

N.1

INSTITUTE FOR HEALTH

COMICS 2020

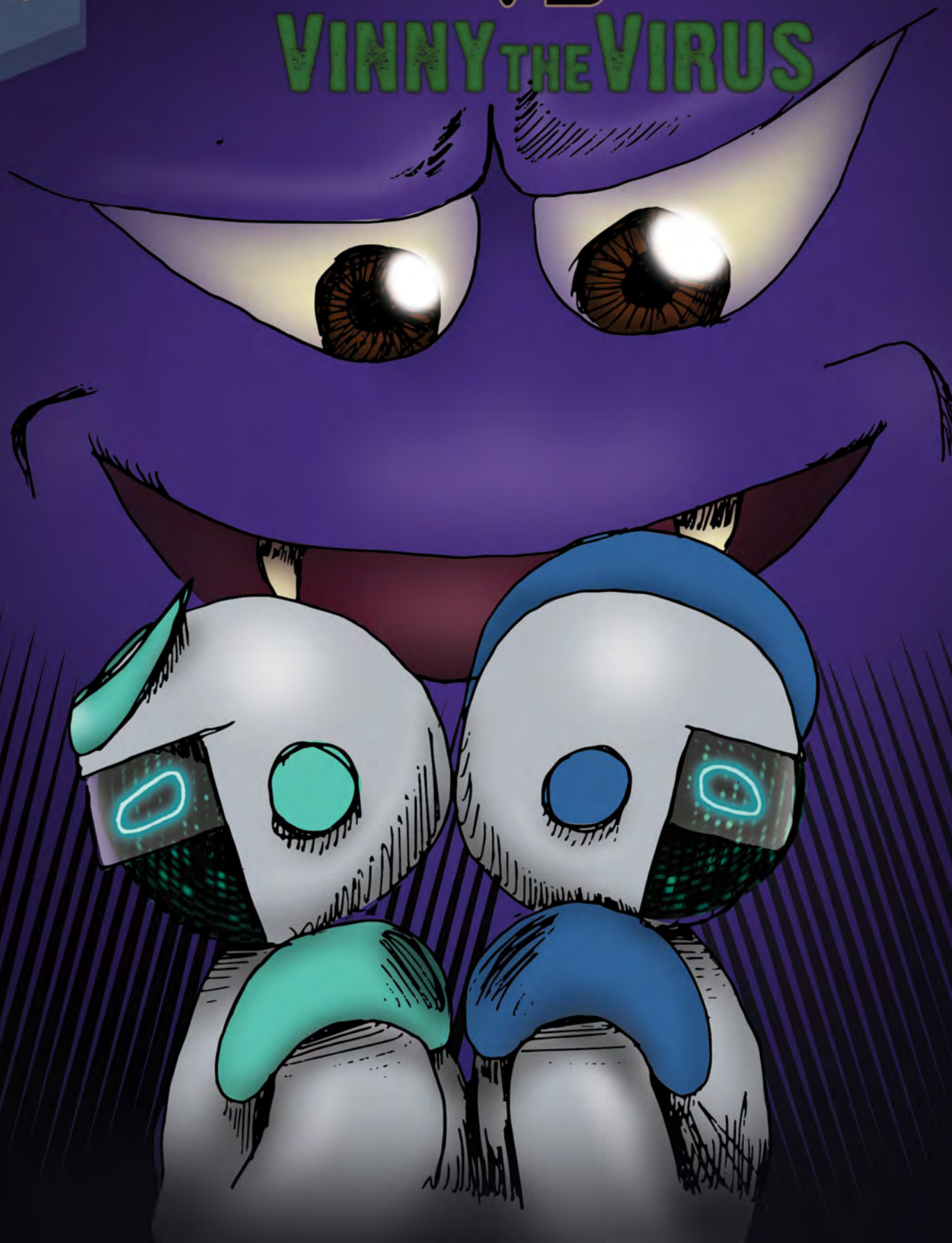
ISSUE

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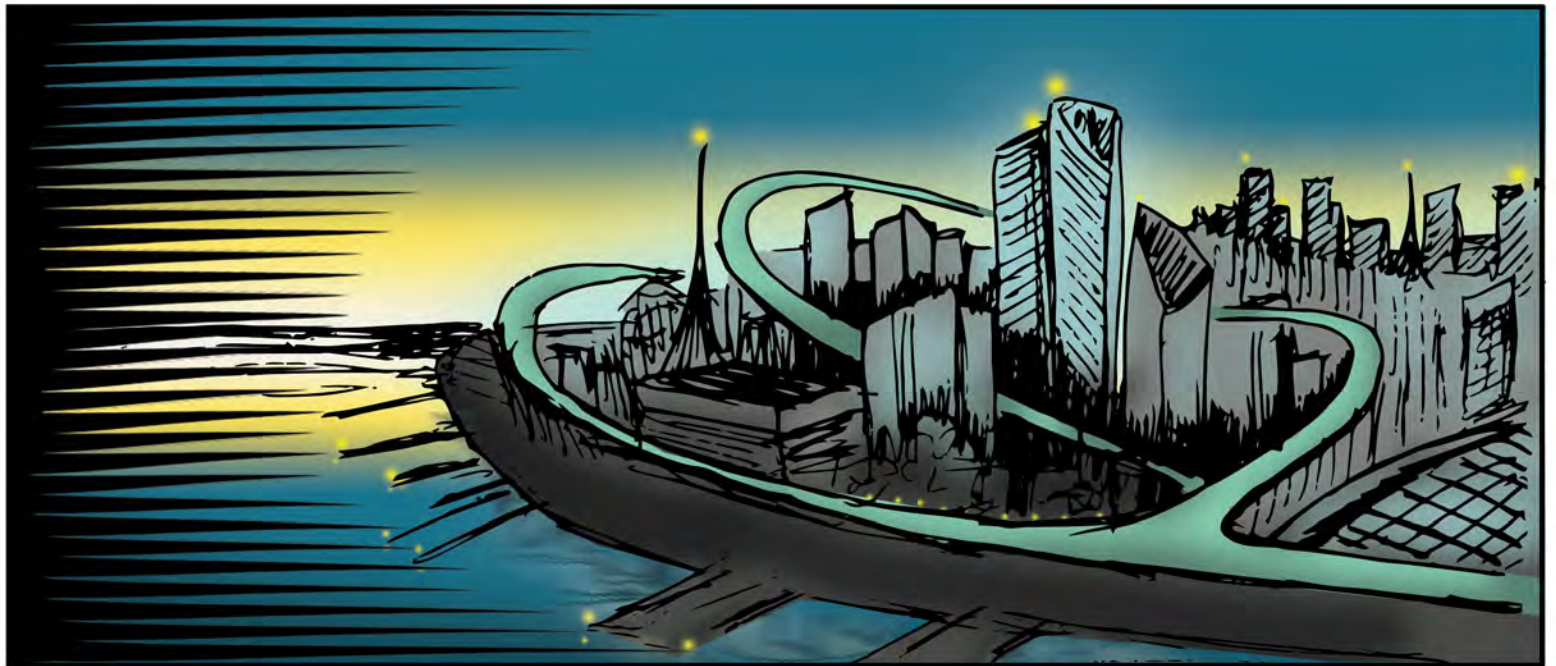
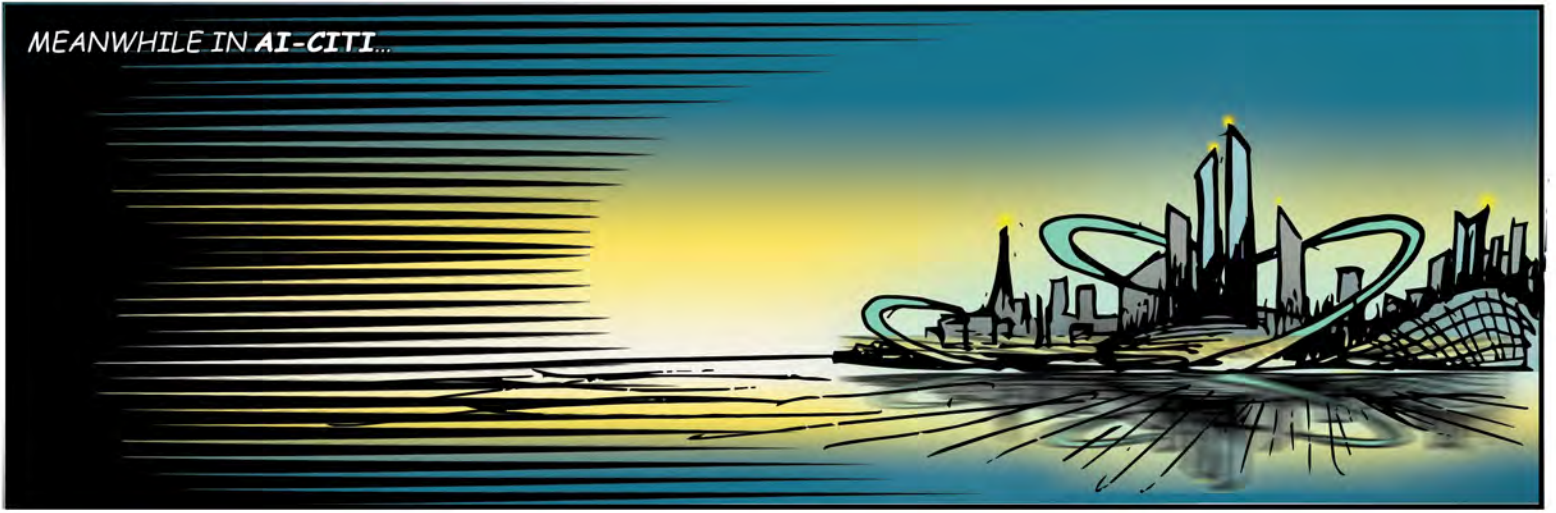
AIDAN & A-LAN

VS

VINNY THE VIRUS



MEANWHILE IN AI-CITI...



HELLO. I AM **MEDDI**. WELCOME TO AI-CITI.
I WILL BE YOUR GUIDE ON TODAY'S TOUR.

IN AI-CITI, **ARTIFICIAL INTELLIGENCE**, OR "AI", PLAYS AN IMPORTANT PART IN OUR EVERYDAY LIVES.

WHAT IS AI?

AI ALLOWS US TO PROCESS INFORMATION **FASTER** AND MORE **ACCURATELY**. TO MAKE AI WORK, WE USE A TOOL CALLED AN **ALGORITHM** THAT HELPS US MAKE **DECISIONS!** IT CAN ALSO HELP US MAKE **BETTER** DECISIONS IF WE USE IT CORRECTLY!

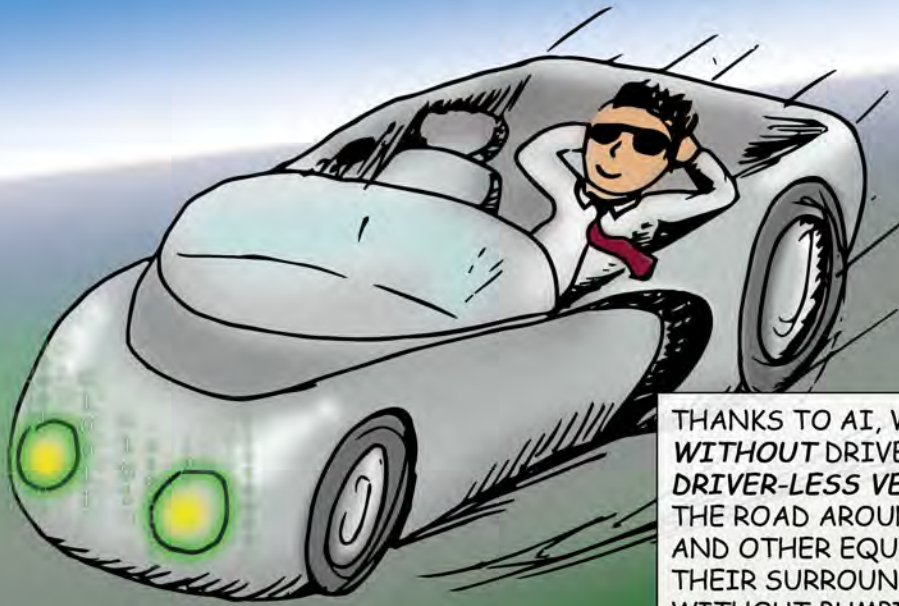
HOW DO WE USE ALGORITHMS? SOMETIMES, WE RUN LITTLE **EXPERIMENTS** TO TRAIN THEM TO LEARN AND FIND THE RIGHT ANSWERS, **FASTER!**

START

END

ALGO

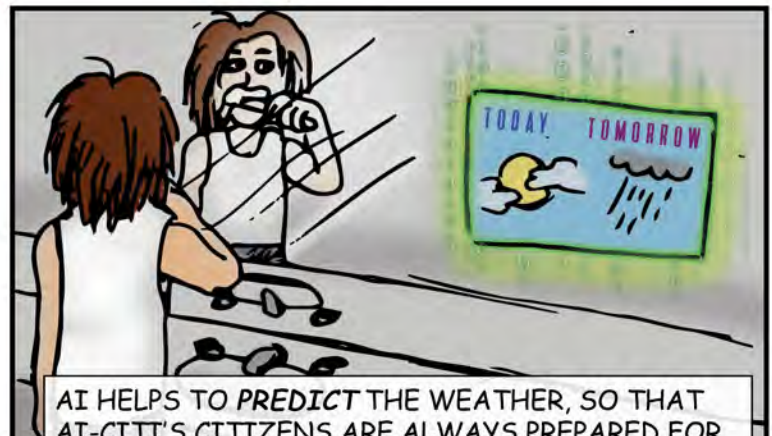
IN AI-CITI, WE USE AI TO DO ALL SORTS OF WONDERFUL THINGS.....



THANKS TO AI, WE NOW HAVE CARS THAT CAN MOVE *WITHOUT DRIVERS!* AI HELPS THESE AMAZING *DRIVER-LESS VEHICLES* TO BETTER UNDERSTAND THE ROAD AROUND THEM. WITH CAMERAS, SENSORS, AND OTHER EQUIPMENT, THESE CARS CAN SENSE THEIR SURROUNDINGS, ZOOMING AROUND TOWN WITHOUT BUMPING INTO ANYTHING!



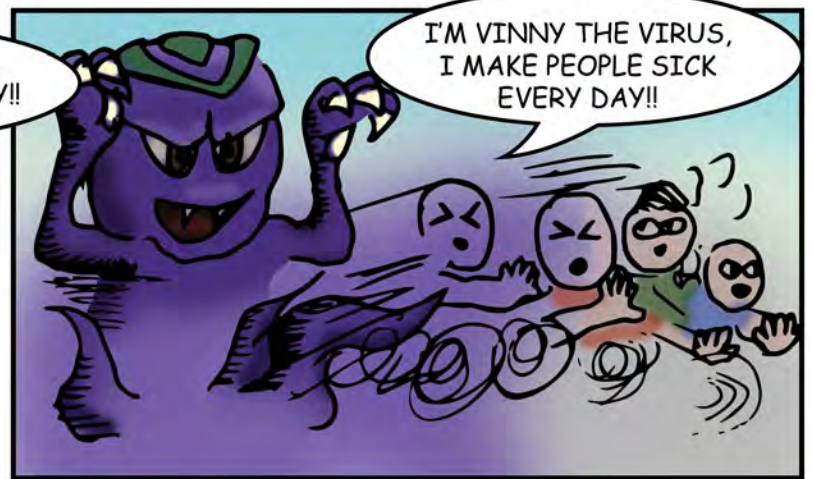
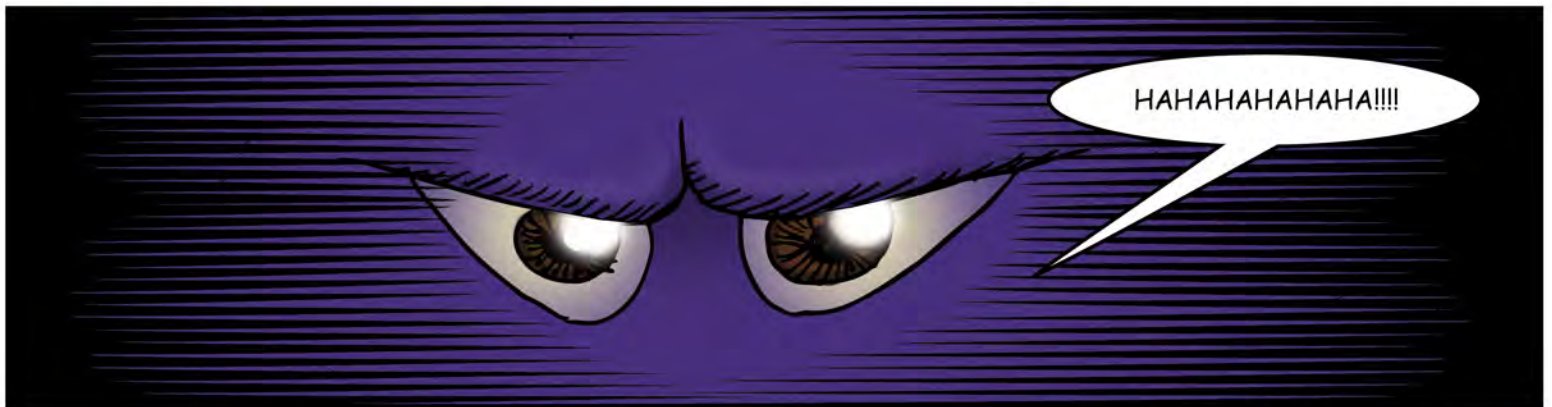
AI IS ALSO *PROTECTING* OUR CITY AGAINST HACKERS, WHO ARE SNEAKY THIEVES THAT TRY TO STEAL INFORMATION AND EVEN MONEY!! HOW? WELL, AI IS BEING USED TO TELL THE DIFFERENCE BETWEEN REAL THIEVES AND PRETEND THIEVES, SO THAT OUR BANKS CAN SPEND THEIR TIME SCARING AWAY THE REAL ONES!

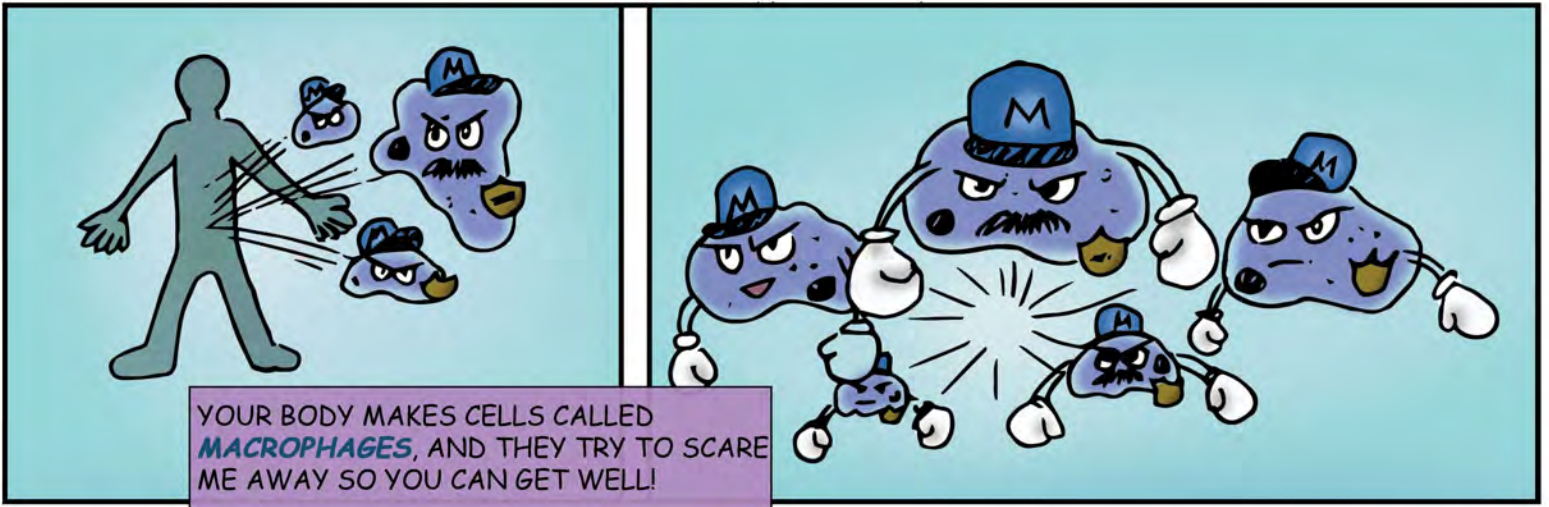


AI HELPS TO *PREDICT* THE WEATHER, SO THAT AI-CITI'S CITIZENS ARE ALWAYS PREPARED FOR THE DAY AHEAD... AI CAN PREDICT HOW AND WHEN THE WEATHER WILL CHANGE. FOR EXAMPLE, IT CAN TELL US IF WE ARE IN FOR A DAY OF SUNSHINE, OR IF THE CLOUDS IN THE SKY WILL TURN INTO STORMS SO THAT WE CAN PREPARE OUR RAINCOATS!

