
Drug Development in Academia

The SPARK Approach

SPARK Mission

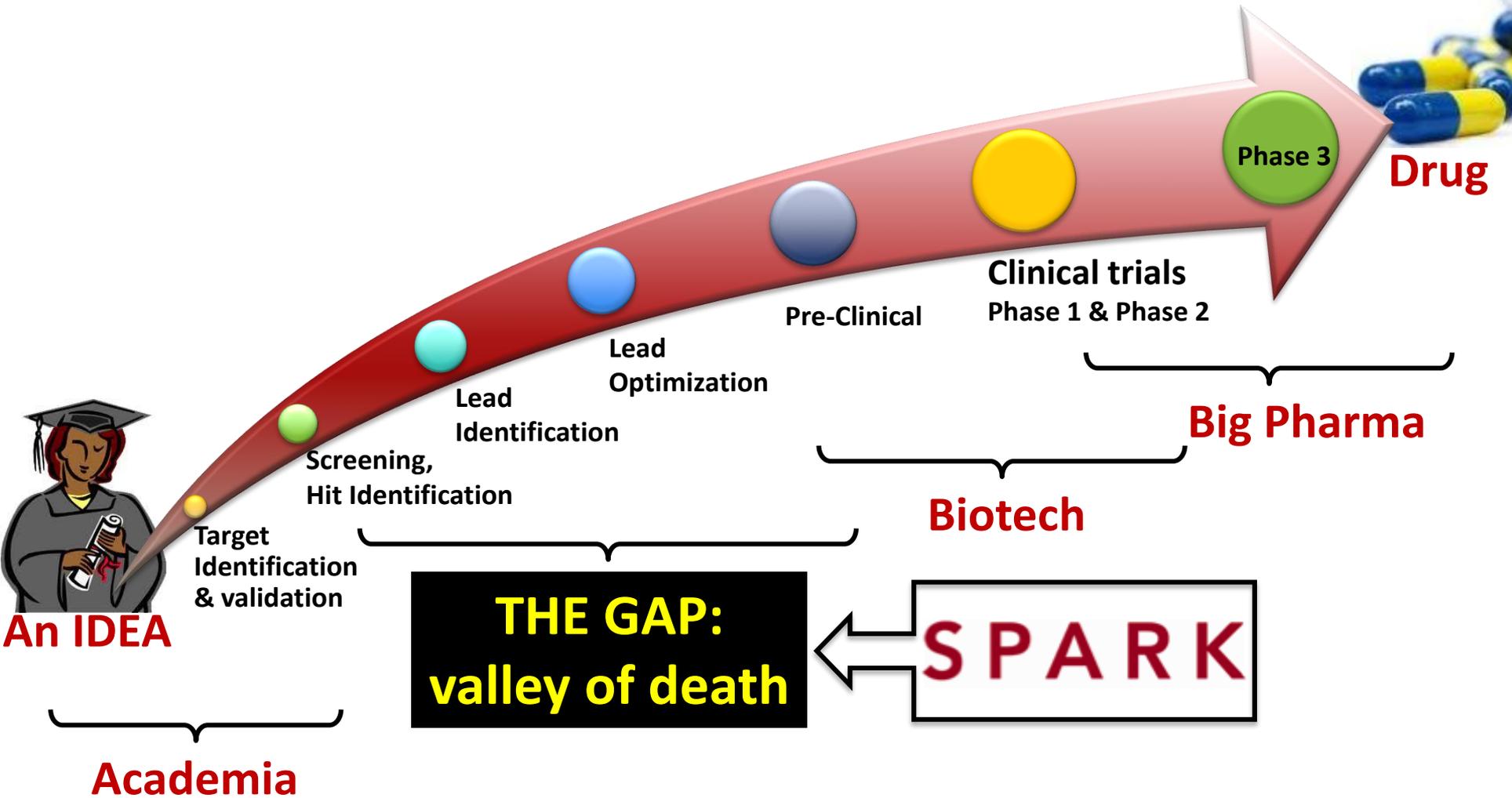
Partnership between university and industry to:

