PARKER B. FRANCIS
FELLOWSHIP PROGRAM

Survey of 2006 PBF Fellows

Conducted in November 2014

We conducted a survey of the fifteen 2006 PBF Fellows who completed their fellowship in June 2009. Sadly, one 2006 PBF Fellow died from cancer. We received 12 completed surveys achieving an 80% response rate (n=12). We were unable to obtain current email addresses for two of the 2006 fellows who are no longer conducting research but collected funding and publication data for these fellows from mentors and public databases (PubMed, NIH Reporter).

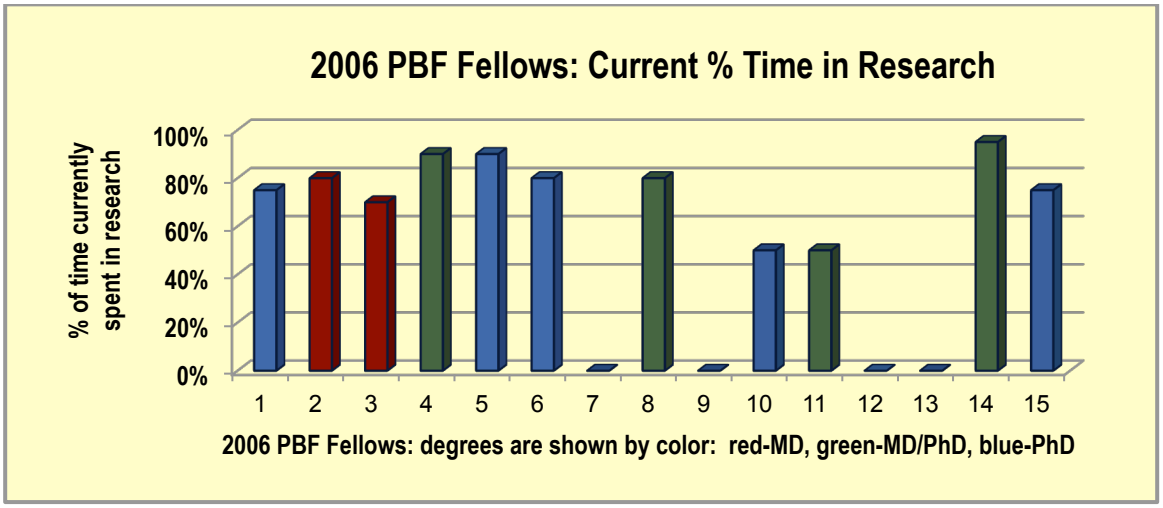
Four of the fifteen 2006 fellows (27%) are no longer pursuing research careers. This was influenced primarily by the current poor research funding environment.

We see achievement with this group, however, with eleven of the fifteen 2006 PBF Fellows (73%) continuing to work in research relevant to lung diseases. Five of the PBF Fellows have been promoted rapidly to Associate Professor: two MD/PhD fellows and three PhD fellows.

Despite the current funding environment, three of the 2006 PBF Fellows have obtained remarkable research support since receiving their PBF Fellowship: one fellow with $17.2M, one with $11.2M and a third with $3.9M.

We also see very strong publication records in this group; seven have more than two publications per year; one has 7.1/year, one has 5.3/yr and another has 3.5/yr.

The chart below shows the 2006 PBF Fellows by the percent of time currently spent in research; the degrees held are shown by color, red for MDs, green for MD/PhDs, and blue for PhDs.



For comparison with the 2006 PBF Fellows, Table 1 below shows the five-year post-PBF Fellowship retention rates in academic research for the 2003-2005 PBF Fellows and the overall retention rate for the1976-2006 PBF Fellows who responded to our 2009 survey. The 2003 and 2004 PBF Fellows reported a high degree of retention in academic research (100% and 93% respectively). The lower retention rates for the 2005 and 2006 fellows may be a reflection of the current poor research funding environment.

