WEBVTT

NOTE duration: ”00:02:36.757”

NOTE Confidence: 0.86692154

00:00:02.720 --> 00:00:03.919 My lab is a biomedical

NOTE Confidence: 0.86692154

00:00:03.919 --> 00:00:06.480 engineering lab. Our chemistry and

NOTE Confidence: 0.86692154

00:00:06.480 --> 00:00:09.360 engineering group, and, work on

NOTE Confidence: 0.86692154

00:00:09.360 --> 00:00:11.059 developing a ray of tachology,

NOTE Confidence: 0.9829892

00:00:11.599 --> 00:00:12.559 mainly for,

NOTE Confidence: 0.69076365

00:00:13.280 --> 00:00:14.655 drug delivery to the brain

NOTE Confidence: 0.87416565

00:00:14.974 --> 00:00:16.335 and also for non viral

NOTE Confidence: 0.87416565

00:00:16.335 --> 00:00:17.475 delivery gene therapy.

NOTE Confidence: 0.9441452

00:00:18.095 --> 00:00:19.295 And our biology team,

NOTE Confidence: 0.904445

00:00:19.775 --> 00:00:21.875 work together with, our engineering

NOTE Confidence: 0.904445

00:00:21.935 --> 00:00:23.794 team, you know, to apply,

NOTE Confidence: 0.9318873

00:00:24.095 --> 00:00:25.154 this new technology

NOTE Confidence: 0.9538658

00:00:25.535 --> 00:00:27.634 for treatment of selective neurological

NOTE Confidence: 0.9538658

00:00:27.775 --> 00:00:28.275 disease.

NOTE Confidence: 0.9501149

00:00:31.720 --> 00:00:33.640 We focus on developing three

NOTE Confidence: 0.9501149

00:00:33.640 --> 00:00:35.100 major platform technology,

NOTE Confidence: 0.9486702

00:00:35.559 --> 00:00:36.940 you know, for different applications.

NOTE Confidence: 0.90885144

00:00:37.880 --> 00:00:39.820 The first one, is nanoparticles,

NOTE Confidence: 0.90885144

00:00:40.040 --> 00:00:41.320 you know, because we use

NOTE Confidence: 0.90885144

00:00:41.320 --> 00:00:42.760 a lot of nanoparticles. We

NOTE Confidence: 0.90885144

00:00:42.760 --> 00:00:43.604 engineer particles,

NOTE Confidence: 0.86149436

00:00:44.725 --> 00:00:46.165 blood brain barrier, for delivering

NOTE Confidence: 0.86149436

00:00:46.165 --> 00:00:47.364 drugs into the brain for

NOTE Confidence: 0.86149436

00:00:47.364 --> 00:00:49.145 brain cancer or stroke treatment.

NOTE Confidence: 0.894279

00:00:49.604 --> 00:00:50.965 The second technology we call

NOTE Confidence: 0.894279

00:00:50.965 --> 00:00:51.784 step engineering,

NOTE Confidence: 0.9838798

00:00:52.405 --> 00:00:54.105 so which we pioneered,

NOTE Confidence: 0.82938564

00:00:54.565 --> 00:00:55.925 the development. And, we are

NOTE Confidence: 0.82938564

00:00:55.925 --> 00:00:57.390 the only group still now,

NOTE Confidence: 0.82938564

00:00:57.630 --> 00:00:58.989 in the world in, working

NOTE Confidence: 0.82938564

00:00:58.989 --> 00:01:00.770 on delivering genome editing therapy

NOTE Confidence: 0.82938564

00:01:01.070 --> 00:01:01.470 for,

NOTE Confidence: 0.7579196

00:01:02.030 --> 00:01:03.870 many new genetic disease. The

NOTE Confidence: 0.7579196

00:01:03.870 --> 00:01:05.550 third topic actually is the

NOTE Confidence: 0.7579196

00:01:05.550 --> 00:01:07.090 antibody, is a new technology,

NOTE Confidence: 0.8488498

00:01:07.470 --> 00:01:08.750 which are the development in

NOTE Confidence: 0.8488498

00:01:08.750 --> 00:01:10.235 the lab. So we are

NOTE Confidence: 0.8488498

00:01:10.235 --> 00:01:12.494 working on, engineering, developing

NOTE Confidence: 0.85741645

00:01:12.795 --> 00:01:14.174 a group of antibodies

NOTE Confidence: 0.8279428

00:01:15.034 --> 00:01:16.795 which can penetrate cells for

NOTE Confidence: 0.8279428

00:01:16.795 --> 00:01:19.194 treatment now, like Parkinson disease

NOTE Confidence: 0.8279428

00:01:19.194 --> 00:01:20.655 or Huntington disease.