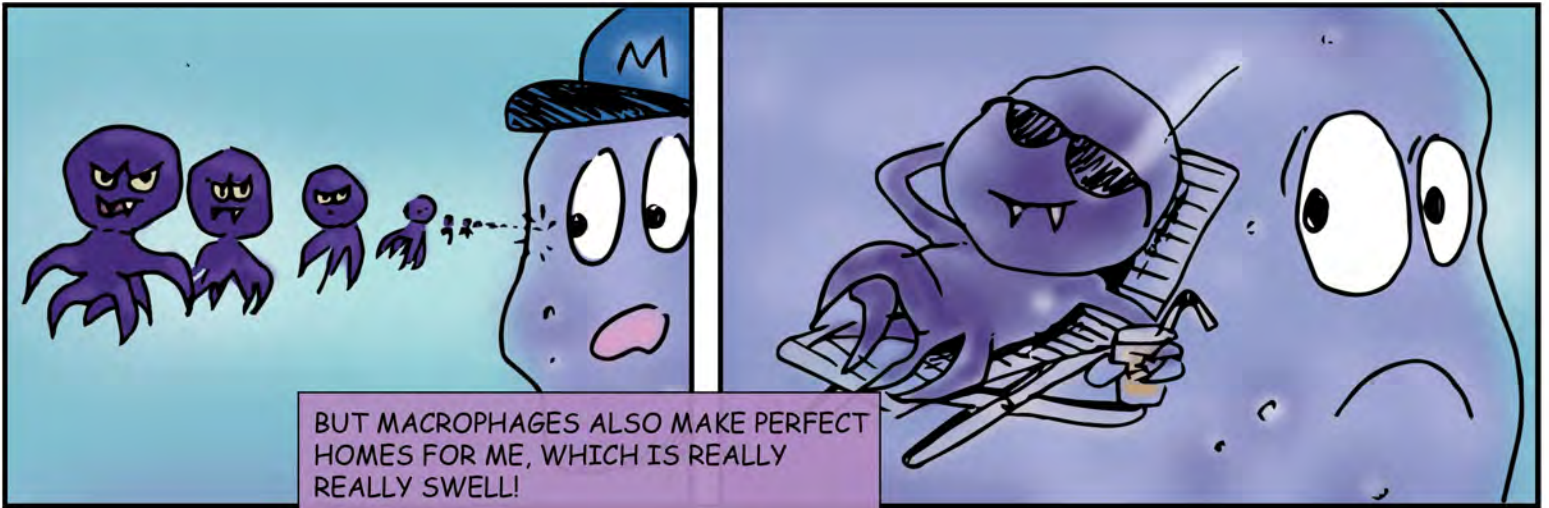


AI IS ALSO HELPING DOCTORS TO FIND IMPORTANT INFORMATION FROM A PERSON'S *GENETIC PROFILE*. THESE PROFILES USE OUR DNA, WHICH ARE TINY LITTLE TWISTS THAT HOLD ALL OF THE INFORMATION THAT MAKES YOU AND ME! AI CAN STUDY ALL OF THESE TWISTS QUICKLY, TO HELP CHOOSE BETTER MEDICINE WHEN PEOPLE GET SICK!

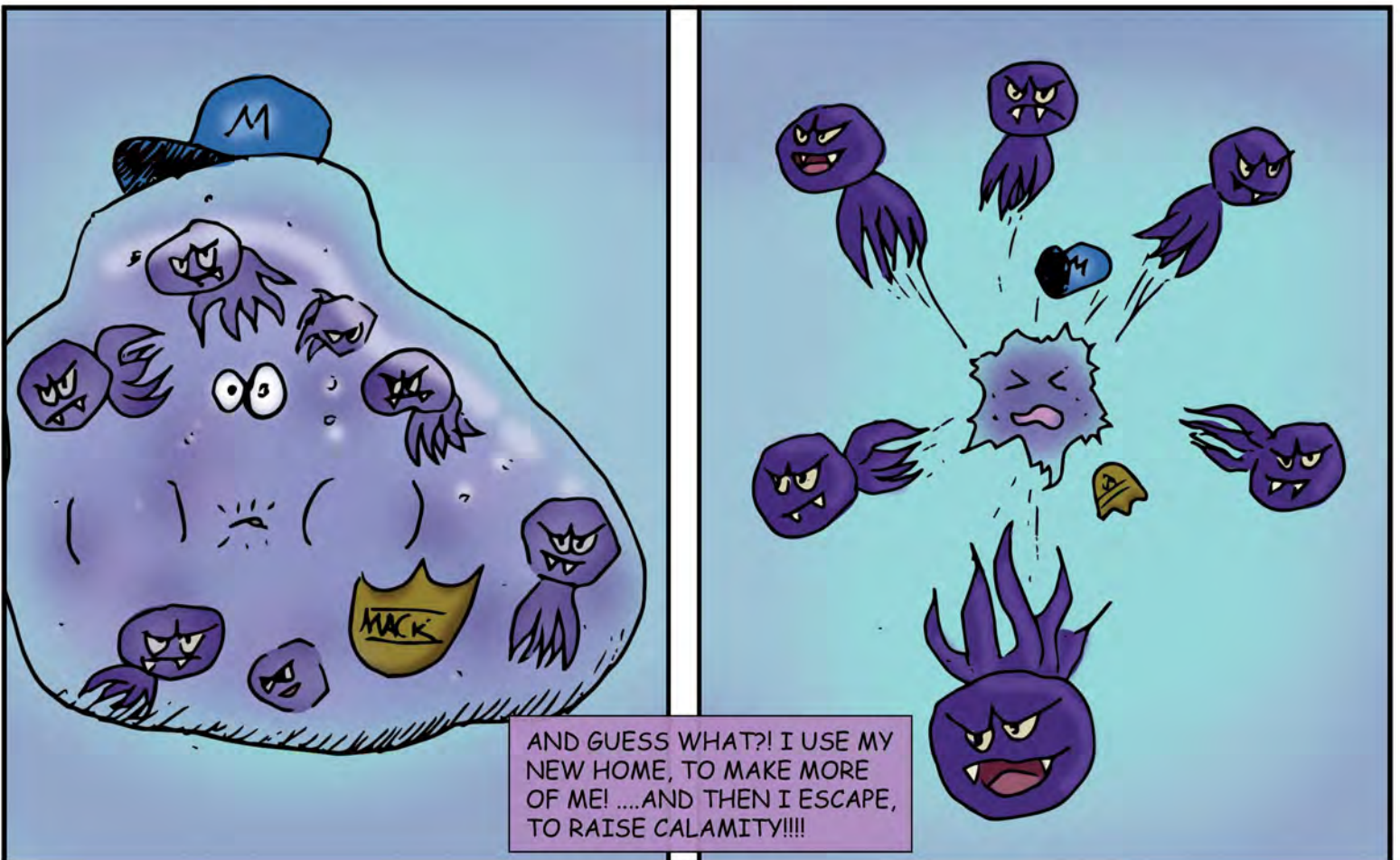




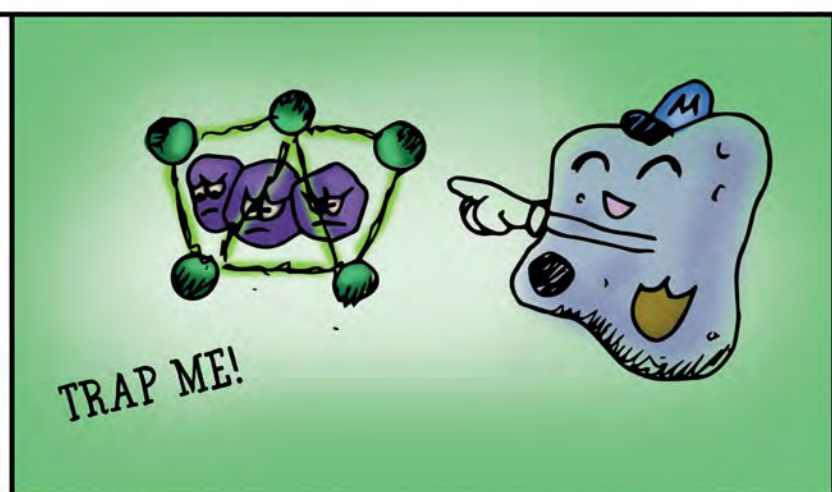
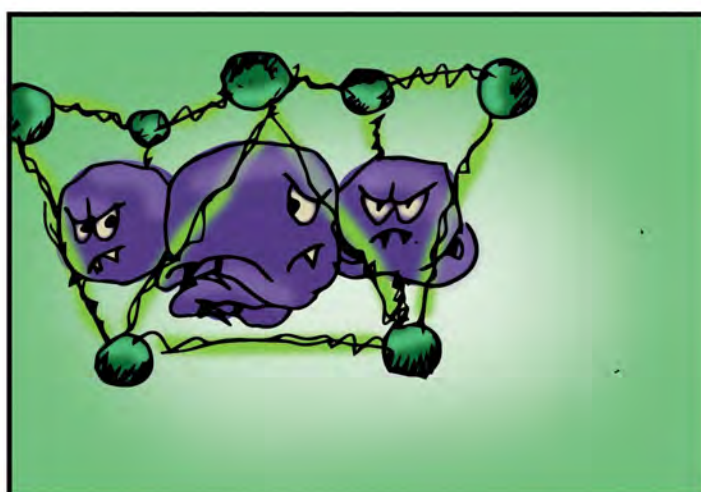
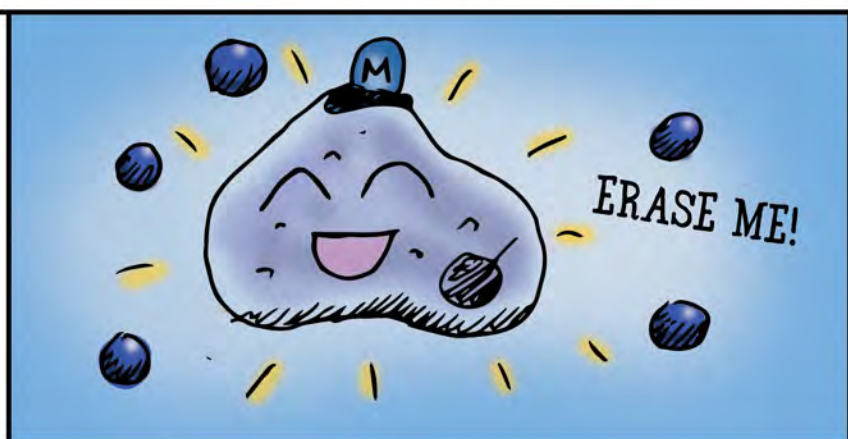
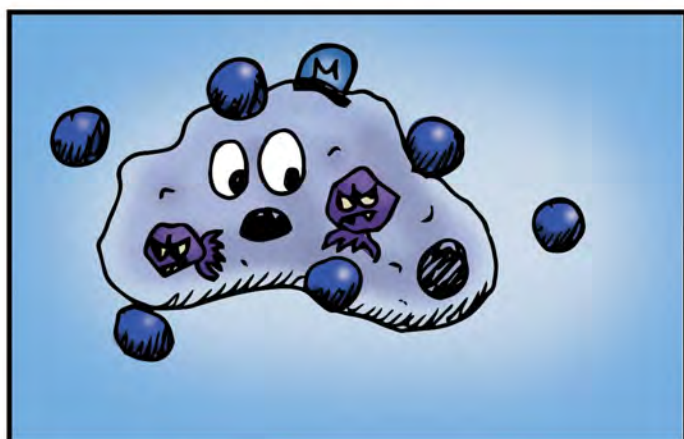
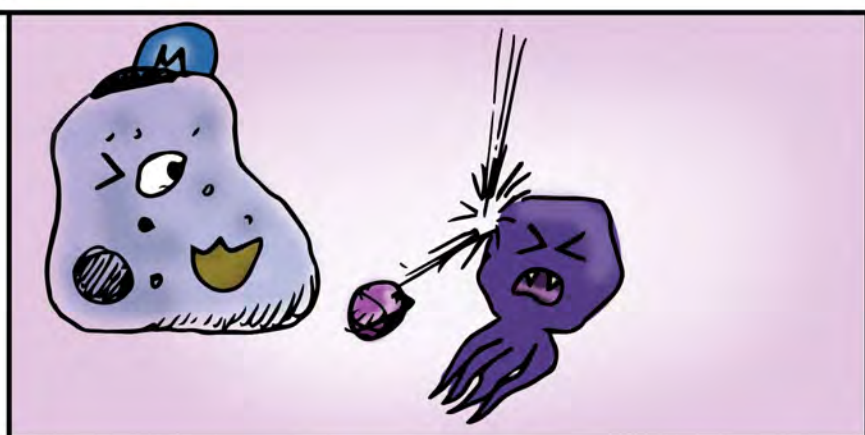
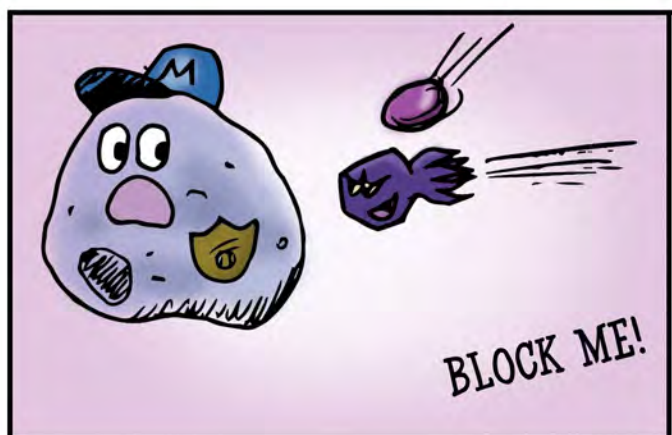
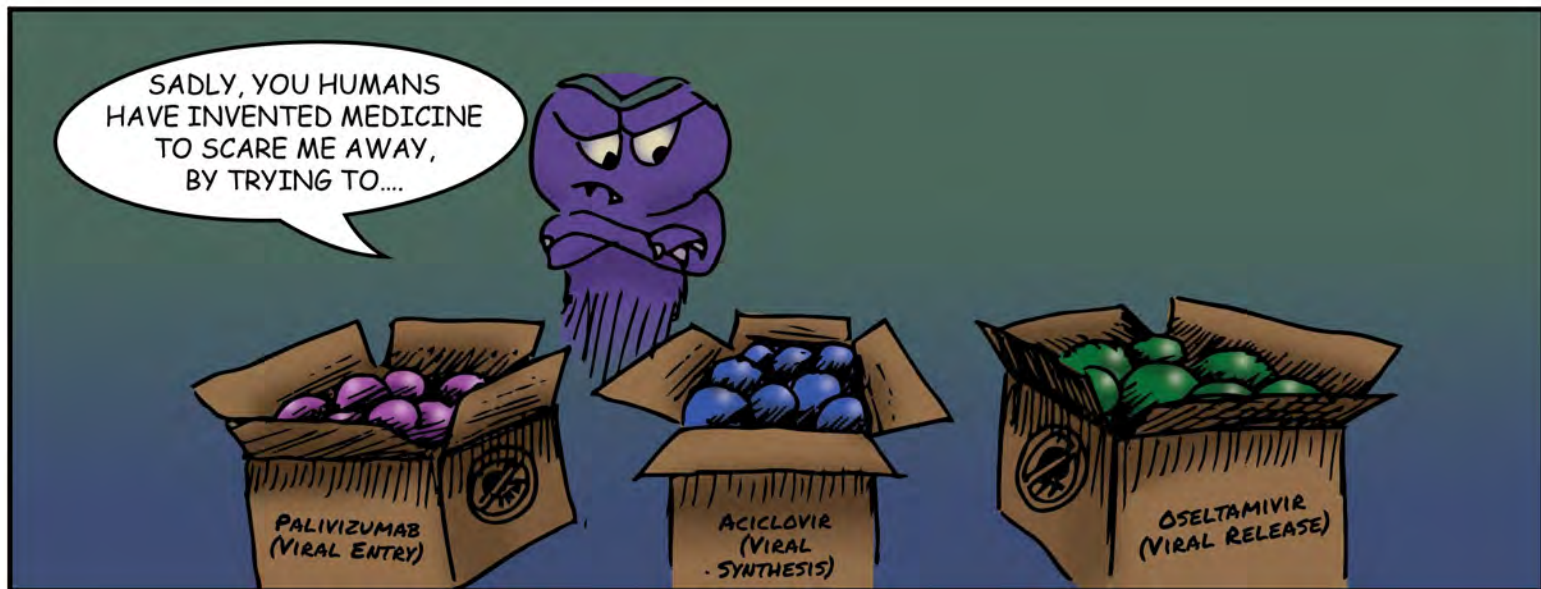
YOUR BODY MAKES CELLS CALLED **MACROPHAGES**, AND THEY TRY TO SCARE ME AWAY SO YOU CAN GET WELL!



BUT MACROPHAGES ALSO MAKE PERFECT HOMES FOR ME, WHICH IS REALLY REALLY SWELL!



AND GUESS WHAT?! I USE MY NEW HOME, TO MAKE MORE OF ME!AND THEN I ESCAPE, TO RAISE CALAMITY!!!!





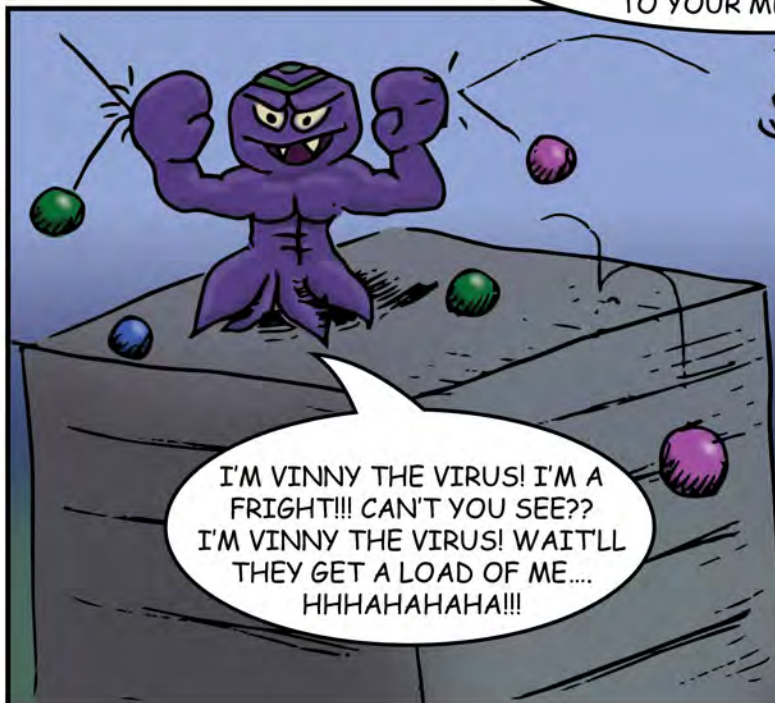
BUT, GUESS WHAT? I'M NOT TOO SCARED, BECAUSE I'VE GOT SOME TRICKS UP MY SLEEVE.



BECAUSE I'M VINNY THE EVEN STRONGER VIRUS, NOW NEW AND IMPROVED WITH **RESISTANCE**! AND I MAY NEVER LEAVE!!!!



SAY HELLO TO THE BIGGER, BADDER, AND **MUTATED** VINNY!!!! I AM EVEN STRONGER THAN BEFORE, AND I AM RESISTANT TO YOUR MEDICINE!



I'M VINNY THE VIRUS! I'M A FRIGHT!!! CAN'T YOU SEE?? I'M VINNY THE VIRUS! WAIT'LL THEY GET A LOAD OF ME... HHHAAAAHAHA!!!

WE INTERRUPT OUR REGULARLY BROADCASTED PROGRAM TO BRING YOU AN IMPORTANT UPDATE. THE CITIZENS OF AI-CITI ARE FALLING ILL LEFT AND RIGHT. AI-CITI HEALTH OFFICIALS HAVE DESCRIBED THE CULPRIT AS VINNY THE VIRUS.

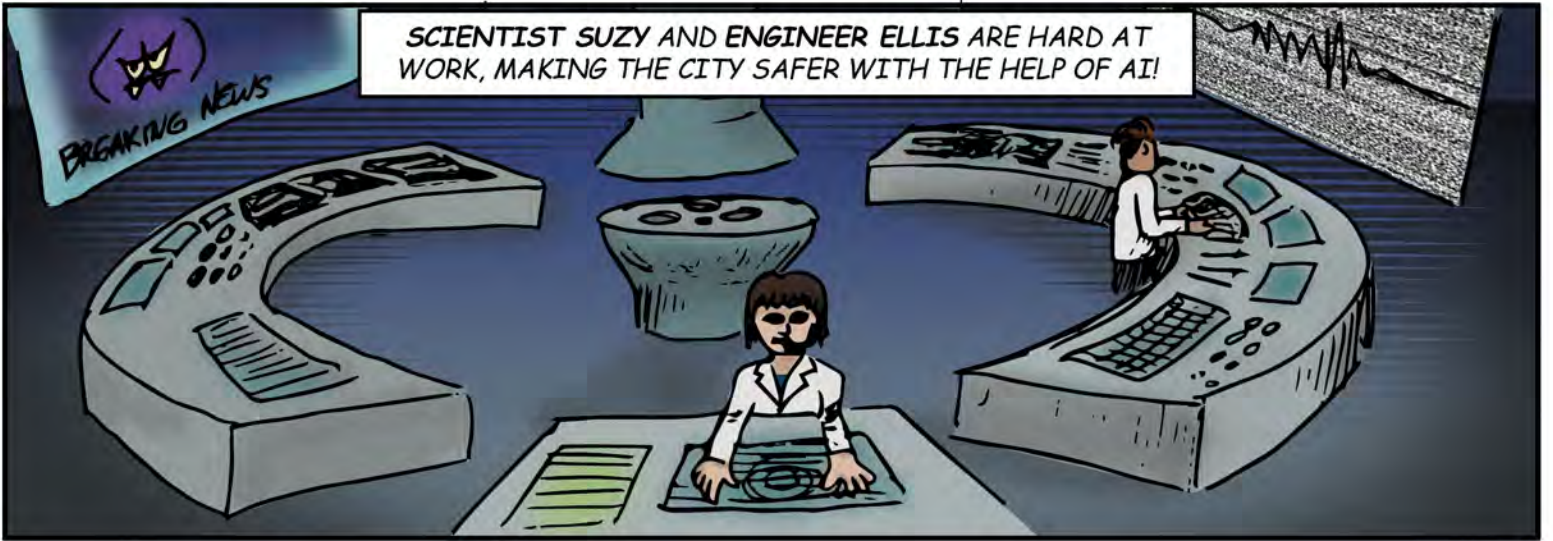


UNLIKE PREVIOUS VIRUSES, VINNY IS HARD TO SCARE AWAY. OUR MEDICINE DOESN'T SEEM TO WORK ON HIM! IT SEEMS...IT SEEMS LIKE HE IS MUTATED!! COUGH...COUGH...I THINK I'M GOING TO BE SICK!!!!

