lineage differentiation and extracellular matrix remodeling during murine heart valve formation in vivo. *Circulation Research* 103(9): 948-56, 2008.
2. Peacock, J.D., Lu, Y., Kadler, K.E., and Lincoln, J. Temporal and Spatial expression of collagens during murine atrioventricular heart valve development and maintenance. *Developmental Dynamics* (237)10;3051-8, 2008.
3. Lincoln J., Kist, R., Scherer, G. Yutzey, K.E. Sox9 is required for valve precursor cell expansion and extracellular matrix organization during mouse heart valve development. *Developmental Biology* 305(1):120-32, 2007.
4. Hinton Jr., R.B*, Lincoln, J*, Deutsch, G., Osinska, H., Benson, W., Yutzey, K.E. Extracellular matrix remodeling and organization in developing and diseased aortic valves. *Circulation Research* 98(11):1431-8, 2006. *Both authors contributed equally. Front cover article.
5. Lincoln J., Alfieri, C.M., Yutzey, K.E. BMP and FGF regulatory pathways control cartilage- and tendon-like cell lineage differentiation of heart valve precursor cells. *Developmental Biology* 292;290-302, 2006.

5 other significant publications

1. Lincoln J., Florer, J.B., Deutsch, G.H., Wenstrup, R.J., Yutzey, K.E. ColVa1 and ColXIa1 are required for myocardial morphogenesis and heart valve development. *Developmental Dynamics* 235(12);3295-3305, 2006.
2. Lincoln J., Lange, A.L., Yutzey, K.E. "Hearts and Bones": Shared regulatory mechanisms in heart valve, cartilage, tendon and bone. Review article. *Developmental Biology* 294; 292-302, 2006
3. Lincoln J., Alfieri, C.M., Yutzey, K.E. Development of heart valve leaflets and supporting apparatus in chicken and mouse embryos. *Developmental Dynamics* 229 (4), 2004. Front cover article.
4. Lako, M., Lindsay, S., Lincoln, J., Cairns, P.M., Armstrong, L., Hole, N. Characterisation of *Wnt* gene expression during the differentiation of murine embryonic stem cells in vitro: role of *Wnt3* in enhancing haematopoietic differentiation. *Mechanisms of Development* 103, 49-59 2001
5. Armstrong, L., Lako, M., Lincoln, J., Cairns, P.M., Hole, N. *mTert* expression correlates with telomerase activity during the differentiation of murine embryonic stem cells. *Mechanisms of Development* 97, 109-116, 2000

Synergistic Activities.

Innovations in teaching and training

- I head the 'Cardiovascular Research Techniques' course as part of the NIH/NHLBI Training Grant in Cardiovascular Cell Signaling. This unique course is both classroom- and lab- based and has been designed to allow established University of Miami investigators introduce innovative cardiovascular-related techniques to a small group of post-docs and graduate students. This method of teaching not only educates trainees on new techniques, but exposes them to campus faculty and facilities that will likely advance their own research.
- I coordinate the annual 'Cardiovascular Research Symposium', an event hosted at The University of Miami to encourage interactions between Basic and Clinical science trainees and faculty through poster and oral presentation sessions. This is the first of its kind for cardiovascular research at the university and has been very positive in encouraging collegiate connections across South Florida.
- As a postdoctoral fellow, I organized a panel of academics from various tiers of tenure (which included myself as a postdoc just receiving my first faculty position) to meet for a Q&A session with trainees. This session received outstanding feedback and allowed current trainees to seek advice from new and established faculty on various aspects of academic life from grant writing, man management, CV writing and teaching.
- I am currently developing a handbook for the University of Miami Post Doctoral Programs Office. We anticipate this long awaited handbook will provide all the necessary information for new and existing postdocs including policies and procedures, benefits, salary, information for international scholars and Miami life.

Development and/or refinement of research tools:

One of my papers provides a novel in vitro system for assessing developmental mechanisms of heart valves

- In the *Developmental Biology* 292;290-302, 2006 paper, I devised a unique methods that allows the culture and genetic manipulation of primary heart valve cells. This technique has since been utilized and adapted by several highly reputable labs in the field of research

Service to the scientific and engineering community outside of my immediate organization.

- I was awarded the 2007 "Stop Heart Disease Researcher of The Year" by The Florida Heart Research Institute. This award gave me the opportunities to attend meeting with the general public to educate them on the fundamental basics of heart disease.
- In 2008, I gave a seminar series at The Miami Science Museum that allowed the general public of all ages and educational backgrounds to attend and learn about the biology and use of stem cells.

Collaborators & Other Affiliations

(i) Collaborators in the last 48 months:

Karl Kalder, PhD, Professor University of Manchester, UK.

Manuel Koch, PhD, Assistant Professor, University of Cologne

David Birk, PhD, Professor, University of South Florida

Robert Hinton Jr., MD, Cincinnati Children's Hospital

(ii) Graduate advisor, Nicholas Hole, PhD, Postdoctoral advisor, Katherine E. Yutzey, PhD

(iii) Advisor to: Postgraduate: Derek Rosenzweig Graduate: Jacqueline Peacock, Ge Tao

Current funding

NIH R01HL091878, PI – Lincoln. The molecular regulation of heart valve development and disease.

Florida Biomedical Research NIR 07KN-07, PI – Lincoln. The role of Sox9 in heart valve development and disease