

# Best Practices for the Development of Junior Research Faculty in the PUIs

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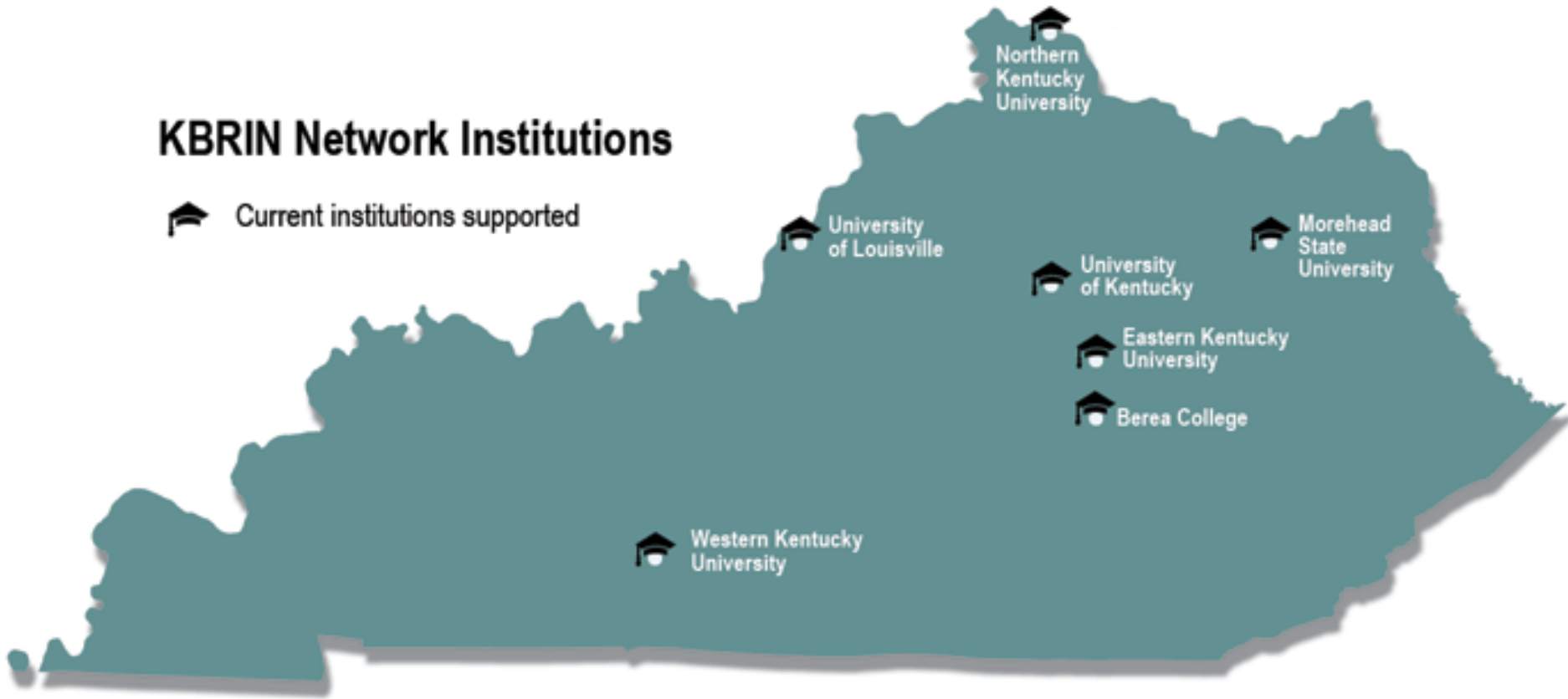
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# THE KENTUCKY-INBRE NETWORK

## KBRIN Network Institutions

 Current institutions supported



There are 4 state-supported PUIs willing to develop competitive research programs on their campuses. These include WKU, NKU, ECU and MSU.

# MOTIVATIONS

- ✓ Increase State's capacity for biomedical research
- ✓ Increase the number of undergraduate students interested in a career in biomedical research.  
[Students need prolonged immersion in research to be able to make career decisions in which research is choice].
- ✓ Provide more undergraduate students with more opportunities for quality research experiences
- ✓ Enhance quality of the pipeline

# DEVELOPMENT OF RESEARCH FACULTY IN THE PUIs

## STRATEGY –

- SC has ultimate responsibility for funding decisions and that committee set the overall tone by establishment of a “METRICS FOR SUCCESS” plan. This plan established standards and clearly enumerated the expectations for prospective investigators if they were to be funded by the INBRE.