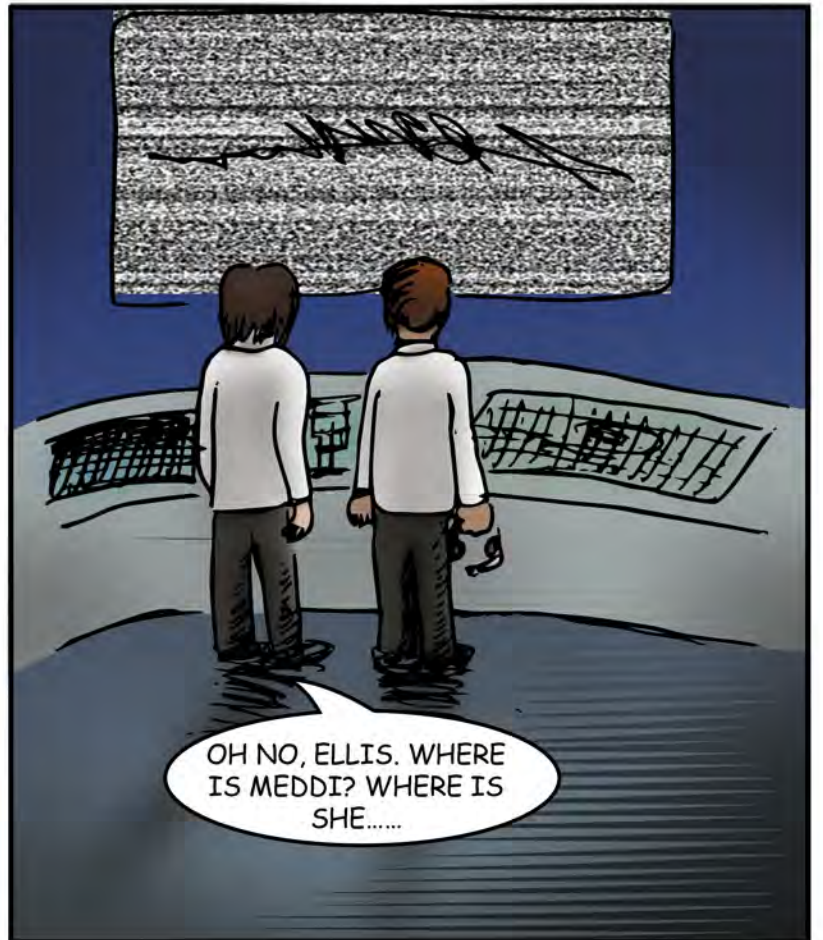
MEANWHILE AT AI-CITI LABORATORIES...



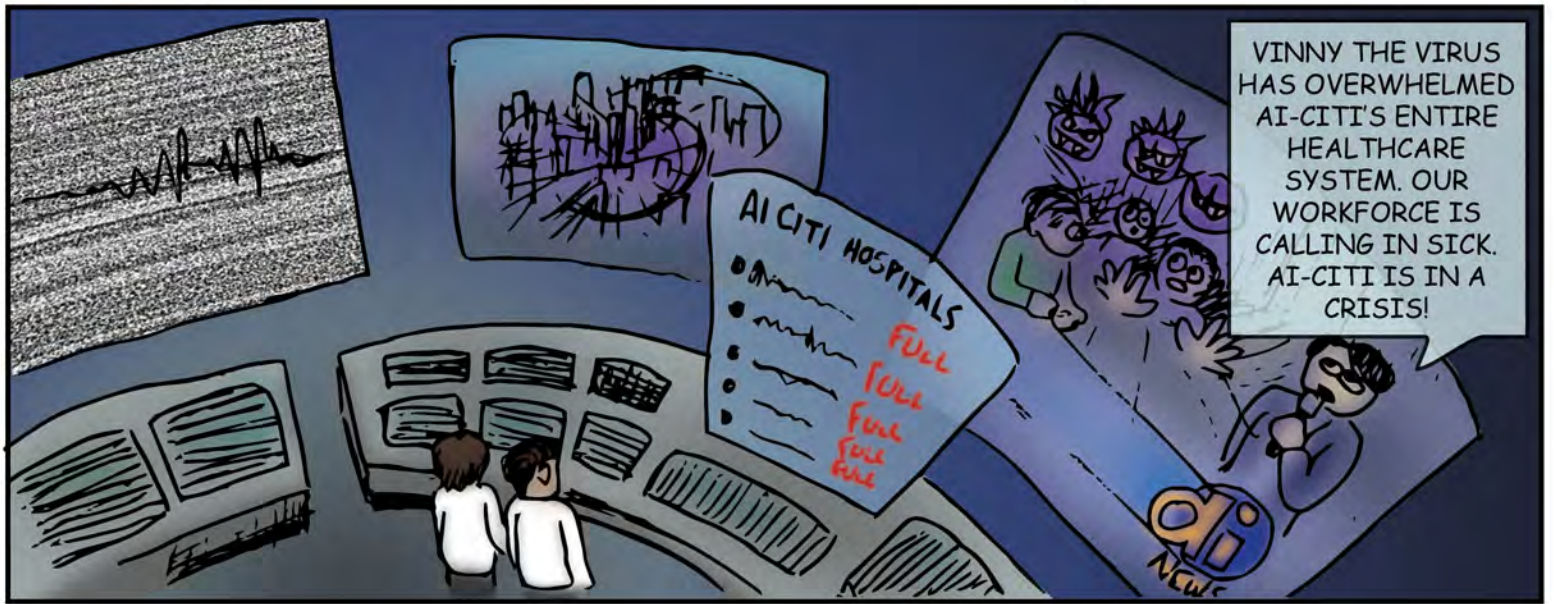
SCIENTIST SUZY AND ENGINEER ELLIS ARE HARD AT WORK, MAKING THE CITY SAFER WITH THE HELP OF AI!

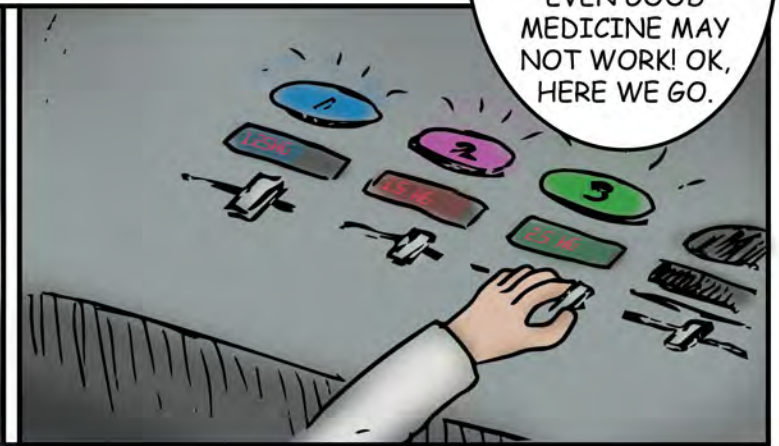
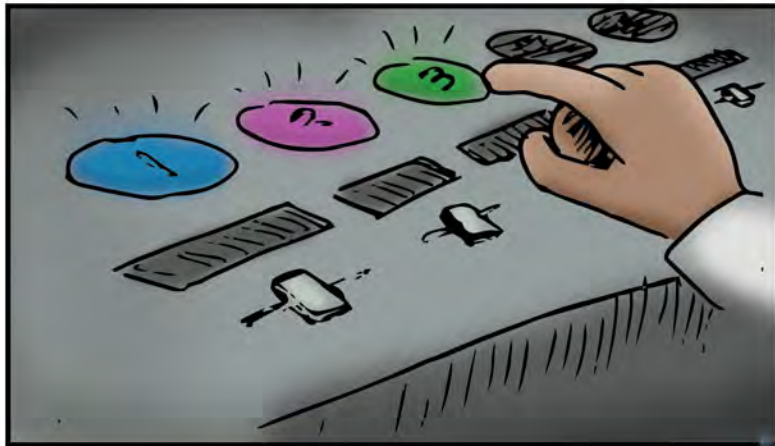


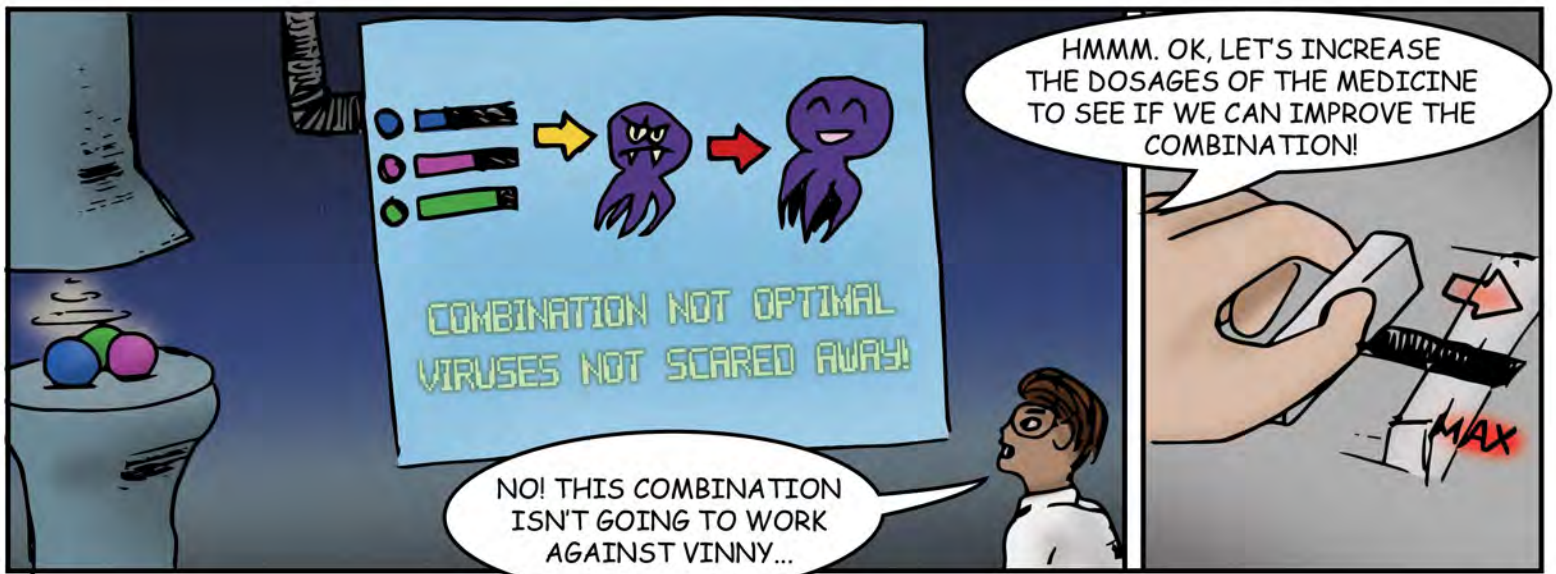
ALRIGHT SUZY, LET'S ACTIVATE MEDDI TO HELP US WITH OUR FIRST ROUND OF AI EXPERIMENTS TO MAKE POWERFUL MIXTURES OF MEDICINE KNOWN AS **COMBINATION THERAPY**!



OH NO, ELLIS. WHERE IS MEDDI? WHERE IS SHE.....

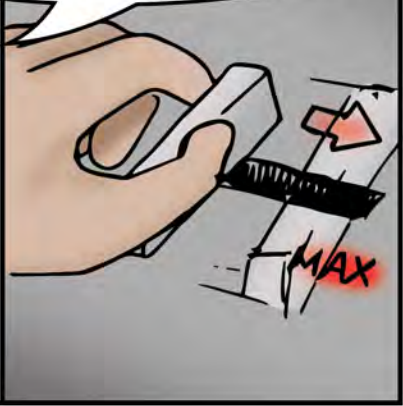






HMMM. OK, LET'S INCREASE THE DOSAGES OF THE MEDICINE TO SEE IF WE CAN IMPROVE THE COMBINATION!

NO! THIS COMBINATION ISN'T GOING TO WORK AGAINST VINNY...



WOW. THAT MADE IT EVEN WORSE!

COMBINATION NOT OPTIMAL
VIRUSES NOT SCARED AWAY!
DANGER! COMBINATION VERY TOXIC TO HUMANS!

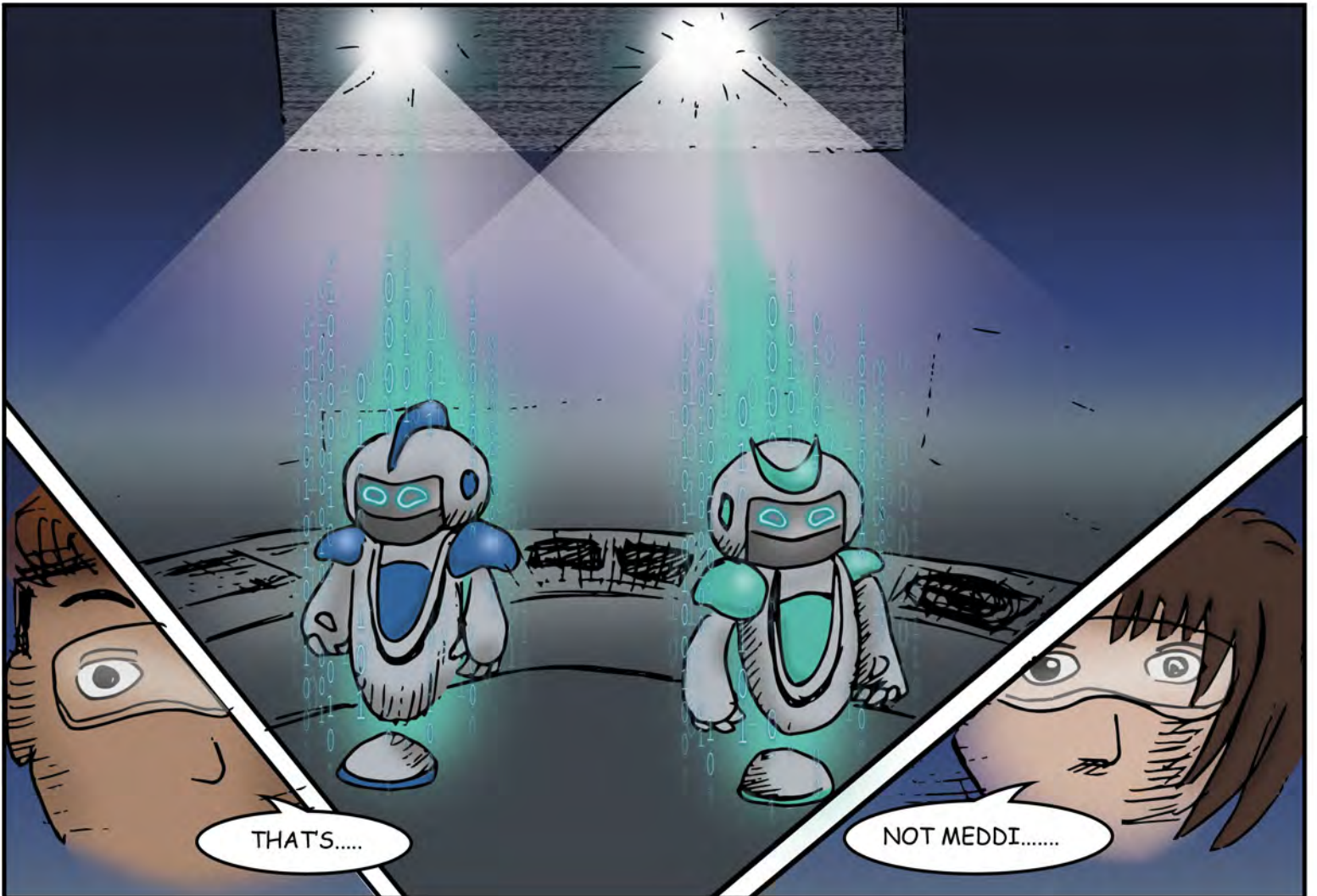
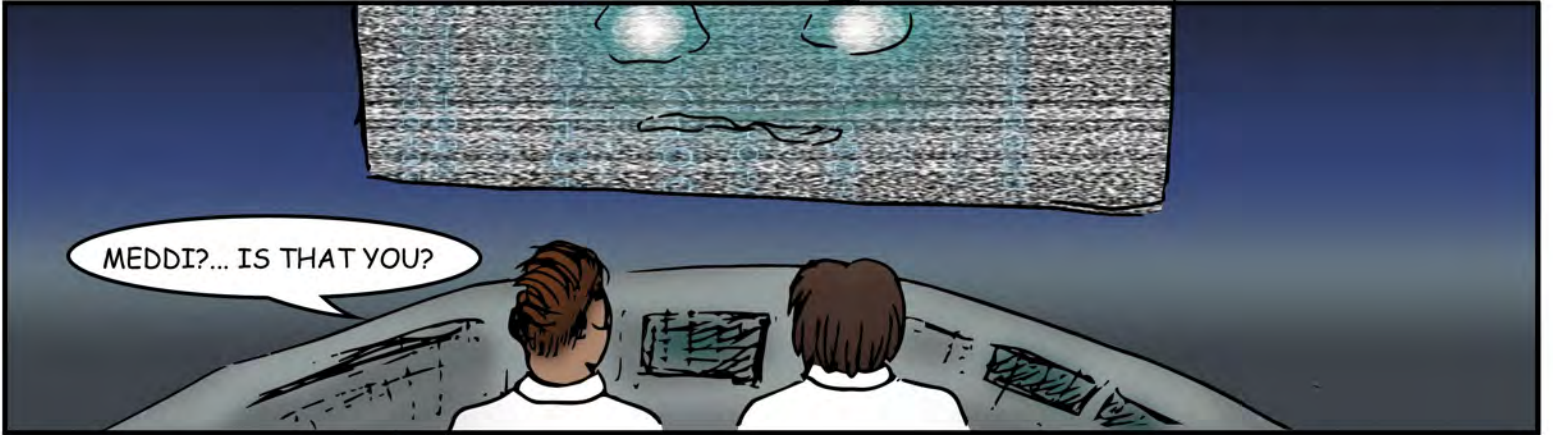
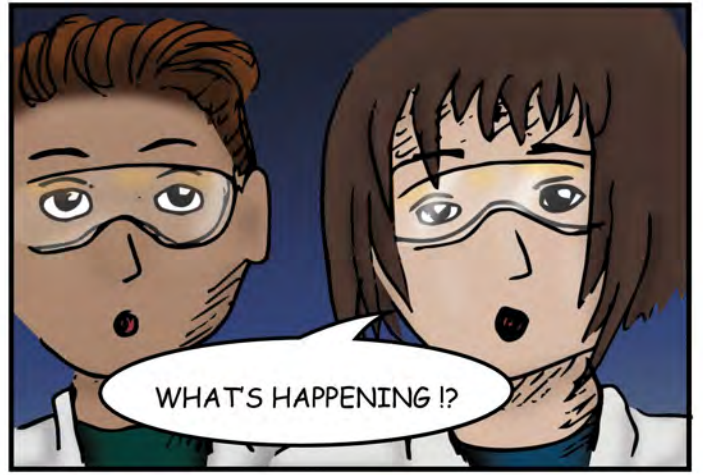
HMMM. SUZY, SHOULD WE TRY TO MAKE A DIFFERENT COMBINATION THERAPY?

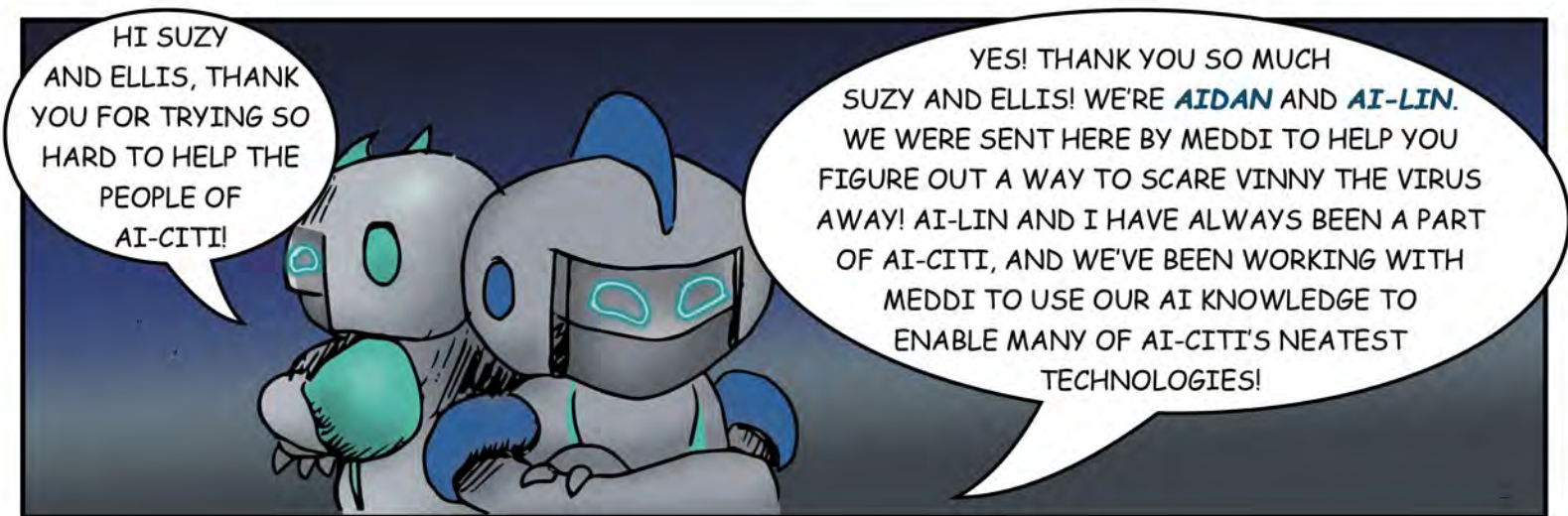


SUZY, NOTHING'S WORKING! WHAT DO WE DO NOW?!



