



PROBUS Club of Central Edmonton Newsletter

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March 15 – Dale Leckie

Presentation by Dale Leckie, past president of Society for Sedimentary Geology and the Canadian Society of Petroleum Geologists presented scenic geology of Alberta. Dale took us around Alberta and into BC showing us a great many interesting scenes. I included a few from the presentation in this newsletter. His book, *Scenic Geology of Alberta*, formed the backdrop of the presentation. The book and the presentation included photos, and painting from 2 artists. One common theme was the incredible time that makes up geologic history. He spoke about the ancient landscape of Alberta and how it was formed. We heard about:

- Cemented rocks
- Lost Lemon gold mine
- Rock moving from mountains at millimeters a year
- Shore line of great lakes that covered Alberta
- Giant boulders – the Okotoks Erratic
- And many more examples of Alberta geologic history.

There was an incredible array of geologic formations scattered across Alberta. One can revisit the presentation by reading the book he authored. Also, we can experience it directly by visiting many of the site he noted. Here are a few pictures:



Petrified Bone



March 22 – John Mackey

John Mackey discussed the Cross Cancer Institute, phase 1 trial program, advanced cancer treatment, PARS Microscope and challenges in moving ideas to products at the U of A. The presentation was entitled “Cancer treatment: Exciting time at the Cross Cancer Institute”. Dr Mackey has dedicated many years to cancer research at the Cross.

First, he shared his opinion on the Cross Cancer and why it is a hot bed for cancer research. The idea of being better each day is built into the culture of the Cross. He mentioned that a large fundraising program for the Cross will be announced on April 20. It is to raise funds to enhance the Cross and its ability to do research. They currently have up to 700 people per year in clinical trials their goal is to increase this to 1,000. Currently they have about 250 active clinical trials going at any given time. *(For more information check Alberta Cancer Clinical Trials website.)*

He introduced us to Car T cell therapy and Dr. Michael Chu. This therapy is about teaching a person’s native immune system to attack cancer cells. They do this by training a person’s T cells. It starts by extracting the T-Cells from a person, altering them in a lab, then reinjection them into the person. They use the labs built for diabetes to work with the T cells. This new treatment has the potential of being significant tool in fighting cancer. The following is quote from U of A website:

Dr. Michael Chu is convinced immunotherapy is a game-changing treatment in the stand against cancer, and he sees the potential for this type of medicine as nearly limitless. "For decades we've been relying on surgery, chemo, and radiation, [but] immunotherapy has really changed how we look at oncology. We can now target the actual cancer cells directly through this treatment," says Chu, a clinician and researcher at the University of Alberta's (U of A) department of oncology. "It's changed melanoma from an entirely palliative disease to something where about 50 to 60 per cent of patients are cured of it."

He next spoke about pre-phase 1 program. He shared his experiences with moving research to the development. He learned that he could help colleges to commercialize research. He did so by building a team to advise research on the steps needed. One of the key issues is that the brilliant researchers went to publish research before patenting it. As soon as it was

published it was in the public domain and they were unable to attract financial support and the research never moved forward. Pre-phase 1 program is about helping researchers with setting up a company, patenting and other issues in commercializing research. They now have 3 projects move into clinical trials. Also, he spoke about the U of A's struggles to help researchers start spin of companies as well as the roadblocks put in place by the U of A.

The following is from the Website:

The Alberta Pre-Phase I Cancer Program (PP1P) was set up in 2013 by medical oncologist Dr. John Mackey and colleagues to link potential solutions with unmet needs. Both patients and clinicians are in urgent need of therapies that are safer and more effective. Alberta has a thriving discovery and medical research community, from which those therapies will spring. Linking problem with solution requires the translation of basic discovery research to clinical evaluation.

He moved on to PCLX-001, a new cancer drug. He stated that if you were a rat with cancer, he could feed this drug to you and cure your cancer in 5 days. It is a new type of drug that is an MNT inhibitor. Luc G. Berthiaume, PhD is the lead researcher on this subject. The idea is to kill cancer cells but not normal cells. Working together they started a company called Pacylex. With help from many individuals and funding from several sources. They are in trials with the 7 patients about to start treatment for one in Montreal. So far it preformed vary well and is quite encouraging. They have learned that this drug may be effective in either curing or slowing cancer. *(More information is available on the Company Website.)*

He shared a story about a brilliant engineering PhD student, now Dr. Parsin Haji Reza, PhD. It encapsulated the issues around move ideas to commercialization. Parsin found new signal while firing lasers at a target. He took it to his supervisor, who sceptical and suggested that Parsin was wrong. This motivated Parsin to prove his case. After proving the case his supervisor argued that he should publish it. Instead, the student felt that he should patent it. They approached Dr Mackay for advice. He agreed to be provisional CEO.

The invention that the company is working on is a microscope that can quickly identify cancer in real time. It will be a game changer, the microscope named PARS® offers ...

- Imaging at least as good as diagnostic-quality H&E histology
- Images fresh tissues without dyes
- Images thick tissue samples
- Contact-free imaging
- Near real-time feedback (< 5 min)
- Additional biological information beyond H&E
- Downstream processing (no staining of samples necessary)
- AI-supported cloud diagnostics

(The above is from the IllumiSonics Website)

March 25 - Versailles

We participated in private group tour of a part Versailles. This virtual tour was a first for us. I will write from my perspective. I was able to return some kindness to David when his Wi-Fi failed by hosting him to view it on my system.

We each benefited from direct assistance from either David, Yves or both. As a result, I was able to connect to Versailles and join the tour. Initially, I seemed to be frozen on a picture of the exterior of Versailles. However, after my connection crashed and I reconnected we were

part of the Tour. The tour itself was interesting, though it seemed to be relatively slow, this allowed lots of time to view the images, these were truly remarkable. Martine, our guide, described the sights with a great many superlatives the remarkable craftsmanship was deserving of her praise. Here are three screen shots I took during the presentation. They provide a taste of what we viewed.



Throne room



Mirror room

We now need to decide if similar tours are worthy of our interest and how we can apply what we learned to ease the processes of setting up future tours.



Exterior with cathedral at the center

Stay Health and remember spring is actually on its way