## TACTICS –

- In KY, we aligned with the NIH’s R15/AREA grant funding mechanism to build research expertise and to develop competitive research, leading to research independence.
- Potential investigators are selected for local INBRE funding opportunities using a competitive process. This process adopts the federal R15/AREA format and these applications are reviewed and rank-ordered. Feedback to investigators from this process is reportedly helpful for their subsequent applications for federal funding. The local INBRE funding is used to gather pilot data.
- Establish a Mentoring Core with responsibility for development of R15-specific grant writing workshops, evaluations of grant proposals, for site visits, for oversight of investigator progress reports.

# METRICS FOR SUCCESS

- **Minimum 1 publication per year**
- **Attend R15-specific grant writing workshop**
- **1 grant application per year until funded**
- **Provide pink sheets to MC**
- **Involve undergraduate student(s) in a significant manner**
- **Present specific list of activities to EAC**

# IMPROVING THE LANDSCAPE FOR COMPETITIVE RESEARCH

- ❑ Provide access to facilities and cores.
- ❑ Transition from purely service role to a more collaborative role where possible.
- ❑ Call for NGS projects and related workshops
- ❑ Bioinformatics summit and workshops
- ❑ Maintain flexibility to incorporate new ideas

# PROGRAM FUNDING PRIORITIES

- Prospective five-year projects with \$75K per year (dc) awards with mid-term evaluations (without evaluation there may be a tendency to complacency).
- Two-year pilot projects with \$25K per year (dc) awards (how much is sufficient to gather pilot data. We are trying to evaluate this question).
- Postdoctoral or technical level support (full time support in the lab + completes the portfolio of research training from undergraduate –graduate- postdoc - faculty).
- Bridge funding (stuff happens).
- Recruitment aid (recruitment can be a vehicle to improve the research portfolio).

