### National Institutes of Health

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# PS-OC Survey: Project Investigators (Sections C & J)

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#### 1. Please identify your primary affiliation with the Physical Sciences - Oncology Centers Program.

#### Please pick one of the answers below.

- O Center Principal Investigator (PI)
- O Center Senior Scientific Investigator (SI)
- O PS-OC Project/Core Investigators (i.e. project/core leader or research investigator)
- O PS-OC Trainee
- O PS-OC Advocate
- O PS-OC Outreach and Dissemination Unit Lead
- O PS-OC Education and Training Unit Lead
- O PS-OC Administrator
- O PS-OC External Advisor
- O I am not associated with the PS-OC Program

Section C. The following section contains questions specific for PS-OC Investigators.

2. C1. There are a variety of different types of scientists involved in the PS-OC program. Research experiences may vary depending on your background and the background of your collaborators. For							
	ng column headers, p			Dly.			
rease in it are answers in an	Your field of training and expertise	Scientists have you worked with prior to the PS-OC program	Scientists you work with currently	Scientists would like to work with in future projects			
Molecular Biologists							
Cell Biologists							
Engineers							
Biologists							
Evolutionary Biologists							
Surgeons							
Oncologists							
Pathologists							
Radiologists							
Cancer Biologists							
Chemists							
Physicists							
Mathematicians							
Theorists							
Statisticians							
Information Technologists/Comput er Scientists							
Other							
3. C2. Please rate your satisfaction with the progress you have made so far on your project specific aims?							
Please pick one of the answers below.							
O Satisfied							
O Somewhat Satisfied							
O Neutral							
O Somewhat Dissatisfied							

Dissatisfied

The following questions inquire about the status and infrastructure of the physical sciences in oncology field.							
4. C3. I have seen evid	lence of the	formation	of a new fie	ld of "Physic	cal Sciences	s-Oncology	" within
Please mark the corresponding circle	e - only one per line	<b>)</b> .					
	Disagree			Neutral			Agree
My department(s)	0	0	0	0	0	0	0
My institutions(s)	0	0	0	0	0	0	0
At scientific meetings	0	0	0	0	0	0	0
My current research	0	0	0	0	0	0	0
My future research plans	0	0	0	0	0	0	0
Publications	0	0	0	0	0	0	0
I have not seen evidence of the formation of a new field of "Physical Sciences- Oncology"	0	0	0	0	0	0	0
5. C4. Does your Institution have an overall strategy for converging physical sciences and oncology outside of the PS-OC program? If yes, please provide details in comment area.							
Please pick one of the answers below	w and add your cor	mments.					
O Yes							
O No							
O Unsure							
	<u></u>						
6. C5. Do any sources	of support	exist for phy	ysical scien	ces in oncol	ogy researd	ch at your Ir	stitution

outside of the PS-OC?

Please pick one of the answers below.

O Yes

O No

7. C5b. Please answer yes or no to the following questions about the "other" types of support offered at your Instution for converging physical sciences and oncology.						
Please mark the corresponding circle	e - only one per line.					
	Yes	No				
Do PS-OC researchers recieve funding from these sources?	0	0				
Do PS-OC researchers collaborate with researchers supported by these sources?	0	0				
Do PS-OC researchers use equipment, materials, or infrastructure supported by these sources?	0	0				
	stions inquire about your PS-OC the PS-OC program.	research advances and your				
8. C6. From your stand emerge from your PS-	dpoint, please briefly describe the most i OC to date.	mportant scientific advancement to				
Please write your answer in the space	ce below.					

