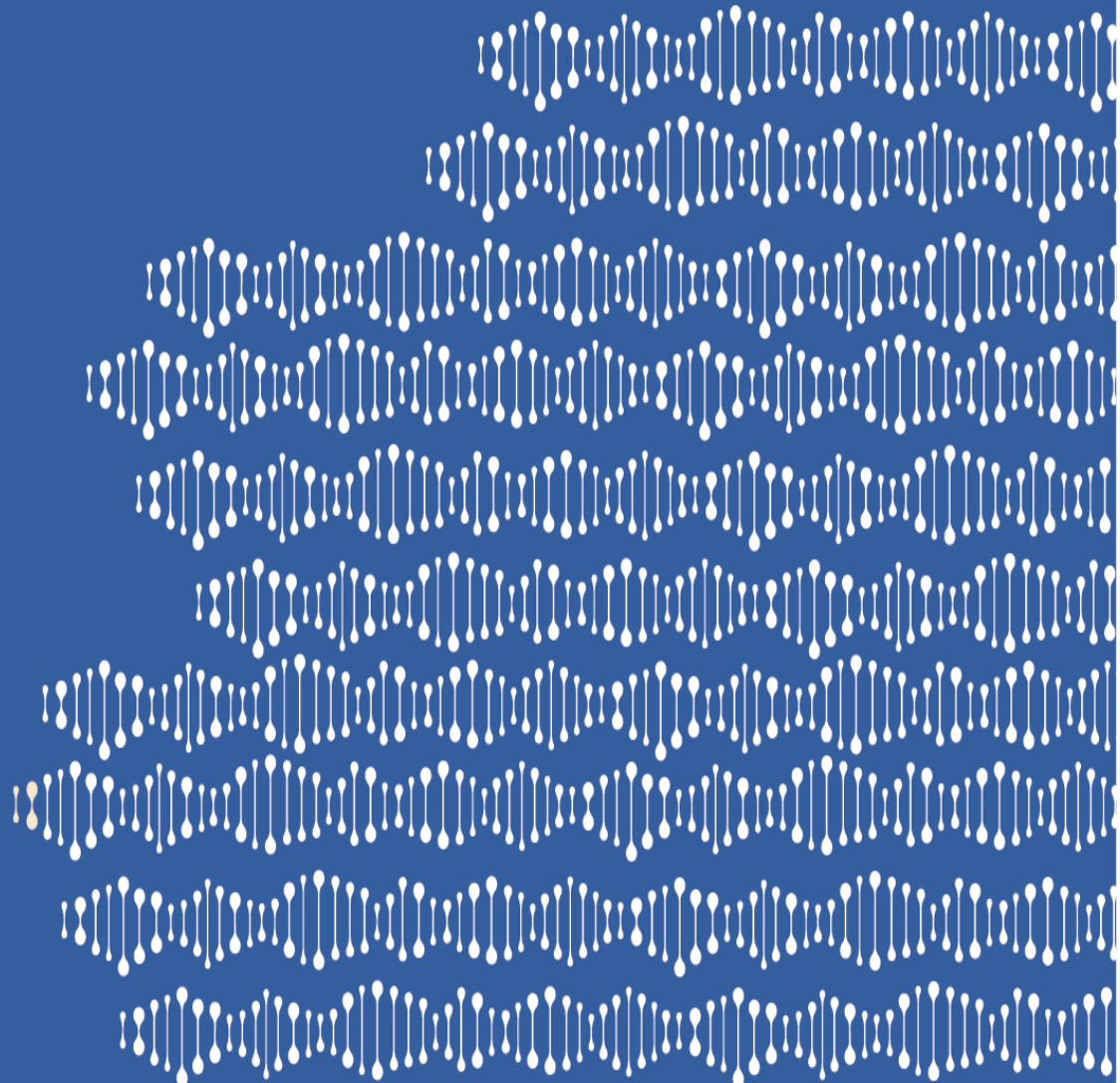




CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Oversight Committee Meeting

January 17, 2018





CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Oversight Committee Meeting Agenda

William B. Travis Building
1701 N. Congress Ave, Austin, Texas 78701
Suite 6-127, Carson Leslie Conference Room

January 17, 2018
10:00 a.m.

The Oversight Committee may discuss or take action regarding any item on this agenda, and as authorized by the Texas Open Meetings Act, Texas Government Code Section 551.001 et seq., may meet in closed session concerning any purposes permitted by the Act.

1. Call to Order
2. Roll Call/Excused Absences
3. Special Meeting Overview TAB 1
4. Budget Presentation TAB 2
 - Fiscal Year 2020 – 2023 Budget Scenarios
 - Fiscal Biennium 2020 – 2021 Budget Request
5. Fiscal Year 2018 Program Priorities and FY 2015 – 2017 Program Impact TAB 3
6. Fiscal Year 2019 Program Priorities TAB 4
7. New Initiatives TAB 5
8. Post Fiscal Year 2019 Program Priorities and Program Budgeting
9. Adjourn



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

MEMORANDUM

To: OVERSIGHT COMMITTEE MEMBERS
From: WAYNE ROBERTS, CHIEF EXECUTIVE OFFICER
**Subject: PREPARATION FOR JANUARY 17 SPECIAL OVERSIGHT
COMMITTEE AND SUBCOMMITTEE MEETINGS**
Date: JANUARY 9, 2018

Summary

The Oversight Committee is convening a special meeting on January 17 primarily to address two issues –setting program priorities for fiscal year 2019 and discussing and possibly approving CPRIT’s fiscal year 2020 – 2021 appropriations request. Included in this memo is brief background on both issues. While it is critical that the Oversight Committee considers these two items, the committee’s discussion also informs how CPRIT spends its funds remaining through fiscal year 2023.

Enclosed are materials to stimulate substantive discussion on January 17. Most of the information was discussed at the subcommittee meetings that occurred the week of January 8. CPRIT staff has worked hard to refine the information and focus on issues needing resolution at the special meeting. You are encouraged to review the material from all three subcommittee packages to facilitate the discussion on January 17.

Please let any of the appropriate staff know of any concerns or how we may assist you in preparing for the January 17 meeting.

Planning for the January 17 Meeting

We have an ambitious agenda for the January 17 meeting. Decisions made and discussed by the Oversight Committee at the special meeting will guide CPRIT for the remainder of its statutory life. To maximize the time available for Oversight Committee discussion and deliberation, I have instructed CPRIT staff not to spend our limited time together on reviewing information already provided to the Oversight Committee or previously discussed in subcommittee meetings.

The program subcommittee meetings were critical in preparing for the special meeting. It will be helpful for members to review thoroughly all program and budget information prior to the special meeting. Each of the program officers has proposed fiscal year 2019 program priorities and provided supporting material. Heidi McConnell and I have created the three current budget projection scenarios that appear to have garnered the most interest as of this writing for awarding grants in fiscal years 2020 – 2022.

Budget Projections and Available Appropriations Through 2023

Heidi and I discussed with the Oversight Committee at the August and November meetings that CPRIT does not have enough money left from its constitutionally authorized \$3 billion to fund CPRIT grants and operations at its current \$300 million per year rate through 2023. Even if CPRIT plans for a gradual decline in award funding, we project that by fiscal year 2022 there will be less than \$60 million available for awards. The Oversight Committee is responsible for determining how the remaining funds should be allocated for grant awards. We prepared information on estimated available funds through 2023. Also, to assist the Oversight Committee's decisions on distributing the remaining funds for grants, we emphasize three different funding allocation scenarios for fiscal years 2020 – 2022. These three have been and continue to be referred to as Scenarios 3, 4 and 5. Consider these scenarios to be straw men to help frame the on-going discussion. Scenarios 1 and 2 are included as appendices.

The budget projection material formatted as Excel spreadsheets is available electronically in the Oversight Committee Data Room. In addition to the spreadsheets, we provide a brief narrative summary of each of the three options and the appendices. Hard copies of the summaries and the spreadsheets will be available for you at the meeting. Due to the size requirements of the spreadsheets, we cannot provide them as PowerPoint slides or in any other format. I strongly recommend that you use the hard copy provided to you at the January 17 meeting. It will be much easier to use than to try to follow the discussion on your computer.

Program Priorities

Although the new year will only be two weeks old, it is not premature to discuss fiscal year 2019 (which begins September 1, 2018) issues. The current process for setting program priorities does not allow enough lead time for preparing and releasing requests for applications (RFAs). As a result, the program priorities are set too late to drive policy for the fiscal year. At former Chair Pete Geren's urging and supported by Chair Montgomery, the Oversight Committee agreed that a special meeting early in 2018 allowed the committee time to consider fully and discuss the priorities for fiscal year 2019. Deciding on 2019 program priorities now allows the priorities to guide, rather than follow, the fiscal year 2019 RFA process. The staff recommends that next November the Oversight Committee adopt the fiscal year 2020 priorities in time to incorporate them into the 2019 annual plan to release program RFAs that also will be adopted by the Oversight Committee.

Each of the program officers has proposed fiscal year 2019 program priorities based on input from the program subcommittees. After I summarize the impact of fiscal year 2015 – 2017 program priorities, the program officers will present a concise overview (no more than 10 minutes per program) of the proposed priorities. The meeting agenda allows Oversight Committee members at least 20 minutes to discuss each program's proposed priorities before voting. We have allotted time to ensure that every program and topic is discussed. If it is necessary to move on to the next agenda item before discussion on a topic has ended, Mr. Montgomery and I will propose a plan for taking up the discussion topic again, either later in the meeting or at the next Oversight Committee meeting.



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

MEMORANDUM

To: OVERSIGHT COMMITTEE MEMBERS
From: WAYNE ROBERTS, CHIEF EXECUTIVE OFFICER
**Subject: OVERVIEW OF BUDGET MATERIALS FOR JANUARY 17, 2018,
OVERSIGHT COMMITTEE MEETING**
Date: JANUARY 11, 2018

Summary

Unlike the budget updates we provide in our regular meetings, the budget discussion on January 17 requires Oversight Committee members to address policy decisions. The amount of bond funding remaining after fiscal year 2019 (ending August 31, 2019) is not enough to fund CPRIT operations and grant awards at \$300 million each year, the maximum allowed by law. CPRIT cannot award grants after August 31, 2022. This means that for a three-year period, CPRIT will be awarding fewer grants than it has in previous years due to the reduced funding available. The Oversight Committee's decision on how to divide the dwindling amount of funding for grants over the last three years of CPRIT will affect which requests for applications we release and the types of grants CPRIT awards.

CPRIT has discussed three broad options for awarding the amount remaining between fiscal 2020 and 2022. Within these three options, there are numerous mathematical iterations that we can pursue. Heidi McConnell prepared for presentation five scenarios to the subcommittees to help frame the members' consideration of a path forward. Based on the discussions in the three subcommittee meetings, it appears that Scenarios 3, 4, and 5 are generating sufficient interest as choices the Oversight Committee could support to maximize the number of grants that the agency can award in the later years when funds are declining. We will focus the budget discussion on these three scenarios at the January 17 meeting. Ms. McConnell has put all three scenarios on one sheet for comparison purposes (pg 3). It is not necessary for the Oversight Committee to make a final decision at the January meeting on which scenario CPRIT will use in framing its budget request (due early August), but action should take place at the February or by the May meeting, at the latest. This provides time to receive input from our legislative champions, advocates, and potential grant recipients.

Options for Controlled Spend Down of Funds Underlying the Proposed Scenarios

- **“The Cliff”** - Under this option, CPRIT continues awarding grants to the \$300 maximum allowed by law until all funds available for grants are exhausted, likely in late 2020 or early 2021. None of the scenarios provided to you reflect this option.

- “The Gradual Downward Slope” - CPRIT gradually reduces the amount available for awards between 2020 – 2022. Scenarios 1 -3 are based on a gradual decline of funding.
- “The Plateau” - CPRIT allocates the remaining grant funds equally among the out years. Scenarios 4 and 5 are built on this model, with the only difference being the number of years included in the allocation.

Descriptions of the Funding Scenarios

- Scenario 3: Fund Research, Product Development, and Prevention Awards Through 2022. This “slope” scenario illustrates a gradual step down in grant funding beginning 2020 through 2022. CPRIT minimizes operational expenses in 2022 by limiting research awards to Academic Recruitment grants and prevention awards to Prevention Dissemination grants. There is debate about whether the limited amount of funds available in 2021 and 2022 will negatively affect the potential applicant pool and the type of projects that can be funded.
- Scenario 4: Allocate Equal Amounts of Award Funding Between Two Years (2020-2021). Under this “plateau” scenario, CPRIT allocates the total funds remaining for awards after fiscal year 2019 equally between 2020 and 2021. This means that CPRIT stops awarding grants by August 31, 2021, one year earlier than authorized by law. Scenario 4 minimizes operational expenses associated with grant review but raises concerns about the perception of voluntarily ending funding earlier than required.
- Scenario 5: Allocate Equal Amounts of Award Funding Among Three Years (2020-2022). The difference between Scenarios 4 and 5 is that the Scenario 5 “plateau” includes awards in fiscal year 2022. In comparison to Scenario 4, this scenario funds all programs for as long as possible, but agency operating expenses are higher to support the grant review processes in fiscal year 2022.

Background Information Available in Appendices

We have provided the background budget information used to develop these scenarios as appendices. We do not plan to discuss the appendices on January 17 unless it is necessary to do so. For your convenience, I briefly describe each below.

- Appendices 1-5 (pages 5-9). These spreadsheets contain all the scenarios previously provided to the Oversight Committee and are the basis for the three scenarios in the scenario comparison spreadsheet.
- Appendix 6: What We Know or Can Reasonably Project (page 10). This spreadsheet indicates historical appropriations, unobligated appropriations authority, and deobligated grant funds (unexpended balances of grant awards) resulting in the projections of funds available for fiscal years 2020-23.
- Appendix 7: Estimated Available Appropriations 2020-23 (page 11). This spreadsheet is the same as Appendix 1 but excludes all historical information.