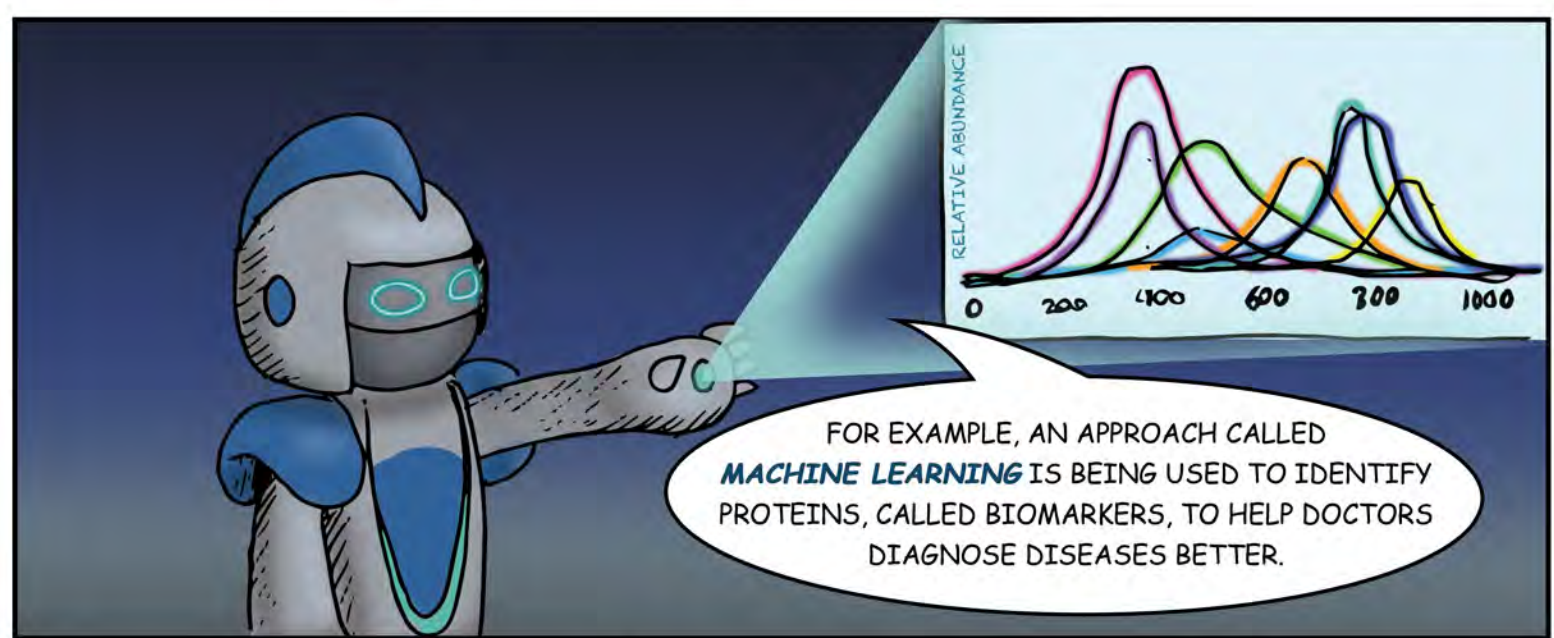
I DON'T THINK THAT WILL WORK, BECAUSE WE WILL STILL NEED TO FIND THE RIGHT DOSE FOR EACH KIND OF MEDICINE, WHICH WILL BE VERY HARD. AFTER ALL, EVEN A COMBINATION OF GOOD MEDICINE, BUT GIVEN AT THE WRONG DOSE, MAY NOT EVEN WORK!



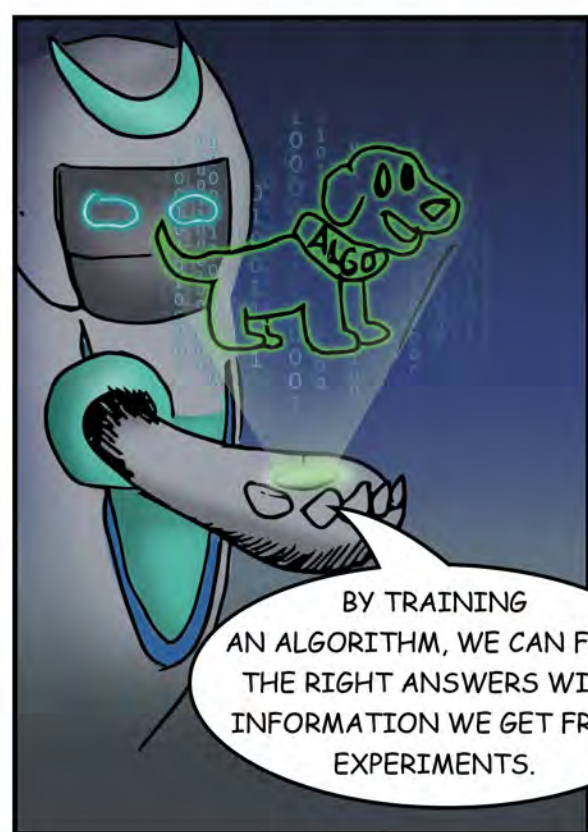


HI SUZY AND ELLIS, THANK YOU FOR TRYING SO HARD TO HELP THE PEOPLE OF AI-CITI!

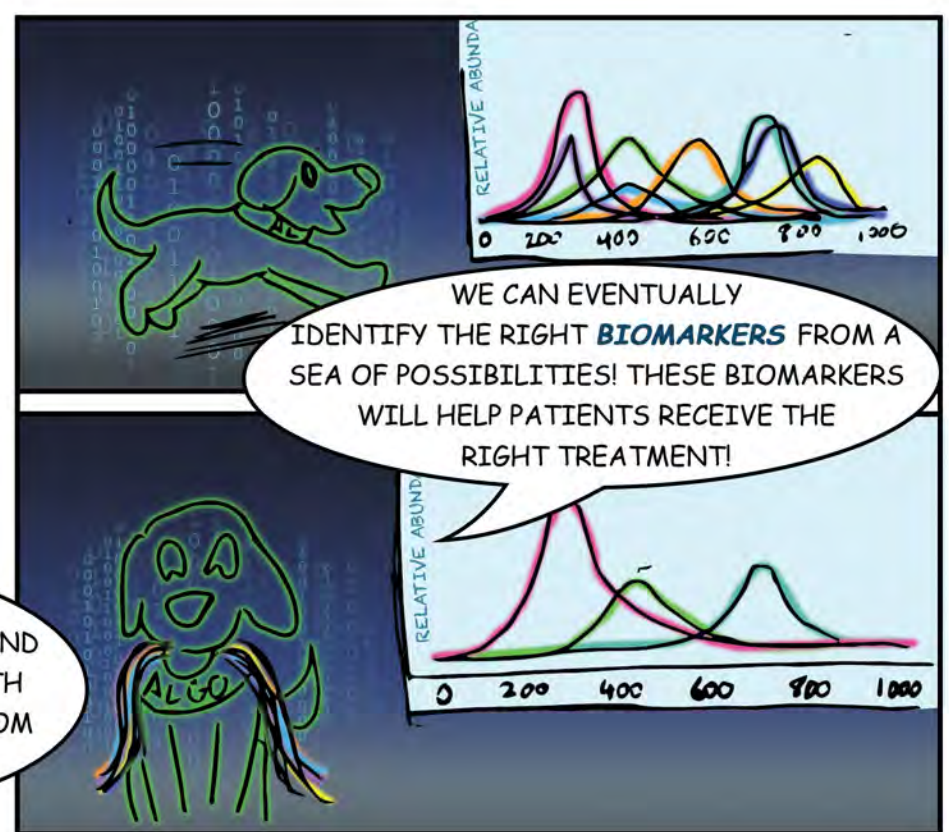
YES! THANK YOU SO MUCH SUZY AND ELLIS! WE'RE **AIDAN** AND **AI-LIN**. WE WERE SENT HERE BY MEDDI TO HELP YOU FIGURE OUT A WAY TO SCARE VINNY THE VIRUS AWAY! AI-LIN AND I HAVE ALWAYS BEEN A PART OF AI-CITI, AND WE'VE BEEN WORKING WITH MEDDI TO USE OUR AI KNOWLEDGE TO ENABLE MANY OF AI-CITI'S NEATEST TECHNOLOGIES!



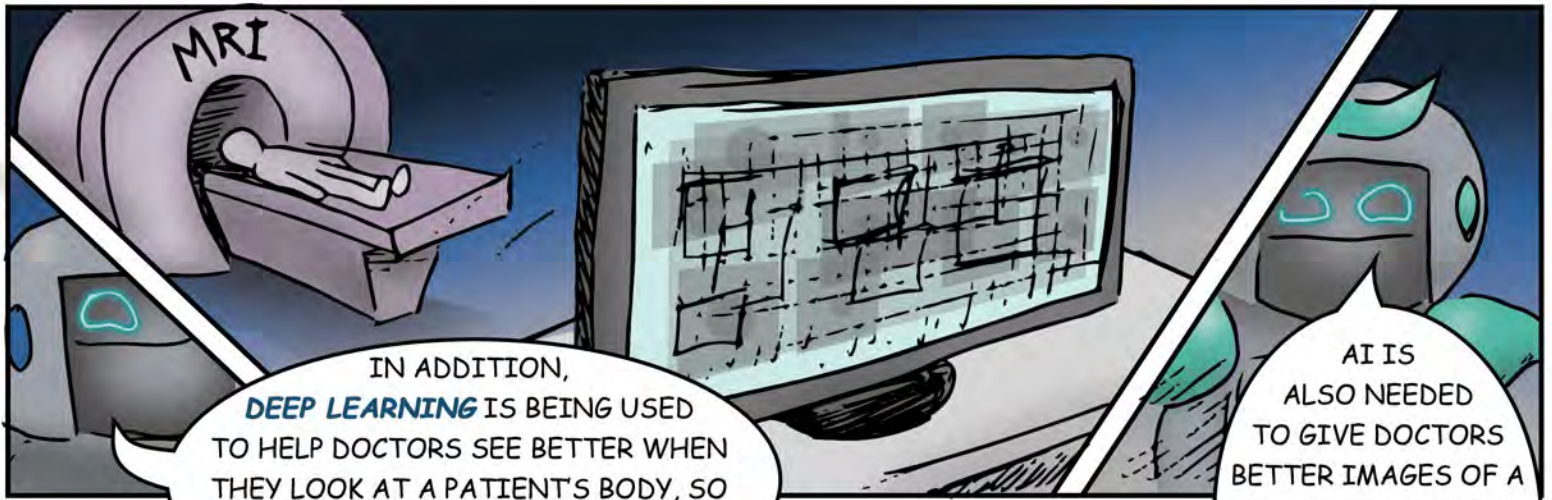
FOR EXAMPLE, AN APPROACH CALLED **MACHINE LEARNING** IS BEING USED TO IDENTIFY PROTEINS, CALLED BIOMARKERS, TO HELP DOCTORS DIAGNOSE DISEASES BETTER.



BY TRAINING AN ALGORITHM, WE CAN FIND THE RIGHT ANSWERS WITH INFORMATION WE GET FROM EXPERIMENTS.

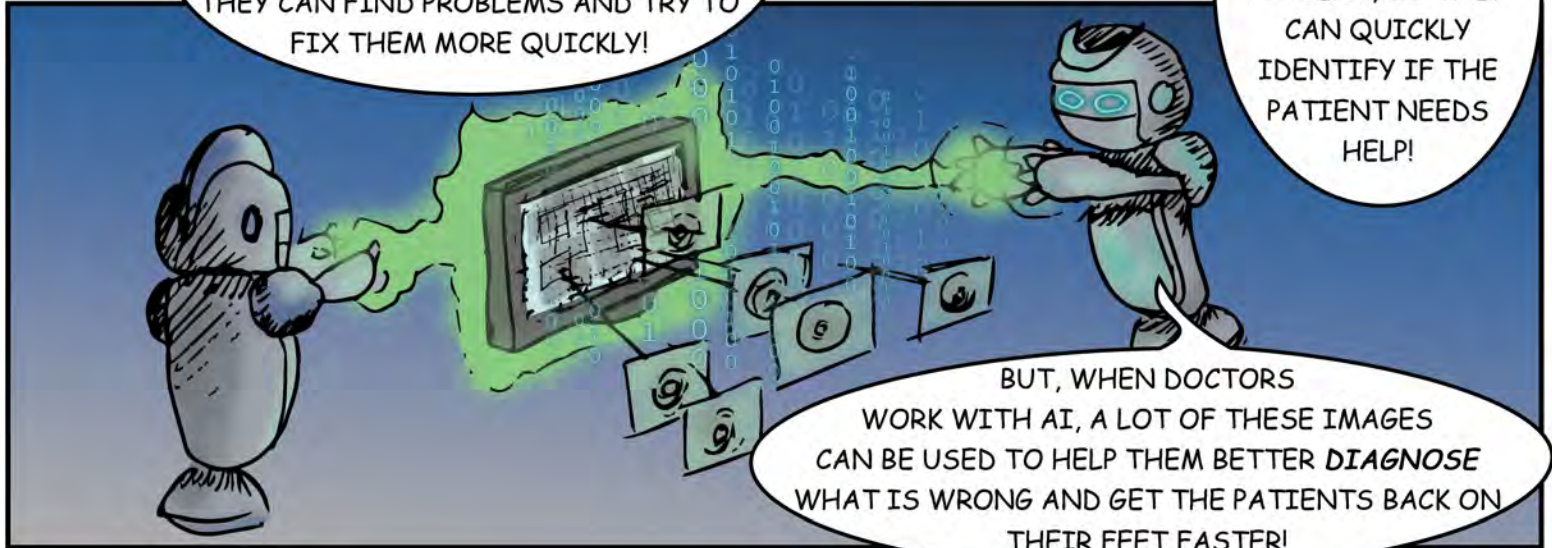


WE CAN EVENTUALLY IDENTIFY THE RIGHT **BIOMARKERS** FROM A SEA OF POSSIBILITIES! THESE BIOMARKERS WILL HELP PATIENTS RECEIVE THE RIGHT TREATMENT!

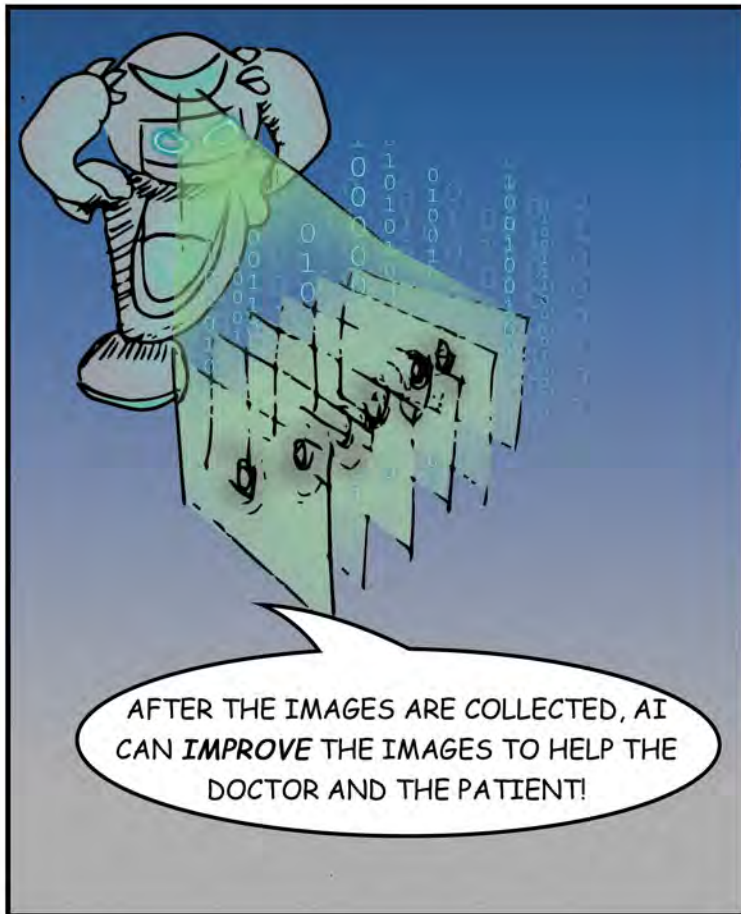


IN ADDITION,
DEEP LEARNING IS BEING USED
TO HELP DOCTORS SEE BETTER WHEN
THEY LOOK AT A PATIENT'S BODY, SO
THEY CAN FIND PROBLEMS AND TRY TO
FIX THEM MORE QUICKLY!

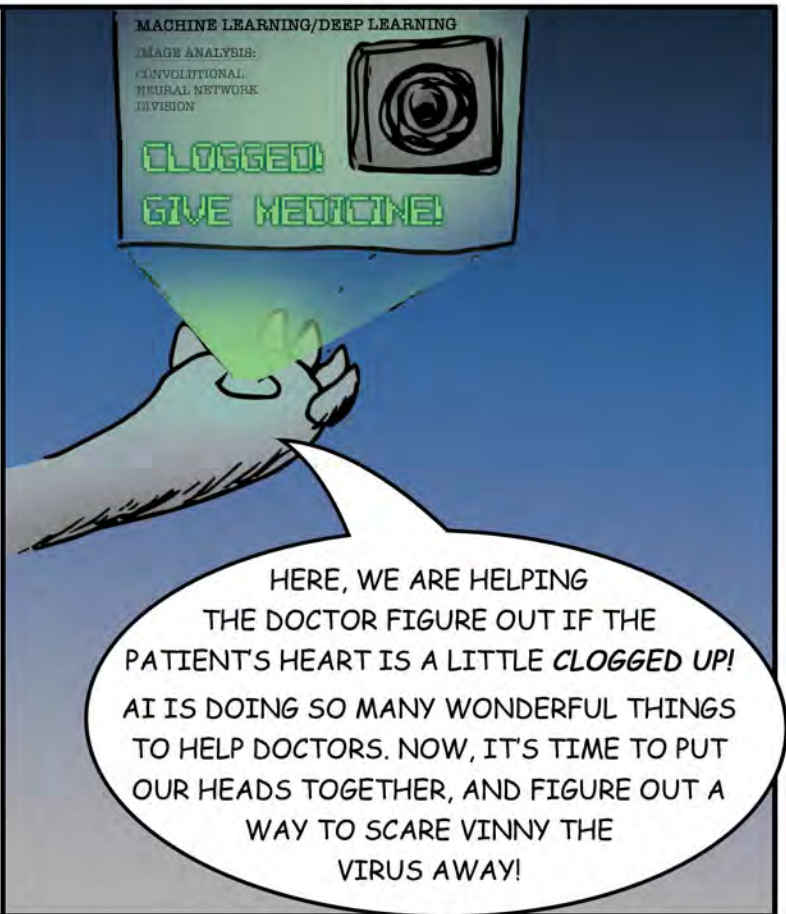
AI IS
ALSO NEEDED
TO GIVE DOCTORS
BETTER IMAGES OF A
PATIENT, SO THEY
CAN QUICKLY
IDENTIFY IF THE
PATIENT NEEDS
HELP!



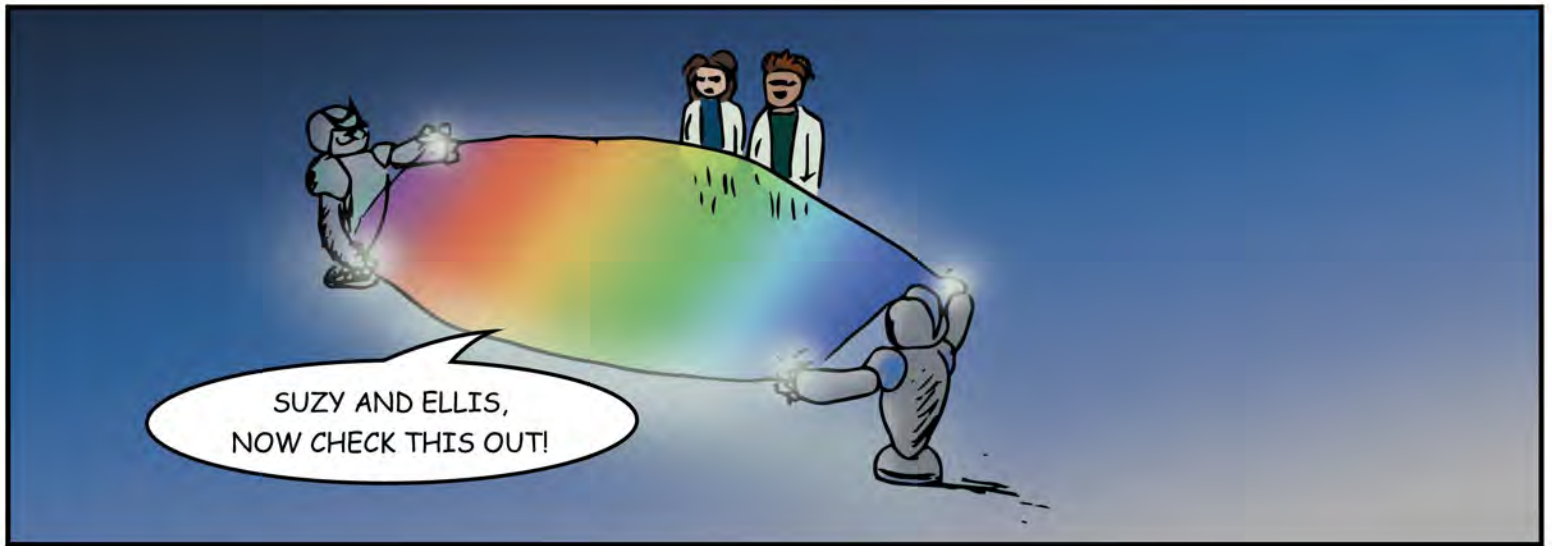
BUT, WHEN DOCTORS
WORK WITH AI, A LOT OF THESE IMAGES
CAN BE USED TO HELP THEM BETTER **DIAGNOSE**
WHAT IS WRONG AND GET THE PATIENTS BACK ON
THEIR FEET FASTER!



