

# Next-level Discovery with Augmented Intelligence

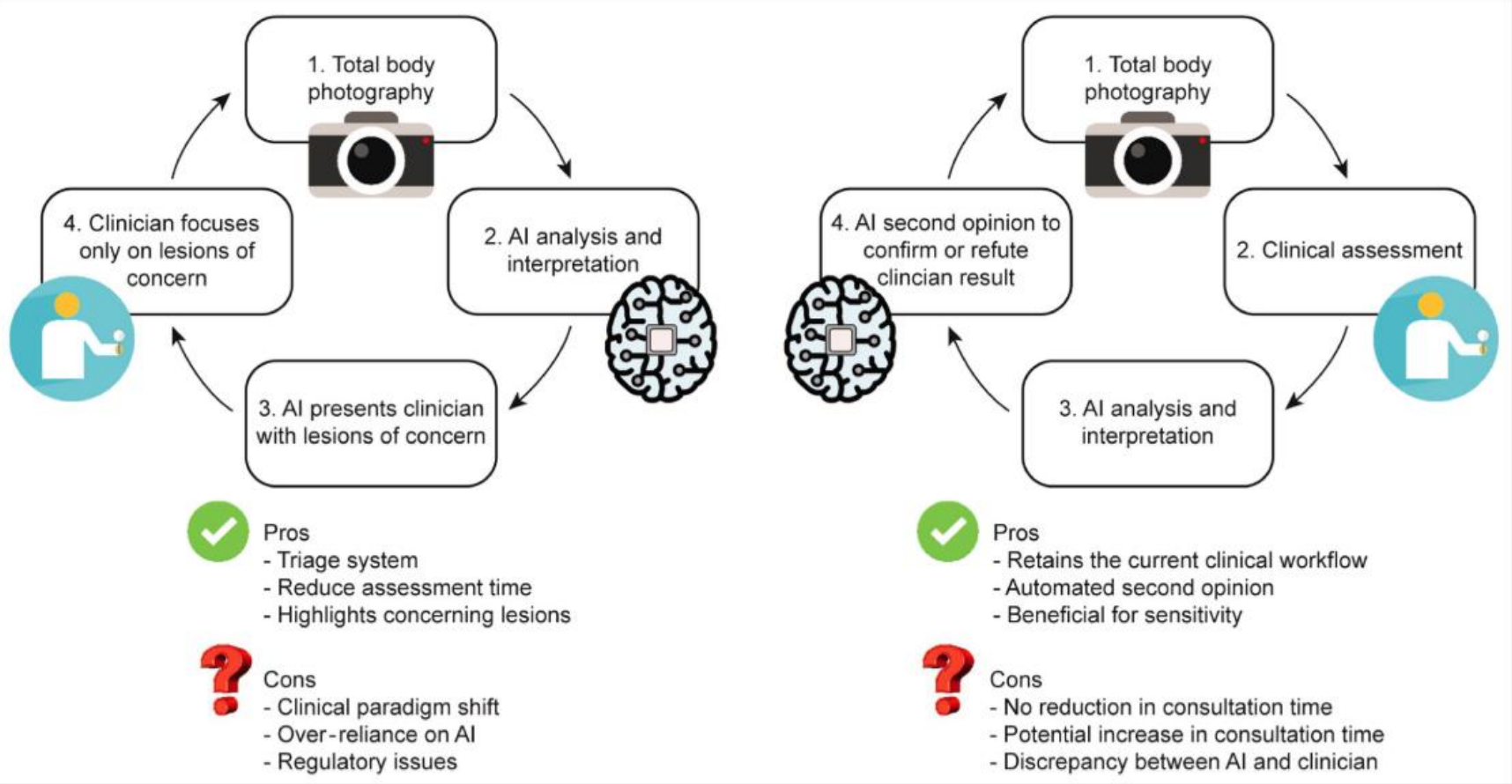
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3 December 2019  
STM Week Innovations Day, AI panel