	Appropriations				Grant Funding							Q	R	S	
	G	H		I	J	K	L	M	N	O	P				
Appropriation Year	Total Budget	Appropriations for Agency Operations and Transfer to DSHS	Agency Operations as Percent of Total Budget	Appropriations Available for Grant Awards	Prevention Grants Announced/ Projected	Percent PREV Awards of Available Award Funding	Academic Research Grants Awarded/ Projected	Percent AR Awards of Available Award Funding	Product Development Research Grants Awarded/ Projected	Percent PDR Awards of Available Award Funding	Total Grant Awards Awarded/ Projected	Total Research Award Funding Only	Percent AR Awards of Available Research Awards	Percent PDR Awards of Available Research Awards	
SCENARIO 3: FUND AR RECRUITMENT, PREVENTION DISSEMINATION, AND PD AWARDS IN 2022	2020	\$ 192,000,000	\$ 20,000,000	9%	\$ 172,000,000	\$ 17,200,000	10.0%	\$ 108,360,000	63.0%	\$ 46,440,000	27.0%	\$ 172,000,000	\$ 154,800,000	70.0%	30.0%
	2021	\$ 163,998,229	\$ 20,000,000	10%	\$ 143,998,229	\$ 14,399,823	10.0%	\$ 90,718,884	63.0%	\$ 38,879,522	27.0%	\$ 143,998,229	\$ 129,598,406	70.0%	30.0%
	2022*	\$ 67,828,279	\$ 14,150,000	16%	\$ 53,678,279	\$ 5,367,828	10.0%	\$ 33,817,316	63.0%	\$ 14,493,135	27.0%	\$ 53,678,279	\$ 48,310,451	70.0%	30.0%
	2023**	\$ 13,000,000	\$ 13,000,000	100%	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
		\$ 436,826,508				\$ 288,142,586		\$ 1,929,121,478		\$ 593,925,646		\$ 2,811,189,710	\$ 2,523,047,124		

* Assumptions: 1) SRC only meets by phone to review recruitment applications during first six months of year then disband as in first scenario; 2) PDRC and one product development review panel have meeting to review product development applications during first half of year along with legal and business management due diligence contracts in place; 3) PRC only meets by phone to review prevention dissemination applications during the first 6 months of year
 ** Assumptions: Only fund agency operations for necessary post-award grant management, compliance monitoring program, and other required agency functions.

SCENARIO 4: ALLOCATE EQUAL AMOUNTS OF AWARD FUNDING IN 2020-2021	2020	\$ 205,413,254	\$ 20,000,000	8%	\$ 185,413,254	\$ 18,541,325	10.0%	\$ 116,810,350	63.0%	\$ 50,061,579	27.0%	\$ 185,413,254	\$ 166,871,929	70.0%	30.0%
	2021	\$ 205,413,254	\$ 20,000,000	8%	\$ 185,413,254	\$ 18,541,325	10.0%	\$ 116,810,350	63.0%	\$ 50,061,579	27.0%	\$ 185,413,254	\$ 166,871,929	70.0%	30.0%
	2022*	\$ 13,000,000	\$ 13,000,000	100%	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
	2023*	\$ 13,000,000	\$ 13,000,000	100%	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
		\$ 436,826,508				\$ 288,257,586		\$ 1,929,845,978		\$ 594,236,146		\$ 2,812,339,710	\$ 2,524,082,124		

*Assumptions: Only fund agency operations for necessary post-award grant management, compliance monitoring program, and other required agency functions.

SCENARIO 5: ALLOCATE EQUAL AMOUNTS OF GRANT FUNDING IN 2020-2022	2020	\$ 141,275,503	\$ 20,000,000	12%	\$ 121,275,503	\$ 12,127,550	10.0%	\$ 76,403,567	63.0%	\$ 32,744,386	27.0%	\$ 121,275,503	\$ 109,147,953	70.0%	30.0%
	2021	\$ 141,275,503	\$ 20,000,000	12%	\$ 121,275,503	\$ 12,127,550	10.0%	\$ 76,403,567	63.0%	\$ 32,744,386	27.0%	\$ 121,275,503	\$ 109,147,953	70.0%	30.0%
	2022	\$ 141,275,502	\$ 20,000,000	12%	\$ 121,275,502	\$ 12,127,550	10.0%	\$ 76,403,566	63.0%	\$ 32,744,386	27.0%	\$ 121,275,502	\$ 109,147,952	70.0%	30.0%
	2023*	\$ 13,000,000	\$ 13,000,000	100%	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
		\$ 436,826,508				\$ 287,557,586		\$ 1,925,435,978		\$ 592,346,146		\$ 2,805,339,710	\$ 2,517,782,124		

*Assumptions: Only fund agency operations for necessary post-award grant management, compliance monitoring program, and other required agency functions.

APPENDICES

SCENARIO 1: FUND ONLY ACADEMIC RESEARCH RECRUITMENT AWARDS IN 2022

	Appropriations	Grant Funding									
	I	J	K	L	M	N	O	P	Q	R	S
Appropriation Year	Appropriations Available for Grant Awards	Prevention Grants Announced/ Projected	Percent PREV Awards of Available Award Funding	Academic Research Grants Awarded/ Projected	Percent AR Awards of Available Award Funding	Product Development Research Grants Awarded/ Projected	Percent PDR Awards of Available Award Funding	Total Grant Awards Awarded/ Projected	Total Research Award Funding Only	Percent AR Awards of Available Research Awards	Percent PDR Awards of Available Research Awards
2020	\$ 172,000,000	\$ 17,200,000	10.0%	\$ 108,360,000	63.0%	\$ 46,440,000	27.0%	\$ 172,000,000	\$ 154,800,000	70.0%	30.0%
2021	\$ 145,148,229	\$ 14,514,823	10.0%	\$ 91,443,384	63.0%	\$ 39,190,022	27.0%	\$ 145,148,229	\$ 130,633,406	70.0%	30.0%
2022*	\$ 53,678,279	\$ -	0.0%	\$ 53,678,279	100.0%	\$ -	0.0%	\$ 53,678,279	\$ 53,678,279	100.0%	0.0%
2023**	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
		\$ 282,889,758		\$ 1,949,706,941		\$ 579,743,011		\$ 2,812,339,710	\$ 2,529,449,952		

*Assumptions: 1) No peer review panels meetings; 2) SRC only meets by phone to review recruitment applications during first 6 months of year then disband to reduce honorarium costs further; 3) Honoraria only paid to PRC chair and PDRC at reduced amounts for progress report review; 4) Don't know administrative costs for Texas Safekeeping Trust grant award management and research grant revenue sharing monitoring.

** Assumptions: Operating funds for necessary post-award grant management, compliance monitoring program, and other required agency functions.

SCENARIO 2: FUND ACADEMIC RESEARCH RECRUITMENT AND PRODUCT DEVELOPMENT AWARDS IN 2022

	Appropriations	Grant Funding									
	I	J	K	L	M	N	O	P	Q	R	S
Appropriation Year	Appropriations Available for Grant Awards	Prevention Grants Announced/ Projected	Percent PREV Awards of Available Award Funding	Academic Research Grants Awarded/ Projected	Percent AR Awards of Available Award Funding	Product Development Research Grants Awarded/ Projected	Percent PDR Awards of Available Award Funding	Total Grant Awards Awarded/ Projected	Total Research Award Funding Only	Percent AR Awards of Available Research Awards	Percent PDR Awards of Available Research Awards
2020	\$ 172,000,000	\$ 17,200,000	10.0%	\$ 108,360,000	63.0%	\$ 46,440,000	27.0%	\$ 172,000,000	\$ 154,800,000	70.0%	30.0%
2021	\$ 144,148,229	\$ 14,414,823	10.0%	\$ 90,813,384	63.0%	\$ 38,920,022	27.0%	\$ 144,148,229	\$ 129,733,406	70.0%	30.0%
2022*	\$ 53,678,279	\$ -	0.0%	\$ 37,574,795	70.0%	\$ 16,103,484	30.0%	\$ 53,678,279	\$ 53,678,279	70.0%	30.0%
2023**	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
		\$ 282,789,758		\$ 1,932,973,458		\$ 595,576,495		\$ 2,811,339,710	\$ 2,528,549,952		

* Assumptions: 1) SRC only meets by phone to review recruitment applications during first 6 months of year then disband as in first scenario; 2) PDRC and one product development review panel function to review product development applications during first 6 months of year along with legal and business management due diligence contracts in place; 3) Honoraria only paid to PRC chair and PDRC at reduced amounts for progress report review after first 6 months of year; 4) Don't know administrative costs for Texas Safekeeping Trust grant award management and research grant revenue sharing monitoring.

** Assumptions: Operating funds for necessary post-award grant management, compliance monitoring program, and other required agency functions.

SCENARIO 3: FUND ACADEMIC RESEARCH RECRUITMENT, PREVENTION DISSEMINATION, AND PRODUCT DEVELOPMENT AWARDS IN 2022

	Appropriations	Grant Funding									
	I	J	K	L	M	N	O	P	Q	R	S
Appropriation Year	Appropriations Available for Grant Awards	Prevention Grants Announced/ Projected	Percent PREV Awards of Available Award Funding	Academic Research Grants Awarded/ Projected	Percent AR Awards of Available Award Funding	Product Development Research Grants Awarded/ Projected	Percent PDR Awards of Available Award Funding	Total Grant Awards Awarded/ Projected	Total Research Award Funding Only	Percent AR Awards of Available Research Awards	Percent PDR Awards of Available Research Awards
2020	\$ 172,000,000	\$ 17,200,000	10.0%	\$ 108,360,000	63.0%	\$ 46,440,000	27.0%	\$ 172,000,000	\$ 154,800,000	70.0%	30.0%
2021	\$ 143,998,229	\$ 14,399,823	10.0%	\$ 90,718,884	63.0%	\$ 38,879,522	27.0%	\$ 143,998,229	\$ 129,598,406	70.0%	30.0%
2022*	\$ 53,678,279	\$ 5,367,828	10.0%	\$ 33,817,316	63.0%	\$ 14,493,135	27.0%	\$ 53,678,279	\$ 48,310,451	70.0%	30.0%
2023**	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
		\$ 288,142,586		\$ 1,929,121,478		\$ 593,925,646		\$ 2,811,189,710	\$ 2,523,047,124		

* Assumptions: 1) SRC only meets by phone to review recruitment applications during first six months of year then disband as in first scenario; 2) PDRC and one product development review panel have meeting to review product development applications during first half of year along with legal and business management due diligence contracts in place; 3) PRC only meets by phone to review prevention dissemination applications during the first 6 months of year then disband; 4) Honoraria only paid to PRC chair and PDRC at reduced amounts for progress report review after first 6 months of year; 5) Don't know administrative costs for Texas Safekeeping Trust grant award management and research grant revenue sharing monitoring.

** Assumptions: Operating funds for necessary post-award grant management, compliance monitoring program, and other required agency functions.

SCENARIO 4: ALLOCATE SAME AMOUNT OF FUNDING PER YEAR FOR GRANT AWARDS IN 2020-2021 (NO NEW GRANT AWARDS IN 2022)

	Appropriations			Grant Funding							Q	R	S
	G	H	I	J	K	L	M	N	O	P			
Appropriation Year	Revised Appropriations of Available Funds	Appropriations for Agency Operations and Transfer to DSHS	Appropriations Available for Grant Awards	Prevention Grants Announced/ Projected	Percent PREV Awards of Available Award Funding	Academic Research Grants Awarded/ Projected	Percent AR Awards of Available Award Funding	Product Development Research Grants Awarded/ Projected	Percent PDR Awards of Available Award Funding	Total Grant Awards Awarded/ Projected	Total Research Award Funding Only	Percent AR Awards of Available Research Awards	Percent PDR Awards of Available Research Awards
2020	\$ 205,413,254	\$ 20,000,000	\$ 185,413,254	\$ 18,541,325	10.0%	\$ 116,810,350	63.0%	\$ 50,061,579	27.0%	\$ 185,413,254	\$ 166,871,929	70.0%	30.0%
2021	\$ 205,413,254	\$ 20,000,000	\$ 185,413,254	\$ 18,541,325	10.0%	\$ 116,810,350	63.0%	\$ 50,061,579	27.0%	\$ 185,413,254	\$ 166,871,929	70.0%	30.0%
2022*	\$ 13,000,000	\$ 13,000,000	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
2023*	\$ 13,000,000	\$ 13,000,000	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
	\$ 436,826,508			\$ 288,257,586		\$ 1,929,845,978		\$ 594,236,146		\$ 2,812,339,710	\$ 2,524,082,124		

SCENARIO 5: ALLOCATE SAME AMOUNT OF FUNDING PER YEAR FOR GRANT AWARDS IN 2020-2022

	Appropriations			Grant Funding							Q	R	S
	G	H	I	J	K	L	M	N	O	P			
Appropriation Year	Revised Appropriations of Available Funds	Appropriations for Agency Operations and Transfer to DSHS	Appropriations Available for Grant Awards	Prevention Grants Announced/ Projected	Percent PREV Awards of Available Award Funding	Academic Research Grants Awarded/ Projected	Percent AR Awards of Available Award Funding	Product Development Research Grants Awarded/ Projected	Percent PDR Awards of Available Award Funding	Total Grant Awards Awarded/ Projected	Total Research Award Funding Only	Percent AR Awards of Available Research Awards	Percent PDR Awards of Available Research Awards
2020	\$ 141,275,503	\$ 20,000,000	\$ 121,275,503	\$ 12,127,550	10.0%	\$ 76,403,567	63.0%	\$ 32,744,386	27.0%	\$ 121,275,503	\$ 109,147,953	70.0%	30.0%
2021	\$ 141,275,503	\$ 20,000,000	\$ 121,275,503	\$ 12,127,550	10.0%	\$ 76,403,567	63.0%	\$ 32,744,386	27.0%	\$ 121,275,503	\$ 109,147,953	70.0%	30.0%
2022	\$ 141,275,502	\$ 20,000,000	\$ 121,275,502	\$ 12,127,550	10.0%	\$ 76,403,566	63.0%	\$ 32,744,386	27.0%	\$ 121,275,502	\$ 109,147,952	70.0%	30.0%
2023*	\$ 13,000,000	\$ 13,000,000	\$ -	\$ -		\$ -		\$ -		\$ -	\$ -		
	\$ 436,826,508			\$ 287,557,586		\$ 1,925,435,978		\$ 592,346,146		\$ 2,805,339,710	\$ 2,517,782,124		

*Assumptions: Only fund agency operations for necessary post-award grant management, compliance monitoring program, and other required agency functions.

