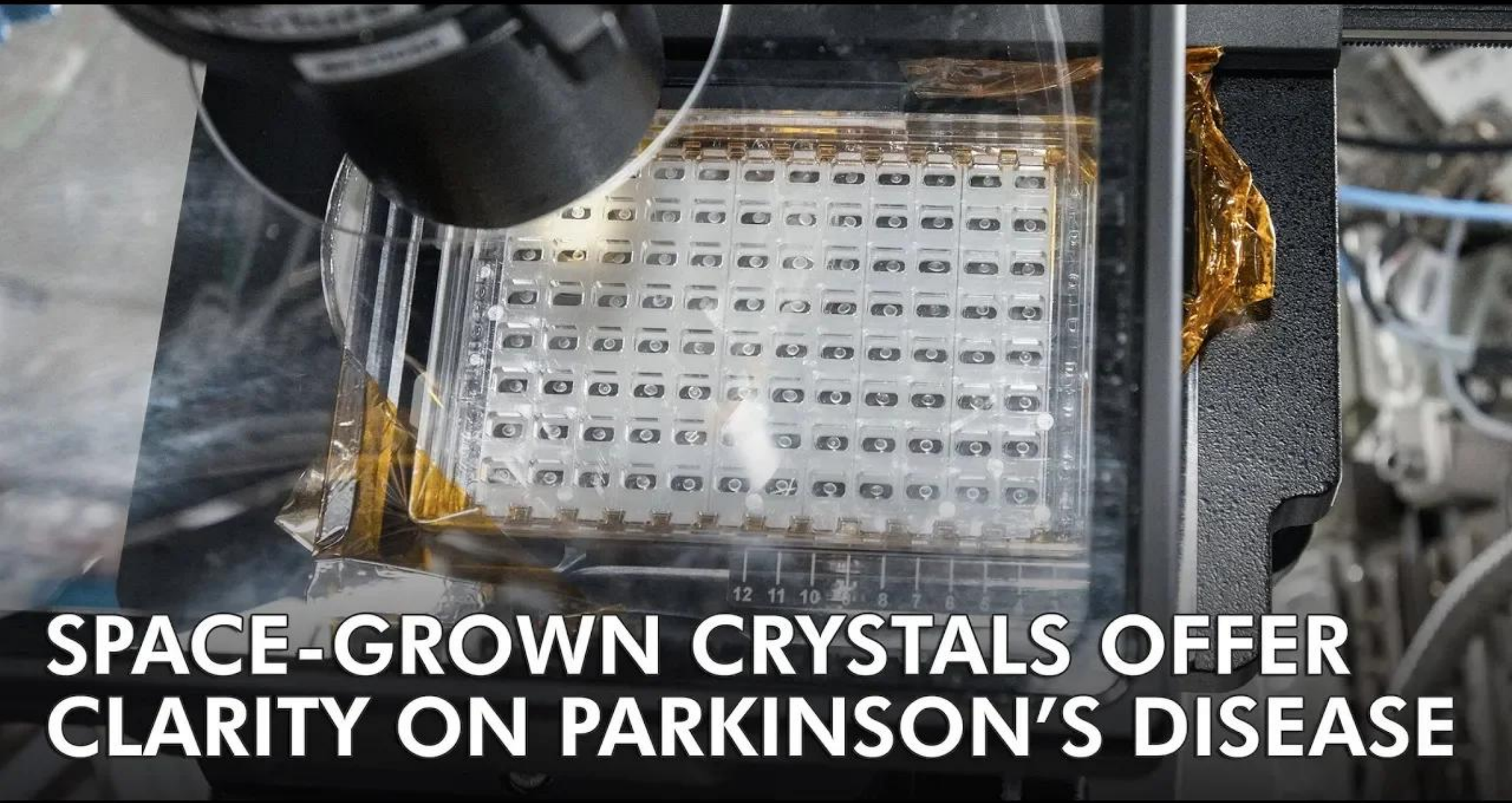

SPACE-GROWN CRYSTALS OFFER CLARITY ON PARKINSON'S DISEASE

1
00:00:00,240 --> 00:00:00,739
[MUSIC]