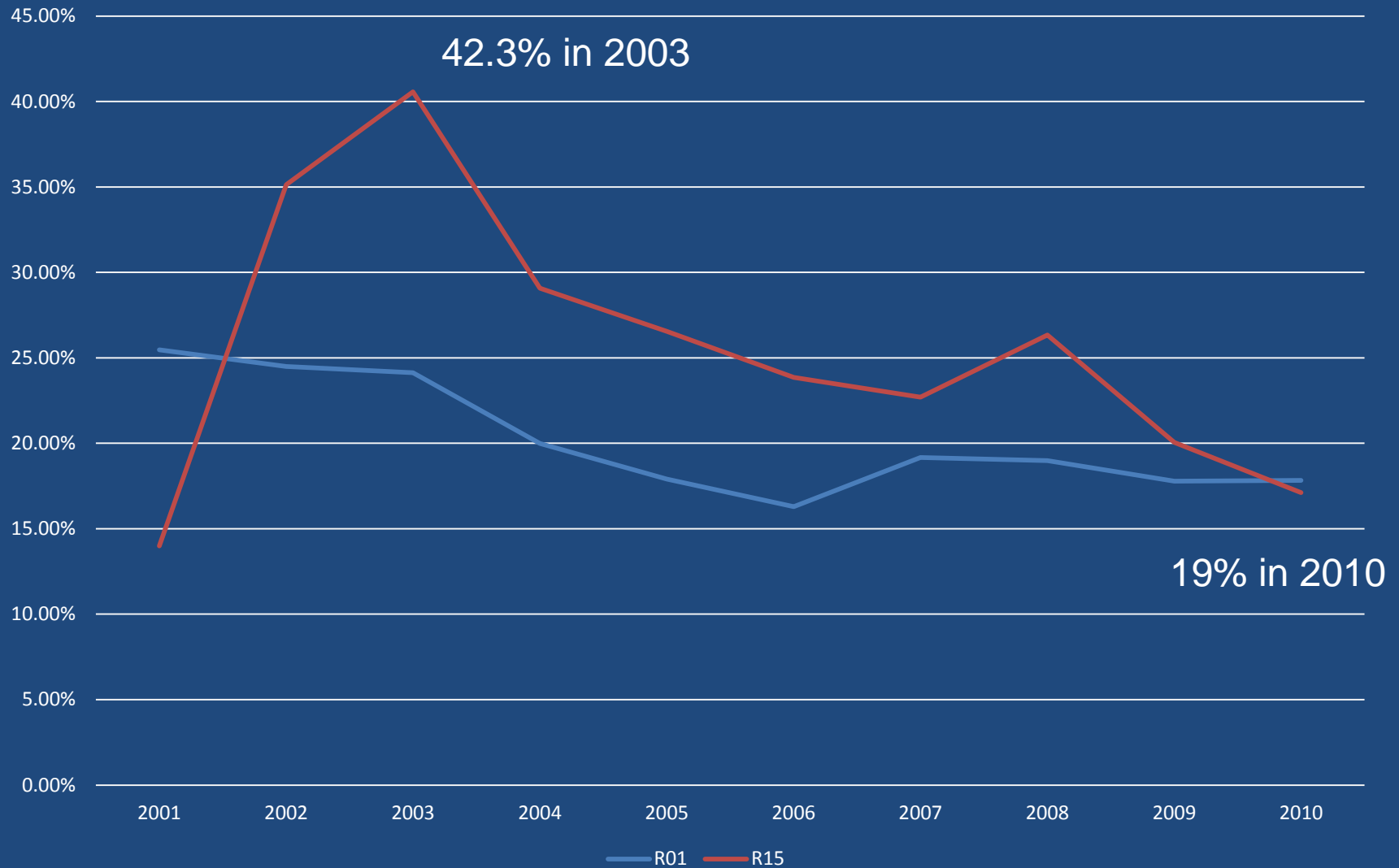
**REALITY CHECK!**

# Total R15 Funding and Success Rates FY 2001 - 2010

FY	Applications	Awards	Success	R15 Total Awards*
2001	523	177	33.8%	\$23,901,165
2002	503	187	37.2%	\$25,279,770
2003	506	214	42.3%	\$30,466,704
2004	619	193	31.2%	\$37,633,031
2005	662	197	29.8%	\$39,740,776
2006	725	184	25.4%	\$37,938,780
2007	862	216	25.1%	\$45,228,704
2008	759	213	28.1%	\$44,395,633
2009	805	178	22.1%	\$37,299,776
2010	992	185	19%	\$52,352,418

\*Caveats - Total Awards column is confounded in later years due to ARRA stimulus funding and the very recent doubling of the R15 award budget from \$150K-\$300K.

## NIH funding success rates show that the R15/AREA Awards are becoming increasingly competitive



**28 Kentucky NIH R15 Awards  
BRIN-INBRE YEARS 2002 - 2011**

<b>Faculty</b>	<b>Institution</b>	<b>Year</b>
Wesley White *	MSU	2002-06
Patrick Schultheis *	NKU	2002-05
Ilsun White	MSU	2003-07
Stephen Asmus	CEN	2004-07
Sterling Wright	MUR	2004-08
Brian Cusato	CEN	2006-09
Rodney King	WKU	2007-11
Nancy Rice	WKU	2007-11
Patrick Schultheis *	NKU	2007-10
Mark Bardgett *	NKU	2007-11
Wesley White *	MSU	2007-11
Sigrid Jacobshagen	WKU	2007-11
Kevin Williams	WKU	2007-10
Hazel Barton	NKU	2008-11
Doug Dennis *	MSU	2008-11
Stephen Asmus	CEN	2009-12
Stefan Paula	NKU	2009-12
Eimear Mullin	NKU	2009-12
Janelle Hare	MSU	2009-12
Doug Dennis *	MSU	2009-11
Alexey Arkov	MUR	2009-12
Cecile Marczinski	NKU	2010-13
Patrick Schultheis *	NKU	2010-13
Kristi Haik/H. Bullen	NKU	2011-14
Mark Bardgett *	NKU	2011-14
Rebekah Waikel **	EKU	2011-14
Tanea Reed **	EKU	2011-14
Wesley White *	MSU	2011-14