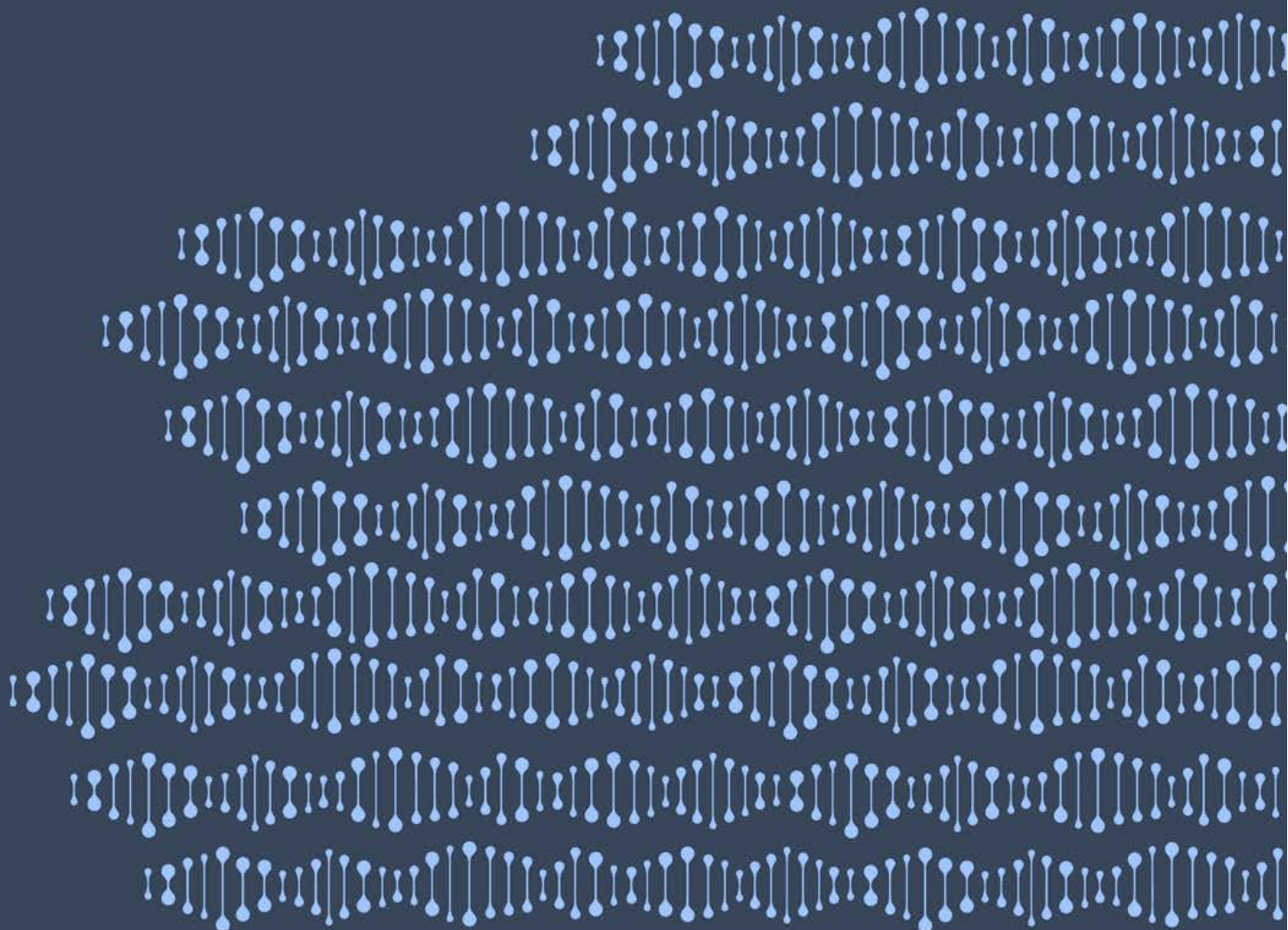
	Appropriations								
	A	B	C	D	E	F	G	H	I
Appropriation Year	Original Appropriations	Obligated Appropriations Authority	Unobligated Appropriations Authority	Estimated Available Funds from Deobligated Grants	Apply Previously Unobligated Appropriations Authority	Apply Funds from Grant Deobligations	Revised Appropriations	Projected Appropriations for Agency Operations and Transfer to DSHS	Appropriations Available for Grant Awards
2010	\$ 225,000,000	\$ 225,000,000	\$ -	\$ 36,993,736	\$ -				\$ 216,163,477
2011	\$ 225,000,000	\$ 222,424,955	\$ 2,575,045	\$ 4,594,749	\$ -				\$ 213,226,330
2012	\$ 300,000,000	\$ 287,928,167	\$ 12,071,833	\$ 10,607,413	\$ -				\$ 281,408,334
2013	\$ 300,000,000	\$ 122,244,623	\$ 177,755,377	\$ 1,515,061	\$ -				\$ 280,409,352
2014	\$ 300,000,000	\$ 276,327,248	\$ 23,672,752	\$ 1,330,983	\$ -				\$ 279,507,332
2015	\$ 300,000,000	\$ 292,332,529	\$ 7,667,471	\$ (129,694)	\$ -				\$ 279,308,900
2016	\$ 300,000,000	\$ 298,792,850	\$ 1,207,150	\$ (139,609)	\$ -				\$ 279,658,846
2017	\$ 300,000,000	\$ 291,801,399	\$ 8,198,601	\$ (156,337)	\$ -				\$ 280,229,568
2018	\$ 300,000,000			\$ (156,337)	\$ -				\$ 280,099,874
2019	\$ 300,000,000			\$ (156,337)	\$ -				\$ 280,099,874
2020	\$ 137,000,000			\$ (156,337)	\$ 55,000,000	\$ -	\$ 192,000,000	\$ 20,000,000	\$ 172,000,000
2021	\$ 13,000,000			\$ (156,337)	\$ 152,148,229	\$ -	\$ 165,148,229	\$ 20,000,000	\$ 145,148,229
2022	\$ -			\$ (156,337)	\$ 13,000,000	\$ 53,678,279	\$ 66,678,279	\$ 13,000,000	\$ 53,678,279
2023	\$ -			\$ (156,337)	\$ 13,000,000	\$ -	\$ 13,000,000	\$ 13,000,000	\$ -
	\$ 3,000,000,000	\$ 2,016,851,771	\$ 233,148,229	\$ 53,678,279	\$ 233,148,229	\$ 53,678,279	\$ 436,826,508		

	Appropriations								
	A	B	C	D	E	F	G	H	I
Appropriation Year	Original Appropriations	Obligated Appropriations Authority	Unobligated Appropriations Authority	Estimated Available Funds from Deobligated Grants	Apply Previously Unobligated Appropriations Authority	Apply Funds from Grant Deobligations	Revised Appropriations	Appropriations for Agency Operations and Transfer to DSHS	Appropriations Available for Grant Awards
2020	\$ 137,000,000			\$ (156,337)	\$ 55,000,000	\$ -	\$ 192,000,000	\$ 20,000,000	\$ 172,000,000
2021	\$ 13,000,000			\$ (156,337)	\$ 152,148,229	\$ -	\$ 165,148,229	\$ 20,000,000	\$ 145,148,229
2022	\$ -			\$ (156,337)	\$ 13,000,000	\$ 53,678,279	\$ 66,678,279	\$ 13,000,000	\$ 53,678,279
2023	\$ -			\$ (156,337)	\$ 13,000,000	\$ -	\$ 13,000,000	\$ 13,000,000	\$ -
	\$ 3,000,000,000		\$ 233,148,229	\$ 53,678,279	\$ 233,148,229	\$ 53,678,279	\$ 436,826,508		



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Program Priorities 2018





Academic Research Program Priorities

- Recruitment of outstanding cancer researchers to Texas
- Investment in core facilities
- A broad range of innovative, investigator-initiated research projects
- Prevention and early detection
- Computational biology and analytic methods
- Childhood cancers
- Population disparities and cancers of importance in Texas

Prevention Program Priorities

- Populations disproportionately affected by cancer incidence, mortality or cancer risk prevalence
- Geographic areas of the state disproportionately affected by cancer incidence, mortality or cancer risk prevalence
- Underserved populations

Product Development Research Program Priorities

- Funding novel projects that offer therapeutic or diagnostic benefits not currently available; i.e., disruptive technologies
- Funding projects addressing large or challenging unmet medical needs
- Investing in early stage projects when private capital is least available
- Stimulating commercialization of technologies developed at Texas institutions
- Supporting new company formation in Texas or attracting promising companies to Texas that will recruit staff with life science expertise, especially experienced C-level staff to lead to seed clusters of life science expertise at various Texas locations
- Providing appropriate return on Texas taxpayer investment



Summary: Priorities across CPRIT’s Three Programs

Below is a table illustrating how each of CPRIT’s three programs could implement the recommended areas of emphasis outlined above.

	Prevention and Early Detection Initiatives	Early Translational Research	Enhance Texas’ Research Capacity and Life Science Infrastructure
Academic Research Program Implementation	Create the evidence base for new approaches to prevention and early detection.	Identify CPRIT funded basic research that could translate new discoveries into practical advances.	Increase workforce and infrastructure: researcher recruitment, training grants and core facilities.
Prevention Program Implementation	Implement programs to put these new approaches into practice and continue to fund what is known to work (evidence based).	Due to long lead-time to product development, there may be limited role for prevention to implement programs resulting from this research.	Implementing systems change, developing partnerships and collaborations, training of community and healthcare providers, and creating new jobs.
Product Development Research Program Implementation	Fund new tools, technologies, methods and devices for early cancer detection and prevention.	Fund translational research that bridges the gap between basic research and product development.	Build up life sciences infrastructure and industry in Texas and create new high paying jobs.

ACADEMIC RESEARCH PROGRAM PRIORITIES FY2015 - FY2017

Priorities - FY2015, FY2016 and FY2017																														
			Recruit outstanding cancer researchers to Texas				Investment in CORE Facilities				A broad range of innovative, investigator- initiated academic research projects				Prevention and Early Detection				Childhood Cancers				Population disparities and cancers of importance in Texas				Computational biology and analytic methods			
Cycle	# funded awards	\$ awarded	# Addressing Priority	% Awards	\$ Awarded	% Funds	# addressing priority	% Awards	\$ Awarded	% Funds	# addressing priority	% Awards	\$ Awarded	% Funds	# addressing priority	% Awards	\$ Awarded	% Funds	# addressing priority	% Awards	\$ Awarded	% Funds	# addressing priority	% Awards	\$ Awarded	% Funds	# addressing priority	% Awards	\$ Awarded	% Funds
FY2015	112	\$188,180,000	17	15%	\$49,000,000	26%	6	5%	\$30,950,000	16%	69	62%	\$92,319,999	49%	13	12%	\$22,100,000	12%	10	9%	\$17,900,000	10%	ND	0%	ND	0%	2	2%	\$6,450,000	3%
FY2016	109	\$197,590,000	20	18%	\$62,520,000	32%	6	6%	\$30,340,000	15%	72	66%	\$51,970,000	26%	17	16%	\$23,272,828	12%	20	18%	\$26,984,209	14%	38	35%	\$32,982,826	17%	9	8%	\$24,600,567	12%
FY2017*	122	\$212,911,662	39	32%	\$113,100,000	53%	11	9%	\$46,562,278	22%	67	55%	\$53,986,327	25%	14	11%	\$21,260,046	10%	23	19%	\$48,478,271	23%	21	17%	\$40,896,125	19%	14	11%	\$39,983,177	19%
Total	343	\$598,681,662	76	22%	\$224,620,000	38%	23	7%	\$107,852,278	18%	208	61%	\$ 198,276,326	33%	44	13%	\$ 66,632,874	11%	53	15%	\$ 93,362,480	16%	59	17%	\$73,878,951	12%	25	7%	\$71,033,744	12%

Note: Projects may address more than one priority
 *Assumes adoption of August 1, 2017 PIC recommendations

PREVENTION PROGRAM PRIORITIES FY2015 - FY2017

Priorities - FY2015 and FY2016														
			Focus on underserved populations				Prioritize populations and geographic areas of greatest need, greatest potential for impact				Increase targeting of preventive efforts to areas where significant disparities in cancer incidence or mortality in the state exist			
Cycle	# funded awards	\$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ awarded
FY2015	16	\$27,890,646	16	100%	\$27,890,646	100%	15	94%	\$26,627,304	95%	12	75%	\$18,920,485	68%
FY2016	26	\$26,938,196	26	100%	\$26,938,196	100%	18	69%	\$18,650,900	69%	14	54%	\$13,464,820	50%
TOTAL	42	\$54,828,842	42	100%	\$54,828,842	100%	33	79%	\$45,278,204	83%	26	62%	\$32,385,305	59%

NOTE: Projects may address more than one priority

Priorities - FY2017*														
			Prioritize underserved populations				Prioritize populations disproportionately affected by cancer incidence, mortality or cancer risk prevalence				Prioritize geographic areas of the state disproportionately affected by cancer incidence, mortality or cancer risk prevalence			
Cycle	# funded awards	\$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ awarded
FY 2017	17	\$26,043,832	17	100%	\$26,043,832	100%	11	65%	\$14,229,009	55%	10	59%	\$15,068,341	58%

NOTE: Projects may address more than one priority

*Assumes adoption of August 1, 2017 PIC recommendations

PRODUCT DEVELOPMENT PROGRAM PRIORITIES FY2015 - FY2017

Priorities - FY2015 and FY2016														
			Funding projects at Texas companies and relocating companies that are most likely to bring important products to the market				Providing funding that promotes translation of research at Texas institutions into new companies able to compete in the marketplace				Identifying and funding projects to develop tools and technologies of special relevance to cancer research, treatment and prevention			
Cycle	# funded awards	\$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded
FY2015	6	\$69,509,265	6	100%	\$69,509,265	100%	1	17%	\$2,000,000	3%	6	100%	\$69,509,265	100%
FY2016	4	\$66,060,655	4	100%	\$66,060,655	100%	1	25%	\$16,946,716	26%	4	100%	\$66,060,655	100%
TOTAL	10	\$135,569,920	10	100%	\$135,569,920	100%	2	20%	\$18,946,716	14%	10	100%	\$135,569,920	100%

NOTE: Projects may address more than one priority

Priorities - FY2017*																										
			Funding novel projects that offer therapeutic or diagnostics not currently available, i.e., disruptive technologies				Funding projects addressing large or challenging unmet medical needs				Investing in early stage projects when private capital is least available				Stimulating commercialization of technologies developed at Texas institutions				Supporting new company formation in Texas or attracting promising companies to Texas that will recruit staff with life sciences expertise, especially experienced C-level staff to lead seed clusters of life science expertise at various Texas locations				Providing appropriate return on Texas taxpayer investment			
Cycle	# funded awards	\$ awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded	# addressing priority	% of total awards	\$ awarded	% of \$ Awarded
FY2017	1	\$8,998,067	1	100%	\$8,998,067	100%	1	100%	\$8,998,067	100%	0	0%	\$0	0%	1	100%	\$8,998,067	100%	1	100%	\$8,998,067	100%	1	100%	\$8,998,067	100%

* Assumes adoption of August 1, 2017 PIC recommendation



Priorities across CPRIT’s Three Programs: FY2015 – FY2017 Cumulative*

	Prevention and Early Detection Initiatives	Early Translational Research	Enhance Texas’ Research Capacity and Life Science Infrastructure
Academic Research Program Implementation	\$63,068,424 39 awards	\$37,830,000 24 awards	\$294,380,000 76 awards
Prevention Program Implementation	\$80,872,674 59 awards	N/A	\$80,872,674 59 awards
Product Development Research Program Implementation	N/A	N/A	\$135,569,920 10 awards

*Assumes adoption of PIC recommendations



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

MEMORANDUM

TO: OVERSIGHT COMMITTEE MEMBERS
FROM: JAMES WILLSON, M.D., CHIEF SCIENTIFIC OFFICER
SUBJECT: JANUARY 10, 2018 ACADEMIC RESEARCH SUBCOMMITTEE MEETING
DATE: JANUARY 10, 2018

Summary

The Oversight Committee Academic Research Subcommittee recommends that the Oversight Committee approve the staff recommended FY 2019 Academic Research Program priorities and the proposed FY 2019 Cycle 2 RFAs. The FY 2019 priorities essentially remain unchanged from those adopted for FY 2018. The subcommittee members were briefed on and discussed several funding scenarios for fiscal years 2020 through 2023 to be informed for the broader discussion expected at the January 17, 2018, Oversight Committee special meeting.