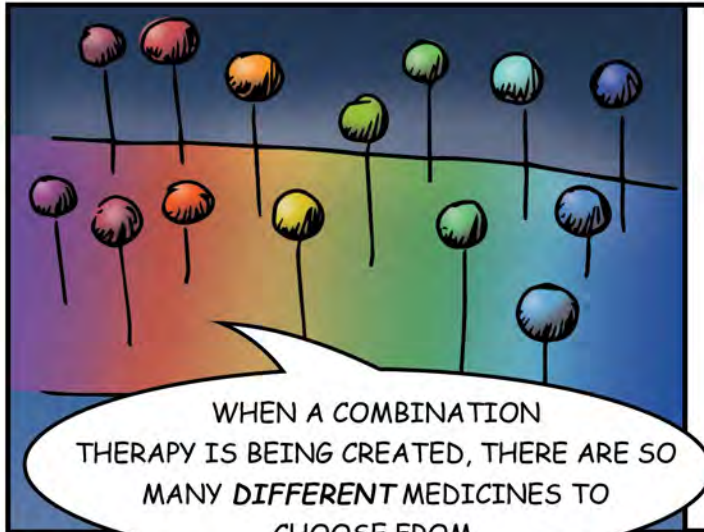
AFTER THE IMAGES ARE COLLECTED, AI
CAN **IMPROVE** THE IMAGES TO HELP THE
DOCTOR AND THE PATIENT!



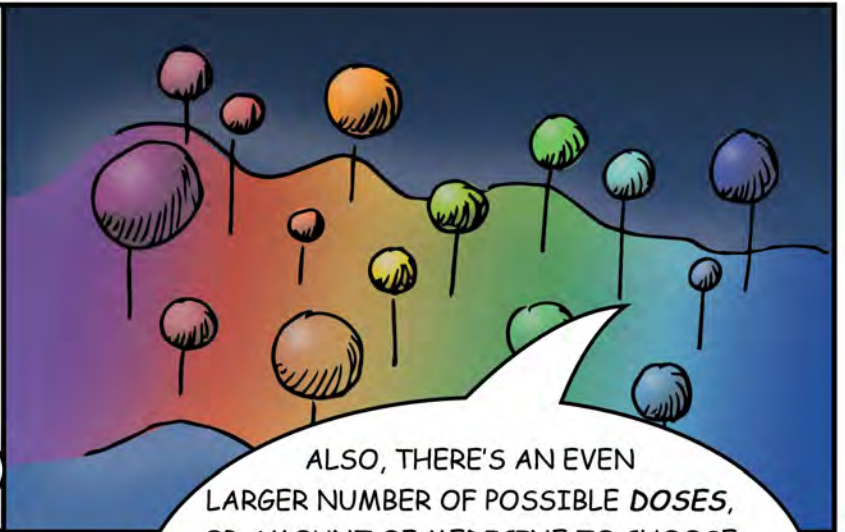
HERE, WE ARE HELPING
THE DOCTOR FIGURE OUT IF THE
PATIENT'S HEART IS A LITTLE **CLOGGED UP!**
AI IS DOING SO MANY WONDERFUL THINGS
TO HELP DOCTORS. NOW, IT'S TIME TO PUT
OUR HEADS TOGETHER, AND FIGURE OUT A
WAY TO SCARE VINNY THE
VIRUS AWAY!



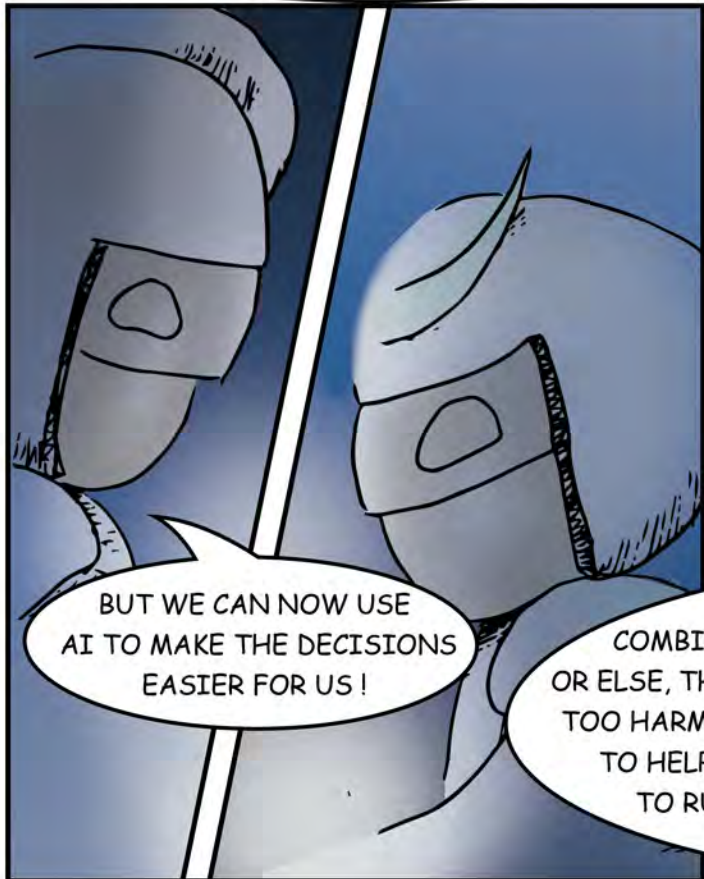
SUZY AND ELLIS,
NOW CHECK THIS OUT!



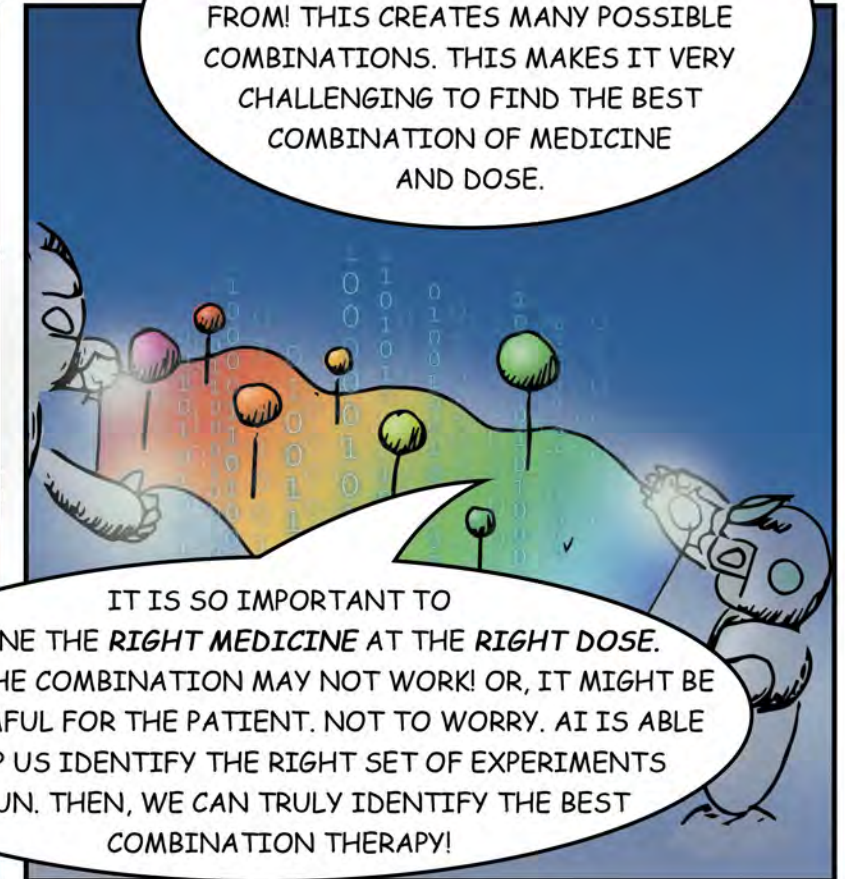
WHEN A COMBINATION
THERAPY IS BEING CREATED, THERE ARE SO
MANY *DIFFERENT* MEDICINES TO
CHOOSE FROM.



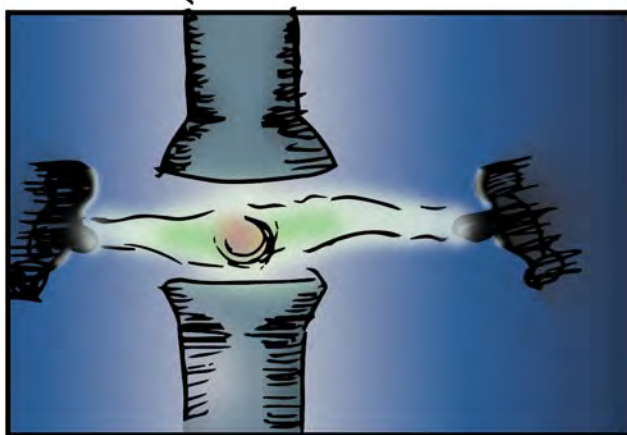
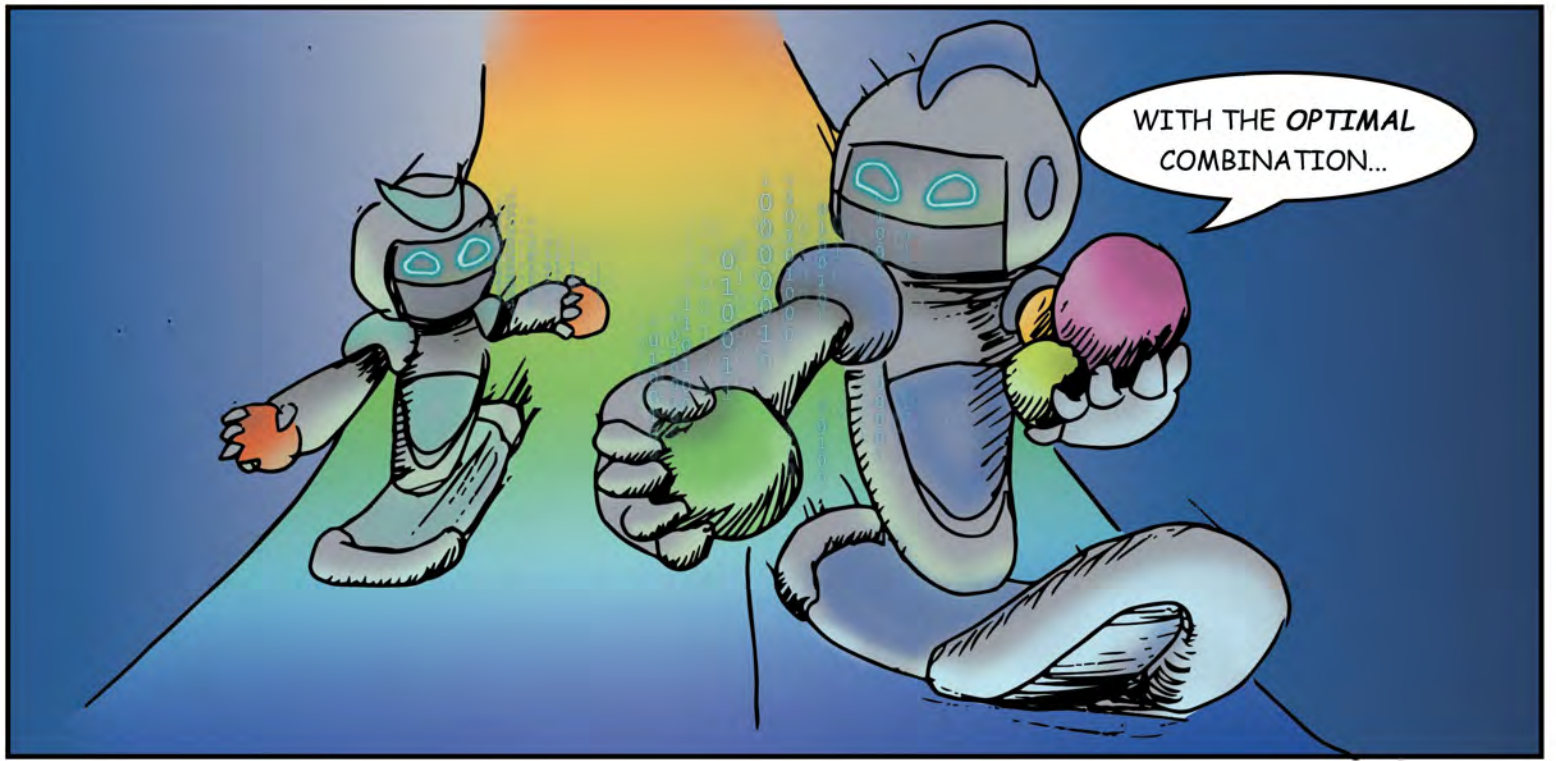
ALSO, THERE'S AN EVEN
LARGER NUMBER OF POSSIBLE *DOSES*,
OR AMOUNT OF MEDICINE TO CHOOSE
FROM! THIS CREATES MANY POSSIBLE
COMBINATIONS. THIS MAKES IT VERY
CHALLENGING TO FIND THE BEST
COMBINATION OF MEDICINE
AND DOSE.

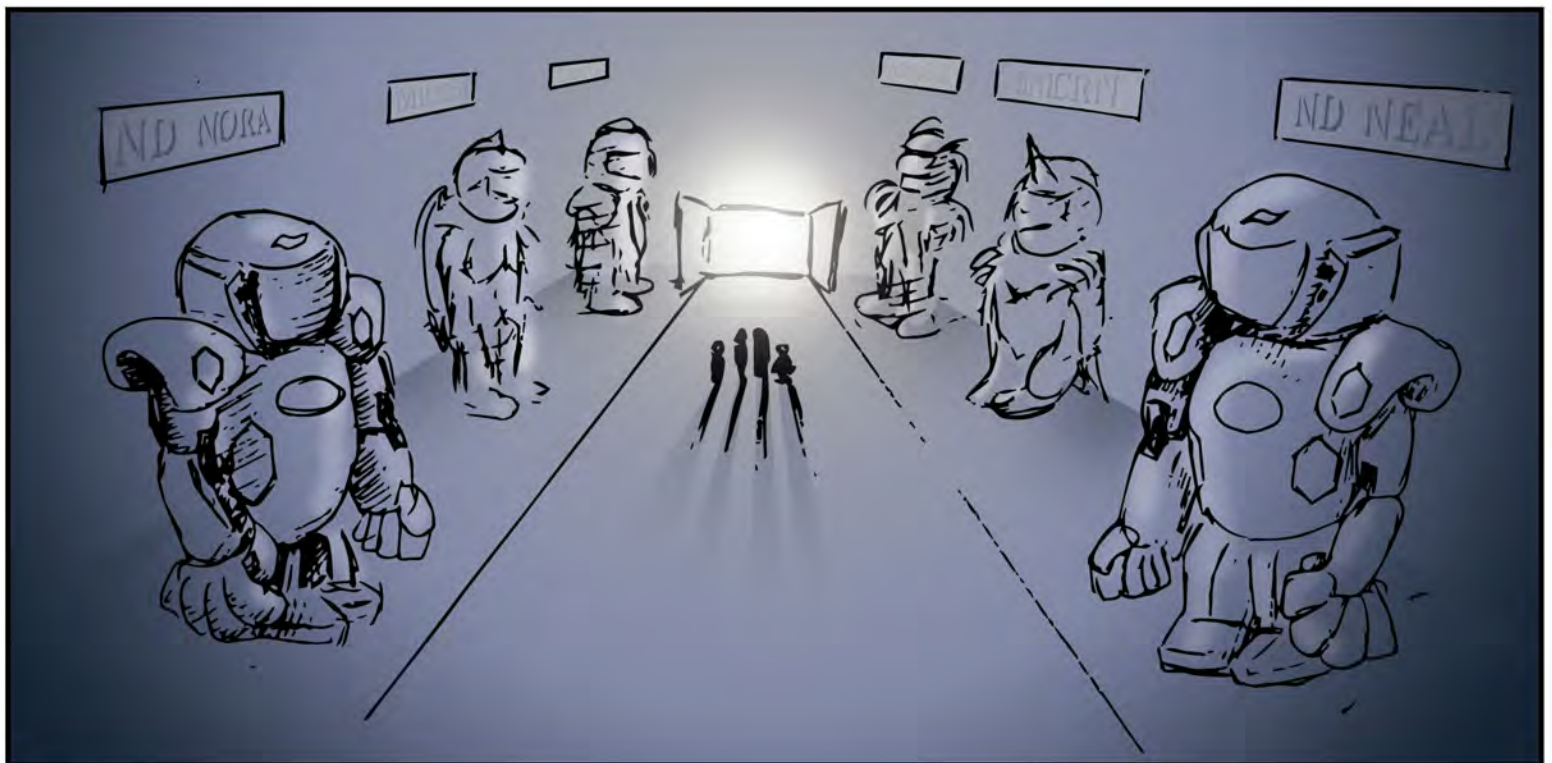
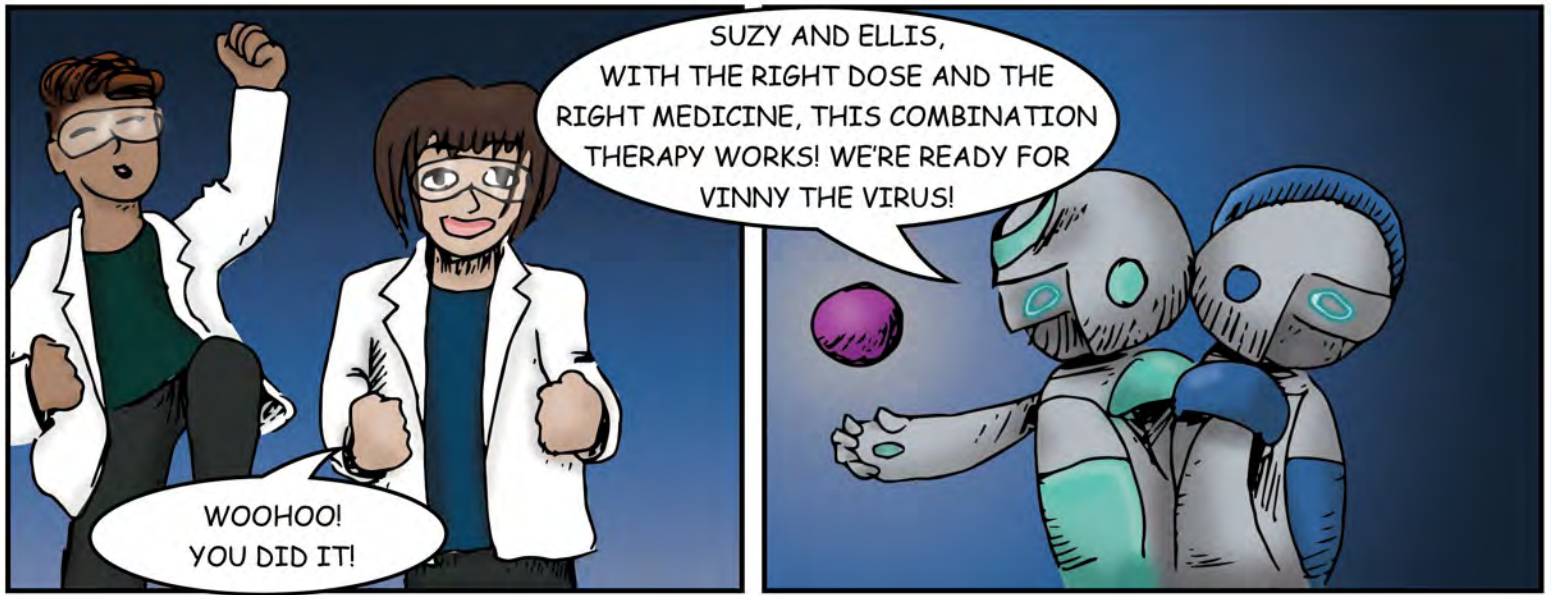


