

ArboraNano – the Canadian Forest NanoProducts Network selected as a new Business-led Network funded by the Government of Canada

Montréal, Québec, February 23, 2009 --- FPInnovations is pleased to announce that **ArboraNano – the Canadian Forest NanoProducts Network** has been selected as one of four new Business-led Networks funded by the Government of Canada. ArboraNano is receiving \$8.9 million over four years. Announced in Budget 2007, the goal of the Business-led Networks of Centres of Excellence program is to fund large-scale, collaborative networks led by the private sector and focused on specific business research needs.

ArboraNano, a research and development network bringing together nanotechnology and forest sector expertise, will strive to create a new Canadian bio-economy based on innovative, highly-engineered, carbon-neutral products containing nanomaterials. Wood and wood fibre from Canada's vast forests can be converted into high-value nanomaterials and intermediates, and these can be used to produce a variety of unique advanced products.

These nanomaterials and the products developed from them will have applications in many industrial sectors, including aerospace, automotive, medical devices, chemicals, composites, cosmetics, pharmaceutical, coatings and forest products. The ArboraNano network will involve the collaboration of Canadian scientists and engineers from these industries, as well as from university and government laboratories. It will provide the means to combine fundamental and applied research with private sector innovation in order to take advantage of Canada's vast sustainable natural forest resource.

Mr. Dave McDonald, Vice-President, Pulp and Paper, FPInnovations said that "many of the new products will be based on a plant-derived nanomaterial - NanoCrystalline Cellulose (NCC), while others will use other nanomaterials in the development of new forest products. NCC is a nanomaterial that has yet to establish a presence in the marketplace but that holds great promise. Research by FPInnovations scientists has shown that NCC has many remarkable properties, some of which are unique and others that are comparable to those of other well-known nanomaterials."

NCC can be economically extracted from trees. The properties of NCC and the many forms in which it can be made means that it has the potential to be used in many different ways, namely advanced building products, recyclable structural and interior components for the transportation industry, innovative coatings and fillers for papermaking, novel bioplastics, fibre-reinforced composites, switchable optical films, bio-composites for bone repair, additives for paints/pigments/inks and for cosmetic

products, iridescent or magnetic films, electrically-conductive membranes, printed paper electronic devices, encapsulated quantum semiconductor crystal dots, and advanced or “intelligent” packaging materials. FPInnovations researchers have also shown the advantage of using nanomaterials other than NCC to significantly enhance the performance of forest products such as building materials, paper, board, packaging.

By using nanomaterials in various ways, increased strength and toughness, and improved resistance to wear, moisture and UV damage can be achieved. By taking advantage of unique properties such as colour, anti-microbial activity and self-cleaning properties, a multitude of novel forest nanoproducts can be created.

“Nanotechnology bridges a broad spectrum of scientific disciplines and cuts across many industrial sectors. The growing interest in nanotechnology is a consequence of the promise this science holds to create new materials for a wide variety of manufactured goods,” stated Pierre Lapointe, President and CEO, FPInnovations. “Nanotechnology is expected to represent a dominant force in economic growth over the next few decades and has been identified as a strategic platform for development. ArboraNano will build on this strategic platform and apply Canada’s forest resource to create new unique opportunities for Canadian manufacturing industries”, concluded Mr. Lapointe.

About FPInnovations

FPInnovations is a not-for-profit world leader which specializes in the creation of scientific solutions in support of the Canadian forest sector’s global competitiveness, and responds to the priority needs of its industrial and government members. It is ideally positioned to perform research, to innovate, and to deliver state-of-the-art solutions for every area of the sector’s value chain, from forestry operations to consumer and industrial products. Created from the merger of the three main Canadian forest sector research institutes: FERIC, Forintek Canada Corp., and Paprican, FPInnovations also provides technical direction to the Natural Resources Canada’s Canadian Wood Fibre Centre. FPInnovations’ staff numbers more than 600. Its research laboratories are located in Québec City, Montréal, and Vancouver, with technology transfer offices across Canada.

About NanoCrystalline Cellulose (NCC) and the ArboraNano Network

Please consult the Publications page of FPInnovations’ website at www.fpinnovations.ca/publications_e.htm

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