Discussion

FY 2019 Program Priorities and FY2019 RFAs

Academic Research Program staff propose the Oversight Committee approve FY 2019 Academic Research Program priorities. These priorities are very similar to the FY 2018 priorities; however, the prevention and early detection priority was modified to emphasize implementation research to accelerate the adoption and deployment of prevention and screening interventions. We also recommended modifying the population disparities and cancers of importance in Texas priority to emphasize hepatocellular cancer. Related to the proposed priorities, I also provided an overview of the proposed RFA Schedule for Cycle 2 of FY 2019. The Academic Research Subcommittee unanimously recommends that the Oversight Committee approve the proposed FY 2019 Academic Research Program priorities and the proposed RFAs and release schedule for Cycle 2 of FY 2019.

Funding Scenarios for FY 2020-2022

The subcommittee members were briefed on and discussed several funding scenarios for fiscal years 2020 through 2023.

Collaborative Action Program (CAP) to reduce liver cancer mortality in Texas.

I reviewed a proposal for a collaborative action program to reduce hepatocellular cancer (HCC) mortality in Texas. Dr. Garcia and I developed the proposal in response to Oversight Committee members' interest in exploring the feasibility of a CPRIT project that would catalyze statewide expertise to tackle a cancer problem of high importance. Committee members voiced interest in further consideration of the proposal.

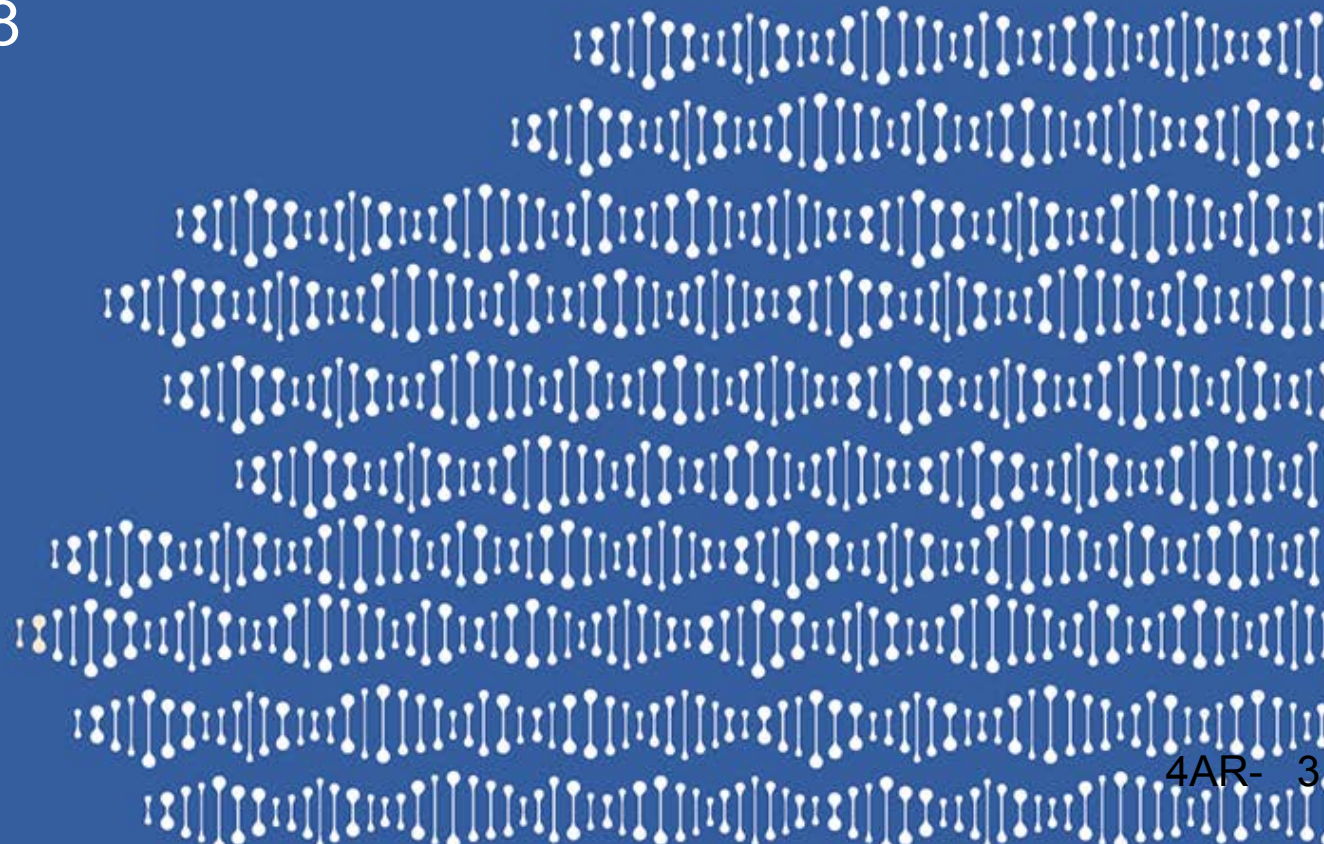


CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Academic Research Program

Priorities and resource allocations FY 19 to FY 22

January 17, 2018



Academic Research Program Priorities 2018

- PRINCIPLES:
 - Scientific excellence and impact on cancer
 - Increasing the life sciences infrastructure
- PRIORITIES:
 - Recruitment of outstanding cancer researchers to Texas
 - Investment in core facilities
 - A broad range of innovative, investigator-initiated research
 - Prevention and early detection
 - Computational biology and analytic methods
 - Childhood cancers
 - Population disparities and cancers of importance in Texas



Academic Research Program Priorities 2019

- Recruitment of outstanding cancer researchers to Texas
- Investment in core facilities
- A broad range of innovative, investigator-initiated research
- Implementation research to accelerate the adoption and deployment of evidence based prevention and screening interventions
- Computational biology and analytic methods
- Childhood cancers
- Hepatocellular cancer



Academic Research Program

RFA Release Schedule – Scenario #4

Mechanisms	FY2018	FY2019	FY2020	FY2021	FY2022
Recruitment	\$80,000,000	\$80,000,000	\$74,000,000	\$74,000,000	
Individual Investigator Research Awards (IIRA)	\$45,600,000	\$45,600,000	\$28,400,000	\$28,400,000	
• IIRA- Broad range of innovative research	\$16,200,000	\$16,200,000	\$16,200,000	\$16,200,000	
• IIRA - Childhood & Adolescent Cancers	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	
• IIRA - Prevention	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	
• IIRA - Clinical Translation	\$12,000,000	\$12,000,000			
• IIRA- Computational Biology	\$5,400,000	\$5,400,000			
Core Facility Support Awards	\$36,000,000	\$36,000,000			
High Impact/High Risk	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	
Multi-Investigator Research Awards	\$20,000,000				
Early Translational Research Awards		\$10,000,000	\$10,000,000	\$10,000,000	
Summed Projected Budget	\$185,600,000	\$175,600,000	\$116,400,000	\$116,400,000	
Budget Scenarios #4.	\$176,453,843	\$176,453,843	\$116,810,350	\$116,810,350	0



Academic Research Program

RFA Release Schedule – Scenario #5

Mechanisms	FY2018	FY2019	FY2020	FY2021	FY2022
Recruitment	\$80,000,000	\$80,000,000	\$48,000,000	\$48,000,000	\$48,000,000
Individual Investigator Research Awards (IIRA)	\$45,600,000	\$45,600,000	\$28,400,000	\$28,400,000	\$28,400,000
• <i>IIRA- Broad range of innovative research</i>	\$16,200,000	\$16,200,000	\$16,400,000	\$16,400,000	\$16,400,000
• <i>IIRA - Childhood & Adolescent Cancers</i>	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000
• <i>IIRA - Prevention</i>	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000
• <i>IIRA - Clinical Translation</i>	\$12,000,000	\$12,000,000			
• <i>IIRA- Computational Biology</i>	\$5,400,000	\$5,400,000			
Core Facility Support Awards	\$36,000,000	\$36,000,000			
High Impact/High Risk	\$4,000,000	\$4,000,000			
Multi-Investigator Research Awards	\$20,000,000				
Early Translational Research Awards		\$10,000,000			
Summed Projected Budget	\$185,600,000	\$175,600,000	\$76,400,000	\$76,400,000	\$76,400,000
Budget Scenarios #5.	\$176,453,843	\$176,453,843	\$76,403,567	\$76,403,567	\$76,403,567



Appendices

- Resource Documents



Awards by Priority FY 2015, 2016 & 2017

Priority	# Funded Awards	% of Total Awards	Funds Awarded	% of Total Funds Awarded
Recruitment of outstanding cancer researchers to Texas	76	22%	\$224,620,000	38%
Investment in core facilities	23	7%	\$107,852,278	18%
A broad range of innovative, investigator-initiated research	208	61%	\$198,276,326	33%
Prevention and Early Detection	44	13%	\$66,632,874	11%
Childhood Cancers	53	15%	\$89,310,927	16%
Population disparities and cancers of importance in Texas	59	17%	\$73,878,951	12%
Computational biology and analytic methods	25	7%	\$71,033,744	12%



CPRIT Impact by Mechanism

Mechanism	# Cumulative Awards	Cumulative Award Funds	Follow-on Funds	Patent Applications	#Publications Published
Recruitment	151	\$444,090,000	\$257,822,782	66	1300
Core Facility Support Awards	41	\$154,970,000	\$160,314,232	10	275
High Impact/High Risk	123	\$24,530,000	\$29,647,058	27	199
Individual Investigator Research Awards	394	\$381,750,000	\$274,301,151	90	1770
Early Translational Research Awards	36	\$48,860,000	\$6,764,280	7	39
Multi-Investigator Research Awards	201	\$247,710,000	\$153,933,249	37	1363
Research Training Awards	23	\$59,880,000	\$17,998,816	8	799
Totals	969	\$1,361,790,000	\$900,781,568	245	5745

Data through August 31, 2017



Accolades for CPRIT Scholars

- ✓ 8 members National Academies of Sciences; Medicine; Engineering
- ✓ 2 Members Howard Hughes Medical Institute (HHMI); 2 HHMI Scholars
- ✓ 4 National Cancer Institute Outstanding Investigators
- ✓ 2015 Lasker DeBakey Clinical Medical Research Award
- ✓ 2015 American Society Clinical Oncology's Gianni Bonadonna Breast Cancer Award
- ✓ 2016 Wolf Prize in Chemistry
- ✓ 2016 American Society Clinical Oncology Distinguished Achievement Award
- ✓ 2016 O'Donnell Award in Medicine, Academy of Medicine, Engineering and Science of Texas

“Houston is loading up on superstar cancer scientists, bankrolled in part by a generously funded state program that's transforming Texas into the nation's center of research on the deadly disease.”

Houston Chronicle

“UCSD loses 3 star scientists to Rice University”

The San Diego Star Union-Tribune

“In a time of declining federal investment in biomedical research, the resources from CPRIT will make it possible to do things in Texas that are difficult or impossible to do in most other places”.

The Texas Brain Gain, J Clin Invest. 2012;12:424.

“The Battle for Biomedical Supremacy ...Much of the frenzy has been driven by the outsize role of Texas”

The New York Times, Editorial



Impact of CPRIT Scholars

- **Parker Institute at MD Anderson Cancer.** The Parker Institute for Cancer Immunotherapy, created with a \$250 million grant from the Parker Foundation, focuses on accelerating progress in the breakthrough field that helps the immune system attack cancers. The program at MD Anderson will be led by James Allison. Funding in the first year was announced as \$10-15M.
- **BCOM is designated as one of three NIH Proteogenomic Translational Research Centers.** The Center will develop biomarkers in the context of a clinical trials using an integration of proteomics and genomics to understand drug response and resistance to therapies. The Center is led by CPRIT Scholar, Matthew Ellis, MB, B.Chir., Ph.D., and will focus on breast cancer. The CPRIT supported proteomic core facility at BCOM provides the technical infrastructure for this important NIH Award.
- **BCOM and Rice are designated as an NIH Encyclopedia of DNA Elements Project (ENCODE) Center.** Erez Lieberman Aiden, Ph.D., a CPRIT Scholar and assistant professor of genetics at BCOM and senior scientist at Rice leads the \$3.3 million award that establishes BCOM as one of eight ENCODE Centers. The ENCODE Project is a research consortium funded by the National Human Genome Research Institute to identify all functional elements in the human genome sequence.



Impact of CPRIT Scholars -2-

- **BCOM is designated as a NIH Proteogenomic Data Analysis Center.** The Center is led by CPRIT Scholar, Bing Zhang, Ph.D., and will use advanced computational methods to integrate and analyze different data types (genomics, transcriptomics, and proteomics, imaging and clinical data) to improve the understanding of the genome-proteome relationship and the interplay/regulation of signaling pathways involved in cancer.
- **Rice received a five-year, \$11.75 million grant from the National Science Foundation (NSF) to establish a Center for Theoretical Physics.** The Rice Center is one of ten Physics Frontiers Centers supported by the NSF. The Center's researchers work at the intersection of biology and physics, using computational analysis, to reveal how interactions at the atomic scale relate to the behavior of cells and their communities. A major focus is to understand the progression and evolution of cancer under a variety of different condition. The Center came to Rice in 2011 when biophysicists José Onuchic, Ph.D., and bioengineer Herbert Levine, Ph.D., were recruited to Texas as CPRIT Established Investigators. The Center includes researchers at BCOM and the University of Houston.
- **MD Anderson awarded a Stand Up to Cancer (SU2C) "Immunology Dream Team".** The Entertainment Industry Foundation's SU2C program awarded \$11M to CPRIT Scholars, James P. Allison, Ph.D., and Cassian Yee, M.D., at MD Anderson to address key factors currently limiting the efficacy and wide applicability of tumor immunotherapy.





CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

MEMORANDUM

TO: OVERSIGHT COMMITTEE MEMBERS
FROM: MICHAEL LANG, CHIEF PRODUCT DEVELOPMENT OFFICER
SUBJECT: JANUARY 11 PRODUCT DEVELOPMENT RESEARCH
SUBCOMMITTEE MEETING
DATE: JANUARY 11, 2018

Summary

The Product Development Research Subcommittee recommends that the Oversight Committee approve the staff recommended FY 2019 Product Development Program priorities. The proposed priorities remain unchanged from those adopted for FY 2018. The subcommittee members were briefed on and discussed several funding scenarios for fiscal years 2020 through 2023 to be informed for the broader discussion expected at the January 17, 2018, Oversight Committee special meeting.