# Will Artificial Intelligence replace doctors?





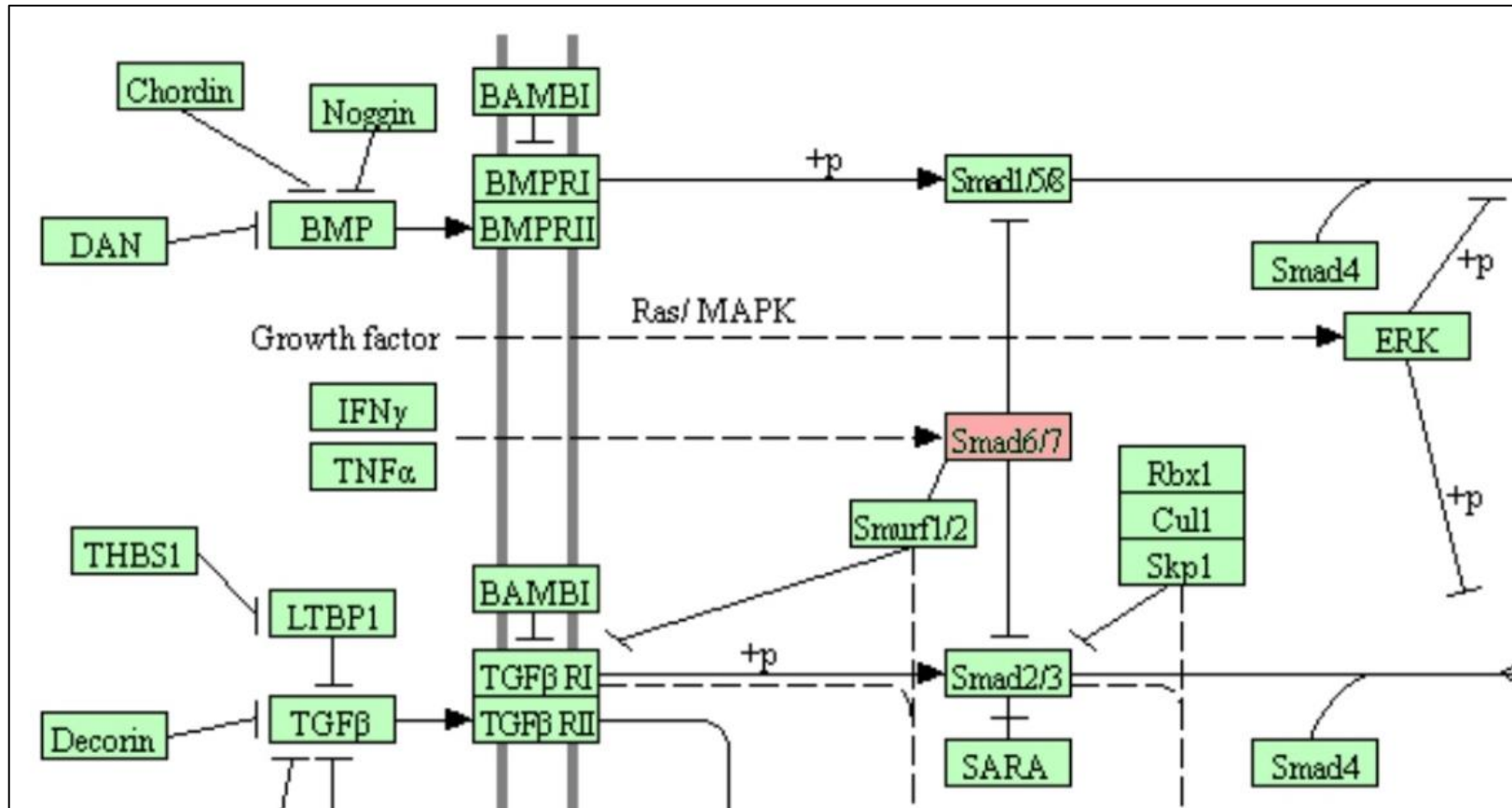
<https://onlinelibrary.wiley.com/doi/full/10.1111/bjd.17110>



# «Augmented Intelligence»

Using specific **Artificial Intelligence** (et al.)  
approaches  
to **augment** human expertise

