



## Press Release

Göteborg, Sweden

Hertfordshire, UK

Kuala Lumpur, Malaysia

March 22, 2001

**A<sup>+</sup> SCIENCE INVEST AB, MALAYSIAN RUBBER BOARD AND UNIVERSITY OF  
HERTFORDSHIRE HAVE SIGNED A COLLABORATIVE AGREEMENT REGARDING DEVELOPMENT  
OF IMPROVED PROPERTIES OF RUBBER TREES**

A<sup>+</sup> Science Invest AB, Malaysian Rubber Board and University of Hertfordshire have signed a collaborative agreement aiming at research development and commercialisation of rubber trees and rubber products.

The goal of this collaboration is to improve on girdling, to reduce the immaturity period and to increase biomass in rubber trees (*Hevea brasiliensis*). This will be accomplished by exploiting genes of the PLE homeobox class to obtain Hevea plants with improved radial division and greater capacity for carbon sequestration. Increasing the rubber and timber content may be to the benefit of rubber tree growers and ultimately to the timber industry.

The yearly export of rubber and rubber products represents a value exceeding USD 1 billion to Malaysia. Rubber wood is also an important export item.

Possible applications of such preharvest modification of wood include for example production of trees, both hardwoods and softwoods, with higher wood density, less branching, less differences between early and late wood. Other applications are the construction of trees producing homogenous, strong and flexible fibres, to be used in pulp and paper production. New application areas for plant fibres, such as novel bio-based materials and composite materials between fibres and plastics or

metals, are also conceivable in the future. Such applications would require directed modifications of fibre surface properties and cell wall composition, which may be accomplished by genetic engineering. These novel materials could be used in airplane and car bodies and as replacements for mineral oil based products like plastics.

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A<sup>+</sup> Science Invest AB (publ.) ([www.a-plusscience.se](http://www.a-plusscience.se)), formed in 1997, is a bioscience company, identifying, evaluating, acquiring, developing, financing and commercialising patent-able, patented and marketable inventions in the life science field. The project portfolio comprises some thirty projects in medicine and biotechnology. A<sup>+</sup> is owned by the National Pension Insurance Fund, Sixth Fund Board, The Holding Company at Göteborg University, Investor Investments Novare Limited, Biofund, Optiom OY and researchers.

The Malaysian Rubber Board (MRB) is the custodian of the rubber industry in Malaysia. Established on 1 January 1998, it has under its fold three well established agencies (RRIM, MRRDB and MRELB), which are now merged into one, which have contributed significantly to the development of the rubber industry for the last 73 years.

The R&D excellence in NR, accomplished by the Rubber Research Institute of Malaysia (RRIM), has had an impact on the Malaysian NR industry and other NR producing countries.

The primary objective of MRB is to assist in the development and modernisation of the Malaysian rubber industry in all aspects from cultivation of the rubber tree, the extraction and processing of its raw rubber, the manufacture of rubber products and the marketing of rubber and rubber products.

University of Hertfordshire offers a spectrum of disciplines, covering Natural Sciences, Engineering and Information Sciences, Health and Human Sciences, Art and Design, Law, Business, Humanities, Languages and Education. The University has directed its energies towards many essential fields such as medicine, transport, communication, justice and social conditions, producing graduates well-prepared for the workplace and has also an enviable record in research in a range of important disciplines.