Discussion

FY 2019 Program Priorities

Product Development staff proposes no changes for the FY 2019 Product Development Program priorities, noting that the program has been served well under the current priorities as evidenced by the results being achieved by the program. The Product Development Subcommittee members recommend that the Oversight Committee approve the FY 2019 Product Development Program priorities.

Funding Scenarios for FY 2020-2022

Mr. Roberts presented alternative funding scenarios provided in the subcommittee materials. Three of the scenarios were previously presented to the Oversight Committee (Scenario 1-3). Two scenarios (Scenarios 4 and 5) were proposed by the Program Officers who have expressed a preference for Scenario 4. The subcommittee discussed the advantages and disadvantages of Scenario 3 (downward slope of funding) vs. Scenario 4 (earlier expenditure). The downward sloping Scenario 3 maintains funding activities into 2022 which may be viewed more positively by the legislature and other constituencies. Scenario 4, which contemplates an earlier expenditure of funds, maintains the same frequency of RFA cycles thru 2021 with no 2022 RFA cycles. This reduces overhead costs in 2022 and provides earlier impact (more companies, follow on funding, clinical studies, jobs, patents etc.). Product Development staff recommend Scenario 4. The Product Development Subcommittee deferred any decision on preferred scenarios until the full Oversight Committee meeting on January 17.

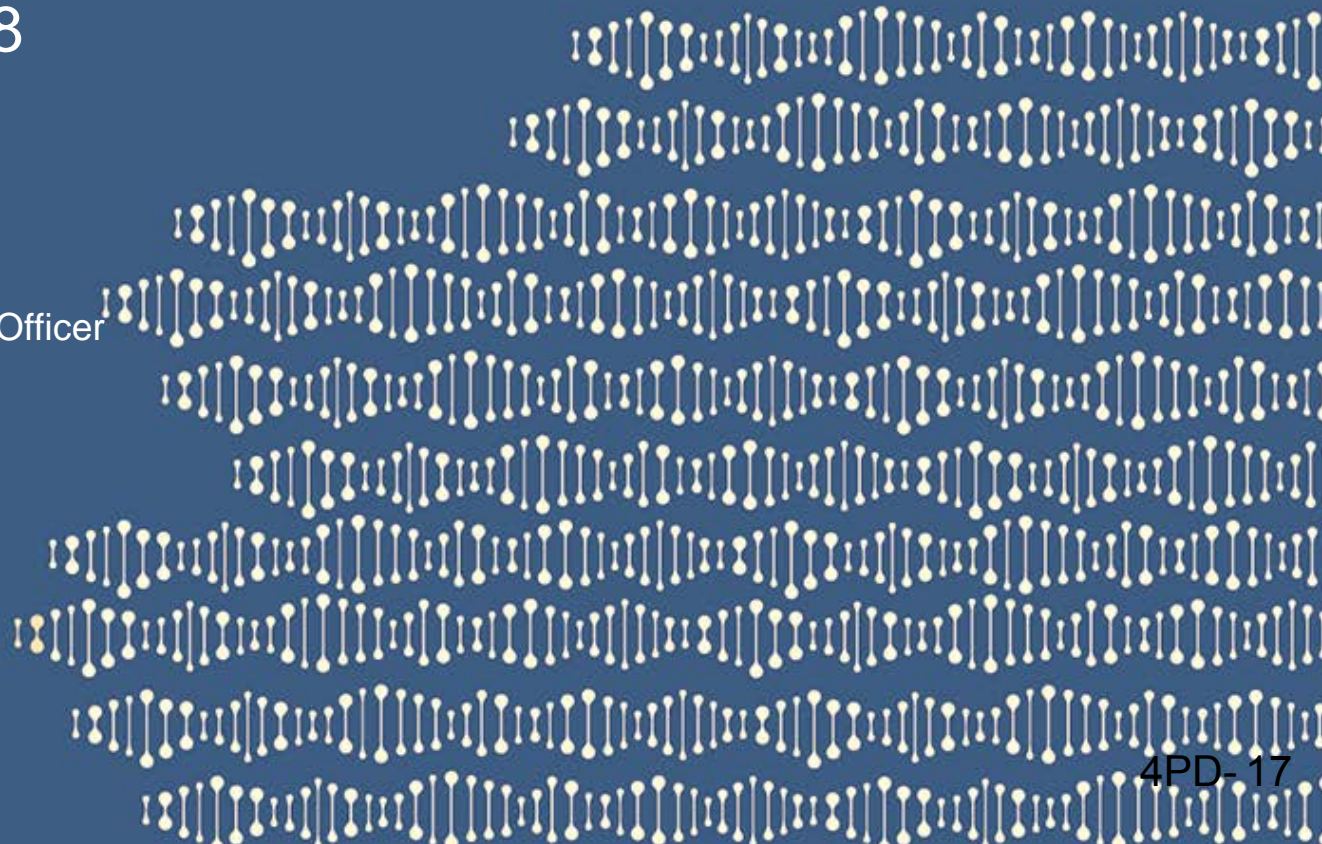


CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

CPRIT Oversight Committee Product Development Report

January 17, 2018

Presented By:
Michael Lang
Chief Product Development Officer



Product Development Agenda

- ❑ Approval Request - PD Program Priorities, FY 2019
- ❑ Open PD Award Cycles Update – FY 18.1 & 18.2
- ❑ Planned PD Award Cycles 2019-2022
 - ❑ Budget & Timeline
 - ❑ RFA schedule



Recommended PD Program Priorities, FY 2019

FY 2018 Product Development Research Program Priorities

- Funding novel projects that offer therapeutic or diagnostic benefits not currently available; i.e., **disruptive technologies**
- Funding projects addressing large or challenging **unmet medical needs**
- Investing in **early-stage** projects when private capital is least available
- Stimulation commercialization of technologies developed at **Texas institutions**
- Supporting **new company formation in Texas or attracting promising companies to Texas** that will recruit staff with life science expertise, especially experienced C-level staff, to lead to seed clusters of life science expertise at various Texas locations
- Providing appropriate **return on Texas taxpayer investment**

No changes proposed for 2019

Product Development Subcommittee voted to approve on Jan 11

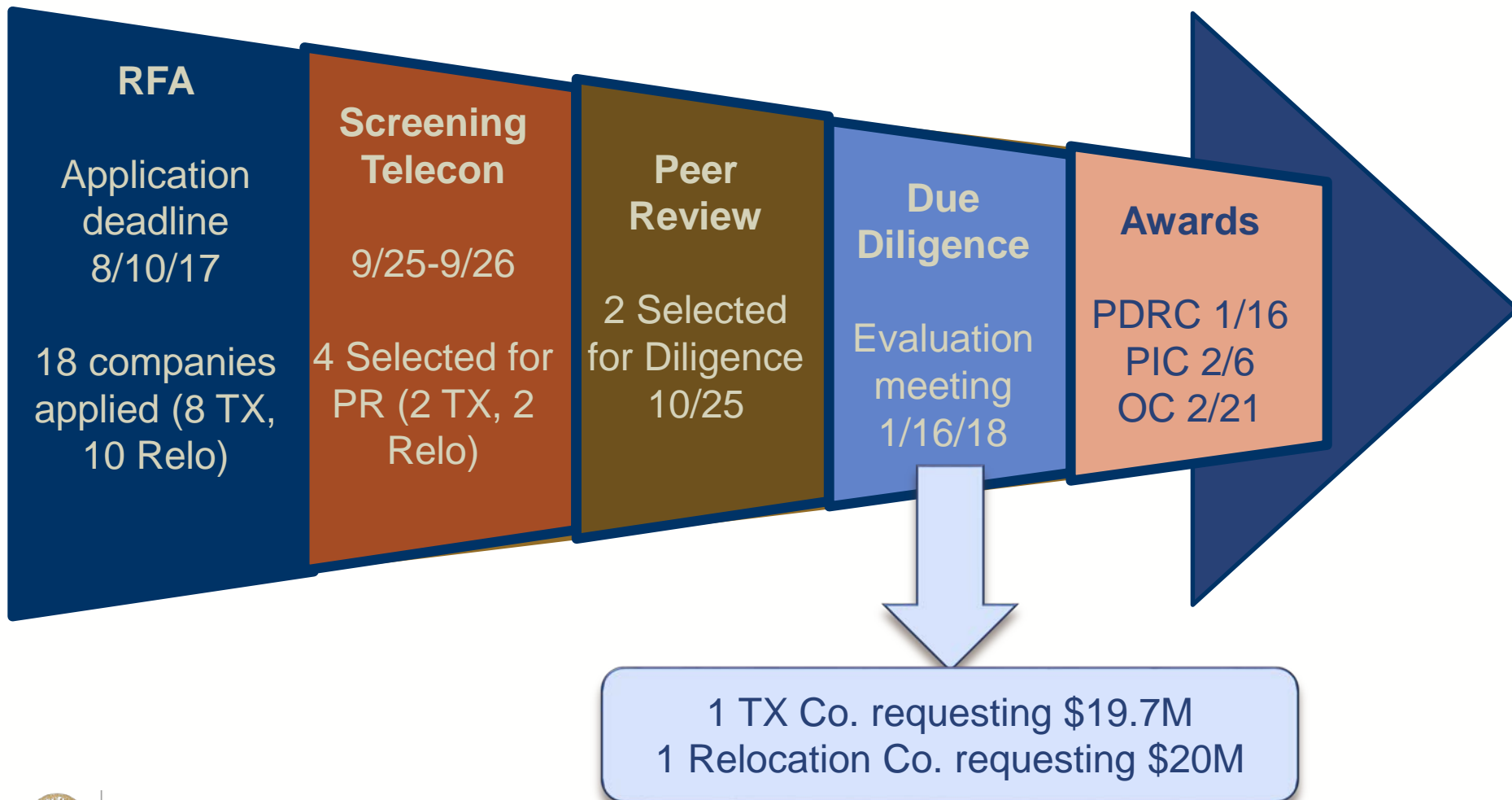


PD Goals for FY 2018 and beyond

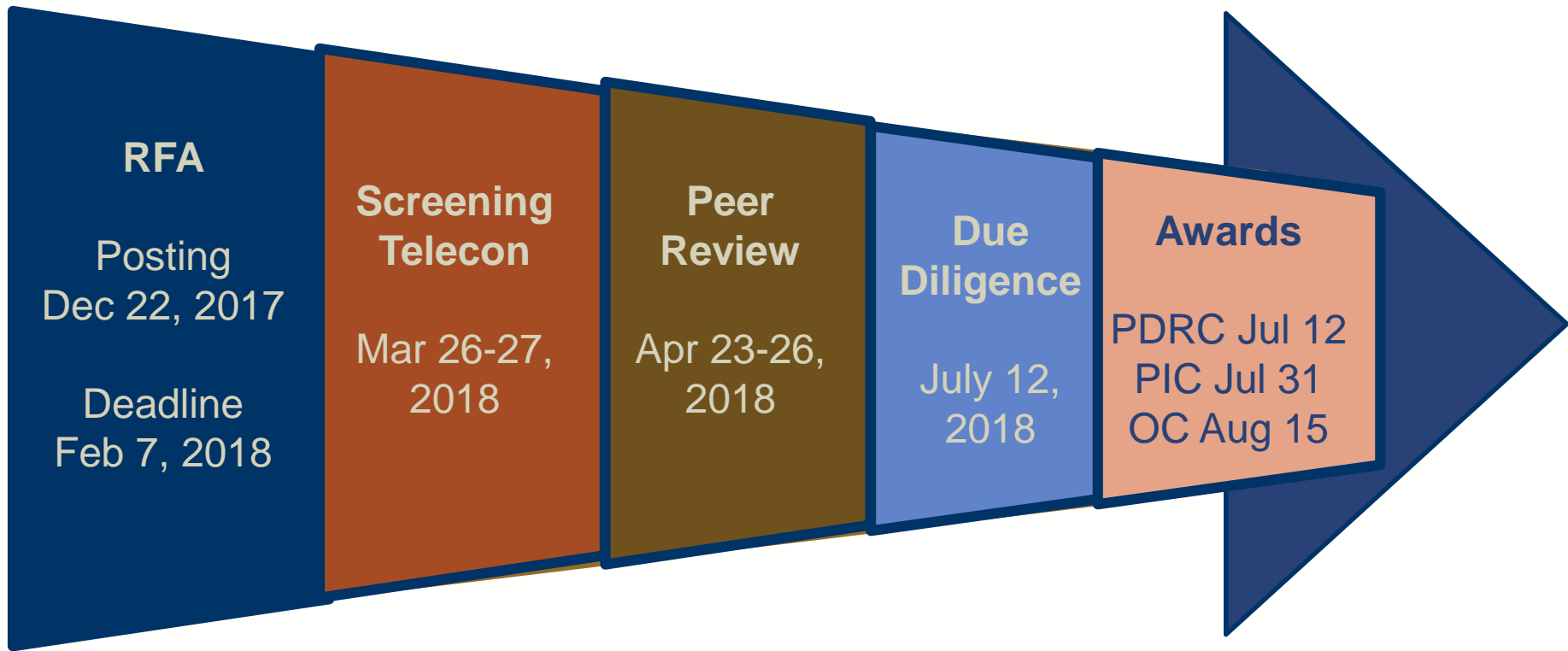
- Novel Projects
 - Novel ideas with therapeutic or diagnostic benefits not currently available
 - Addressing large or challenging unmet medical needs
 - Based on sound scientific research, that will attract private investment
 - Early stage projects when private capital is most difficult to obtain
- Grow Ecosystem
 - Catalyze Texas life sciences ecosystem; TX startups & attract companies
 - Attract life science industry talent, especially C-level staff to seed new clusters
- Research spinouts
 - Support commercialization of technologies developed at Texas institutions