# Case 1: Mongersen



Key Concept

\$AllGeneticF

TGF family

SMAD

SMAD2

SMAD3

TGFB1

SMAD6

SMAD4

miR-21

NF-kB

BMP

SMURF2

microRNA

SMAD1

TGFBR1

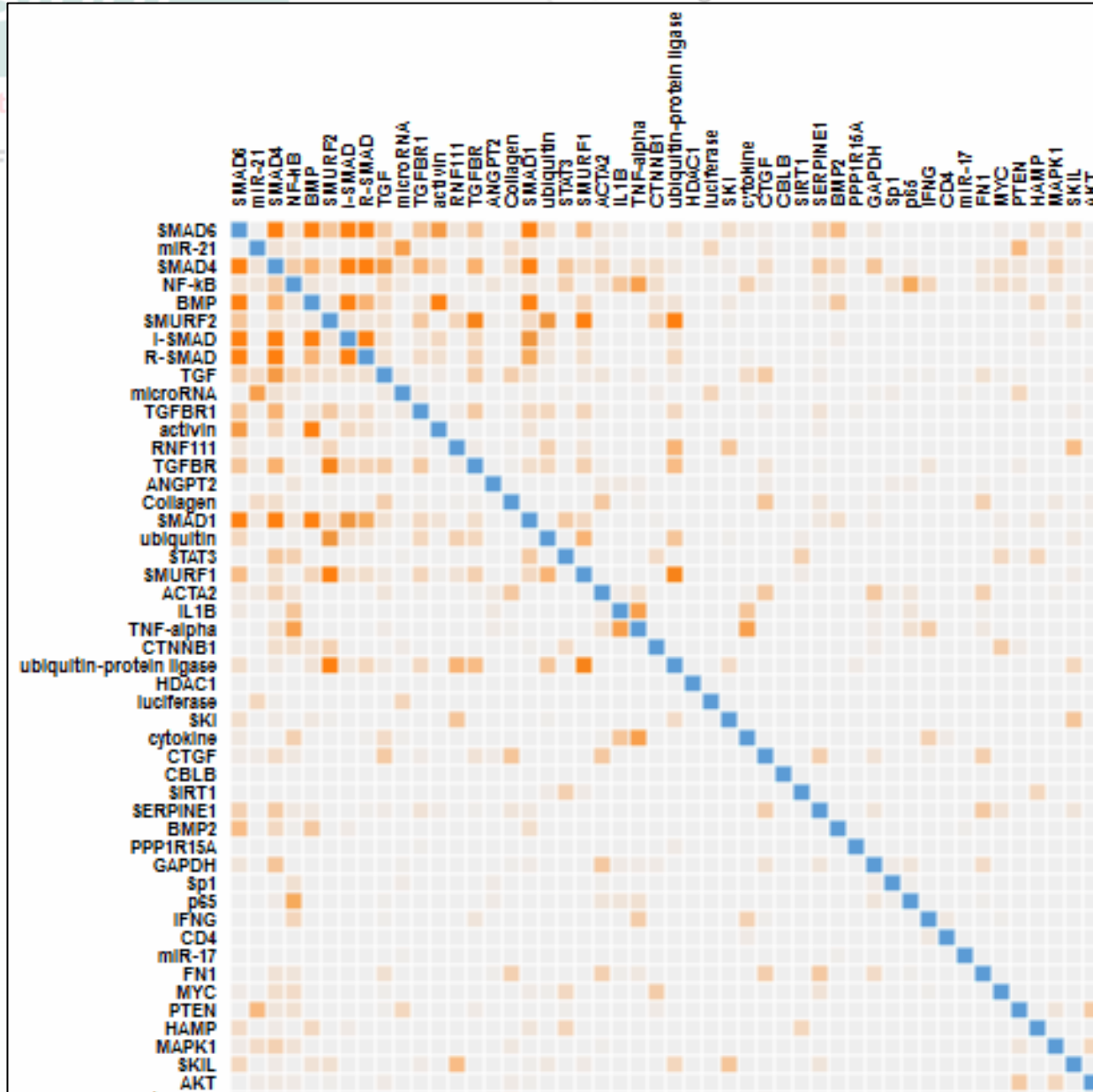
TGFBR

CTGF

activin

iSMAD

SERPINE1



...es pluripotency independent of TGF-β signaling.

