

The Postdoctoral Community at Oregon State University

January, 2013

This report provides a snapshot of the postdoctoral community at OSU as of January 2013. There are six types of non-professorial appointments at OSU that require PhD's or similar advanced degrees. Three of these – Research Associate (postdoc), Postdoctoral Scholar, and Postdoctoral Fellow – fit the general description of “postdoc” (following recommendations established by the American Association of Universities, Committee on Postdoctoral Education, in 1998): temporary, non-clinical research appointments held by recent PhDs. This report focuses on these three postdoctoral appointments but some information about Research Associates, Clinical Fellows and Visiting Postdoctoral Scientists is also included to provide perspectives on similarities and differences in the broader community. Brief descriptions of these appointments are provided in Table 1.

Size of the population and change since last year. Since January, 2012 the overall community of postdocs and research associates increased by about 2% (Table 2). However, within this relatively stable overall population there were significant changes within specific appointment types. For example, the number of Postdoctoral Scholars increased by over 25%, and as the number of Postdoctoral Scholars has increased, there has been a concurrent large decrease in the number of Research Associate (postdocs) and also a slight decrease in the number of regular Research Associates. Most other research-intensive universities in the United States are experiencing a similar large increase in postdoctoral appointments like OSU's “Postdoctoral Scholar” appointment. At OSU and many other places, postdoctoral scholars are considered interns rather than regular employees and the position is explicitly aimed at professional development. They receive health benefits but not retirement benefits. Thus, the position can be more attractive to the postdoctoral scholar because of the emphasis on professional development and potential for a higher take-home salary (they would not become vested in the retirement system during the internship in any event).

Postdocs and Research Associates are distributed among many departments at OSU (Table 3). The Department of Chemistry has the largest number of Postdoctoral Scholars, and there are also relatively large numbers in Botany and Plant Pathology; Fisheries and Wildlife; Environmental and Molecular Toxicology; Electrical Engineering & Computer Science; Earth, Ocean & Atmospheric Science; Microbiology; Physics and Zoology. The College of Earth, Ocean and Atmospheric Sciences has the largest number of Research Associate (postdocs), in part due to a proactive program at the College level to recruit these employees. Relatively large numbers of Research Associate (postdocs) are also employed in Botany & Plant Pathology and Forest Ecosystems & Society.

Gender, Race and Ethnicity. Averaged over the entire current community of postdocs and research associates, men slightly outnumber women (56% to 44%). This is roughly similar to the gender distribution in the undergraduate population. However, the gender distributions vary greatly among the appointment types (Table 4). Nearly 2/3 of the Clinical Fellows and Postdoctoral Fellows are female, whereas males outnumber females by nearly the same

proportion among postdoctoral scholars. There is a more balanced gender distribution among Research Associate (postdocs) and Research Associates.

Ethnic and racial information is available for only about 60% of the postdoctoral community. Given the fairly small size of the populations of each subgroup in the first place, and the fact that there is likely to be “bias” among those who choose not to report this information, great caution should be exercised in interpreting the summary information provided here (Table 5). Given these caveats, at least 2/3 of the people in each of the job categories are white/non-hispanic. Asians are the second largest group, especially among the postdoctoral scholars, where they account for nearly 30% of the population.

Foreign nationals constitute a significant proportion – 38% -- of the population of Postdoctoral Scholars and Research Associate (postdocs). A smaller but also important proportion of Research Associates (11%) are international. Of these international scholars:

- 24% are from China
- 15% are from India
- 71% are male
- 40% have **H-1B** status
- 46% have **J-1** status

Rates of compensation. The full-time annual compensation rate as of January 2013 was lower for Clinical Fellow than for the other types of appointments; average compensations for Postdoctoral Scholars were greater, higher still for Research Associate (postdocs), and highest for Research Associates (Table 6). Except for Clinical Fellows the differences in compensation can largely be explained by differences in the total time served in the appointment (Figure 1). Interestingly, the overall trend in annual compensation vs. years in position is positive for Research Associates, whereas trends are negative for the other types of appointments. For Postdoctoral Scholars and Research Associate (postdocs), at least, this suggests salary compression: i.e., compensation rates for postdocs hired a couple of years ago are not increasing commensurately with the rates offered to newly-hired postdocs. For Clinical Fellows, the number of individuals and lengths of appointment are too small to apply any meaning to the apparent trend.

Among Clinical Fellows, compensation rates are somewhat greater for women than men; the situation is reversed for Postdoctoral Scholars and Research Associate (postdocs) although the differences are too small to be considered significant (Table 7). Among Research Associates, however, the salary differential is significantly skewed in the favor of men.

When Oregon State University established the Postdoctoral Scholar position in 2009, expectations for minimum levels of compensation were established. These minimum levels are tied to the Kirschstein-National Research Service Awards set by the National Institutes of Health. For 2012 the minimum Kirschstein-NRSA stipend for an entry-level postdoc was \$39,264, and the levels increase with years of service (Table 8). At least three dozen postdoctoral scholars at OSU are currently paid less than the entry-level minimum set by NIH, and some of these people have been in their positions for two years. Four departments are systematically paying Postdoctoral Scholars at particularly low levels (Table 9).