- Advance promising research discoveries to the clinic and commercial sector
- Educate faculty, fellows and graduate students on the translational process (discovery and development) for therapeutics and diagnostics
- Innovate efficient and cost-effective approaches to discovery and development



Wednesday
evening project
update

Translating Academic Discoveries



SPARK Selection Criteria

Proposed projects must:

- 1) Address an unmet need
- 2) Utilize a novel approach
- 3) Have the potential to advance to commercial sector or clinical testing with 2-3 years of SPARK support

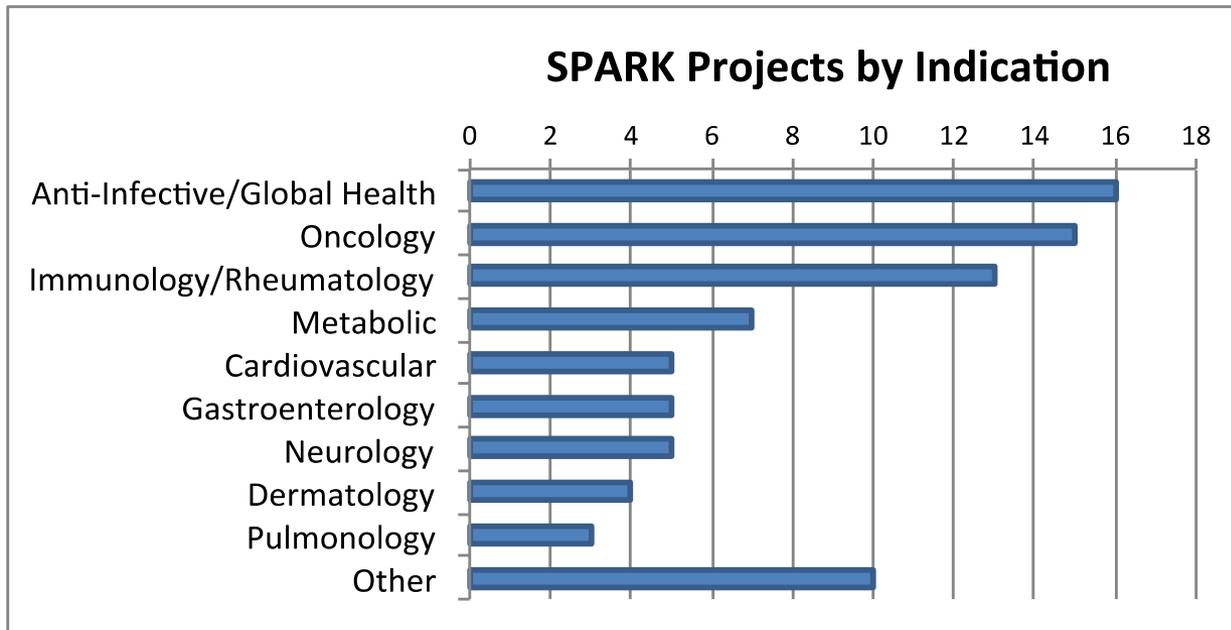
SPARK accepts proposals for any clinical indication.
Special consideration is given to orphan disease and areas historically neglected by industry (e.g., pediatric, tropical).

SPARK Provides

- **Education:** Year-long seminar on important topics in drug and diagnostics development
 - Alternates with project updates
 - Topics range from assay development to commercialization and are taught by expert advisors
- **Advising:** Access to specialized knowledge from our dedicated group of volunteer advisors, in the form of 1:1 advising and project updates to whole group
- **Mentorship:** Each team is assigned a project manager within SPARK to help identify needs and lower roadblocks. PMs also act as matchmakers for possible investors or collaborators
- **Funding:** Money is tied to achievement of milestones and held in a central account (avg: \$50K/project/year)

SPARK Program Statistics

- Founded in 2006
- 83 projects supported (as of 2014; “SPARK 8”)
- Plus 9 student-led programs
 - CSB 240 A&B: Drug Discovery and Development Course



19% of projects were in global health

14% orphan indications

33% child and maternal health indications

How SPARK measures success

With SPARK participation, we hope projects will:

