INTRODUCTION
In conjunction with several other academic institutions, the UM ADVANCE Program administered a survey to postdoctoral fellows at the University of Michigan in spring 2011. The survey covered a broad range of issues related to the postdoc experience and career plans. The aims of the study were to better understand the postdoctoral experience at the University of Michigan and to allow comparisons with other participating institutions, with the goal of improving the work environment for postdocs at the University of Michigan.

SAMPLE
The survey was open to all postdocs with active appointments at the University in spring 2011 (N=1406). A total of 806 completed the survey (57% response rate). Of those who reported their gender, 57% identified as male, and 43% identified as female; this is similar to the gender composition of postdoctoral fellows at the University more generally. Of those who identified their race-ethnicity, 52% identified as white, 41% identified as Asian/Asian American, and 8% identified as an underrepresented minority; these rates are similar to those for the entire population of postdocs that received the survey.

Three-quarters (76%) of postdocs reported having a spouse or partner, and of these, 81% are currently living with this person. One-third (34%) of all postdocs reported having children who live with them; a few (5%) indicated that they have children not living with them for whom they have childcare responsibilities. Regardless of whether or not they currently had children, 53% of respondents indicated that they expect to have a child within the next three years.

More than three-quarters of the postdocs were affiliated with the Medical School (40%), the College of Literature, Science, and the Arts (24%), or the College of Engineering (13%); 5% of respondents (each) were affiliated with the School of Public Health and the Life Sciences Institute. Other academic units accounted for the remaining 14% of affiliations. The response rate by academic unit for this survey closely reflects the breakdown of the University postdocs as a whole. However, in terms of proportions, postdocs affiliated with the Medical School were slightly underrepresented in this survey, and postdocs affiliated with the College of Literature, Science, and the Arts were slightly overrepresented.

SUMMARY OF FINDINGS
Following is a summary of the findings across topic areas. We also assessed differences among groups within the UM postdoctoral fellow data. Comparisons by gender, citizenship status, academic unit, and race-ethnicity were made.

History as a Postdoc
- For three-fourths of respondents, the UM appointment is their first postdoctoral position; nearly two-thirds came directly to UM from graduate school.
- On average, respondents had been at UM for 1.60 years.
  - International and Medical School postdocs reported more total years as a postdoc at UM.
- Most (62%) indicated that they were funded on grants awarded to their supervisors; another one-fifth were funded on federal fellowship or training grants.
URM postdocs were more likely to be funded by non-governmental and non-University sources.

- Respondents pursued postdoc positions principally to provide opportunities to publish, conduct independent research, and to increase knowledge in their fields.
- Michigan was selected principally because of opportunities to work with a particular researcher, lab, or department; the prestige of the institution; and its collaborative work environment.

### Career Goals

- Half of postdocs reported that when they first started their current postdoc they were most interested in pursuing a tenure-track faculty position with a focus on research; a similar percentage expected the same to be true when they leave their postdoc position, but slightly fewer saw themselves working at an academic institution in ten years.
  - URM postdocs were less likely to anticipate working in academia in the longer-term future.
  - International postdocs were less likely to anticipate working in academia at any point in the future.
  - Medical School postdocs were more likely to expect to work in a Medical School.
- Nearly one-third indicated that their career goals have changed since coming to the University of Michigan; most often cited reasons for the change included a desire to integrate work and personal life, the difficulty in obtaining a desired position, and concerns about job security.
  - Women were more likely to report that they have changed their career goals (often away from a tenure-track position) and to identify the desire to integrate work and personal life as the reason.
- About half of all postdocs reported that women may be less likely to pursue a tenure-track career because of family demands; one-quarter reported the same for all postdocs with children and/or partners.
- 16% of all postdocs reported that racial-ethnic minority postdocs are less likely to pursue a tenure-track position, due at least in part to feeling undervalued or experiences of bias in academia.

### Job Satisfaction, Stressors, and Transition

- Most reported satisfaction with their current postdoc appointment and would recommend postdoc training in general as well as postdoc training at UM.
- They also reported that their current position was moderately stressful. Most stressful work-related aspects were scholarly productivity, the search for their next position, and the ability to make progress on their own research.
  - Women were more likely to report the following as stressful:
    - Bias, discrimination, and unfairness in procedures,
    - Scholarly productivity,
    - Ability to make progress on their research,
    - Relationship with their supervisor, and
    - Identifying long-term career goals.
  - International postdocs were more likely to identify advising responsibilities as stressful.
  - Medical School postdocs were more likely to identify securing research funds as stressful.
• The most frequently mentioned open-ended response to factors that facilitated their transition to this position was the support of their faculty mentor, lab members, or department.
• Open-ended responses about what the University could have done to facilitate their transition to UM included better access to logistical information, an orientation and/or an orientation packet, and financial assistance.