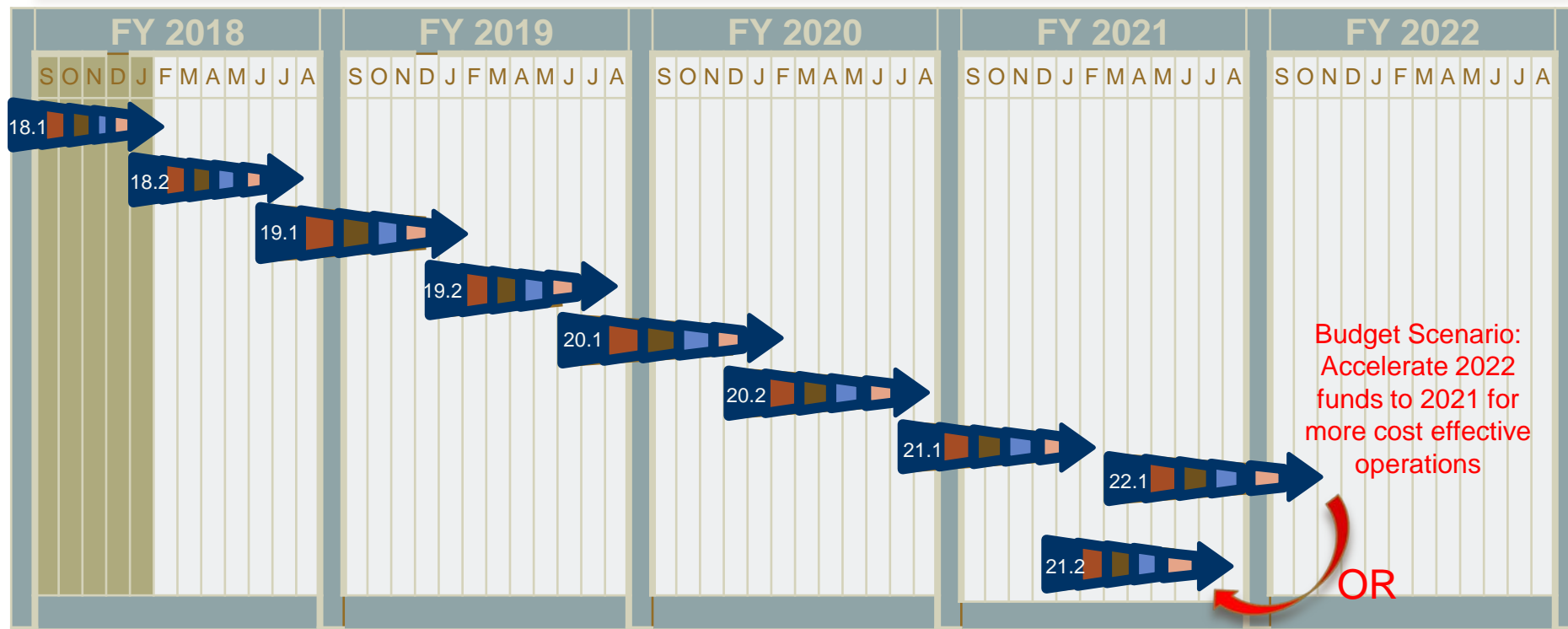
PD Award Cycle Update – 18.1



Schedule for RFA Cycle 18.2



RFA Budget & Timeline, 2018-2022



Annual Budget :

\$76M	\$76M	\$46M	\$39M	\$14M
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Award Scenarios :

Up to 5 @ ~\$15M each	Up to 5 @ ~\$15M each	Up to 3 @ ~\$15M each	2 awards @ ~\$15 each	1 award @ ~\$14M
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Discussion Items

- Approval Request - PD Program Priorities, FY 2019
- Approval Request - RFA Schedule 2019 - 2022
 - Maintain operations thru 2022 (continuity)
 - Accelerate 2022 RFA to 2021 (efficiency & earlier impact)

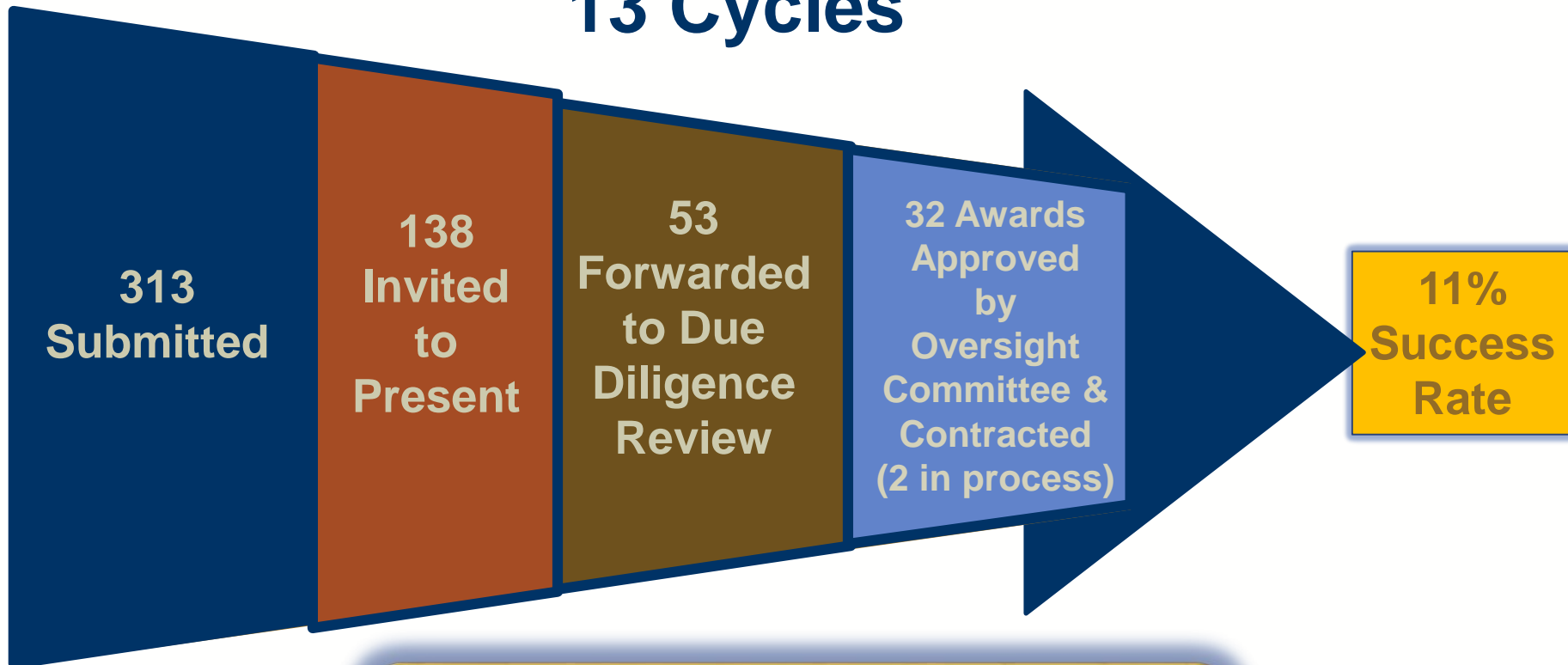


Appendix



PD Funding History

13 Cycles



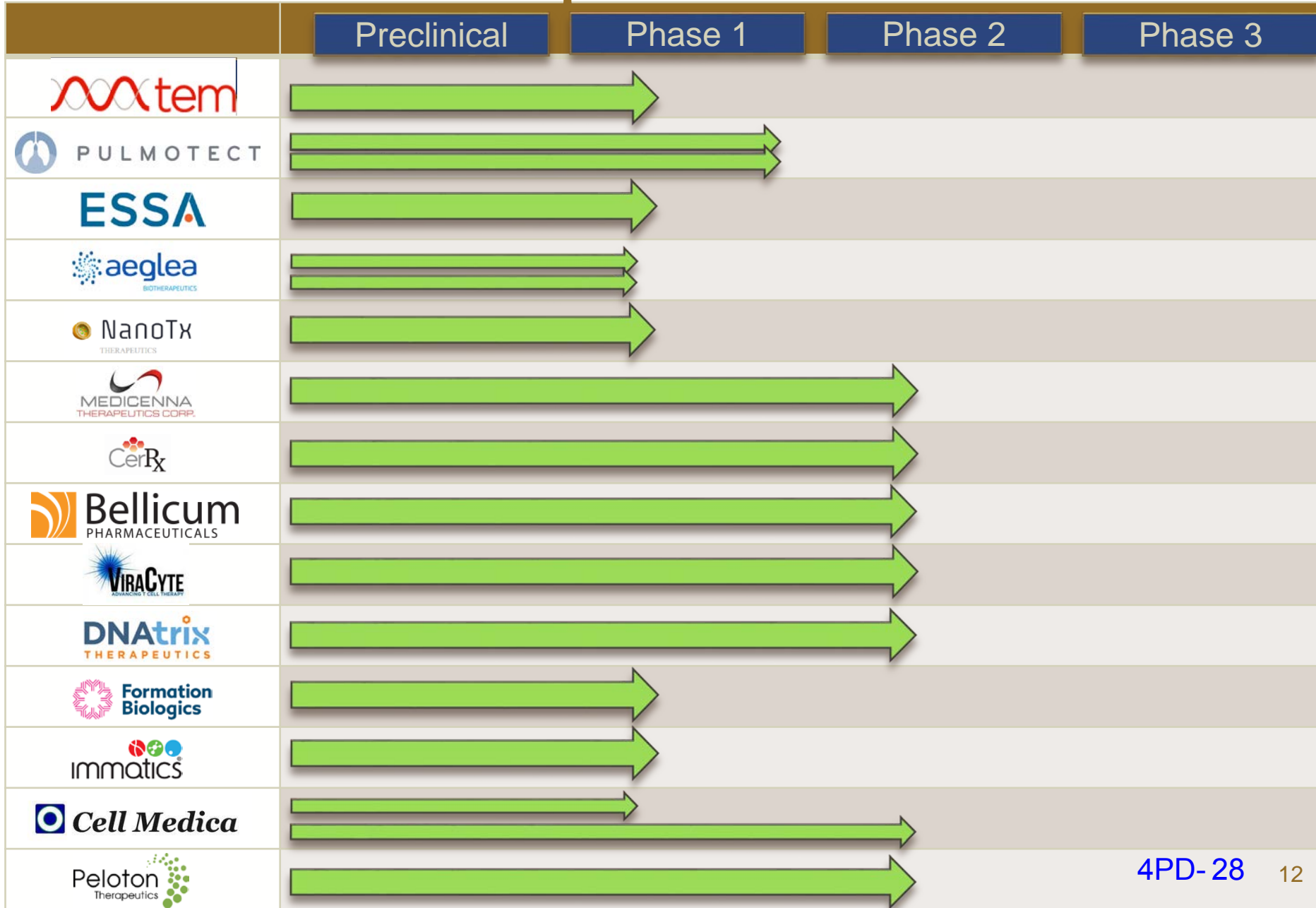
- \$329.6M awarded
- 32 awards granted to 29 firms
- \$1.47B in follow on funding
- 14 companies have ongoing clinical trials