TABLE 1: Retention rates in academic research for PBF Fellows
Shown are five-year retention rates for 2003-2006 fellows and overall retention rate for 1976-2006 fellows

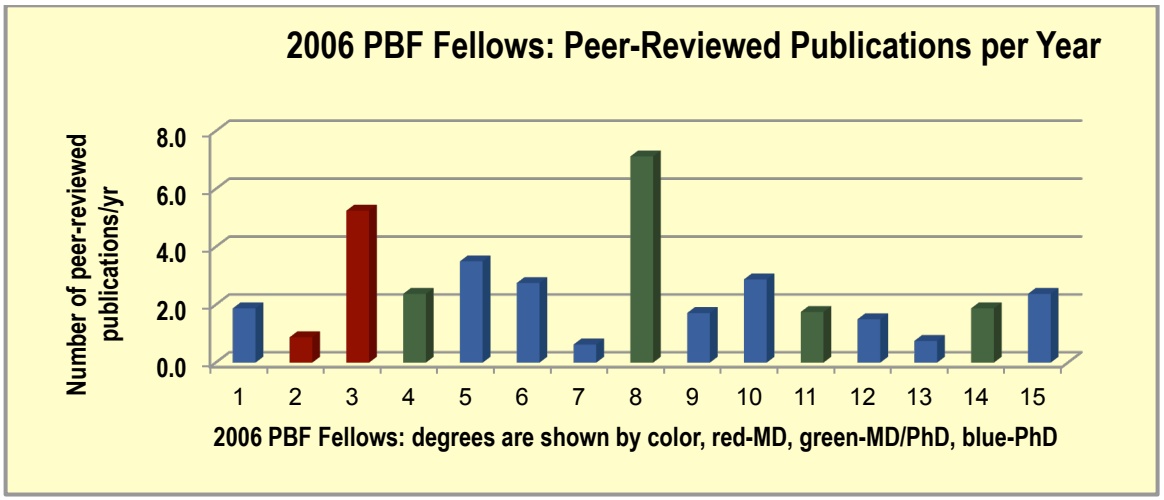
Survey Group	n	Past PBF Fellows still in academic research	no research effort	1–49% effort	50-74% effort	≥ 75% effort
1976-2006 Fellows	365	83% (n=303)	17% (n=62)	27% (n=100)	23% n=84)	33% (n=119)
Class of 2003	12	100% (n=12)	0	17% (n=2)	33% (n=4)	50% (n=6)
Class of 2004	15	100% (n=15)	0	13% (n=2)	47% (n=7)	40% (n=6)
Class of 2005	17	76% (n=13)	23.5% (n=4)	6% (n=1)	47% (n=8)	23.5% (n=4)
Class of 2006	15	73% (n=11)	27% (n=4)	0	20% (n=3)	53% (n=8)

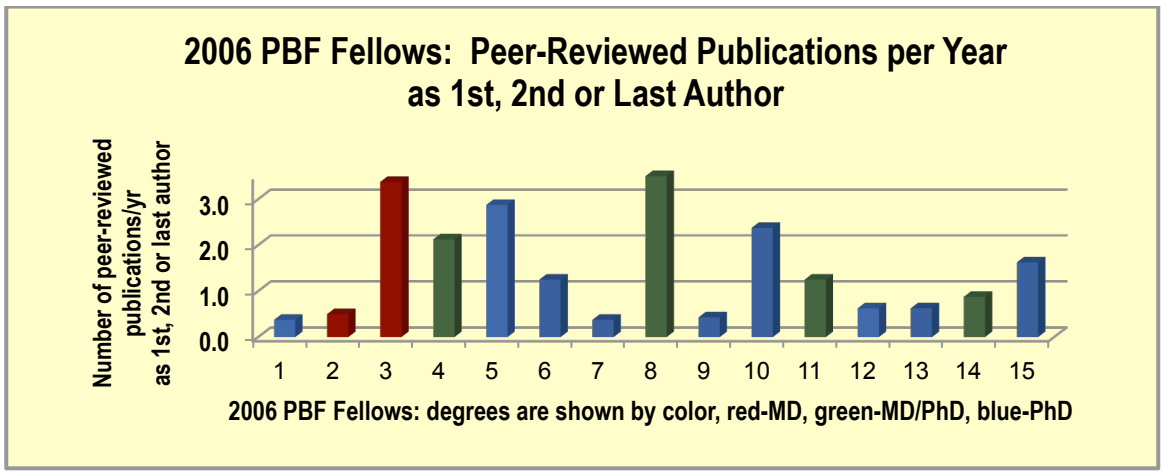
With respect to publication productivity, the overall productivity has been high with 296 peer-reviewed publications in the eight years since the beginning of their PBF Fellowship. Thirty-three percent (5 of 15) of the 2006 PBF Fellows have publication productivity higher than the averages found in our 2009 survey of 365 PBF Fellows from years 1976-2006. The publication productivity of the 2006 PBF Fellows is helped by the exceptionally high publication productivity of two of the fellows (one with 7.1 publications per year and one with 5.4 publications per year).