**Evaluation**

42 awards including all universities

28 awards excluding the major research institutions

\*multiple R15 hits

\*\* first ever R15 hits at ECU

# FIRST EVER R15/AREA SUCCESSES AT ECU



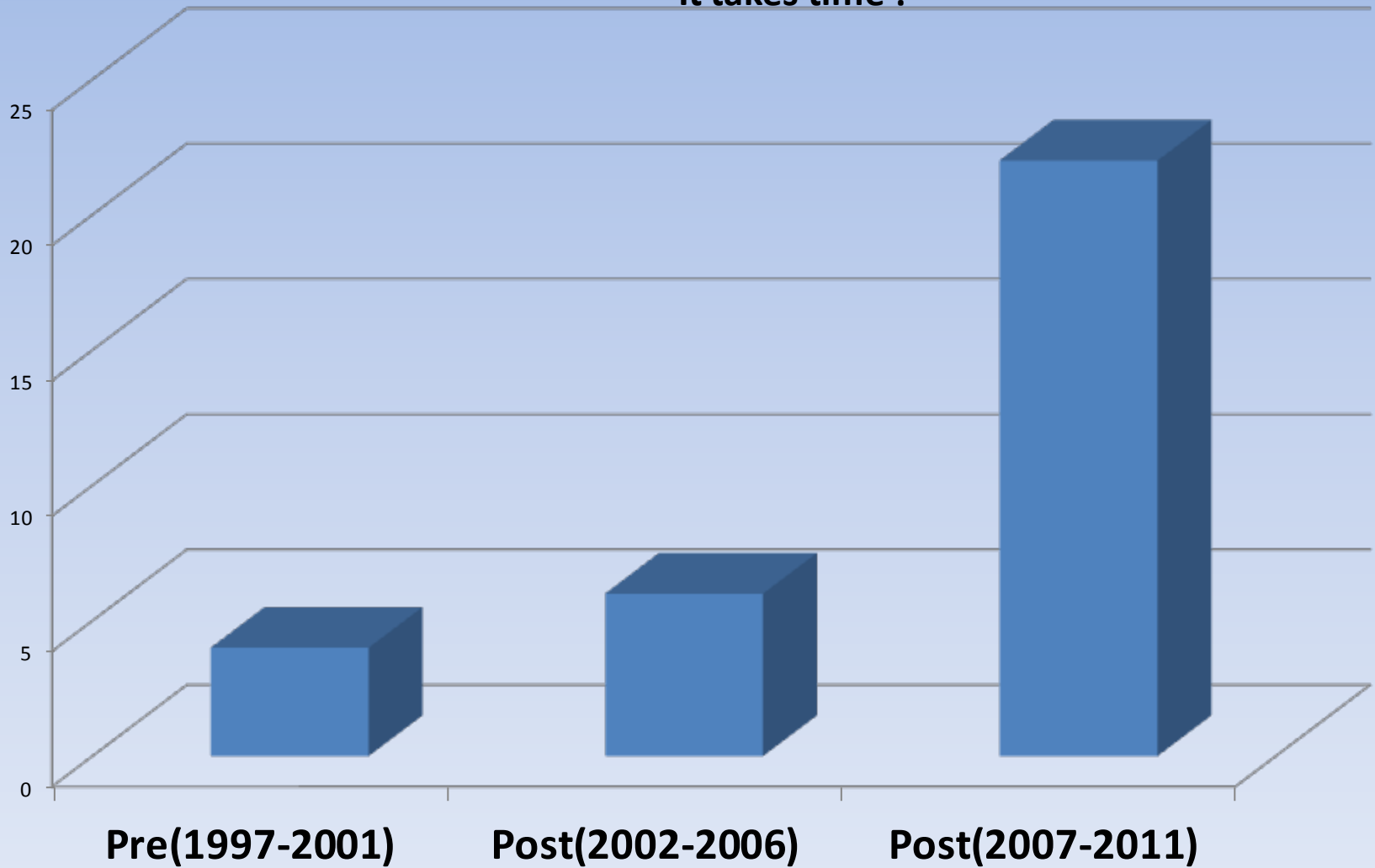
Rebekah Waikel, Ph.D.



