

Online Resource 1. K mechanism descriptions.

Mechanism	Objectives	Research Discipline	Support Years	Qualifying Degrees	Career Stage
K01	Bridged the transition from mentored research environment to an independent research career in cancer research	Basic sciences	Up to 5 years	Research or health professional doctoral degree	Early career
K07	Provides support for early career investigators to conduct research in cancer prevention, control, behavioral and population sciences research	Cancer prevention, control, behavioral and population sciences	Up to 5 years	Research or health professional doctoral degree	Postdoctoral fellows, non-tenured early career stage faculty
K08	Supports individuals with a clinical doctoral degree to receive mentored training in laboratory-based cancer research	Basic sciences, translational research	Up to 5 years	MD or equivalent, PhD in clinical discipline	Postdoctoral and clinical fellows, non-tenured early career faculty with a clinical degree
K11	Provided basic, clinical, or behavioral research training to MDs; Phase I provided didactic study and laboratory experiences while Phase II allowed recipients to pursue an intensive cancer research project	Basic, behavioral, or clinical research	Phase I, 2-3 years; Phase II, 2-3 years	MD or equivalent	Early career
K22	Provides “protected time” for newly independent investigators to develop and receive support for their initial cancer research programs	All cancer research*	Up to 3 years	Research or health professional doctoral degree	Postdoctoral and clinical fellows

Mechanism	Objectives	Research Discipline	Support Years	Qualifying Degrees	Career Stage
K23	Supports the career development of clinical professionals to conduct mentored patient-oriented cancer research projects	Clinical science, patient-oriented research	Up to 5 years	MD or equivalent, PhD with clinical certification	Non-tenured early career faculty with a clinical degree
K25	Supports the career development of investigators with backgrounds in quantitative and engineering sciences to focus on behavioral and biomedical cancer research	All cancer research	Up to 5 years	Advanced degree in quantitative science or engineering	Postdoctoral to senior faculty quantitative scientists

Online Resource 2. Approximate as-of dates for data sources.

Data Source	Approximate Data As-Of Date
IMPAC II	4/28/2011
DRF	Maximum PhD year is 2006
AAMC Faculty Roster	4/1/2010
ClinicalTrials.gov	7/6/2011
Thomson Reuters ScienceWire - DoE	10/28/2010
Thomson Reuters ScienceWire - NSF	3/15/2011
MEDLINE	5/13/2011
HealthLink/Lodestone	4/11/2011
International Cancer Research Partnership*	3/15/2011
FASEB*	10/7/2010
AACR*	2/14/2011
ASCO*	3/21/2011
NIH-NED	8/5/2008 [^]
FIDO.gov	4/11/2011 [#]

*Indicates the date data were received by Discovery Logic/Thomson Reuters. K applicants who were currently registered members of FASEB, AACR, or ASCO were included in the match.

[^]Data downloaded for full cohort in feasibility study.

[#]Data download date; FIDO site listed data present through 2008.

Online Resource 3. Publication matching rules.

1. Match publications for which there was an exact match of the MEDLINE author email address and the IMPAC II PI email address, and a moderate-strength “fuzzy” name match between the MEDLINE author name and the IMPAC II PI name. “Fuzzy” matching accommodates for misspellings and other variations.
2. Match publications for which there was an exact match of the MEDLINE author email address and the IMPAC II PI email address, and a name match between any of the other MEDLINE author names and the IMPAC II PI name.
3. Match publications for which there was an exact match of the Web of Science author email address (for MEDLINE publications that have been matched to Web of Science) and the IMPAC II PI email address, and a moderate-strength fuzzy name match between the MEDLINE author and the IMPAC II PI name.
4. Using the set of matches found using the first three rules and also publications found by funding acknowledgment (which are omitted from the overall match set if not also matched through one rules 1 – 3 to reduce a potential recall bias favoring awardees), find additional publications for which the MEDLINE author names have high name-frequency-corrected overlap and a fuzzy name match between the MEDLINE author name and the IMPAC II PI name.

Online Resource 4. Demographic composition of the full and comparison cohorts.

Parameter	Category	Full Cohort - Applicants (n = 2,893)	% Full Cohort	Comparison Cohort – Applicants (n = 586)	% Comparison Cohort
Primary K Mechanism	K01	479	16.1%	100	17.1%
	K07	562	18.8%	82	14.0%
	K08	1,176	39.4%	284	48.5%
	K11	166	5.6%	20	3.4%
	K22	200	6.7%	42	7.2%
	K23	254	8.5%	50	8.5%
	K25	56	1.9%	8	1.4%
Degree Type ^s	PhD	869	29.1%	160	27.3%
	MD	1,209	40.5%	245	41.8%
	MD/PhD	613	20.5%	157	26.8%
	Dual	43	1.4%	6	1.0%
	Other	40	1.3%	9	1.5%
	Note	4	0.1%	0	0.0%
	Unknown	115	3.9%	9	1.5%
Gender	Male	1,664	57.5%	365	62.3%
	Female	1,055	36.5%	204	34.8%
	Unknown	174	6.0%	17	2.9%
Race/Ethnicity	White	1,519	52.5%	313	53.4%
	Hispanic	49	1.7%	13	2.2%
	Black	42	1.5%	10	1.7%
	Asian	450	15.6%	97	16.6%
	Native American	*	*	*	*
	Other	6	0.2%	4	0.7%
	Unknown	826	28.6%	149	25.4%
Prior Support	Had T Support	1,020	35.3%	247	42.2%
	Had Only T Support	806	27.9%	189	32.3%
	Had F Support	217	7.5%	47	8.0%
	Had Only F Support	112	3.9%	21	3.6%
	Had L Support	144	5.0%	30	5.1%
	Had Only L Support	53	1.8%	7	1.2%
	Had RPG Support	128	4.4%	25	4.3%
	Had Only RPG Support	70	2.4%	11	1.9%
	Had Multiple T, F, or L Support	165	5.7%	41	7.0%
	Had Multiple Support, including RPG	50	1.7%	12	2.0%

Parameter	Category	Full Cohort - Applicants (n = 2,893)	% Full Cohort	Comparison Cohort – Applicants (n = 586)	% Comparison Cohort
	Had Only Other Support	33	1.1%	8	1.4%
	No Prior Support	1,573	54.4%	286	48.8%
Institution Type (by applications) [†]	NCI-Designated Comprehensive Cancer Center	2,539	47.6%	343	48.4%
	NCI-Designated Cancer Center	1,231	23.1%	165	23.3%
	Not an NCI-Designated Cancer Center	1,560	29.3%	200	28.2%
Average Age at Application [#]		37	N/A	37	N/A
Average Years Since Degree [^]		7.7	N/A	7.9	N/A

[§]Dual degree refers to those holding a PhD or MD and an Other degree (e.g., DVM, DDS). Note degree is one not sufficient to qualify as a K applicant (e.g., BS, MS).

*Indicates data have been suppressed due to a low number of applicants.

[†]Institution type data are for applications rather than individual applicants (n = 5,330 for full cohort; n = 708 for comparison cohort).

[#]Full cohort had age information available for 2,627 applicants; comparison cohort had age information for 551 applicants.

[^]Full cohort had years since degree information available for 2,330 applicants; comparison cohort had years since degree information for 508 applicants.