Given the overall small sample size and the lack of information about race and ethnicity for many postdocs and research associates, an attempt to compare compensation levels by job category and ethnicity is likely to be unreliable. However, there does appear to be an indication that the annual compensation for Asians is less than for all other racial/ethnic groups. This difference is greatest among Research Associate (postdocs); the average annual salary for Asians is \$3,600 less per year compared with white/non-hispanics. For postdoctoral scholars the difference in annual stipends between these groups is \$1,888 and for Research Associates the difference is \$2,780.

DATA TABLES

Table 1. Brief Descriptions of Appointment types. All are “non-professorial” appointments requiring a PhD or similar advanced degree

Clinical Fellow: Typically funded by an agency or clinic. Short-term appointments (typically two to three years maximum) for advanced clinical training in counseling, pharmacy, veterinary medicine, etc. Most Clinical Fellows have earned their terminal professional degree within less than five years, but any restrictions limiting these appointments to recent graduates are set by the funding organization, not OSU. Health insurance required and provided by OSU for but paid by the Fellow or funding agency; family insurance available but must be paid by fellow. No retirement benefits.

Postdoctoral Fellows: Funded independently, typically by a federal agency. Short-term research appointments (typically two to three years maximum) under supervision of an OSU faculty member. Most Postdoc Fellows have earned PhDs within less than five years, but any restrictions limiting these appointments to recent graduates are set by the funding agency, not OSU. Health insurance required and provided by OSU for but paid by the Fellow or funding agency; family insurance available but must be paid by fellow. No retirement benefits.

Postdoctoral Scholars: Trainees who are typically funded by grants to OSU faculty and paid a monthly stipend (not a salary) through OSU Payroll. OSU policy stipulates that these are short-term research/trainee appointments limited to a maximum of three years and individuals must have earned a PhD within less than five years. The position combines professional development and research training. Health insurance similar to insurance provided to graduate students paid from the grant that pays the stipend. No retirement benefits.

Research Associates: Fixed-term employees who are typically funded by grants to OSU faculty to support research and paid a monthly salary with benefits the same as all other non-classified employees at OSU. No expectations for professional development. No time limits on years since PhD or years in the position.

Research Associate (postdocs): Exactly the same as the Research Associate position from the University’s perspective, although some colleges have internal policies and expectations for term limits and a recently-earned PhD.

Courtesy Postdoctoral Scientists: Similar to Postdoctoral Fellows except that these are typically international scientists who are funded by their governments or an international agency to do a postdoctoral internship at OSU. These are typically early-career scientists who spend two to three years in their positions and then return to their host countries.

Table 2. The postdoc and research associate populations at OSU and change since last year

	Number		% change
	Jan-12	Jan-13	
Clinical Fellows	12	13	8%
Postdoctoral Fellows	9	10	11%
Postdoctoral Scholars	83	104	25%
Research Associate (postdoc)	92	73	-21%
Research Associate Courtesy Postdocs	76	73	-4%
total	289	295	2%

Table 3. Distribution of postdocs and research associates among departments (Courtesy appointments not included)

	Clinical Fellows	Postdoctoral Fellows	Postdoctoral Scholars	Research	
				Associate (postdoc)	Research Associate
ABE - Biol & Ecol Engineering	0	0	0	3	1
ABP - Ag Botany / Plant Path	0	1	8	8	9
AGD - Agric and Resource Econ	0	0	1	0	2
AGD - Crop and Soil Science	0	0	1	2	5
AGD - Fisheries and Wildlife	0	0	6	1	1
AGD - Food Science and Techno	0	0	0	1	0
AGD - Horticulture	0	0	0	2	2
AGS - Columbia Basin Exp Sta	0	0	0	0	1
AGS - COMES - Newport Exp Sta	0	0	1	2	0
AGS - Hermiston Exp Sta	0	0	3	1	0
AGS - Mid-Columbia Exp Sta	0	0	1	1	0
AIP - Integrtd Plant Prot (Ag)	0	0	0	0	0
AMB - Microbiology (Ag)	0	0	2	0	2
AST - Statistics (Ag)	0	0	0	0	1
ATX - Enviro / Molecular Toxic	0	0	7	1	3
BUS - College of Business Dept	0	0	0	1	1
CLA - History Department	0	0	0	0	0
ECB - Sch of Chem/Bio/Envr Eng	0	0	0	0	2
ECC - Sch of Civil/Constr Engr	0	0	0	1	1