9. C6b. Please use the previous example to answer the following questions.							
Please mark the corresponding circle - only one per line.							
	Disagree			Neutral			Agree
This scientific advancement stems from projects that exisited before the PS-OC program.	0	0	0	0	0	0	0
This scientific advancement will lead to future scientific breakthroughs.	0	0	0	0	0	0	0
This advancement would not have occurred without the support of the PS-OC program.	0	0	0	0	0	0	0
There is potential for this scientific advancement to translate into the clinic.	0	0	0	0	0	0	0
10. C7a. Have you subsupported studies?	omitted appli	cations for	research gr	rants based	on the find	ings from yo	our PS-OC
Please pick one of the answers belo	w.						
O Yes							
O No							
11. C7b. What types o	f comments	were recie	ved on thes	e grants?			
Please check all that apply and/or ac	dd your own variant.						
☐ Not enough prelir	minary data						
☐ Too high risk							
□ No clinical application							
☐ Limited biological components							
□ Innovative							
☐ I have not recieved any comments							
Other							

because of your involvement with the PS-OC program.							
Please write your answer in the space	below.						
13. C9. Please check al	II PS-OC v	vorking grou	ips or exerc	ises in whic	h you have	participate	d.
Please check all that apply.							
☐ Evolution and Drug	g Resistan	ce					
Physics							
☐ CTC Transport							
☐ UN of Cell Modulu	S						
☐ Outreach and Diss	emination						
☐ Education and Tra	ining						
☐ Cell line exercise							
☐ I have not participa	ated in any	PS-OC wo	rking group	s or exercis	es		
14. C9b. Please rate the goals.	e effective	ness of the	working gro	ups or exer	cises in ach	nieving the f	ollowing
Please mark the corresponding circle	- only one per lin	е.					
	Α	В	С	D	E	F	G
Faciliate new collaborations	0	0	0	0	0	0	0
Provide new knowledge	0	0	0	0	0	0	0
Increase communication between PS-OC investigators	0	0	0	0	0	0	0
Generate PS-OC Network publications	0	0	0	0	0	0	0
Disseminate information to the broader scientific community about the PS-OC Network	0	0	0	0	0	0	0

	Α	- Ineffective
	В	-
	С	-
	D	- Neutral
	E	-
	F	-
	G	- Effective
		Please provide a suggestion for new PS-OC working groups or exercises in which you ticipate.
Please	e write yo	ur answer in the space below.
		Did the PS-OC faciliate access to equipment and infrastructure for PS-OC researchers hat would have been available otherwise?
Please	e pick one	of the answers below and add your comments.
0	Yes	
0	No	
Con	nment	S

Legend for rank grid table: 14. C9b. Please rate the effectiveness of the working groups or exercises in achieving the

following goals.

Columns:

#### innovative scientific ideas? Please mark the corresponding circle - only one per line. Not Very **Applicable** Ineffective Effective Effective 0 0 0 O O O **Trans-Network Projects** Young Investigator Trans-0 0 0 0 O 0 **Network Projects** 0 0 O 0 O **Pilot Projects** 0 0 0 O **Outreach Pilot Projects** 0 0 0 O 0 O Student Exchanges 0 0 0 O 0 O **PS-OC Annual Meeting** 18. C12. How have you disseminated information about the PS-OC to the broader scientific community? Please check all that apply and/or add your own variant. Presentations at conferences/scientific meetings Invited talks **Publications** Webpage **Email** Newspaper or radio I have not disseminated information about the PS-OC

Other

17. C11. How effective have the following PS-OC opportunities been in encouraging you to generate

	C13. To what types of scientists have you presented and/or discussed your PS-OC research? se check all that apply.
Please	check all that apply and/or add your own variant.
	Molecular Biologists
	Cell Biologists
	Cancer Biologists
	Engineers
	Evolutionary Biologists
	Surgeons
	Oncologists
	Pathologists
	Radiologists
	Chemists
	Physicisits
	Mathematicians
	Theorists
	Statstaticians
	Information Technologists
Othe	er

### 20. C14. From your standpoint, how effectively have the PS-OC program staff performed the following roles in the management and direction of the PS-OC program?

Please mark the corresponding circle - only one per line.