NOTE Confidence: 0.8845557

00:01:21.274 --> 00:01:22.860 But on the biology side,

NOTE Confidence: 0.8845557

00:01:22.860 --> 00:01:24.299 we try to use the

NOTE Confidence: 0.8845557

00:01:24.299 --> 00:01:26.640 established, you know, procedural techniques.

NOTE Confidence: 0.9185932

00:01:27.100 --> 00:01:28.479 We don't want to innovate

NOTE Confidence: 0.9185932

00:01:28.539 --> 00:01:30.140 on the biology side because

NOTE Confidence: 0.9185932

00:01:30.140 --> 00:01:31.979 we our major innovation is

NOTE Confidence: 0.9185932

00:01:31.979 --> 00:01:33.759 on technology, you know, development.

NOTE Confidence: 0.88973755

00:01:37.524 --> 00:01:38.564 My goal is that, you

NOTE Confidence: 0.88973755

00:01:38.564 --> 00:01:40.965 know, translate all research into

NOTE Confidence: 0.88973755

00:01:40.965 --> 00:01:41.944 clinical applications.

NOTE Confidence: 0.6951631

00:01:42.405 --> 00:01:43.604 And for example, for step

NOTE Confidence: 0.6951631

00:01:43.604 --> 00:01:45.465 engineering and, our first,

NOTE Confidence: 0.777264

00:01:46.244 --> 00:01:48.085 genomic team program, we are

NOTE Confidence: 0.777264

00:01:48.085 --> 00:01:50.024 more to clinical and, translation.

NOTE Confidence: 0.90016955

00:01:50.480 --> 00:01:51.380 And then nanoparticles,

NOTE Confidence: 0.88602567

00:01:51.760 --> 00:01:53.520 we have a program focused

NOTE Confidence: 0.88602567

00:01:53.520 --> 00:01:54.560 on clinical trials in the

NOTE Confidence: 0.88602567

00:01:54.560 --> 00:01:55.460 next two years.

NOTE Confidence: 0.88791376

00:01:55.840 --> 00:01:57.280 And we also anticipate the

NOTE Confidence: 0.88791376

00:01:57.280 --> 00:01:59.280 antibody work will be, applied

NOTE Confidence: 0.88791376

00:01:59.280 --> 00:02:01.040 into, clinical, you know, for

NOTE Confidence: 0.88791376

00:02:01.040 --> 00:02:02.400 disease treatment in the very

NOTE Confidence: 0.88791376

00:02:02.400 --> 00:02:03.060 near future.

NOTE Confidence: 0.9241726

00:02:03.725 --> 00:02:05.165 Most of my work cannot

NOTE Confidence: 0.9241726

00:02:05.165 --> 00:02:07.325 be carried out without, the

NOTE Confidence: 0.9241726

00:02:07.325 --> 00:02:07.825 collaboration,

NOTE Confidence: 0.8886296

00:02:08.845 --> 00:02:10.445 particularly this collaboration with our

NOTE Confidence: 0.8886296

00:02:10.445 --> 00:02:12.205 physician colleagues. For example, for

NOTE Confidence: 0.8886296

00:02:12.205 --> 00:02:13.105 Geelong Medicine,

NOTE Confidence: 0.8333119

00:02:13.565 --> 00:02:15.325 we closely collaborated with Yong

NOTE Confidence: 0.8333119

00:02:15.325 --> 00:02:17.720 Heizhan's group. You know, for

NOTE Confidence: 0.8333119

00:02:17.780 --> 00:02:19.780 antibody, we, closely work with,

NOTE Confidence: 0.8333119

00:02:20.019 --> 00:02:21.239 Professor James Hansen.

NOTE Confidence: 0.8651501

00:02:21.540 --> 00:02:22.659 And then for stroke, you

NOTE Confidence: 0.8651501

00:02:22.659 --> 00:02:24.260 know, we work with, chemo

NOTE Confidence: 0.8651501

00:02:24.260 --> 00:02:25.540 chairs. For brain cancer, we

NOTE Confidence: 0.8651501

00:02:25.540 --> 00:02:26.840 work in a chair monitor.

NOTE Confidence: 0.9243186

00:02:28.392 --> 00:02:29.992 That's actually how make our

NOTE Confidence: 0.9243186

00:02:29.992 --> 00:02:32.492 research unique and, translational.