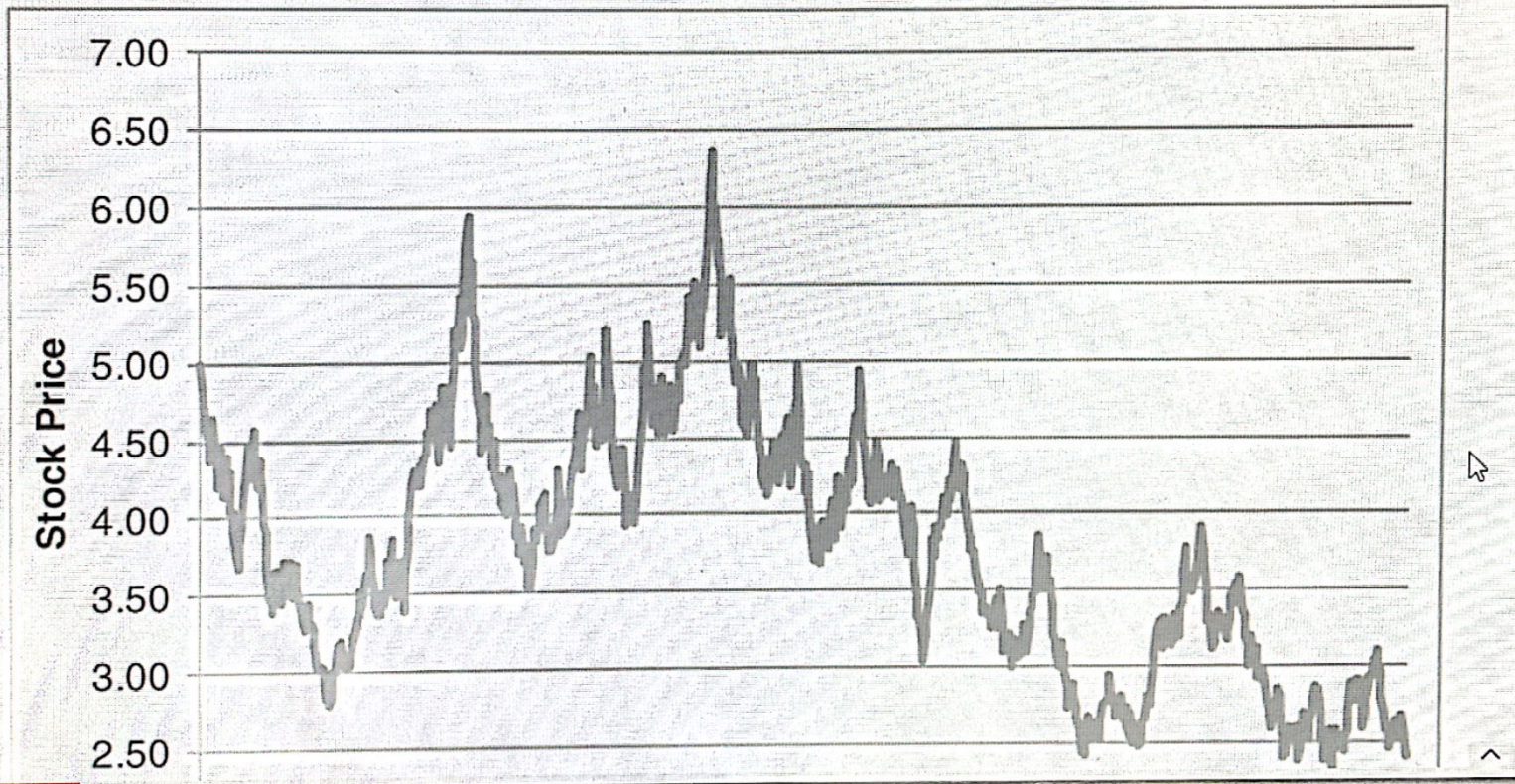


Mandrake Pharmaceutical Ltd.