Troube mark the corresponding energ	o only one por							
	Α	В	С	D	E	F	G	Н
Strategic directions	0	0	0	0	0	0	0	0
Facilitating interactions amoung PS-OC investigators	0	0	0	0	0	0	0	0
Facilitating interactions between the PS-OC Network and the broader community	0	0	0	0	0	0	0	0
Advancing research within the PS-OCs	0	0	0	0	0	0	0	0
Organizing working groups and exercises	0	0	0	0	0	0	0	0
Organizing steering committee	0	0	0	0	0	0	0	0

Legend for rank grid table: 20. C14. From your standpoint, how effectively have the PS-OC program staff performed the following roles in the management and direction of the PS-OC program?

#### Columns:

- A I do not know
- B Ineffective
- С -
- D -
- E Neutral
- F -
- G
- H Very Effective

Section J. The following questions inquire about your collaborations and their impact, methods for facilitating collaborations, and the impact of the PS-OC program in your collaborations.

colla whice	21. J1. Without naming specific individuals, please give an example of a successful trans-disciplinary collaboration (i.e. a collaboration that integrated two or more individual disciplinary perspectives) in which you have been involved as part of the PS-OC program. Please provide a brief description of the project and how it was initiated. Please define each member's role in the collaboration.						
Please	e write your answer in th	the space below.					
22.	J1b. What are	the outcomes of the collaboration described above? Please select all the	at apply.				
Please	e check all that apply.						
	New knowled	dge or skills					
	Pilot project f	funds					
	Outreach project funds						
	Trans-networ	rk project funds					
	NIH or NSF g	grant funds					
	Publications						
	Conference p	presentations or invited talks					
	The collabora	ation is still in progress.					
	Will form new	w collaborations					
	Will pursue no	new aspects of the project as an extention of this work					
23.	J1c. How many	ny researchers were involved in this trans-disciplinary collaboration?					
Please	e pick one of the answer	ers below.					
0	2						
0	3						
0	4						
0	5-7						
0	8-10						
0	10+						

### 24. J1d. Please indicate how strongly you agree or disagree with each of the following statements pertaining to the collaboration described above. "I would have obtained these outcomes..."

Please mark the corresponding circle - only one per line.

	Disagree			Neutral			Agree
without one member of the team	0	0	0	0	0	0	0
without two members of the team	0	0	0	0	0	0	0
without a trans-disciplinary collaboration	0	0	0	0	0	0	0
without the support of the PS-OC program	0	0	0	0	0	0	0

25. J2. What difficulties, if any, have you experienced during your trans-disciplinary collaborations in the PS-OC program? Please rate the severity of these difficulties on a scale of 1-5. A "1" indicates that the issue did not impact the outcome(s) of the collaboration. A "5" indicates that the issue severely impacted the collaboration.

Please fill in the answers in the table below (mark appropriate circles and squares and fill in the blank spaces).					
Check all that apply	Please rate the severity of the issue				
	O1 O2 O3 O4 O5				
	O1 O2 O3 O4 O5				
	01 02 03 04 05				
	O1 O2 O3 O4 O5				

Power struggles	01 02 03 04 05
Sharing credit	O1 O2 O3 O4 O5
The team did not meet regularly	O1 O2 O3 O4 O5
The team did not establish trust	01 002 003 004 05
There is no reward structure at my institution for collaborations	O1 O2 O3 O4 O5
Trouble identifying additional team members to help	O1 O2 O3 O4 O5
Lack of clear vision or goals	O1 O2 O3 O4 O5
No agreement on the primary spokesperson	O1 O2 O3 O4 O5