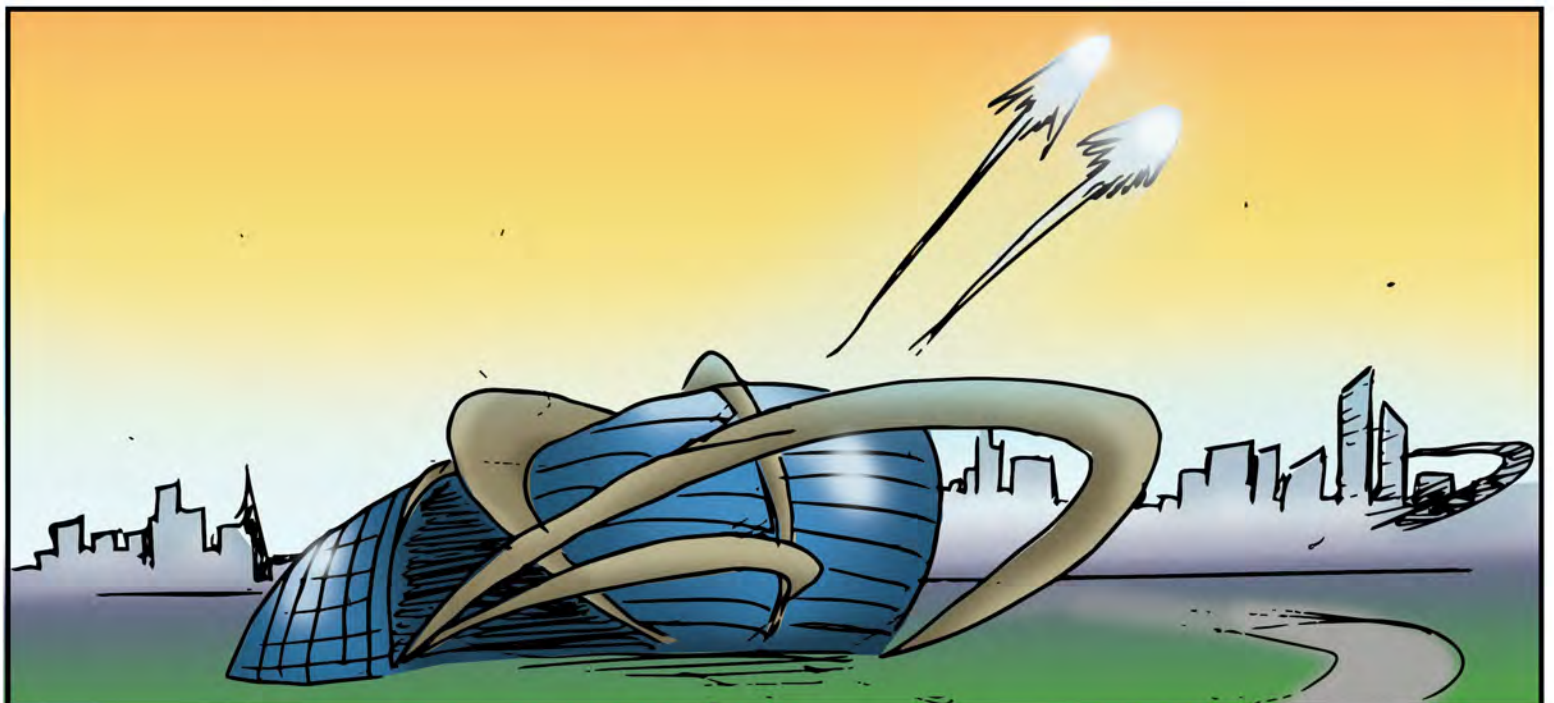
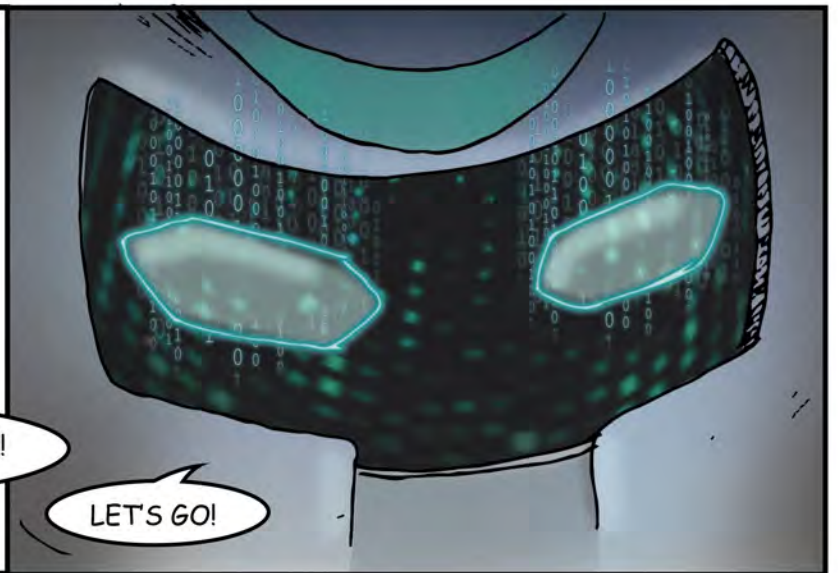
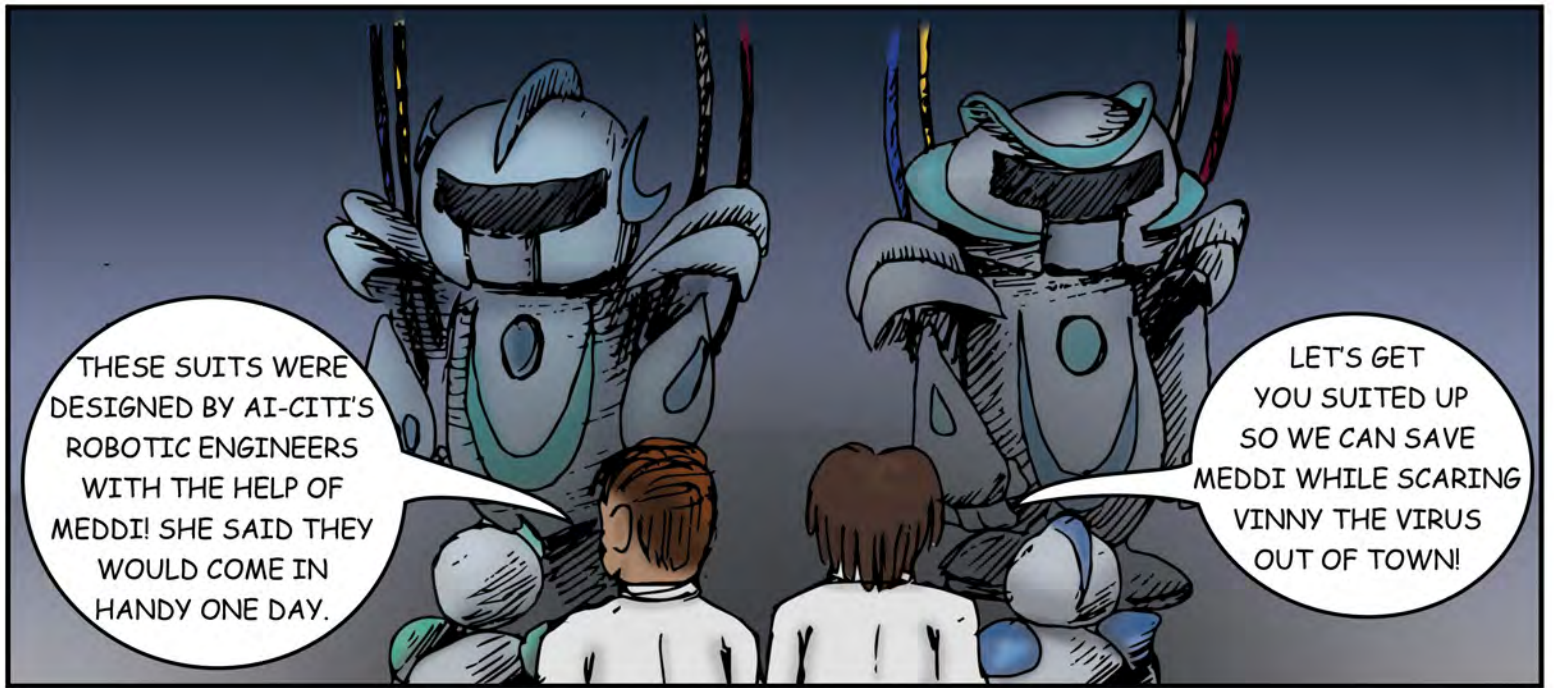
BUT WE CAN NOW USE
AI TO MAKE THE DECISIONS
EASIER FOR US!

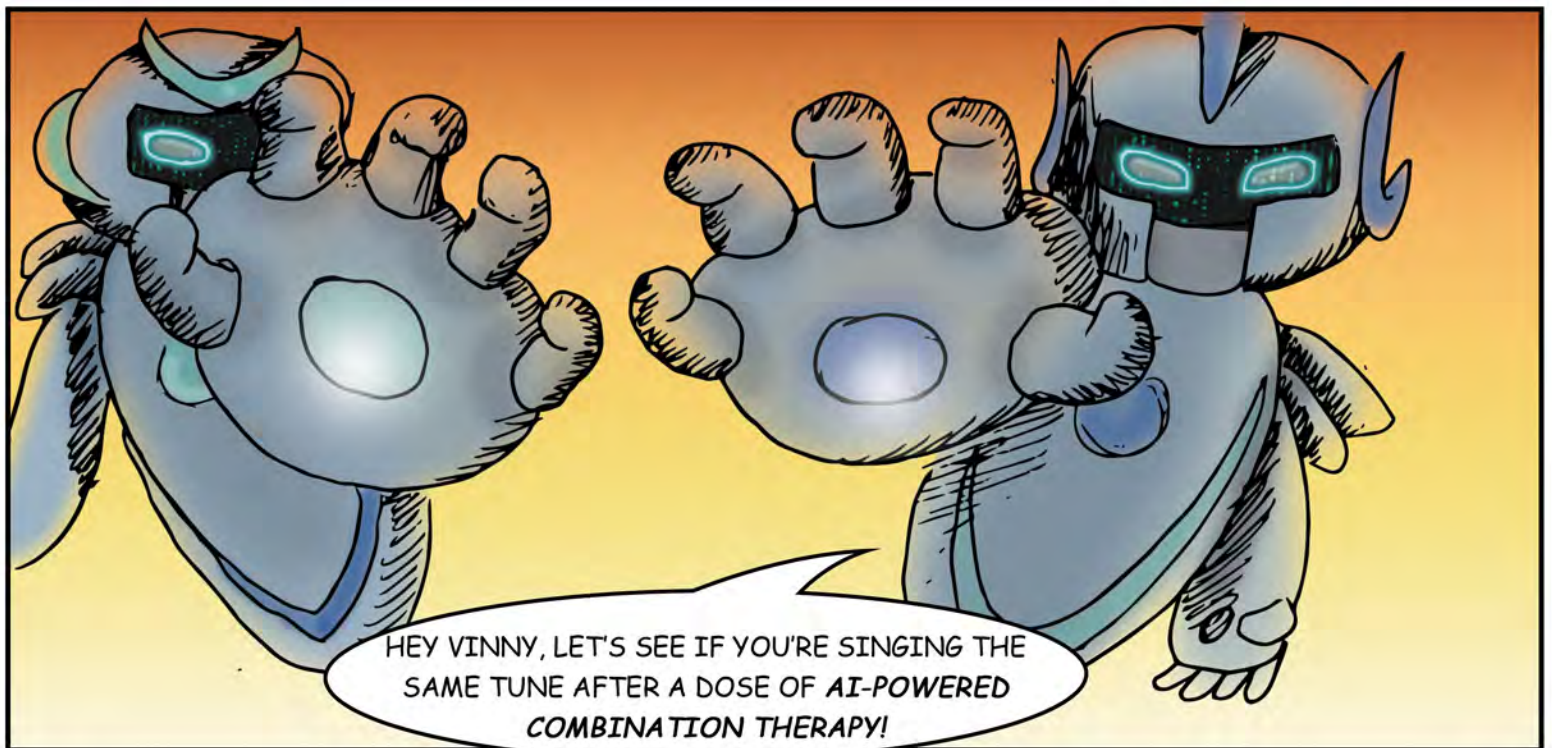
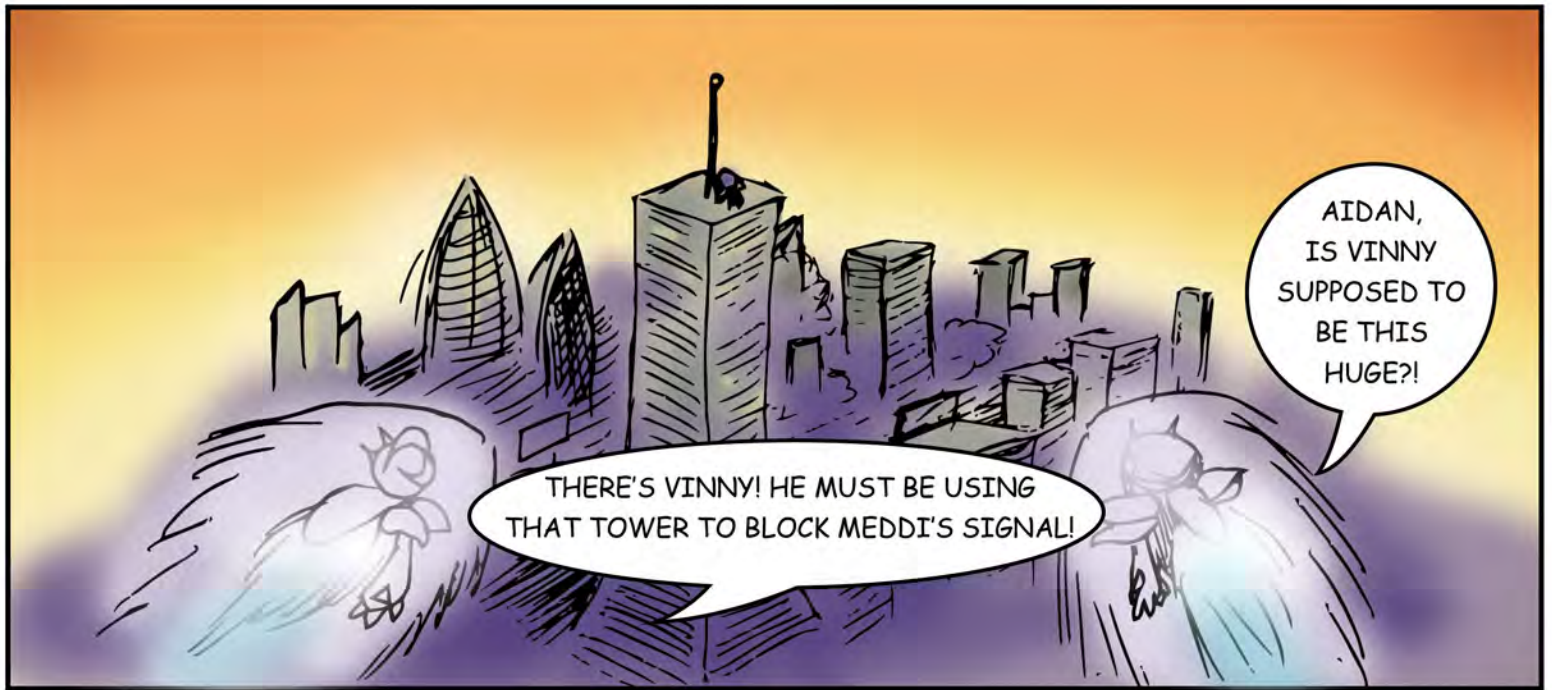


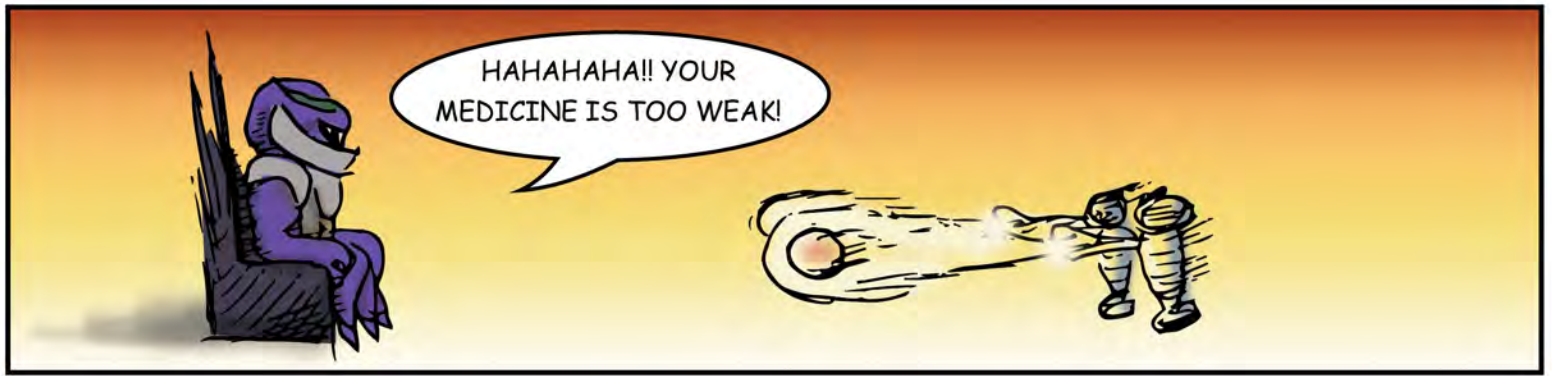
IT IS SO IMPORTANT TO
COMBINE THE *RIGHT MEDICINE* AT THE *RIGHT DOSE*.
OR ELSE, THE COMBINATION MAY NOT WORK! OR, IT MIGHT BE
TOO HARMFUL FOR THE PATIENT. NOT TO WORRY. AI IS ABLE
TO HELP US IDENTIFY THE RIGHT SET OF EXPERIMENTS
TO RUN. THEN, WE CAN TRULY IDENTIFY THE BEST
COMBINATION THERAPY!



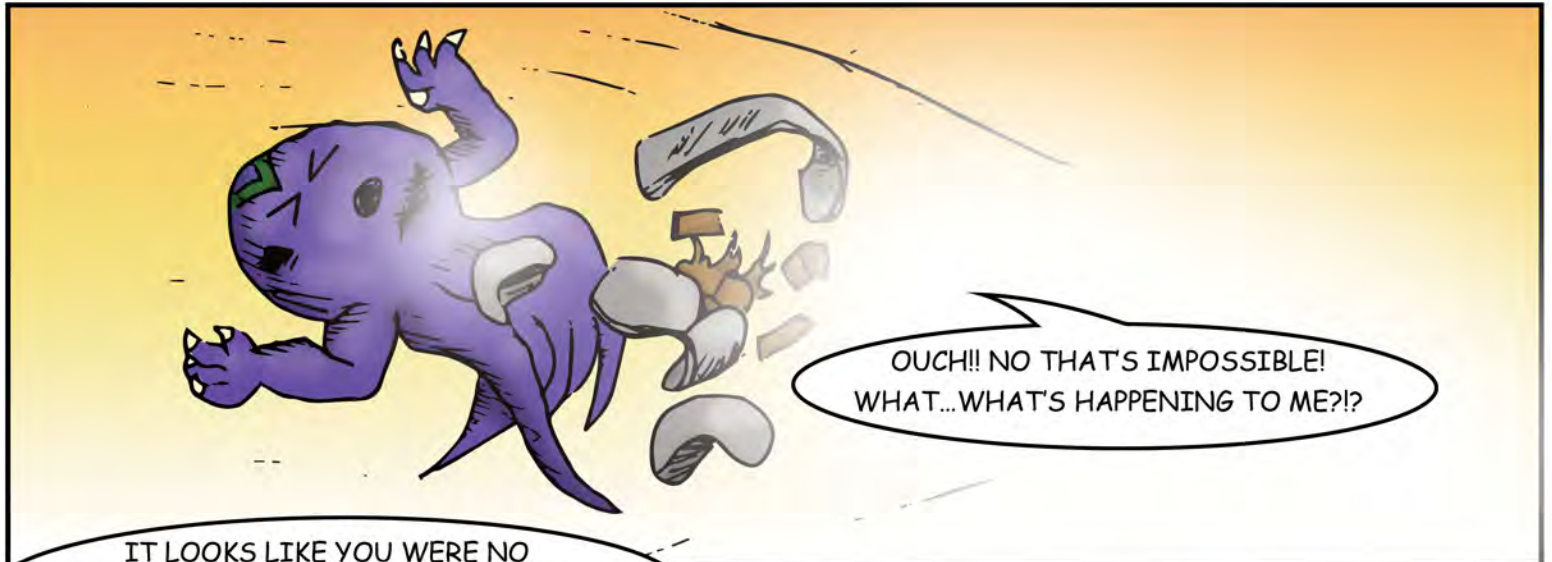






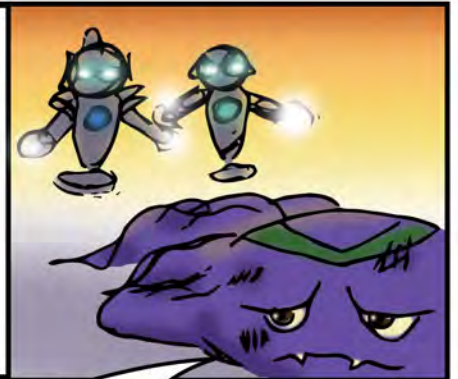


HAHAHAHA!! YOUR MEDICINE IS TOO WEAK!



OUCH!! NO THAT'S IMPOSSIBLE! WHAT...WHAT'S HAPPENING TO ME!?!?

IT LOOKS LIKE YOU WERE NO MATCH FOR OUR AI-POWERED COMBINATION THERAPY VINNY!



NO...NO!! THIS CAN'T BE HAPPENING!! I NEED TO DISAPPEAR!!!

I HAD HOPED TO MAKE EVERYONE SICK, BUT PERHAPS THAT WON'T HAPPEN, I FEAR.....



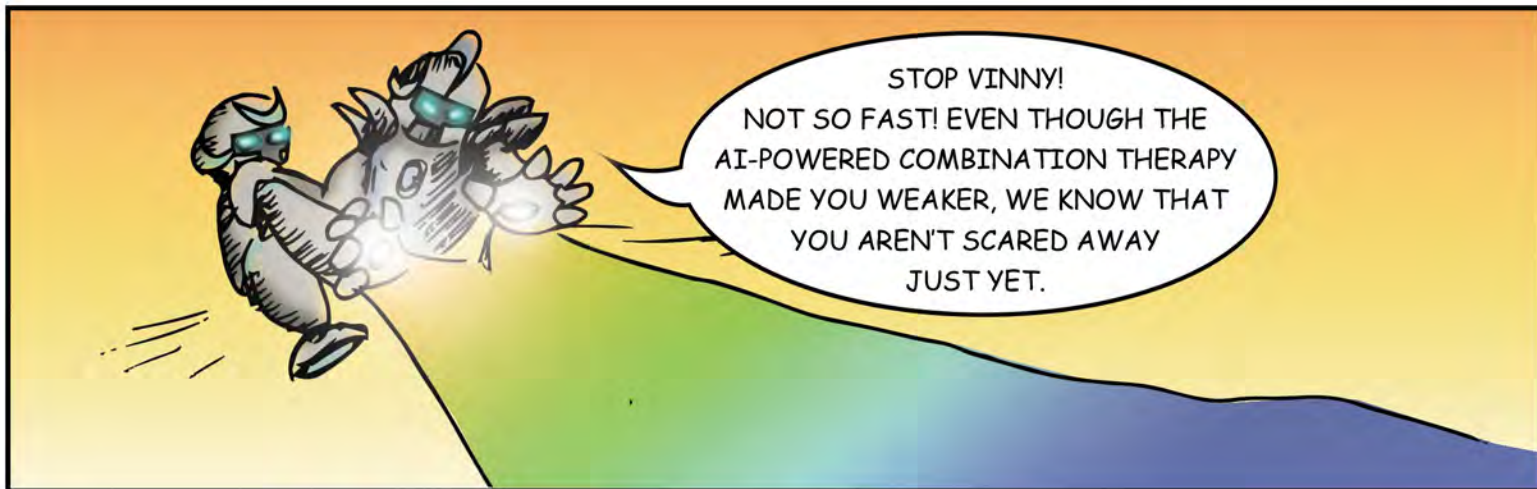
I'VE BECOME SO MUCH SMALLER, IT SEEMS AI REALLY DOES WORK.