Mandrake Pharmaceutical Ltd. (MPL) is a biotech company that is involved in research and commercialization of products to treat a variety of human diseases and to boost human health. The company issued an IPO in the current year, and is traded on the Toronto Stock Exchange under the ticker MPL. The company also has bonds issued in the public market, which are currently yielding 8%.

Given the recent market volatility and global economic conditions, the share price of MPL has been under significant pressure. During its first year on the TSX, MPL's stock price has performed as follows:



The stock price peaked at around \$6.50 per share but has steadily declined since the company announced second-quarter earnings that missed analysts' expectations. Third-quarter earnings met analysts' expectations; however, this did not prove to be a catalyst for share price appreciation.

Shareholders were upset with the weak IPO issuing and are again becoming restless with the slumping share price. Shareholders are looking for management to generate shareholder wealth and there have been rumblings that a shareholder activist group is looking to change top management at the upcoming annual meeting. The low share price has also led to speculation that MPL will be taken over by a larger biotech company through a hostile bid.

The CFO is now preparing the annual financial statements for the year ended December 31, 2020, and considering the following transactions during the most recent quarter:

- MPL recently attracted two new researchers to the company. The researchers were paid an upfront signing bonus of \$350,000 each. The researchers come from a larger company and have a proven track record of developing profitable products. For example, the researchers recently developed (in their previous employment) a highly profitable testing procedure that detects early stages of prostate cancer. The procedure is estimated to generate in excess of \$5 million in discounted cash flows. The researchers must work for MPL for a minimum of three years, or else the bonus must be repaid.
- MPL purchased a patented pharmaceutical drug for \$3.4 million from a smaller company that does not have the resources to commercialize the product. The product treats kidney disease and is named BlockXs. Generally, drug patents last for 20 years. However, the patent was applied for three years ago when clinical trials began.

The product has been recently approved by both Health Canada and the U.S. Food and Drug Administration (FDA), and will be available to the market next year. BlockXs is expected to earn the following net cash flows:

- Fiscal 2021—\$1,250,000
- Fiscal 2020—\$750,000
- Fiscal 2023—\$750,000
- Fiscal 2023—\$750,000
- Fiscal 2025—\$750,000
- Fiscal 2026—\$750,000
- Fiscal 2027—\$750,000
- Fiscal 2028—\$750,000

- During the most recent quarter, MPL had a breakthrough in its research and development of a new protein supplement called Protein². Protein² successfully merges the benefits of whey and casein proteins in an ultra absorptive formula. The following costs were incurred on the project during the past quarter:

Protein ² —Costs Incurred	
• Costs incurred in order to obtain government approvals and patents:	\$ 33,000
• Purchase of equipment to be used to manufacture the protein supplement:	550,000
• Materials and services consumed in development of formula:	345,000
• Payroll and consulting expenses incurred in the design of a logo and packaging:	37,800
• Marketing of the product in fitness magazines:	34,750
• Cost of efforts to refine, improve, and enhance the formula:	177,500
• Materials used in preproduction pilot testing:	88,000
	\$1,266,050

Management is excited to launch this product as the protein supplement industry is large, and growing. Both Health Canada and the U.S. FDA have approved the product, and a patent for the formula has been filed and approved. Protein² is expected to generate net cash flows of \$450,000 per year over the next five years.

- MPL purchased a nontransferable right to distribute its products through a direct-to-doctor sales company. The company visits doctors and hospitals and directly promotes the benefits of the products in order to sell the product. MPL paid \$1.2 million to acquire the **distribution rights** for a four-year period, and must pay a royalty of 2% of all products sold through this outlet.

Management expects that there is a 55% chance that this new **distribution** arrangement will increase total sales by 5%. Total revenue in the current fiscal year is \$5,150,000. However, there is a 25% probability that sales could increase by as much as 10%, and a 20% probability that sales could increase by as little as 2%.

Required

You have been hired as part of the accounting group. The CFO has asked you to prepare a report that discusses the appropriate accounting treatment of the transactions noted above. The CFO would like you to not only address recognition and initial measurement but also subsequent measurement.