Workload, Productivity, and Skill Development
• Most postdocs reported that their present postdoc position at UM is preparing them adequately for their current career goals.
  o URM postdocs were less likely than white postdocs to report this; however, they were more likely than white postdocs to report skill enhancements in working in a team, understanding how academia works, selecting research problems, and learning time management.
  o International postdocs were less likely to report skill enhancements in their positions.
• Most indicated that they have a lot of control over their workload; one-third indicated that they have little control over their workload.
  o International and Medical School postdocs reported less control over their workload.
• Nearly two-fifths of all postdocs work 40-49 hours per week, and one-third work 50-59 hours; the remaining work fewer or more hours.
• One-half have submitted 1-3 journal articles for publication, and slightly fewer have had 1-3 articles published or accepted for publication; half reported no publications submitted, and half reported no publications published or accepted.
  o International postdocs reported fewer papers submitted for publication.
• Two-thirds of postdocs reported that they have supervised or directed research activities of undergraduates, graduate students, or technical staff; one-quarter have taught courses or delivered lectures as part of a course.
  o Women were more likely to report that they have supervised research activities of others, and women and Asian American postdocs were more likely to report that their current position has enhanced their skills in supervision and teaching.
  o URM, Medical School, and international postdocs were less likely to have taught courses or delivered lectures as part of a course.
• When asked what UM could do to enhance their career preparation, respondents mentioned better and more training and professional opportunities as well as resources specifically related to career development.

Mentoring, Resources, and Climate
• Nearly all reported that they are supervised by a faculty member; 3% are supervised by a senior researcher who is not faculty.
• Postdocs reported moderate to high levels of satisfaction with both the amount and quality of supervisor contact; they were least likely to agree that they have received advice from their supervisor on career paths outside of academia.
  o Women reported less satisfaction with the amount and quality of contact with their supervisor.
  o International postdocs were less likely to report that their supervisor provides opportunities for them to gain experiences; they were also less likely to rely on senior colleagues outside of UM, and more likely to seek out career counselors, for career development advice.
• Half of the postdocs have received some form of performance evaluation.
  o International postdocs were less likely to have received either a formal or informal evaluation.
  o Medical School postdocs were more likely to have received a written or oral evaluation.
  o White postdocs were more likely than all other postdocs to have initiated a performance evaluation.

• Generally, postdocs reported a positive climate.

• However, one-quarter indicated that they feel excluded from their lab’s or department’s informal network and that they have to work harder than others to be perceived as a legitimate scholar.
  o International postdocs were more likely and Medical School postdocs were less likely to report the latter.
  o Women were less likely to report fair and equitable procedures in their units.

• In addition, a few postdocs reported that they have been harassed or have been subject to inappropriate or disrespectful language at UM.
  o International postdocs were more likely to report both.
  o Women were more likely to report the latter.

• Postdocs suggested that UM could enhance the community for postdocs by improving mentoring and decreasing workload, encouraging more inclusion of international postdocs in events, and by integrating postdocs’ family members into the larger postdoc community.

Resources and Work-Life Balance

• The majority of postdocs were not at all aware of the newly revised University personnel policy that applies to postdocs; two-thirds were unaware of grievance and/or mediation procedures at UM.
  o Medical School postdocs were more likely to be aware of these policies.
  o International postdocs expressed less confidence that problems would be resolved fairly if they did seek help.

• Most stressful aspects of their lives outside of their postdoc position were balancing work and family responsibilities and the partner’s situation.
  o Women were more likely to report stress related to household responsibilities and childcare and were less satisfied with their ability to integrate demands of work and home life.
  o International postdocs reported more stress associated with balancing work and family responsibilities as well as issues related to immigration matters.
  o Medical School postdocs reported more stress related to cost of living and immigration matters.

• Most postdocs agreed that their supervisor understands when demands at home impact their professional responsibilities.
  o Medical School postdocs were less likely to agree that their work schedules provide flexibility to address demands at home.

• However, one-third indicated that their demands at home limit their professional activities.

• Only one-quarter knew about the policies for time off related to childbirth or adoption; a few indicated that they had taken time off for childbirth/adoption, and an identical percentage reported that they were not able to take this time off.
  o Medical School postdocs were more likely to be aware of childbirth/adoption policies.