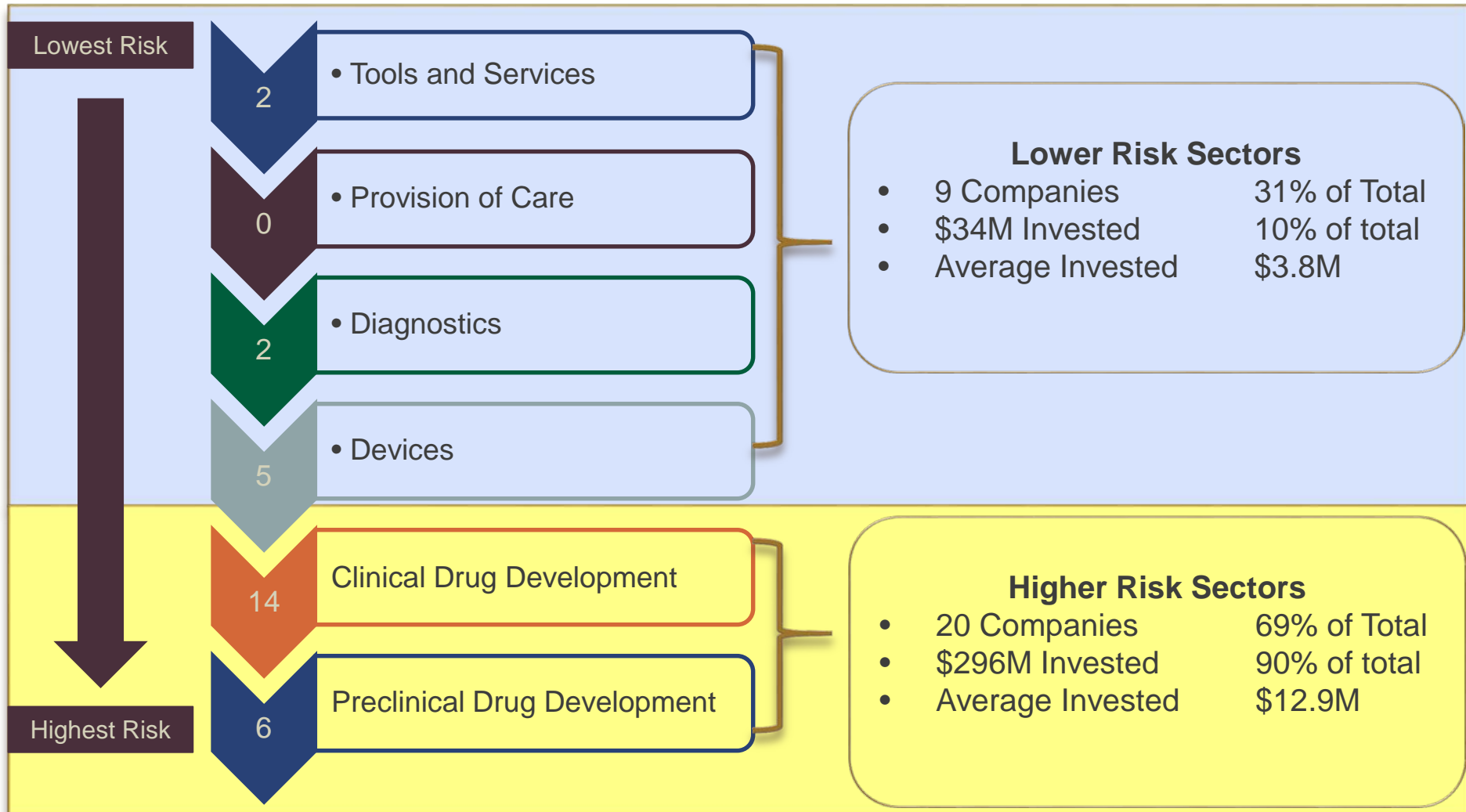
29 PD Awardees to date



Robust Clinical Pipeline



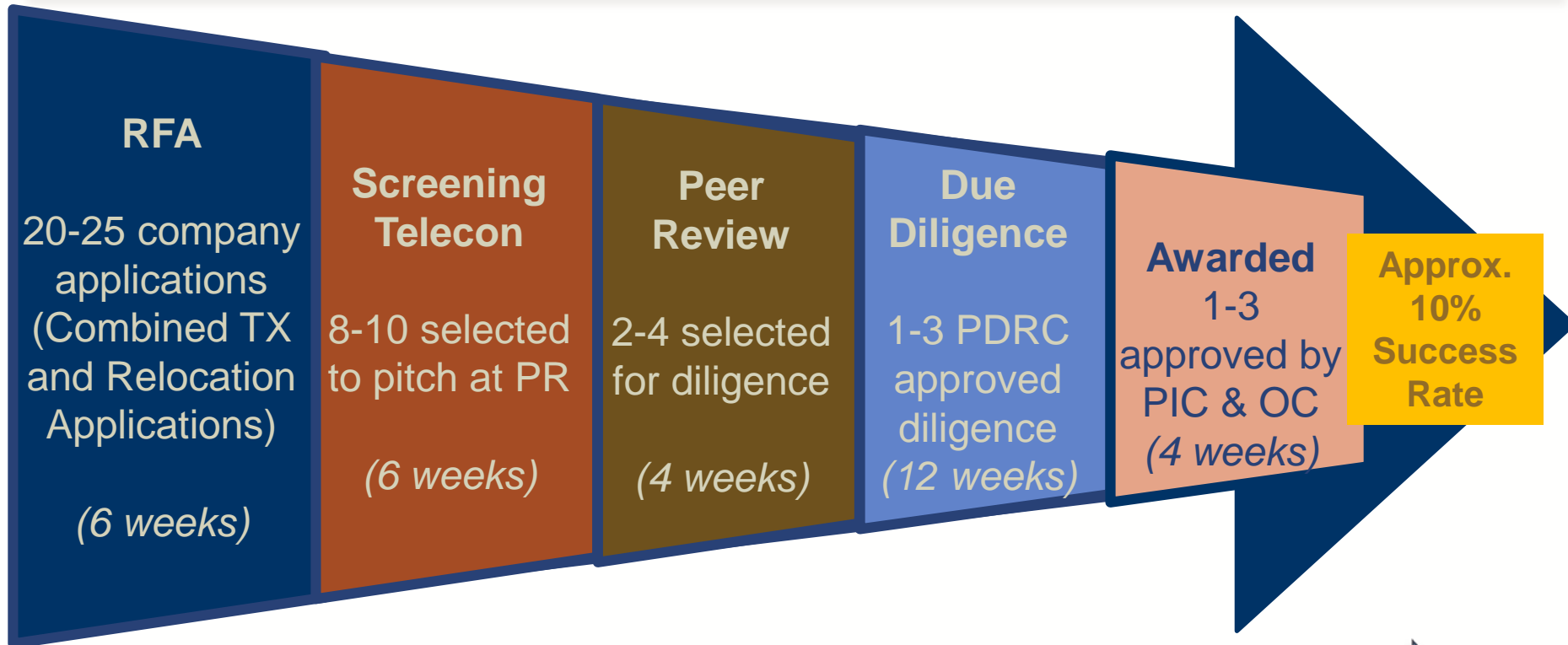
PD Portfolio – 90% Oncology Drugs



CPRIT has predominantly invested in oncology drug development.



Typical Product Dev. Application Cycle



8 month process

Average 2 awards per RFA cycle, 2 RFAs per year
Range \$6M-\$20M (avg. ~\$15M per company)
Estimated 4 companies @ \$15M each → \$60M PD Awards Annually



RFAs FY 18

Two Product Development Award Mechanisms:

1. **Texas Company** Product Development Research Awards

- Invested in preclinical research and early clinical research necessary to demonstrate initial clinical safety and efficacy (typically phase 1, phase 2A)
- All cancer-related sectors are eligible: therapeutics, diagnostics, devices, and tools
- Recipient companies must currently be or commit to be Texas based
- 50% Matching: recipient companies are required to raise \$1.00 in matching funds for every \$2.00 contributed by CPRIT
- Applicants may request up to \$20M in CPRIT funds
- Funding is tranching and tied to the achievement of contract specified milestones
- Duration: 36 months
- All award contracts include a revenue-sharing agreement

2. **Company Relocation** Product Development Research Awards

- Same key points as above; designed for companies relocating to Texas





CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

MEMORANDUM

TO: OVERSIGHT COMMITTEE MEMBERS
FROM: REBECCA GARCIA, PHD, CHIEF PREVENTION AND COMMUNICATIONS OFFICER
SUBJECT: JANUARY 8, 2018 PREVENTION SUBCOMMITTEE MEETING
DATE: JANUARY 10, 2018

Summary

The Oversight Committee Prevention Subcommittee recommends to the Oversight Committee approval of the staff recommended FY 2019 Prevention Program priorities which would remain unchanged from those adopted for FY 2018. The subcommittee members were briefed on and discussed several funding scenarios for fiscal years 2020 through 2023 to be informed for the broader discussion expected at the January 17, 2018, Oversight Committee special meeting.

Discussion

FY 2019 Prevention Program Priorities

Prevention Program staff propose no changes for the FY 2019 Prevention Program priorities. The Prevention Program has been served well under the current priorities, as evidenced by the results being achieved by the program. The Prevention Subcommittee unanimously recommends that the Oversight Committee approve the proposed FY 2019 Prevention Program priorities.

Funding Scenarios for FY 2020-2022

Mr. Roberts presented alternative funding scenarios provided in the subcommittee materials. Three of the scenarios were those presented previously to the Oversight Committee (Scenario 1-3). Two scenarios were proposed by the Program Officers who have expressed a preference for what is referred to as Scenario 4. Instead of discussing a specific scenario recommendation the subcommittee focused on whether selecting a funding proposal based on positioning CPRIT for the future or addressing all the goals under current statute would be the best strategy. For example, should the Oversight Committee focus on only funding academic research and prevention if it is felt they would have the biggest short-term impact and legislative interest. Consideration was given for scenarios that fund all three programs and might maximize immediate benefits through prevention, academic research and product development research. Also emphasized was the need to address the Oversight Committee's fiduciary duty of fulfilling current state law.

The subcommittee discussed my recommendation to focus on continuation/expansion projects starting in 2020 as the program budget decreases. This allows the program to leverage CPRIT funded infrastructure and minimize start up time, which is always required when new programs

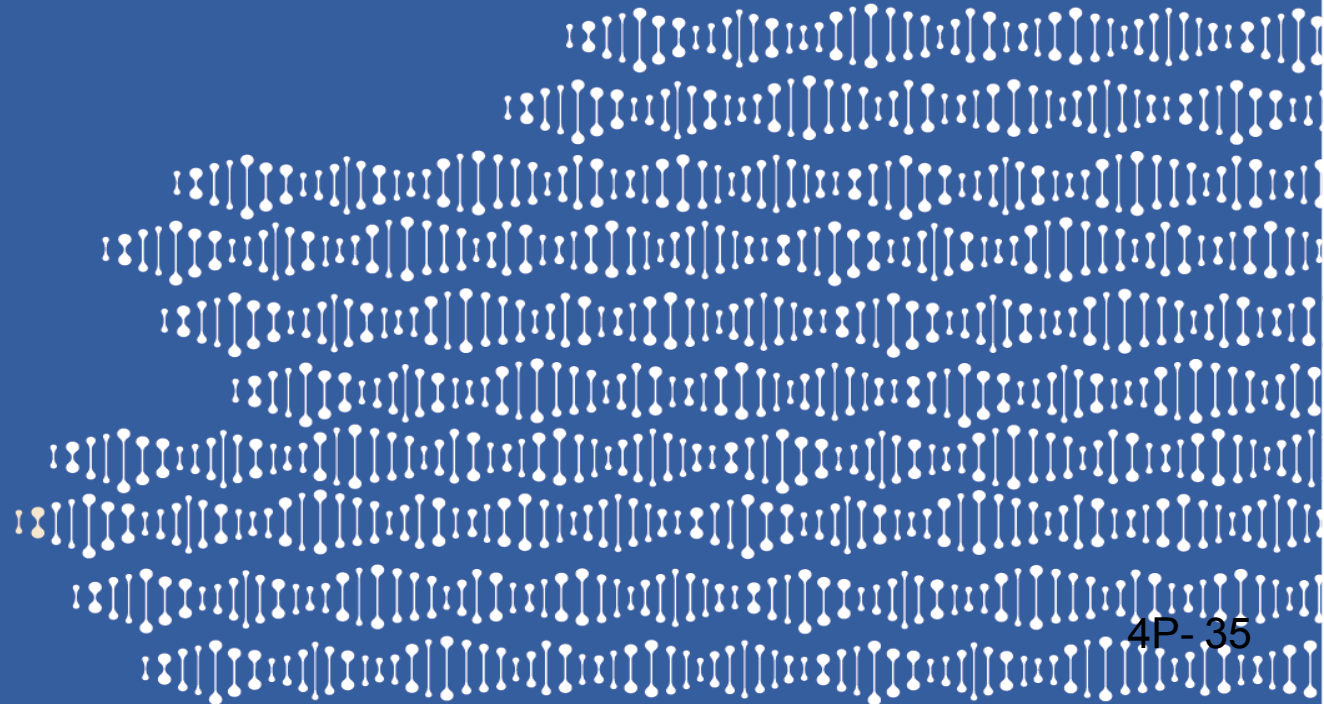
are funded. I recommend scenario 4 (funding of \$18.5 million in both 2020 and 2021), which provides more money up front and maximizes programmatic impact. While the decrease in funding reduces the Prevention Program's geographic reach and number of services provided, funding the greatest number of 3-year projects up front mitigates this negative impact. The subcommittee agreed with this rationale and encouraged focusing on expansion of previously funded projects.



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CPRIT Prevention Program

Program Impact and Priorities



FY 2018 Approved Priorities

No changes proposed for FY 2019 & beyond

1. Populations disproportionately affected by cancer incidence, mortality or cancer risk prevalence
2. Geographic areas of the state disproportionately affected by cancer incidence, mortality or cancer risk prevalence
3. Underserved populations

Note: Areas of Emphasis listed in all RFAs highlight population and geographic disparities based on TCR data. Data are reviewed and updated annually.



Prevention Program

RFA Release Schedule – Scenario #1,2,3

Mechanisms	FY2018	FY2019	FY2020	FY2021	FY2022
	\$28,022,956	\$28,022,956	\$17,200,000	\$14,514,823	\$0 or \$5,384,211
	2 cycles	2 cycles*	1 cycle	1 cycle	1 or 0
Dissemination of CPRIT Funded Cancer Control Interventions	X	X	X	X	
Continuation and Expansion into Rural and MUA	1st Released Cycle 2	X	X	X	
Evidence-based Cancer Prevention Services	X	X			
Tobacco Control and Lung Cancer Screening	X	X			



Prevention Program

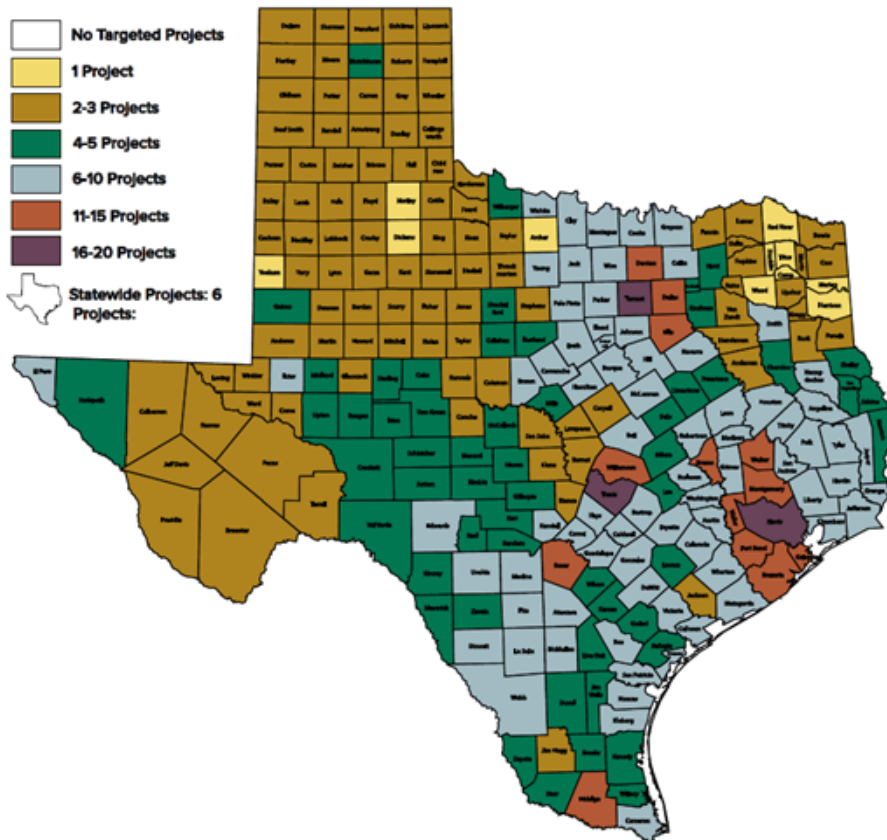
RFA Release Schedule – Scenario #4, 5

	FY2018	FY2019	FY2020	FY2021	FY2022
Scenario 4	\$28,022,956	\$28,022,956	\$18,541,325	\$18,541,325	\$0
Scenario 5	\$28,022,956	\$28,022,956	\$12,127,550	\$12,127,550	\$12,127,550
	2 cycles	2 cycles*	1 cycle	1 cycle	1 or 0
Mechanisms					
Dissemination of CPRIT Funded Cancer Control Interventions	X	X	X	X	
Continuation and Expansion into Rural and MUA	1st Released Cycle 2	X	X	X	
Evidence-based Cancer Prevention Services	X	X			
Tobacco Control and Lung Cancer Screening	X	X	Scenario 4, with max. \$\$ in 2020, reduces the # of projects that will shut down, & maintains more infrastructure, services & coverage for 3 years.		