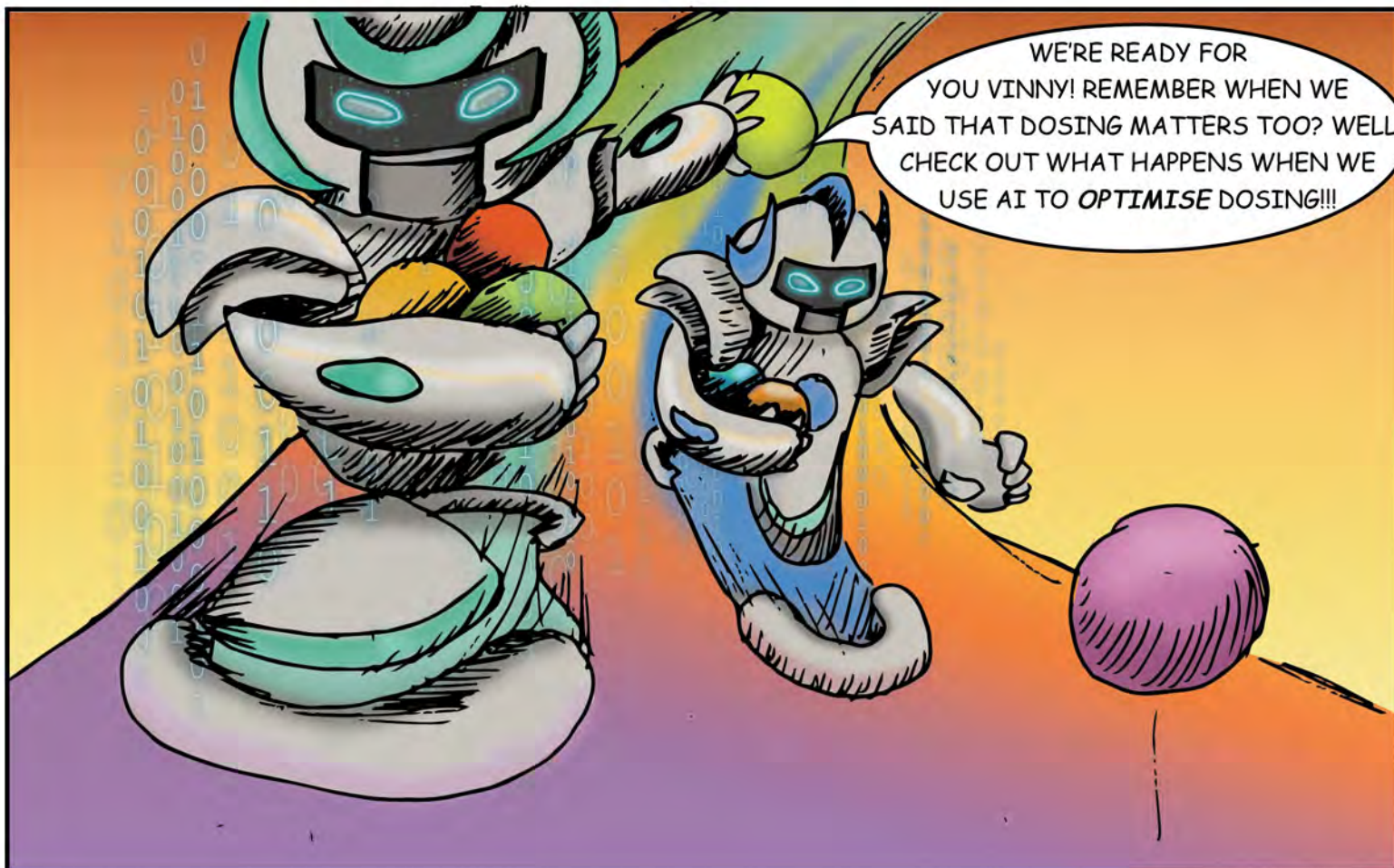
BUT...GUESS WHAT? I STILL FEEL PRETTY SNEAKY..



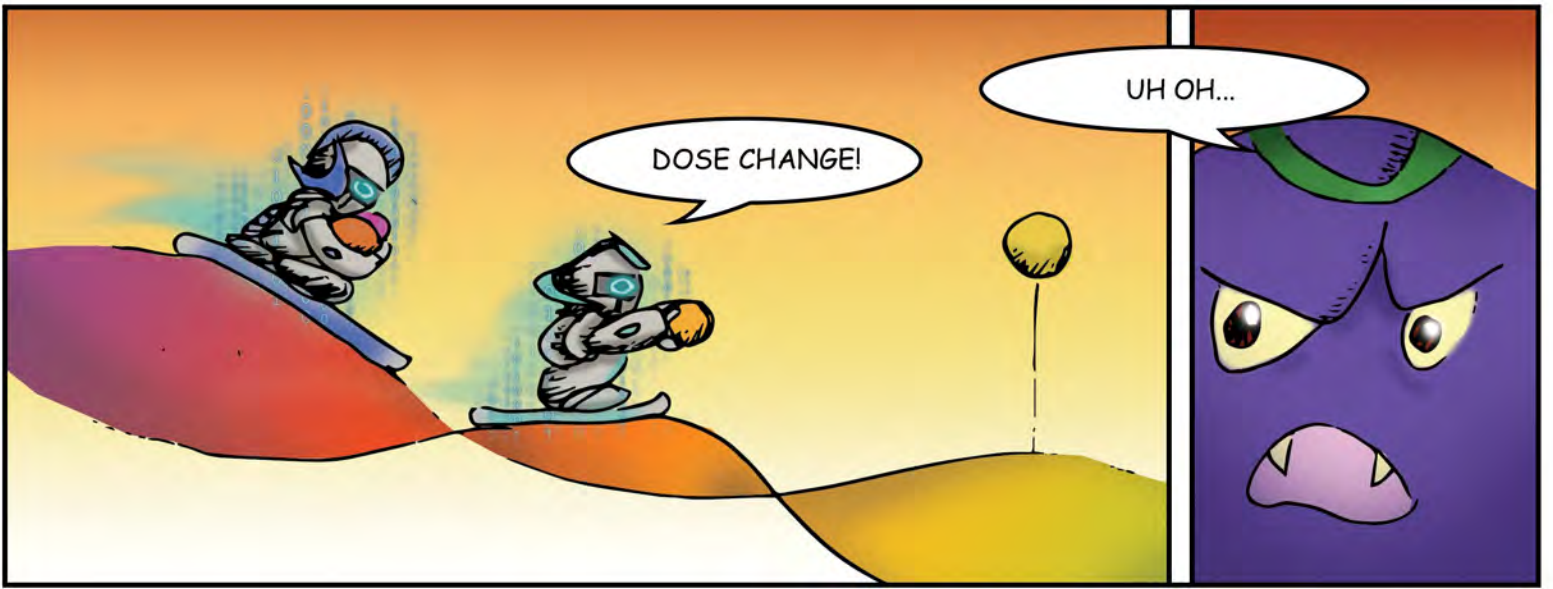
SO I GUESS I SHOULD CONTINUE TO LURK !!!



STOP VINNY!
NOT SO FAST! EVEN THOUGH THE AI-POWERED COMBINATION THERAPY MADE YOU WEAKER, WE KNOW THAT YOU AREN'T SCARED AWAY JUST YET.

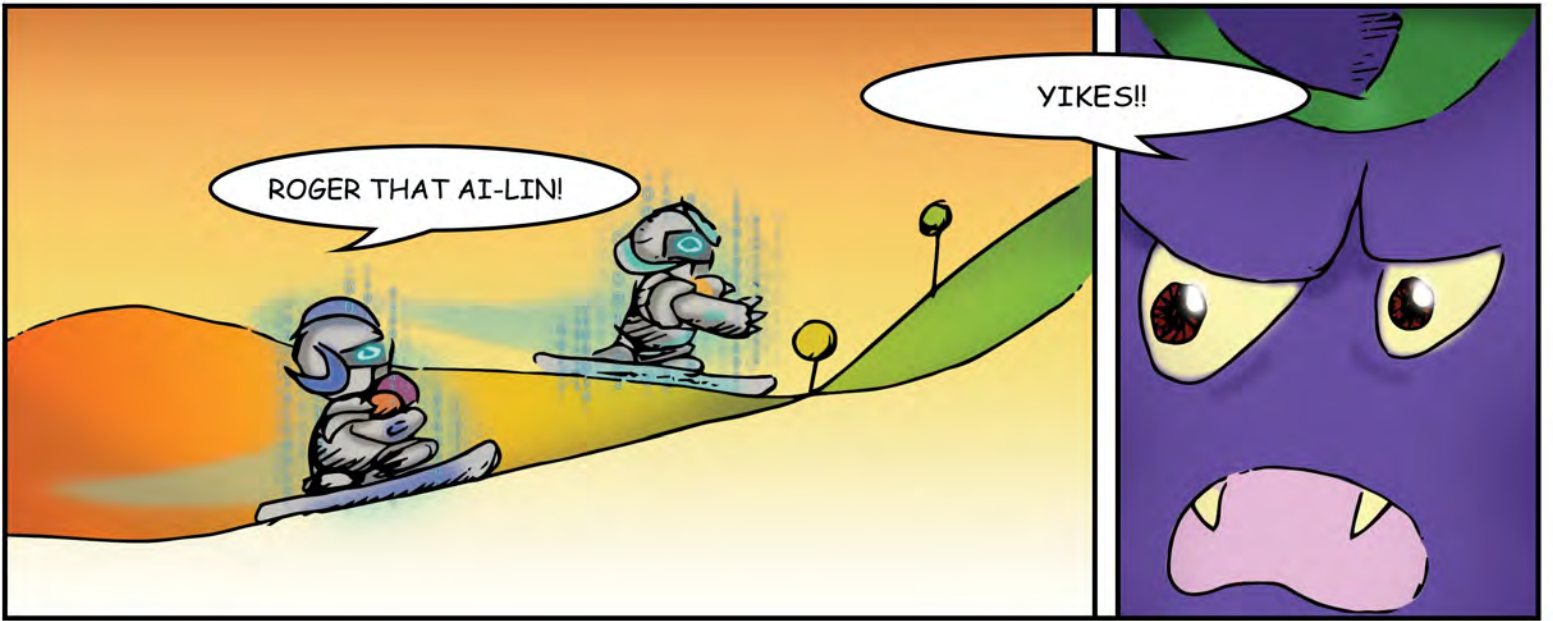


WE'RE READY FOR YOU VINNY! REMEMBER WHEN WE SAID THAT DOSING MATTERS TOO? WELL, CHECK OUT WHAT HAPPENS WHEN WE USE AI TO OPTIMISE DOSING!!!



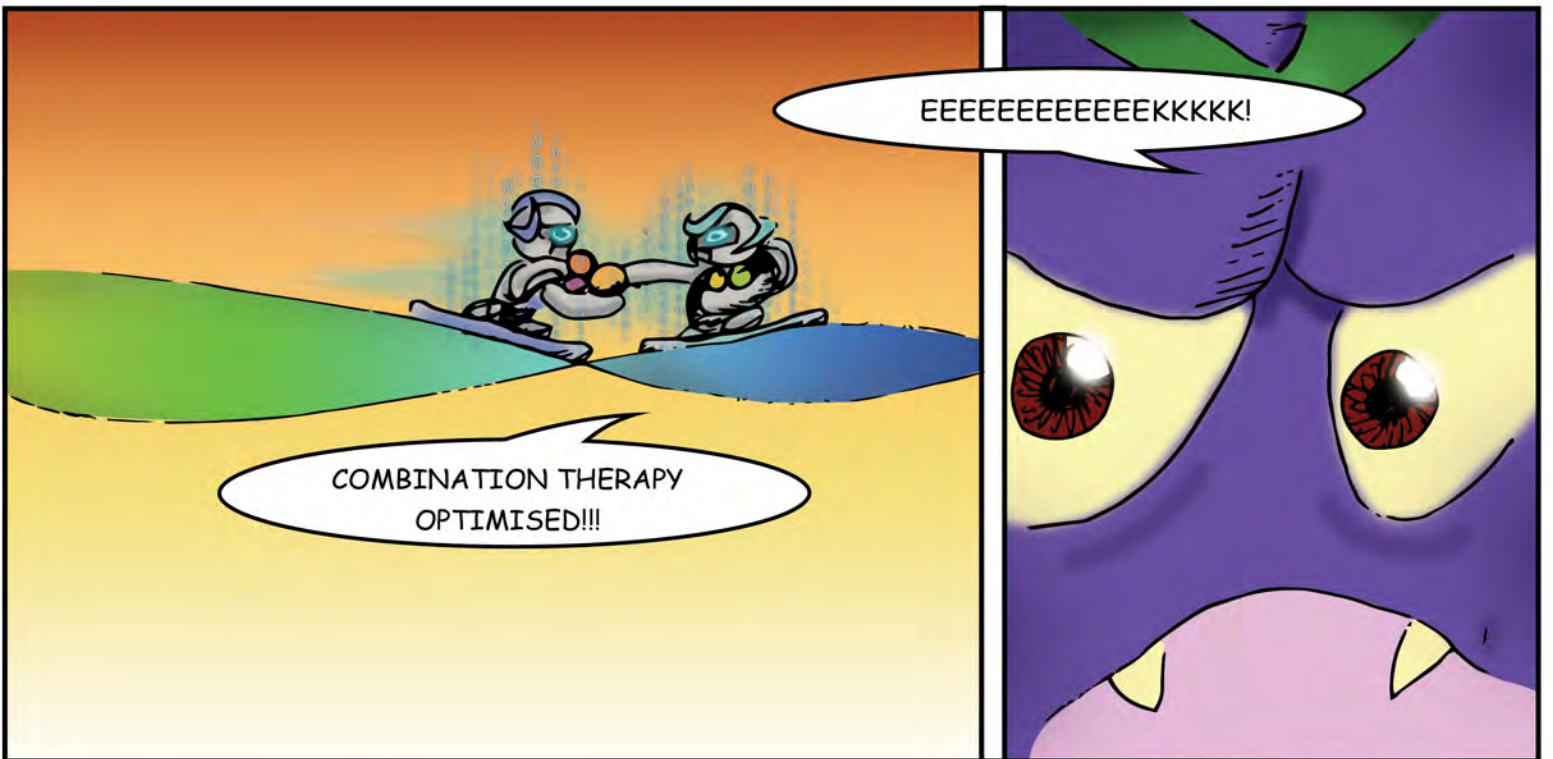
DOSE CHANGE!

UH OH...



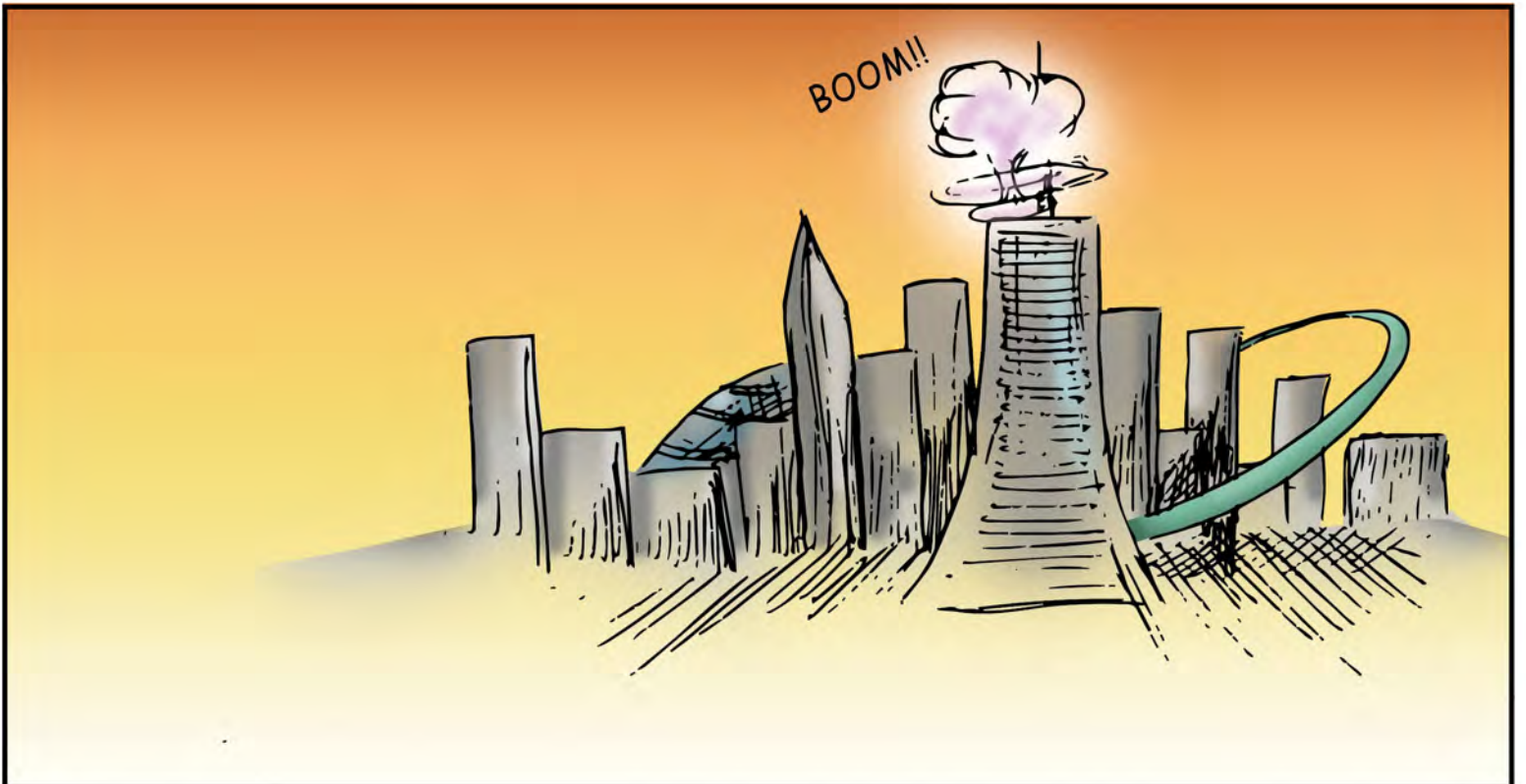
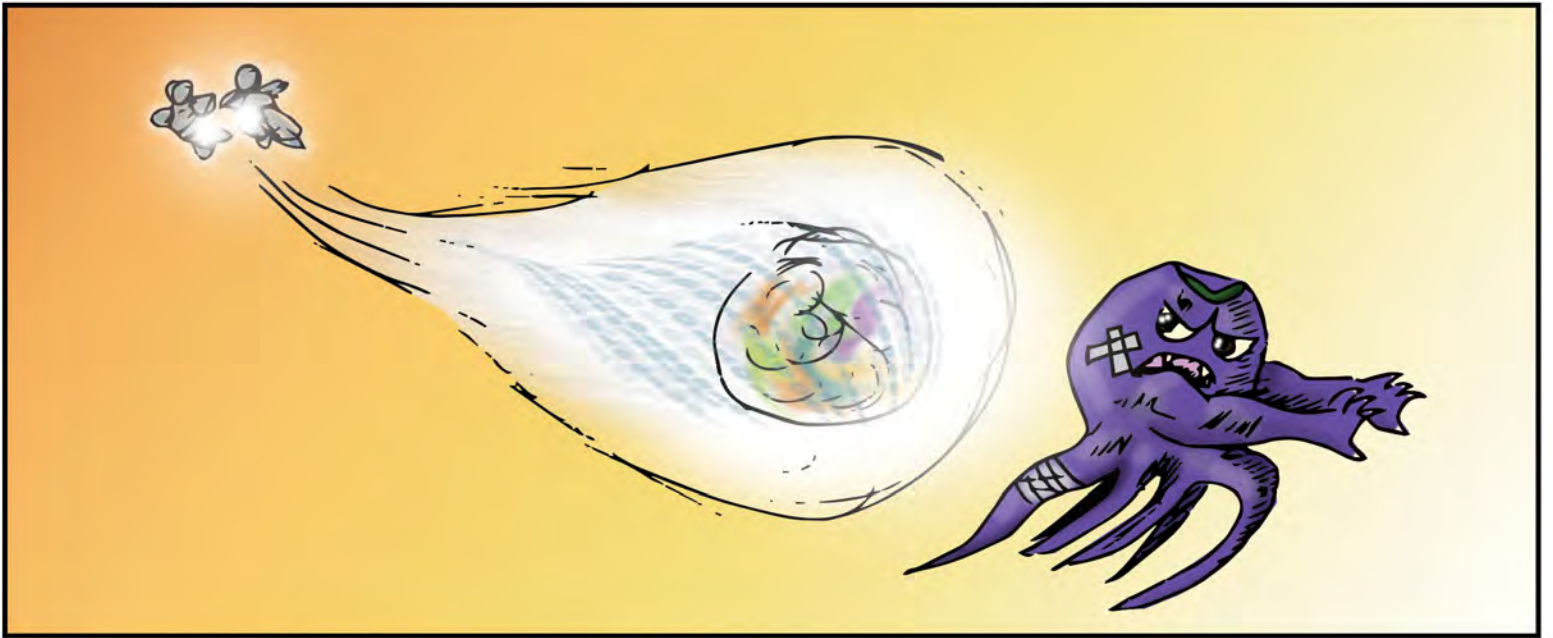
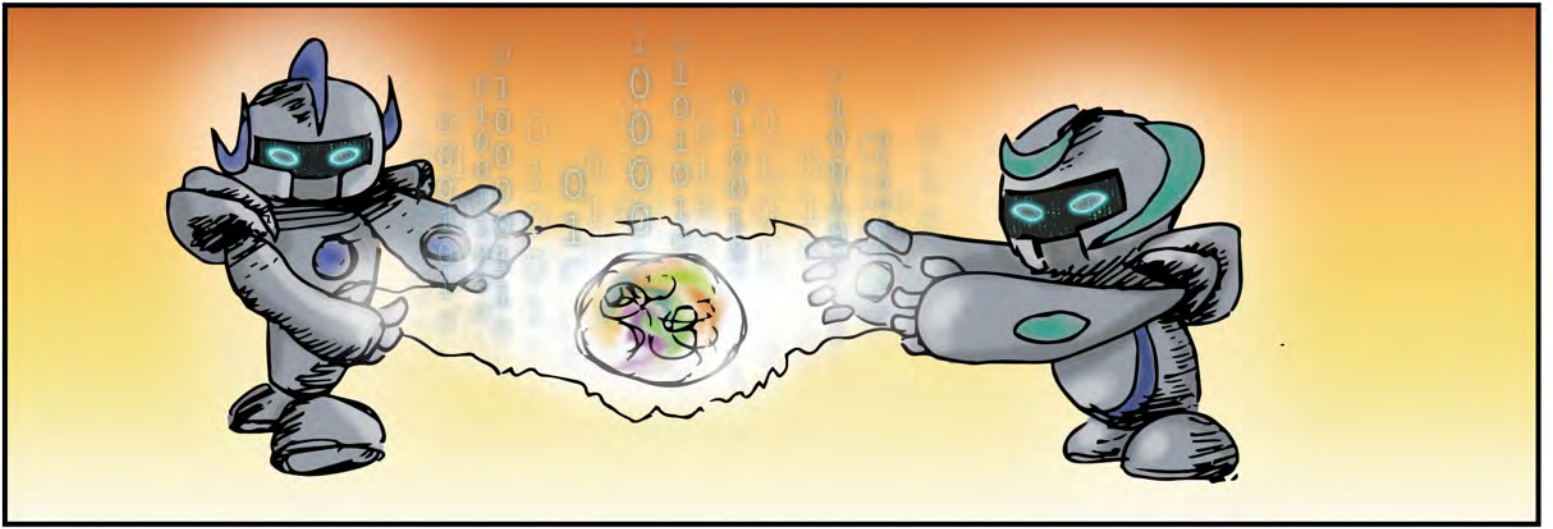
ROGER THAT AI-LIN!