26. J3. Please define y	our role(s) in yo	ur PS-OC collab	orations. Please	e select all that a	apply.			
	ease check all that apply and/or add your own variant.							
☐ Provide cells or re	Provide cells or reagents							
☐ Provide technolog	Provide technology or skill							
☐ Provide strategic	Provide strategic direction							
☐ Leader								
☐ Combine data	e data							
☐ Organize team m	Organize team meetings and communication							
☐ Perform data ana								
☐ Participant								
☐ Advisor								
☐ Provide training/e	ducation							
☐ Create reports								
·	Communicate to stakeholders (i.e. NCI)							
☐ Interface with Inst								
	Administrative support or IT							
Other	·							
07 I4 Disease services	the fellowing or				-t /: -			
27. J4. Please answer faculty level researche		estions with the	approximate nu	mber of investig	ators (i.e.			
Please mark the corresponding circle	e - only one per line.							
	0	1 - 4	5 - 10	11 -15	16+			
How many PS-OC								
investigators within your								
Center did you work with prior to the start of the PS-								
OC program?	0	0	0	0	0			
How many PS-OC investigators within your								
Center do you work with								
now?	0	0	0	0	0			
How many of these new collaborations would have								
started without PS-OC program funding?	0	0	0	0	0			

28. J5. Overall, please	evaluate you	r PS-OC sup	ported collab	orations in th	e following a	areas.
Please mark the corresponding circle	le - only one per line.					
	Very Poor	Poor	F	air	Good	Excellent
Scientific impact	0	0		O	0	0
Productivity	0	0		0		0
Rewarding to all parties involved equally	0	0		0	0	0
Communication among collaborators	0	0		0		0
Ability to utilize the strengths of different researchers involved	0	0		0	0	0
Enabling you to reach your own research milestones faster	0	0	0		0	0
Ability to attract new collaborators to join effort	0	0		<b>o</b>	0	0
29. J6. How effective have the following PS-OC opportunities been in encouraging you to find and/or generate collaborations?						
Please mark the corresponding circle	le - only one per line.					
	Not Applicable	Ineffective		Somewhat Effective		Very Effective
PS-OC Trans-Network Projects	0	0	0	0	0	0
PS-OC Young Investigator Trans-Network Projects	0	0	0	0	0	0
PS-OC Pilot Projects	0	0	0	0	0	0
PS-OC Outreach Pilot Projects	0	0	0	0	0	0
Student Exchanges	0	0	0	0	0	0
PS-OC Annual Meeting	0	0	0	0	0	0
PS-OC Workshops and Symposiums	0	0	0	0	0	0
PS-OC Data Jamboree	0	0	0	0	0	0

### 30. J7. From your standpoint, please evaluate the extent to which the PS-OC program has been successful in the following areas.

Please mark the corresponding circle - only one per line.

	I do not know	Very Poor	Poor	Fair	Good	Excellent
Improving leadership skills in heading a transdisciplinary study	0	0	0	0	0	0
Mentoring junior faculty in leading and participating in a trans-disciplinary study	0	0	0	0	0	0
Increasing the discussion about team science and collaborations at your institution	0	0	0	0	0	0
Developing better policies to review and reward team science at your institution	0	0	0	0	0	0

The following question inquires about your views on the progress the PS-OC program is making relative to the goals of the program.

## 31. From your standpoint, please evaluate the extent to which the PS-OC program has been successful in reaching the following program goals.

Please mark the corresponding circle - only one per line.

Please mark the corresponding circle	e - Only One per line.					
	I do not know	Very Poor	Poor	Fair	Good	Excellent
Form trans-disciplinary teams focused on establishing physical sciences-centric themes in cancer research	0	0	0	0	0	0
Build a collaborative trans- discipline research sharing network	0	0	0	0	0	0
Promote collaboration by PS-OC researchers across the PS-OC network	0	0	0	0	0	0
Educate trans-disciplinary scientists that pursue careers in the field of physical sciences in oncology	0	0	0	0	0	0
Promote collaboration by PS-OC researchers beyond the PS-OC network	0	0	0	0	0	0
Form new physical sciences in oncology programs at universities or institutions	0	0	0	0	0	0
Test dogma-challenging hypothesis on cancer initiation and progression	0	0	0	0	0	0
Bring new types of scientists to cancer research	0	0	0	0	0	0
Generate new datasets in cancer research	0	0	0	0	0	0
Generate new knowledge in cancer research	0	0	0	0	0	0

	nces in oncology or the PS-OC program.
Please write your ans	wer in the space below.