EMM - Sch of Mech/Ind/Mfg Engr	0	0	2	0	3
ESE - Sch Elect Engr/Comp Sci	0	1	6	0	0
FOR - Forest Ecosyst & Society	0	0	2	11	5
FOR - Forest Eng/Resources/Mgmt	0	0	4	2	2
FOR - Wood Science / Engr	0	0	0	1	0
HHS - Sch of Bio/Pop Hlth Sci	0	0	1	2	1
HHS - Sch of Soc/Bhav Hlth Sci	0	0	1	1	1
KED - College of Education	0	0	1	0	1
LCB - Acad Prog / Student Aff	0	0	0	0	0
MSA - Counseling Center	4	0	0	0	0
OAS - Earth, Ocean & Atmo Sci	0	1	8	17	13
PHR - Pharmacy Professnl Instr	2	0	3	0	2
RDR - CIMRS (Inst/Marine Res)	0	0	0	3	1
RDR - Environ Health Sci Ctr	0	6	0	0	0
RDR - Linus Pauling Institute	0	0	5	3	5
RNR - Institute Natrl Res Dir	0	0	1	0	2
RNR - Or Natrl Heritage InfCtr	0	0	0	0	2
RSG - Sea Grant	0	0	0	0	0
SBB - Biochem / Biophysics	0	0	2	1	1
SBP - Botany and Plant Path	0	0	1	0	0
SCH - Chemistry	0	0	14	3	2
SMB - Microbiology (Science)	0	0	6	1	0
SMT - Mathematics	0	0	3	1	0
SPH - Physics	0	0	5	0	0
SST - Statistics (Science)	0	0	0	0	0
SZO - Zoology	0	1	5	1	1
VBS - Vet Biomedical Science	1	0	4	2	0
VCS - Vet Clinical Sciences	4	0	0	0	0
VTH - Vet Teaching Hospital	2	0	0	0	0
total	13	10	104	73	73

Table 4. Gender distributions among departments

	male		female	
Clinical Fellows	5	38.5%	8	61.5%
Postdoctoral Fellows	3	30.0%	7	70.0%
Postdoctoral Scholars	64	61.5%	40	38.5%
Research Associate (postdoc)	40	54.8%	33	45.2%
Research Associate	35	47.9%	38	52.1%
Courtesy Postdocs	17	77.3%	5	22.7%

Table 5. Ethnicity (note that this information was not available for almost 40% of the overall group, so these calculations should be interpreted cautiously)

	N	Hispanic or Latino	White/ Euro- American/ non-hispanic	Black/ African American	Asian	Middle Eastern
Clinical Fellows	9	0.0%	66.7%	0.0%	22.2%	11.1%
Postdoctoral Fellows	4	0.0%	100.0%	0.0%	0.0%	0.0%
Postdoctoral Scholars	58	0.0%	67.2%	1.7%	31.0%	0.0%
Research Associate (postdoc)	11	8.9%	68.9%	2.2%	17.8%	2.2%
Research Associate	7	0.0%	77.6%	0.0%	22.4%	0.0%
Courtesy Postdocs	4	0.0%	100.0%	0.0%	0.0%	0.0%

Table 6. Mean annual compensation in 2012 and 2013

	Mean annual compensation (+/- stdev)				%change
	Jan-12		Jan-13		
Clinical Fellows	\$31,127	(\$5,853)	\$31,503	(\$4,986)	1%
Postdoctoral Scholars	\$42,140	(\$7,819)	\$44,186	(\$7,455)	5%
Research Associate (postdoc)	\$45,404	(\$5,781)	\$46,860	(\$5,642)	3%
Research Associate	\$55,306	(\$12,522)	\$55,127	(\$11,589)	-0.3%

Table 7. Mean annual compensation in 2013 by gender

	men (+/- standard deviation)		women (+/- standard deviation)		men years	women years
Clinical Fellows	\$30,002	(\$2,741)	\$32,441	(\$5,976)	0.41	0.43
Postdoctoral Fellows						
Postdoctoral Scholars	\$44,491	(\$7,056)	\$43,698	(\$8,120)	0.97	0.94
Research Associate (postdoc)	\$47,174	(\$5,774)	\$46,481	(\$5,543)	2.52	2.34
Research Associate	\$58,711	(\$12,939)	\$51,827	(\$9,176)	6.73	5.88

Table 8. Stipends established for 2012 by the National Institutes of Health for postdoc-level Kirschstein-National Research Service awards

Years of Experience	Stipend for FY 2012
0	\$39,264
1	\$41,364
2	\$44,340
3	\$46,092
4	\$47,820
5	\$49,884
6	\$51,582
7 or More	\$54,180

Table 9. Mean postdoctoral scholar stipends by department for departments who have at least three p.d. scholars

	average salary	N
ABP - Ag Botany / Plant Path	\$43,102.50	8
AGD - Fisheries and Wildlife	\$48,762.00	6
AGS - Exp Stations	\$42,693.00	4
ATX - Enviro / Molecular Toxic	\$40,662.86	7
ESE - Sch Elect Engr/Comp Sci	\$51,836.00	6
FOR - Forest		
Eng/Resources/Mgmt	\$47,922.00	4
OAS - Earth, Ocean & Atmo		
Sci	\$48,913.50	8
PHR - Pharmacy Professnl		
Instr	\$37,068.00	3
RDR - Linus Pauling Institute	\$43,946.40	5
SCH - Chemistry	\$37,638.00	14
SMB - Microbiology (Science)	\$49,170.00	6
SMT - Mathematics	\$46,000.00	3
SPH - Physics	\$39,684.00	5
SZO - Zoology	\$40,200.00	5
VBS - Vet Biomedical Science	\$38,004.00	4
	mean	
	stipend	N

FIGURES