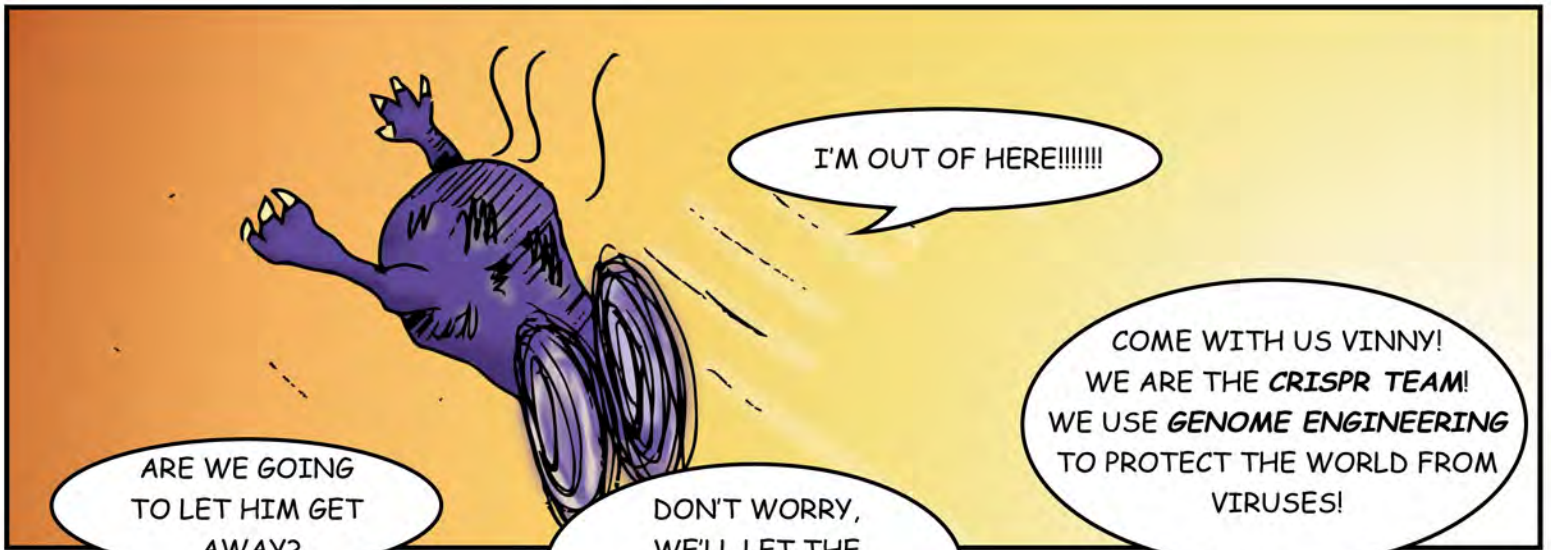
YIKES!!



COMBINATION THERAPY
OPTIMISED!!!

EEEEEEEEEEEEEEEEKKKKK!



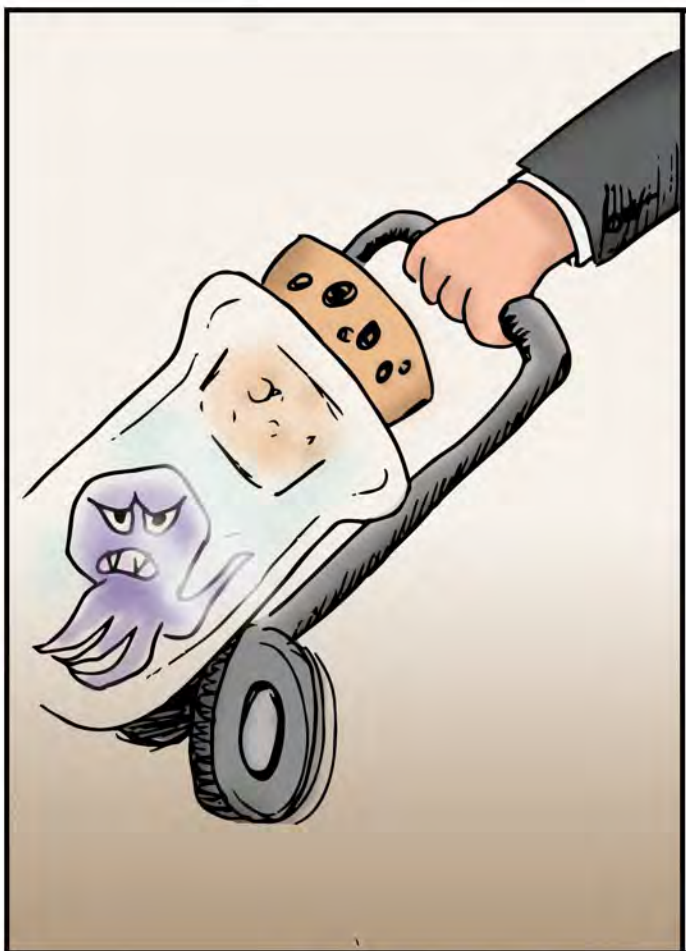
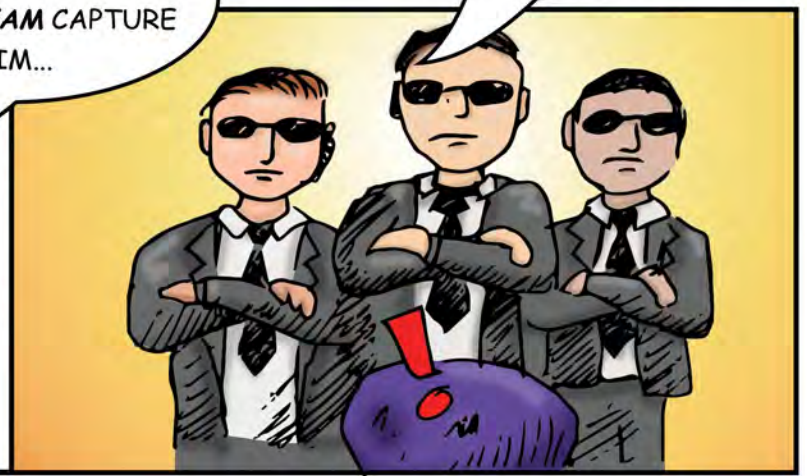


I'M OUT OF HERE!!!!!!

ARE WE GOING TO LET HIM GET AWAY?

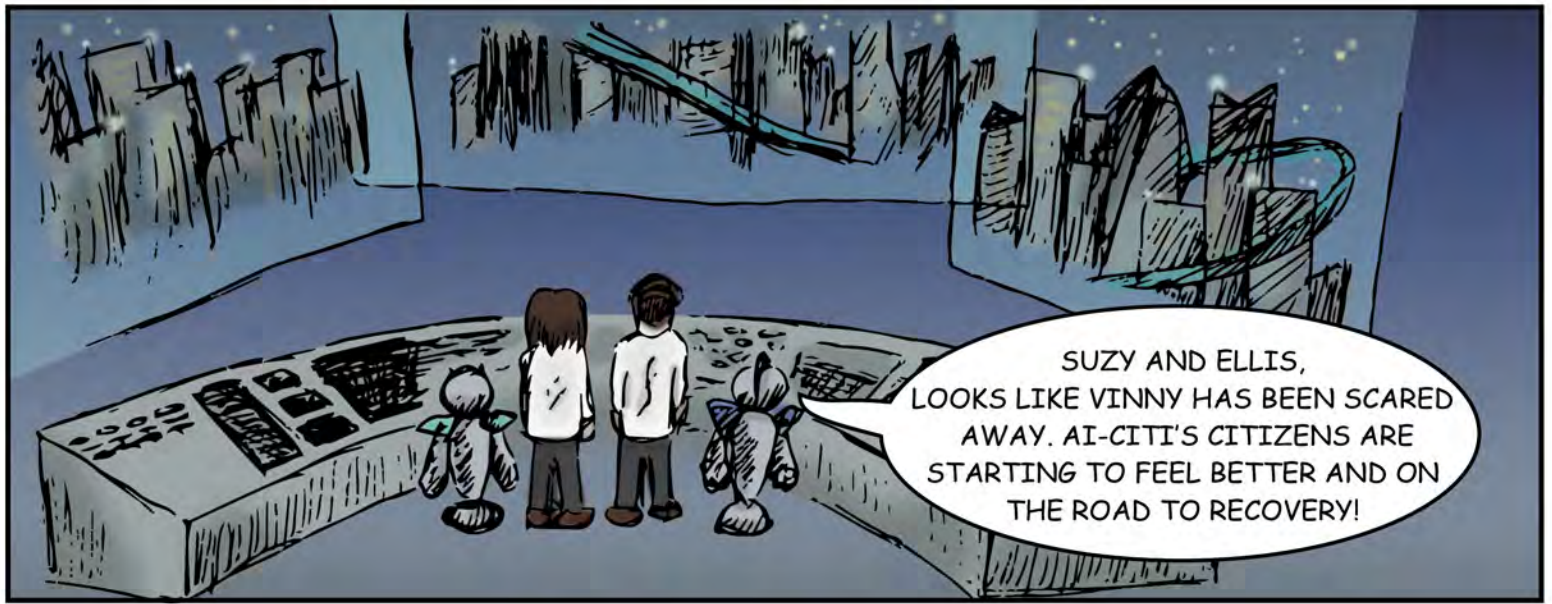
DON'T WORRY, WE'LL LET THE CRISPR TEAM CAPTURE HIM...

COME WITH US VINNY!
WE ARE THE CRISPR TEAM!
WE USE GENOME ENGINEERING TO PROTECT THE WORLD FROM VIRUSES!

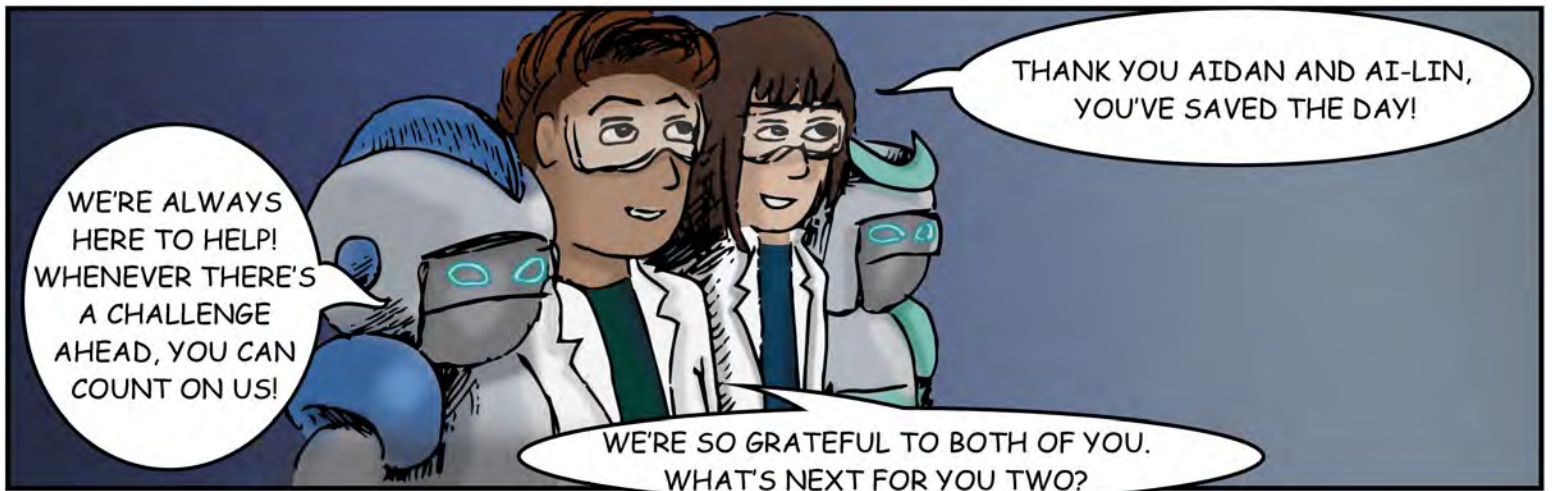


WE HAVE A NEW JOB FOR YOU VINNY!
MAYBE YOU CAN DO SOMETHING GOOD FOR THE WORLD!

BIOFUEL ENGINEERING DIVISION
DIRECTOR BOBBY THE BACTERIA



SUZY AND ELLIS,
LOOKS LIKE VINNY HAS BEEN SCARED
AWAY. AI-CITI'S CITIZENS ARE
STARTING TO FEEL BETTER AND ON
THE ROAD TO RECOVERY!



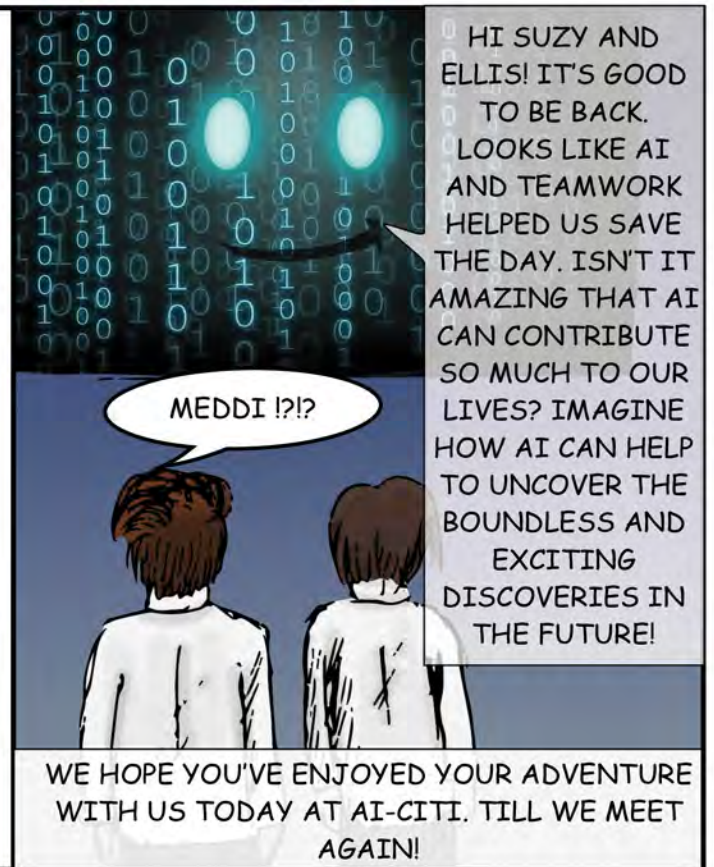
WE'RE ALWAYS
HERE TO HELP!
WHenever THERE'S
A CHALLENGE
AHEAD, YOU CAN
COUNT ON US!

THANK YOU AIDAN AND AI-LIN,
YOU'VE SAVED THE DAY!

WE'RE SO GRATEFUL TO BOTH OF YOU.
WHAT'S NEXT FOR YOU TWO?



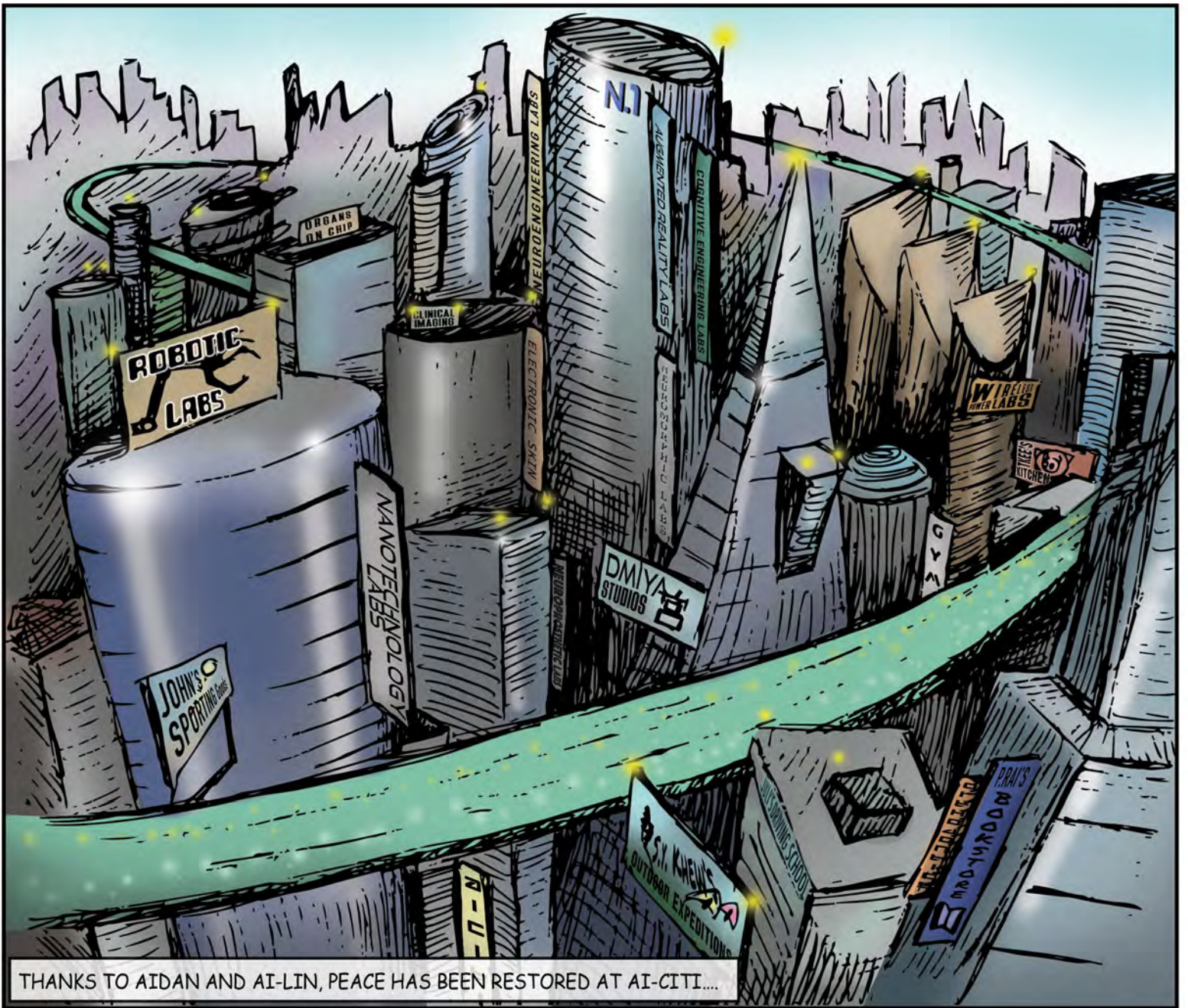
NOW, THERE'S
ONLY ONE THING
LEFT TO DO!



HI SUZY AND
ELLIS! IT'S GOOD
TO BE BACK.
LOOKS LIKE AI
AND TEAMWORK
HELPED US SAVE
THE DAY. ISN'T IT
AMAZING THAT AI
CAN CONTRIBUTE
SO MUCH TO OUR
LIVES? IMAGINE
HOW AI CAN HELP
TO UNCOVER THE
BOUNDLESS AND
EXCITING
DISCOVERIES IN
THE FUTURE!

MEDDI !?!

WE HOPE YOU'VE ENJOYED YOUR ADVENTURE
WITH US TODAY AT AI-CITI. TILL WE MEET
AGAIN!



THANKS TO AIDAN AND AI-LIN, PEACE HAS BEEN RESTORED AT AI-CITI....



THEY THINK THEY'RE SAFE.....

AIDAN AND AI-LIN WILL RETURN....

AIDAN & AI-LIN VS VINNY THE VIRUS

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