

Frederick National Laboratory for Cancer Research



Frederick National Lab Resource Deployment onto RAS

Dr. Atsuo Kuki, CTO, Frederick National Lab
NFAC Meeting, February 4 – 5, 2014

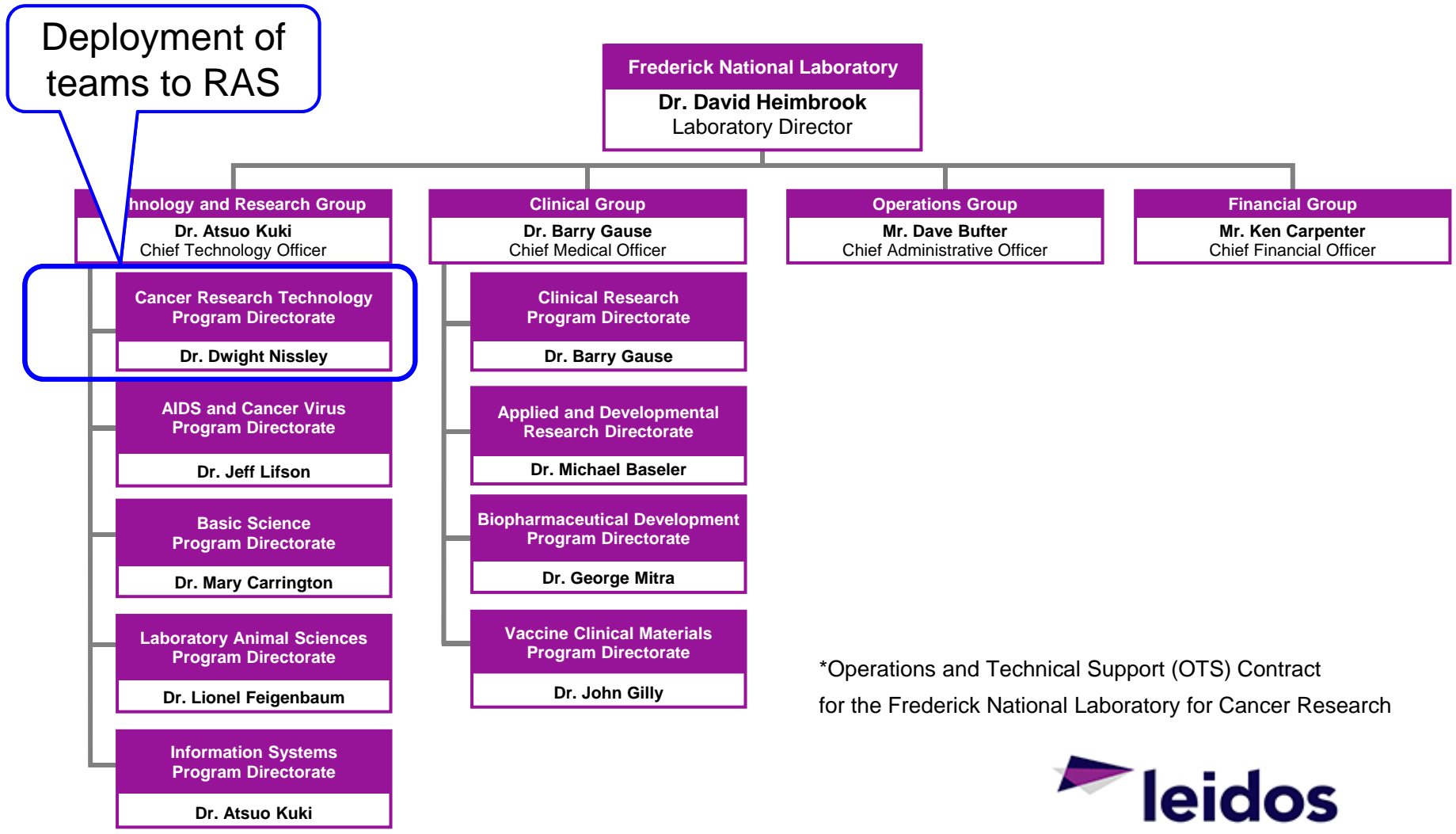
Launch phase



RAS Pivot in Frederick National Lab by the numbers

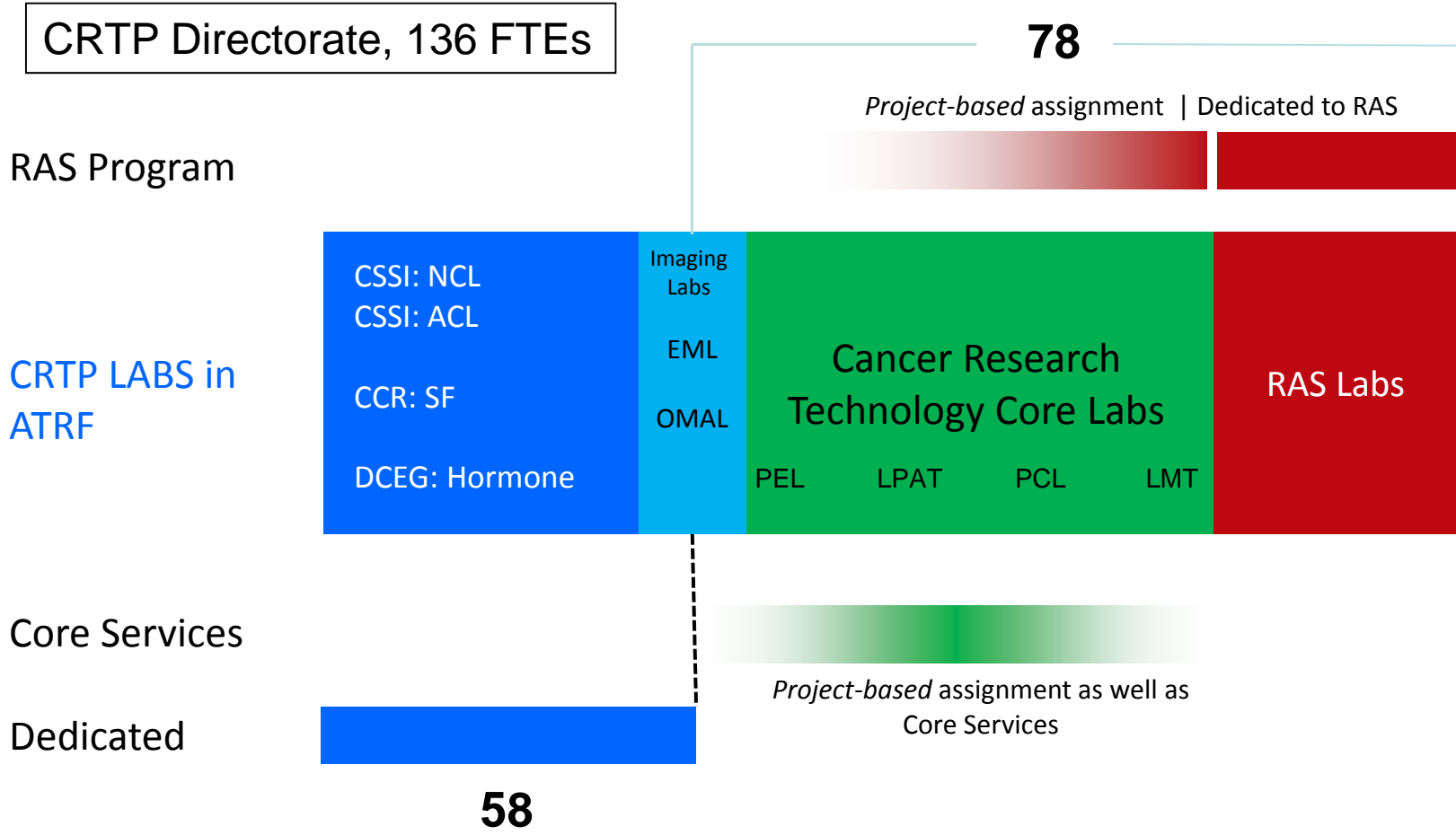
- 7%
- 55 FTE
- 40%
- Frank McCormick, June, 8 months
- Primary concurrence to proceed, September, 5 months
- Full Approval to proceed with program (\$10 M plus interim SBA boost), November, 3 months
- The Cancer Research Technology Directorate, November, 3 months

Leidos Biomedical Research, Inc., Organizational Chart *



*Operations and Technical Support (OTS) Contract for the Frederick National Laboratory for Cancer Research