TABLE 2
Peer-Reviewed Publications per Year

Survey Group	n	Average Pubs/Yr	Average Pubs/Yr as 1st, 2nd, or last author
PBF Fellows, years 1976-2006	365	2.7	1.8
PBF Fellows, class of 2003	12	1.7	1.3
PBF Fellows, class of 2004	15	3.9	2.1
PBF Fellows, class of 2005	17	2.1	1.3
PBF Fellows, class of 2006	15	2.5	1.6

The two charts below show the number of peer-reviewed publications per year and the number of peer-reviewed publications per year in which the fellow is either 1st, 2nd or last (senior) author.





A number of the reported publications appear in high-impact scientific journals (see Table 3 below). A scientific journal's impact factor is a measure reflecting the average number of citations to recent articles. It is frequently used as a proxy for the relative importance of a journal within its field, with journals with higher impact factors deemed to be more important than those with lower ones.

TABLE 3:
2006 PBF Fellows: Peer-reviewed publications in high-impact journals since PBF Fellowship

Journal	Impact Factor	# of Publications
Nature	42.35	3
Journal of the American Medical Association	30.00	1
Journal of Clinical Investigation	13.77	1
American Journal of Respiratory & Critical Care Medicine	11.99	16
Proceedings of the National Academy of Sciences	9.81	3
Journal of Immunology	5.36	10
American Journal of Respiratory Cellular & Molecular Biology	4.11	14
Am Journal of Physiology: Lung Cellular & Molecular Physiology	4.04	19

The fifteen 2006 PBF Fellows have received $40.7M direct research dollars in the eight years since their PBF Fellowship award. The cost of supporting this group of fellows was $2.07M, yielding a multiplier (ROI) of 19.7M. The chart below and Tables 4 and 5 (on pages 5 and 6) show data on direct research dollars received in the eight years following the PBF Fellowship start date.