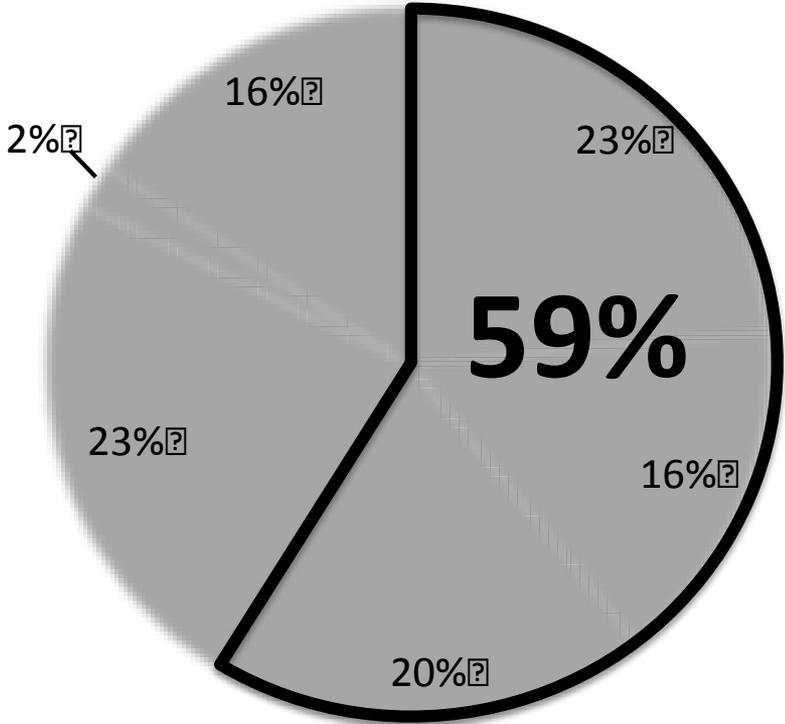
- Educate faculty and trainees on the process of drug development
 - More-informed to work in or collaborate with industry
 - Make translational research second-nature

and
/or

- License to an existing company or funded start-up
- Enter a clinical trial (therapeutic) or validation study with human samples (diagnostic)

SPARK Success Metrics

Outcomes: SPARK Graduated Projects

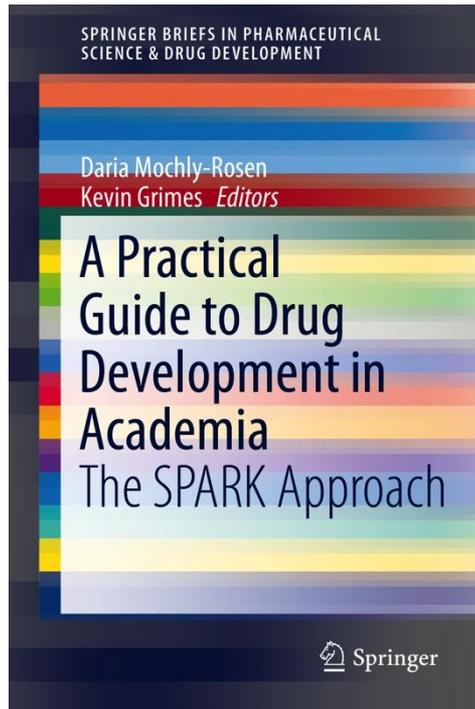


- Licensed in clinic (12)
- Licensed not in clinic (8)
- Unlicensed in clinic (10)
- Unlicensed (12)
- Scooped (1)
- Failed POC/disengage (8)

51 graduates

The SPARK Book

‘A Practical Guide to Drug Development in Academia: The SPARK Approach’



“I think this book should be required reading for any scientists in academia who plan to engage in translation of discoveries into the clinic. The authors have really been there, and they have done their homework. The chapters are not only informative, they are infused with the kind of advice that only comes from living this endeavor. Highly recommended”

- Janet Woodcock, Director, Center for Drug Evaluation and Research, FDA.

- Available for sale on Springer or Amazon websites (*note: SPARK/editors/authors receive no royalties on book sales*)

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