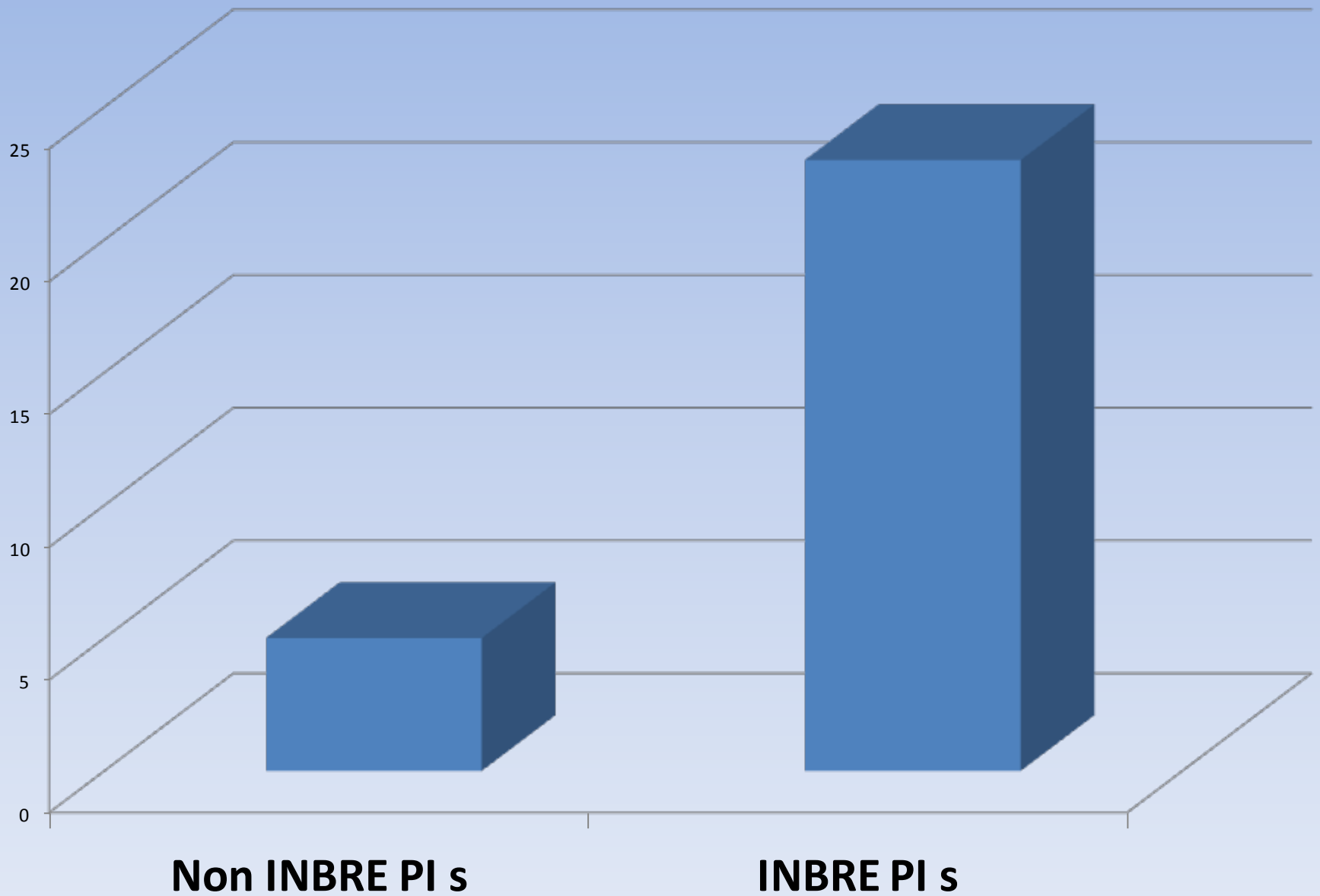
Tanea Reed, Ph.D.

# R15 Awards Pre- and Post KBRIN in Kentucky PUIs - 5 year bins

**It takes time !**



# KY R15 Awards in the PUIs 2002-2011



# KY-INBRE BEST PRACTICES SUMMARY

- ✓ Establish a Metrics for Success Plan
- ✓ Use a competitive mechanism for INBRE funding
- ✓ Set high expectations for publications and grant submissions
- ✓ Maintain standards
- ✓ Require institutional commitments
- ✓ Establish a Mentoring Core
- ✓ Grant writing workshops modeled on R15/AREA awards
- ✓ Site visits and one on one with investigators
- ✓ Mentoring - be realistic

**WHAT DOES YOUR STATE-INBRE DO?**