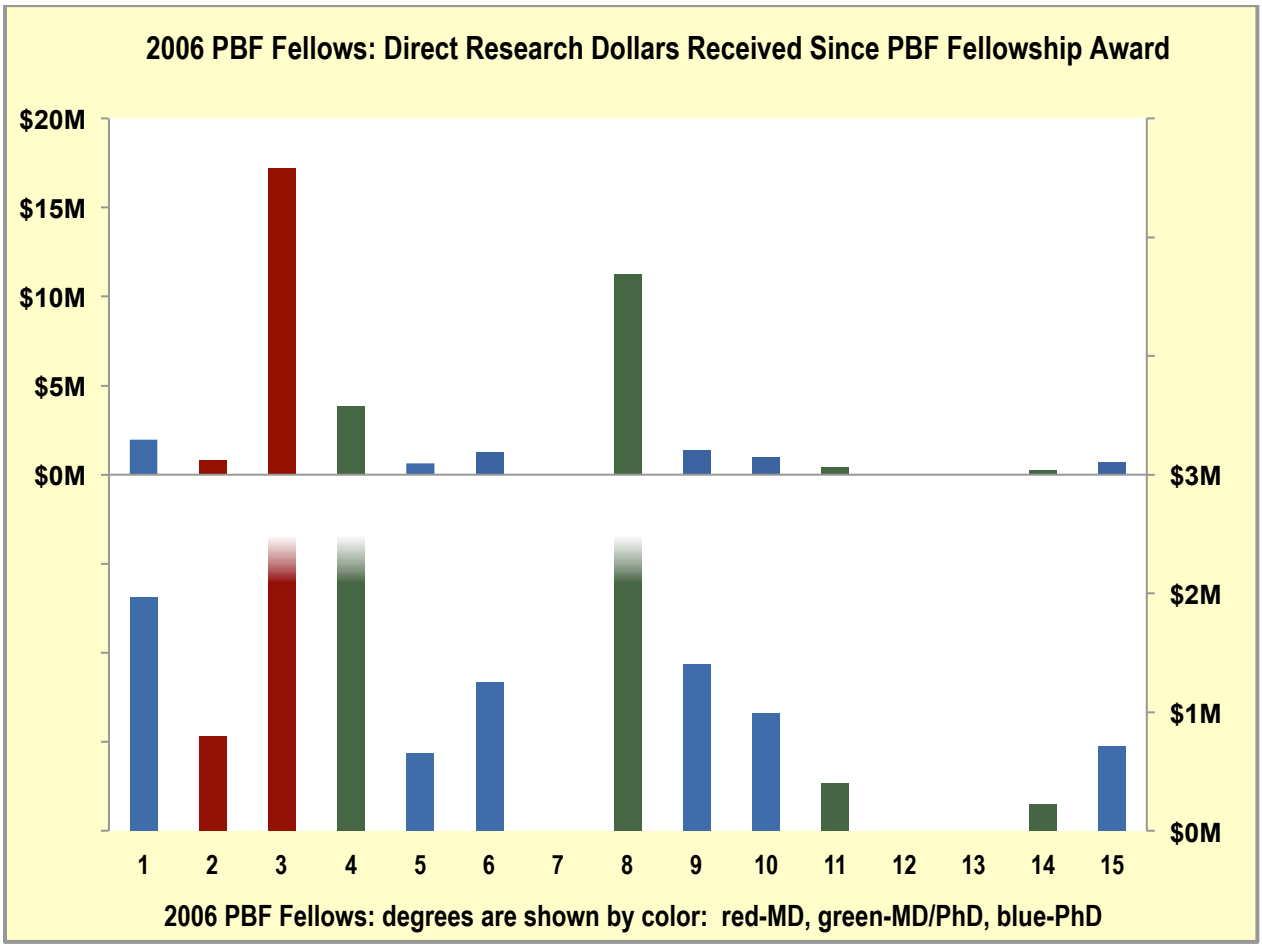


TABLE 4
Direct research dollars received during 8-year period following PBF Award start date

Survey Group	n	PBF Funding for Fellows Group	Total research dollars rec'd by survey group since PBF Fellowship	ROI
PBF Fellows, class of 2003	12	$1.73M	$20.78M	14.5
PBF Fellows, class of 2004	15	$1.86M	$27.83M	14.7
PBF Fellows, class of 2005	17	$2.24M	$24.67M	11.0
PBF Fellows, class of 2006	15	$2.07M	$40.7M	19.7*

*** ROI reflects the extraordinarily high research funding received by two 2006 PBF Fellows. ROI for the other 13 fellows is 6.8.**

CONCLUSIONS

Eleven of the fifteen 2006 PBF Fellows continue conducting research relevant to lung diseases in academic environments. Sadly, one PhD fellow died from cancer. The other three 2006 fellows no longer conducting research all hold PhD degrees. Two have left science altogether and one decided to pursue a clinical physician career. Two of the three were influenced to leave research due to the current poor research funding environment; one was primarily motivated by wanting to devote more time to her family.

The 2006 PBF Fellows have been productive, both in terms of publications and grant funding. Six of the 15 fellows have received one or more NIH K or R level awards. The fifteen 2006 awardees have received more $40.7M in direct research funding in the eight years since receiving the PBF Fellowship award. The cost of supporting this group of fellows was $2.07M. In other words, with an ROI of 19.7, this group has already received nearly 20 times the research funding the Francis Family Foundation invested to support their fellowships. It should be noted that this very high ROI is due to the exceptional funding productivity of two of the fellows. The ROI for the other 13 fellows is 6.8, which is lower than the ROIs calculated for the PBF classes of 2003-2005 at eight years post PBF Fellowship (Table 4).