...e of Medicine Houston TX 77030.)

act »

...out also by JAK-STAT signaling ( , , ).

...mal Cells Acts as a Transcriptional Corepressor by

...e Cell Cycle. My Library

...ammary Diseases Institute for Drug Discovery Research Astellas Pharma Inc. 21

...d that Smad7 located at the proximal but not distal region,

...ad7 in the former.



Show Abstract »

# Case 2: Systematic Reviews

1 randomized controlled trial.pt  
2 controlled clinical trial.pt  
3 randomized.ab.  
4 placebo.ab.  
5 drug therapy.fs.

18 exp DNA Repair/  
19 DNA repair.mp.  
20 exp "Poly(ADP-ribose) Polymerases"/  
21 (PARP adj5 inhibit\*).mp.  
22 (poly ADP ribose polymerase adj5 inhibit\*).mp.

6  
7 «PARP inhibitors and ovarian cancer»  
8

9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8

10 (animals not (humans and animals)).sh.

11 9 not 10

12 **ovar\*.mp.**

13 **(cancer\* or carcinoma\* or neoplasm\* or tumor\* or tumour\* or malignan\*).mp.**

14 **12 and 13**

15 **exp Ovarian Neoplasms/**

16 **14 or 15**

17 exp DNA Repair Enzymes/

26 **BSI-201.mp.**

27 **INO-1001.mp.**

28 **MK4827.mp.**

29 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28

30 11 and 16 and 29

# 79 PARP inhibitors (not 6)

olaparib	N-ethylmaleimide	benzopyrone	FR247304
niraparib	CEP-8983	AZD-2461	GPI-16346
rucaparib	CEP-9722	picolinamide	GPI-18180
veliparib	E-7016	GPI-15427	FR-257517
talazoparib	DPQ (PARP Inhibitor III)	GPI-6150	GPI-18078
histidine	midazolam	EB-47	GPI-6000
minocycline	carvedilol	KU-0058948	quinoxaline analogue 3b
iniparib	BGP-15	3,4-dihydro-5-methyl- isoquinolinone	ICX-56258231
thymidine	PCMBS	3-methoxybenzamide	BYK-204165
pyruvic acid	AG-14361	PARP inhibitor XI	ONO-1924H
bendamustine	INO-1001	5-(2-oxo-2-phenylethoxy)- 1(2H)-isoquinolinone	3-methyl-5-AIQ
niacin	PARPi-FL	NVP-TNKS656	
3-aminobenzamide	5-amino-1(2H)-isoquinolinone	4-quinazolinol	
E-7449	NU1025	KU-0058684	
pamiparib	chloromercuribenzoate	2-(4-hydroxyphenyl)-1H-benzimidazole- 4-carboxamide	
histamine	G007-LK	CEP-6800	
PJ34	[18F]PARPi	carba-NAD	
lapachone	thieno(2,3-c)isoquinolin-5-one	6-iodo-5-nitro-chromen-2-one	
benzamide	4-amino-1,8-naphthalimide	o-Iodosobenzoate	
XAV-939	nicaraven	A-966492	
theophylline	1,5-Dihydroxyisoquinoline	ONO-2231	
1(2H)-phthalazinone	6-phenanthridinol	ME0328	
IBMX	6-amino-5-iodo-1,2-	indenoisoquinolinone	





# «Under the Hood»

- Over a dozen AI (et al.) components in
  - Data ingestion / indexing
  - Query interpretation
  - Result generation
  - Visualization
- Partially Human-Curated Ontology
- >40 million documents, including clinical trials, patents, and more to come

# Thank you.

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**Quertle is actively looking for opportunities to improve discoverability of scientific content with Augmented Intelligence for both users and publishers.**

**Let's talk!**