Current Geographic Coverage & Potential Impact of Reduced Funding

Counties of Residence of Populations Served by 66 Active Projects – Nov 2017
27 projects projected to close in 2020



FY 2020-2021 Proposal

- Support limited number of continuation & expansion and/or DI awards
- Leverage CPRIT funded infrastructure, minimize start up time
- No new projects
- Less geographic coverage
- Fewer services provided

FY 2022 Proposal

- Dependent on scenario and level of funding



Appendix

Program Impact Under Current Priorities

- Geographic coverage and services provided
- Screening Outcomes
- Sustainability examples



Prevention Program Impact

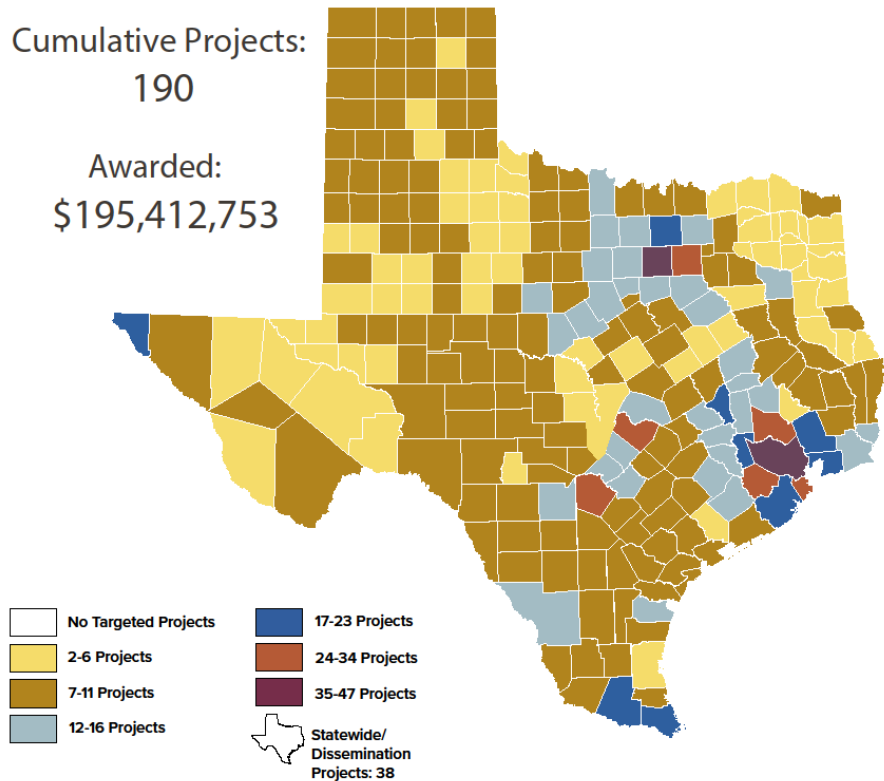
190 awards

\$195,117,949

COUNTIES OF RESIDENCE OF PEOPLE SERVED BY CPRIT PREVENTION PROJECTS

Cumulative Projects:
190

Awarded:
\$195,412,753



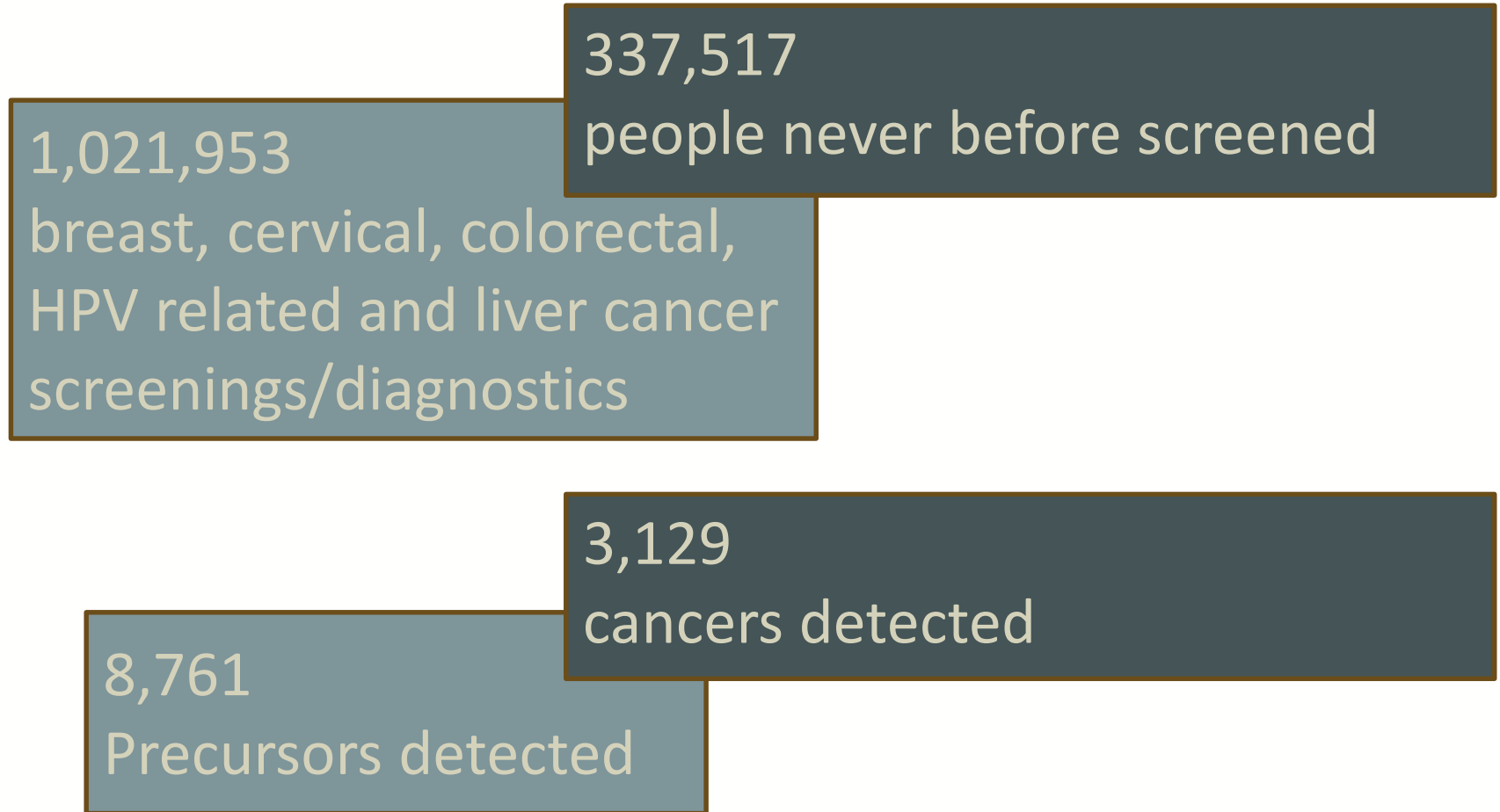
Over 4.0 Million Education and Clinical Services

- 1.9 M Education & Training Services
- 2.2 M Clinical Services
 - ✓ Vaccinations
 - ✓ Tobacco Cessation
 - ✓ Screening: breast, cervical, colorectal, hepatitis B & C
 - ✓ Genetic testing and counseling
 - ✓ Survivor care



Screening Outcomes

Grantee Reports Through November 2017



Impact and Sustainability

Prevention grants also benefit the healthcare system and stimulate greater collaboration among professional colleagues, academic institutions, community organizations and clinics

Sustainable health system improvements include:

- reducing wait times for diagnostic testing
- reducing the number of people lost to follow-up
- implementing patient reminder systems
- enhancing electronic medical records
- training of health professionals including a cadre of community health care workers that help educate and navigate people through the system





CANCER PREVENTION & RESEARCH
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MEMORANDUM

TO: OVERSIGHT COMMITTEE MEMBERS
FROM: WAYNE ROBERTS, CHIEF EXECUTIVE OFFICER
SUBJECT: PROPOSED NEW INITIATIVE
DATE: JANUARY 9, 2018

A working group of CPRIT staff, Mr. Geren (Chair Will Montgomery has replaced Mr. Geren), and Dr. Rice have met several times over the past year to discuss a potential new research initiative. The idea for the new initiative, which started with testimony provided by Susan Dawson at last February's Oversight Committee meeting, is to identify and fund a specific, endemic problem or issue in cancer research, treatment, or prevention that grantees would address through an interinstitutional and interdisciplinary collaboration. Collaborators could include private sector health care providers, nongovernmental organizations, and third-party payers. I provided an update of the working group's discussions at the August Oversight Committee meeting.

After evaluating several proposals, the working group recommends that the Oversight Committee consider developing a new initiative project addressing liver cancer mortality in Texas. Dr. Willson describes the reasons why addressing liver cancer would be particularly meaningful in Texas in his summary, which I have attached to this memo. He will provide an overview of the project on January 17.

While the working group supports this project as the framework for the new initiative, there are practical reasons why it may be difficult to put together the project in the time that CPRIT has left before its sunset date. Implementing such a project also has fiscal implications. Dr. Willson estimates that such a project may require up to \$20 million in CPRIT award funding over the next five years.

If CPRIT moves forward with the new initiative, the Oversight Committee must decide to do so no later than February 21 meeting. The decision about whether to proceed with the new initiative will involve policy decisions and potential fiscal tradeoffs. Given the declining amount of funds available for awards after fiscal year 2019, the working group thought it was an appropriate subject of discussion at the January meeting.

Collaborative Action Program to reduce liver cancer mortality in Texas

SUMMARY

The overall goal of the Program is to position Texas as the national leader in reversing the trajectory of liver cancer incidence in the US.

Liver cancer, also known as hepatocellular cancer (HCC), is the fastest increasing lethal cancer in the US, with an annual incidence that has tripled during the past two decades. Texas is among states with the highest incidence of liver cancer with an annual incidence that is nearly double the national average.

While the reasons for the increase in HCC is not fully understood, the rise is particularly virulent among Texans of Mexican Hispanic ethnicity who have a two-fold higher incidence of HCC compared to non-Hispanic Texans and are disproportionately affected by HCC risk factors including hepatitis C infection, non-alcoholic fatty liver disease, and exposure to aflatoxin.

The proposed “Collaborative Action Program to reduce liver cancer mortality in Texas” - “CAP liver cancer mortality” – will support investigator initiated research projects (1) to explain the increased incidence of HCC in Texas, (2) to discover biomarkers of high risk for developing HCC, and (3) to identify best practices for implementation of prevention measures for HCC.

Research projects will be funded as cooperative agreements to allow CPRIT staff to advise and to ensure coordination across the funded research projects. A coordinating center will be funded as a cooperative agreement with a Texas academic institution to foster interactions among the research participants and to engage private and public entities across the state in developing a plan to implement the project findings.

BACKGROUND

Even as overall cancer rates across the United States decline, liver cancer rates remain on the rise, especially among Texans of Mexican Hispanic heritage. Texas now has the highest incidence of liver cancer in the nation - estimated to be double the national average. In 2017, 4,020 Texans will be diagnosed with HCC and 2,620 will die of liver cancer.

What is behind the increase in liver cancer in Texas? Liver cancer is attributed to a clustering of risk factors that cause liver fibrosis and cirrhosis which are the precursors of HCC.

Hepatitis C infection is a major etiologic factor for cirrhosis and HCC in Texas. Individuals born between 1945 and 1965 are at a very high risk for having chronic hepatitis C and this group is now aging to the point where many have developed cirrhosis and are at high risk for developing HCC. Studies estimate that approximately 368,000 Texans are infected with hepatitis C in Texas and predict that 80 percent will go on to chronic infections and be at high risk for HCC.

Another risk factor for HCC on the rise in Texas is nonalcoholic fatty liver disease (NAFLD). NAFLD is related to obesity and type 2 diabetes and is estimated to affect 1 in 5 adults in Texas (1 in 3 Hispanic adults in Texas). While not all individuals with NAFLD develop liver-related

complications, up to 30% will develop non-alcoholic steatohepatitis (NASH) and be at high risk for development of cirrhosis and HCC. Mexican Hispanics have a high frequency of a genetic polymorphism that increases the risk of obesity and alcohol associated NASH and cirrhosis and the prevalence of this trait among Hispanics may in part explain the rise in HCC in Texas.

In addition to genetic predisposition, recent studies suggest the importance of environmental factors that may explain the incidence of HCC in Texas. Hispanics with liver cancer had much higher levels of aflatoxins than those without liver cancer. This finding suggests a link between aflatoxin, a human carcinogen found in corn, and liver cancer. Another possibility that has not been fully evaluated is the impact of exposure to hazardous air pollutants as a contributing risk factor for liver cancer.

Because of the recent reports on the role of the microbiome in NAFLD and HCC, a comprehensive mechanistic study of the interaction between the microbiome and the liver and the identification of drivers of fatty liver disease progression is needed to identify new preventive strategies.

What can be done to lower the rise in liver cancer incidence and mortality? Screening and treating for hepatitis C and hepatitis B has the potential to have a dramatic impact on HCC incidence and mortality. Hepatitis C treatment results in cure in >90% of cases, and hepatitis B treatment results in adequate viral suppression in >95%. A vaccine for hepatitis B is also available for high risk individuals. Both outcomes have been associated with a considerable reduction in HCC risk.

Behavioral interventions that target obesity and alcohol and tobacco abuse represent obvious opportunities to decrease cirrhosis and HCC particularly in those populations at highest risk such as obese Hispanics carrying the genetic predisposition to developing a “fatty liver”.

Early detection strategies focused on high risk populations offer another promising strategy to change the current trajectory of liver cancer mortality in Texas. The 5-year survival rates for liver cancer is 18% but improves to 31% when diagnosed at an early stage. These data demonstrate both the limited impact of current therapies for late stage HCC and the potential impact of early detection on HCC mortality.

Texas is well positioned to lead a concerted effort to change the trajectory of liver cancer mortality. CPRIT sponsored research and prevention awards have catalyzed collaborative projects across the state that can be the basis of a state-wide investment in a multi-pronged approach to identify robust strategies for the prevention and early detection strategies that will change the current trajectory of HCC mortality in Texas.

A CPRIT Multi-investigator award established the Texas Hepatocellular Carcinoma Consortium (THCC) that includes national leaders in HCC research from Baylor College of Medicine, MD Anderson, UT Southwestern Medical Center, and UT San Antonio. The THCC has established the nation’s premier cohort of individuals at high risk for HCC. This cohort could be expanded to accelerate the validation of biomarkers for early detection and prognosis in HCC.

CPRIT prevention awards currently support regional projects that are using novel strategies to promote HCC prevention through education, screening for hepatitis C, vaccination against hepatitis B and lifestyle modifications. These projects provide opportunities for implementation research to identify the best strategies to adopt and integrate evidence-based interventions into clinical and community settings, scale up successful projects and sustain efforts, and to have a broad geographic impact.

PROPOSED RFA: Collaborative Action Program to reduce liver cancer mortality in Texas

The *CAP liver cancer mortality in Texas* project will promote research in hepatocellular cancer (HCC) prevention and early detection by supporting up to 6 individual investigator research awards designed to discover and validate clinically relevant strategies for preventing or the early detection of HCC in Texas. In addition, this program seeks research projects to identify genetic or environmental factors that explain the disproportionate ethnic and geographic risk for HCC in Texas.

Examples of projects responsive to this program include: implementation research designed to identify optimal outreach, screening and follow up practices for early detection in high-risk populations (including baby boomers); increase access to antiviral therapy for hepatitis C; identify innovative strategies to intervene in life style factors such as obesity and alcohol abuse in individuals at high risk for HCC; geospatial studies to identify environmental risks unique to Texas; and basic studies on the gene environment interactions to identify biomarkers for high risk populations.

In addition to the individual investigator research awards a single Coordinating Center based at a Texas academic institution will be supported to facilitate interactions across the research projects; provide administrative support to the program; assist with identification and collection of common data elements; to establish a collaboration with the state cancer registry to enhance real time assessment of HCC and HCC risk factors across Texas; provide a forum and develop a report for public policy considerations addressing issues critical to the implementation of research findings and reduction of HCC mortality in the state

BUDGET AND REVIEW CONSIDERATIONS

Funding:

Individual Investigator Research Awards, up to 6 @ \$0.5M/year each over 5 years (\$15M)

Coordinating Center @ \$600,000/year over 5 years (\$3M)

Total cost - \$18 M

Review time line:

Oversight Committee Concept Approval: January 2018

Announce RFA: July 2018

Application Receipt Dates: October - January 2019

Peer review: 19.2, Spring 2019

Award: August 2019 - August 2023

