



FOR RELEASE

***Bandage bacteria monitor earns Sandrine Bayard national science kudos;
Quebecer named Manning Young Canadian Innovator at Canada Wide Science
Fair***

FREDERICTON, NB (May 15, 2015) – Sandrine Bayard, 17 year-old student at Cégep de Sept-Îles, has always had an interest in the health sciences and wants to pursue a career in the medical field. She also wants to work on developing new technologies to improve the quality of life, after her grandmother suffered during dressing changes when healing a burn wound. These three personal goals advanced at the 54th Canada Wide Science Fair (CWSF) this past week, as she won a Gold Medal and three other top credentials at the University of New Brunswick campus.

One of Sandrine Bayard’s top honours was being named a Manning Young Canadian Innovator by the Ernest C. Manning Awards Foundation, a designation that earned her a cash award of \$7,500, an October trip to Saskatoon for the Foundation’s National Awards Gala, and membership in a network of nationally recognized innovators.

In addition to the Gold medal and the Manning Award, Bayard won the S.M. Blair Family Foundation Award and the CWSF Challenge Award for innovation.

Sandrine Bayard’s project “*Le pansement qui pense*” (The Bandage That Thinks) developed an innovative way of detecting the presence of bacterial growth under bandages on chronic wounds, without removing the bandages to improve the quality of care of these patients. Sandrine explains that there have been major advancements in treating people with chronic wounds where the bandages used now can be left on for a longer term, almost as artificial skin. Unfortunately, Sandrine pointed out, there is no current method of early detection of bacterial infection underneath these bandages. Realizing this problem, she developed a bandage that contains all the benefits of the artificial skin, but incorporates a graphene layer that can detect the presence of a bacterial infection.

Sandrine began by determining the material, which in conjunction with the current bandages will give the best conductivity. Next, she determined what solution would have the highest conductivity across the membrane of the bandage. After this, she was able to test the change in conductivity of the membrane on her bandage based on the amount of bacteria that was present on the membrane at the same time.

Sandrine’s “thinking bandage” will allow patients to know exactly when to change their bandages which will stop premature removal of bandages for fear of an infection. Premature removal is painful and

significantly slows the healing process. Conversely, allowing an infection to fester under current bandages would pose further hazards to the patient.

“The caliber and ingenuity of Bayard’s project is proof that age is no barrier to innovation,” said Jennifer Diakiw, president, Ernest C. Manning Awards Foundation. “For the past 23 years, the Foundation has been celebrating outstanding young Canadians competing at the Canada Wide Science Fair. The 2015 winners are passionate and creative visionaries and we and our sponsors believe supporting them is critical to creating a culture of Canadian innovation.”

The Ernest C. Manning Awards Foundation introduced its Young Canadian Program in 1992 to recognize outstanding high-school students at the Canada-Wide Science Fair. Each year, the Manning judging team selects eight winning projects, to receive a \$500 Manning Innovation Achievement Award. From the eight, four are honoured with the Manning Young Canadian Innovation Award, which includes a further \$7,000 prize. More information about the Manning Awards is available at www.manningawards.ca, Twitter @ManningAwardsCA Facebook/ManningAwards.

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