2
00:00:00,740 --> 00:00:03,418
WELCOME TO EXPEDITION 57 ONBOARD THE

3
00:00:03,419 --> 00:00:05,338
INTERNATIONAL SPACE STATION TODAY WE'RE

4
00:00:05,339 --> 00:00:06,719
DOING SOME REALLY COOL SCIENCE THIS IS

5
00:00:06,720 --> 00:00:08,939
ALEX GERST OVER HERE WITH ME AND WE ARE

6
00:00:08,940 --> 00:00:11,369
WORKING ON PARKINSON'S DISEASE WHAT

7
00:00:11,370 --> 00:00:12,479
WE'RE LOOKING AT HERE IS A SPECIAL

8
00:00:12,480 --> 00:00:14,939
PROTEIN KINASE OR PROTEIN CRYSTAL

9
00:00:14,940 --> 00:00:16,948
STRUCTURE AND THE REASON SCIENTISTS HAVE

10
00:00:16,949 --> 00:00:18,419
SENT IT UP HERE THE INTERNATIONAL SPACE

11
00:00:18,420 --> 00:00:20,579
STATION IS BECAUSE THESE PROTEIN

12
00:00:20,580 --> 00:00:22,739
CRYSTALS TEND TO GROW LARGER AND HAVE

13
00:00:22,740 --> 00:00:25,079

MUCH BETTER QUALITY PARKINSON'S IS A

14
00:00:25,080 --> 00:00:26,669
DISEASE THAT AFFECTS OVER 5 MILLION

15
00:00:26,670 --> 00:00:28,559
PEOPLE WORLDWIDE AND SCIENTISTS ARE

16
00:00:28,560 --> 00:00:30,509
CONSTANTLY SEARCHING FOR A CURE AND WHAT

17
00:00:30,510 --> 00:00:31,919
WE DISCOVERED WAS THAT HERE IN THE

18
00:00:31,920 --> 00:00:33,569
MICROGRAVITY ENVIRONMENT THESE CRYSTALS

19
00:00:33,570 --> 00:00:35,519
REALLY LIKE TO GROW SO IF SCIENTISTS CAN

20
00:00:35,520 --> 00:00:37,289
BETTER ELUCIDATE OR CLARIFY THE

21
00:00:37,290 --> 00:00:39,319
STRUCTURE THEN THEY'RE BETTER ABLE TO

22
00:00:39,320 --> 00:00:41,669
DEVELOP AN INHIBITOR DRUG FOR

23
00:00:41,670 --> 00:00:43,769
PARKINSON'S AND NOT ONLY AN INHIBITOR

24
00:00:43,770 --> 00:00:46,049
DRUG BUT INHIBITOR DRUG WITH VERY FEW

25
00:00:46,050 --> 00:00:48,209
SIDE EFFECTS SO WHAT ALEX IS DOING HERE

26
00:00:48,210 --> 00:00:50,909
TODAY IS HE'S OBVIOUSLY WORKING ON THE

27
00:00:50,910 --> 00:00:52,198
WALLS WHAT IT SEEMS LIKE HERE IN

28
00:00:52,199 --> 00:00:53,788
MICROGRAVITY AND HE IS HE'S GOT A

29
00:00:53,789 --> 00:00:55,558
MICROSCOPE ABOVE HIM AND HE'S GOT A

30
00:00:55,559 --> 00:00:57,718
PLATE THAT HE FILLED WITH THE SPECIAL

31
00:00:57,719 --> 00:01:00,569
PROTEIN CRYSTAL STRUCTURE JUST A FEW

32
00:01:00,570 --> 00:01:03,058
DAYS AGO GAVE TIME FOR THOSE STRUCTURES

33
00:01:03,059 --> 00:01:04,948
TO CRYSTALLIZE AND NOW HE'S EXAMINING

34
00:01:04,949 --> 00:01:06,269
THEM UNDER THE MICROSCOPE AND HE'S

35
00:01:06,270 --> 00:01:08,669
ACTUALLY INTERACTING REAL-TIME WITH THE

36
00:01:08,670 --> 00:01:10,408
PRINCIPAL INVESTIGATOR ON THE GROUND TO

37
00:01:10,409 --> 00:01:12,509
LOOK AT THE CRYSTAL STRUCTURE TO HELP

38
00:01:12,510 --> 00:01:14,849

IMPROVE THE LIGHTING AND THE CLARITY AND

39
00:01:14,850 --> 00:01:16,769
THEN ALSO TAKE PICTURES WHICH WILL THEN

40
00:01:16,770 --> 00:01:19,618
BE SENT BACK DOWN TO THE GROUND SO HERE

41
00:01:19,619 --> 00:01:21,569
ON BOARD EXPEDITION 57 WE'RE VERY PROUD

42
00:01:21,570 --> 00:01:23,579
TO BE TAKING PART IN THIS EXPERIMENT I

43
00:01:23,580 --> 00:01:25,529
THINK IN THE PAST FEW YEARS SCIENTISTS

44
00:01:25,530 --> 00:01:27,508
HAVE REALIZED THAT THE MICROGRAVITY

45
00:01:27,509 --> 00:01:29,158
ENVIRONMENT IS SUCH A UNIQUE ENVIRONMENT

46
00:01:29,159 --> 00:01:31,438
TO GROW THINGS LIKE CELLS OR PROTEIN

47
00:01:31,439 --> 00:01:34,019
CRYSTALS AND IT PROVIDES A NEW WAY TO

48
00:01:34,020 --> 00:01:36,478
HELP US LOOK AT DISEASES IN A BETTER WAY

49
00:01:36,479 --> 00:01:38,728
TO HELP US DEVELOP NEW MEDICATIONS FOR

50
00:01:38,729 --> 00:01:40,618
THESE DISEASES AND SO WE'RE HAPPY TO BE