RAS teams: Post-Pivot Resources



FNL CRTTP Resource in RAS Teams: 55

• RAS Teams (with cores engaged)	FTEs	\$ (M)
– Structural biology (proj 1)	15	2.3
– Cellular assays and validation (proj Z)	14	2.0
– Target development (proj 2,3,4)	14	2.2
– Informatics, Leadership, Admin	9	1.4
• CRO's, CapX, Eqpt contracts	-	3.9
• RAS Reagents and Spokes (proj5, proj6)	3	0.5
TOTAL FTEs	55	<hr/> 12.3

Project-Based staffing. *Snapshot.*

as of January 2014

C RTP Directorate Overall Resources 136 FTEs

	FTEs	\$ (M)
<ul style="list-style-type: none"> • RAS Teams <ul style="list-style-type: none"> – Project Teams (p1,2,3,4 with cores engaged) • CRO's, CapX, Eqpt contracts • RAS Reagents and Spoke team (p5, p6) 	52 - 3	12.3
		40%
<ul style="list-style-type: none"> • C RTP Core Labs (flexible, especially during this transition year) <ul style="list-style-type: none"> – Protein Expression – Protein Characterization – Genomics – Microscopy 	5 7 7 4	3.4
		17%
<ul style="list-style-type: none"> • C RTP Dedicated Labs (YT assigned) 	58	42%

National Lab Character

- **180 degree rotation from inward to outward facing**
- **Confirmed fit of potent applied science and technology resources that are enabling RAS launch and preparations for RAS Reagent delivery**

Role in Community:

- **Outreach launched in multi-sector manner (see slide below)**
- **Strategy for enablement of national RAS community efforts**
 - Reagents
 - Qualified assays

Building the mojo:

- **Bring in expertise that rapidly builds momentum (Frank McCormick)**
- **Defining the answer to “what is a life-sciences national laboratory” by committing teams to drive towards areas of national need**

Team Science, co-located expertise

- **Re-organized 40 to 57% of the CRTP Directorate as project team units and core units that flex and matrix to accomplish team science**
- **Culture at ATRF: Converting potential energy into kinetic energy**
 - Transition into the driver's seat: Project Team Design, Prioritization of lab work
 - Project Team leads meet regularly all together (and with Frank)
 - Scholarship: intensive RAS-related reviews
- **Cross-fertilization across FNL units**
 - NCL – (Nanotechnology) targeting expertise, assay cascade design
 - ACL – (Antibody) immunoMRM and cell surface epitope expertise
 - Laboratory Animal Science Directorate and LASP/SAIP expertise
 - More expected to come on-line as Projects gain traction

Filling gaps to build and develop RAS capabilities

High-Level hires

Interim review at 3-month point complete

Senior Structural Biologist – (open now)

Crystallographer with deep experience solving structures of protein complexes

Coordinate high-intensity structural biology efforts with external partners

Senior Cancer Biologist – (next)

Mechanistic cancer biologist with strengths in pathway biology and/or pharmacology

Develop cellular and *in vivo* assays for KRAS inactivation

Additional Senior RAS Program leadership roles...

Outreach and Visits into ATRF in recent months (RAS Program)

- **Structural Biology / Biophysics, Academic experts: 3**
- **RAS-driven Cellular Insights, Academic experts: 3**
- **Synthetic Lethal experts: 30**
- **Biotech, Specialty Tech: 3**
- **Big Pharma and RAS-related Tx: 2**
- **cCRADA Pipeline, Broad early pipeline engagement, with signed cCRADA: 0**
- **Non-Profit: active discussions**

Distinctive Attributes of a Redeployment at FNL

- **This FFRDC, opportunity and approach are unique**
- **Applied Science and Technology Team-based approach**
 - Pivot existing technology, teams and expertise
 - Ability to assemble Project Teams and draw new Talent and Leaders
 - Ability to Design (and iteratively refine) National Program consisting of multiple project teams in full alignment to single new mission and purpose
- **Leverages and shares talent and investment across multiple NCI in-place initiatives**
- **Vision that energizes both FNLCR and NCI and induces spirit of co-ownership**
- **Next: Build a framework for National Lab programs**
 - Need sustainable path to launch and funding of new National Lab priorities
 - Demonstrate why and how FNL as a central reference implementation laboratory enriches academic, industrial, governmental, and entrepreneurial Cancer and AIDS Research