

protection against canine distemper in its natural host.

Canine distemper virus is an RNA virus from the morbillivirus family, affecting domestic dogs and many other carnivores, including raccoons, skunks and foxes and other wildlife species. It is known to occur worldwide, though often fatal in highly susceptible natural hosts such as ferrets and minks, widespread vaccination programs in young animals have dramatically reduced its incidence, particularly in domestic dogs. Unfortunately, existing attenuated live vaccines have a drawback in their inability to induce protection in the presence of maternally derived antibodies. New incidences of CDV among terrestrial and aquatic mammals have triggered the research group to explore the possibility of alternative non-infectious vaccines.

CDV can be transmitted directly from exposure to affected dogs or ferrets, or by airborne particles in an enclosed environment. The disease is highly infectious, so to mimic natural exposure the group conducted challenge infection by horizontal transmission from infected contact animals. The symptoms of CDV are also quite distinct in the terminal stages, but initially they resemble an upper respiratory disease like influenza. In this study, several animals received a lethal challenge infection of CDV by administration to the mucosae of the respiratory tract and into the muscle.

The DNA plasmids created by the group encoded the virula nucleoprotein (N) and haemagglutinin (H). In the first experiments, vaccination with H plasmid alone appeared to elicit a protective immune response, whereas vaccination with N plasmid alone was probably not sufficient. When mink were challenged with both H and N plasmid vaccine, no virus could be detected in the blood and tissues and there was an increased level of VN antibody in the serum. It appears that DNA immunization by the combined intradermal and intramuscular routes confers a protective immunity, which will encourage future investigations.

- 5 Dahl L, *et al.* (2004) Immunization with plasmid DNA encoding the hemagglutinin and the nucleoprotein confers robust protection against a lethal canine distemper virus challenge. *Vaccine* 22, 3642–3648

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Business

Collaborations

Intercell AG announces extended collaboration with Aventis on the development of bacterial vaccines

In February 2004, Aventis Pasteur (<http://www.aventispasteur.com>), the vaccine business of Aventis, and Intercell AG (<http://www.intercell.com>) announced a research and license agreement for the development of vaccines against bacterial diseases. This collaboration has now been extended, during which Intercell will further develop the antigens that have been successfully identified with its Antigen Identification Program (AIP). This approach uses state-of-the-art molecular and serological methods to identify pathogen structures that are recognized by the human immune system.

Alexander von Gabain, CEO of Intercell, said: 'Aventis Pasteur is a world leader in vaccine research and our ongoing collaboration validates the potential of our antigen identification technology to deliver in a timely fashion and to meet our partners expectations.'

Intercell's strategy and focus centers around the design and development of novel vaccines that combine antigens with immunizers (adjuvants) for prophylactic and therapeutic treatment of diseases with substantial unmet needs. The company has a broad development pipeline, with vaccines for Japanese Encephalitis and Hepatitis C currently in clinical trials.

Blueprint Asia announces collaboration with the Novartis Institute for Tropical Diseases

The Blueprint Initiative Asia, a non-profit company housed at the National University of Singapore and affiliated with the Blueprint Initiative, based in Mount Sinai Hospital, has announced a collaboration with the Novartis Institute for Tropical Diseases (NITD) to further the company's research into dengue fever. Blueprint Asia will assemble and curate known protein interactions relevant to the biology of dengue fever and will enter this data into the Biomolecular Interaction Network Database (BIND), a repository of molecular interaction data hosted at Mount Sinai Hospital.

'Our collaboration with NITD is consistent with Blueprint Asia's goal of facilitating research and drug discovery related to neglected diseases that burden the Asia-Pacific region,' said Christopher Hogue, Project Leader and Principal Investigator of The Blueprint Initiative.

Brian Yates, Managing Director of Blueprint Asia, said: 'By examining information about dengue virus alongside other data in the BIND repository, NITD scientists will gain a better understanding of the dengue life cycle and of complex interactions with host proteins...this information can then be used to develop drugs or vaccines to fight the disease.'

Acquisitions

Agilent Technologies to acquire Silicon Genetics

Agilent Technologies (<http://www.agilent.com>) has announced its acquisition of Silicon Genetics (<http://www.silicongenetics.com>), a leading software provider for life science discovery. The acquisition, which is subject to closing conditions, will make Agilent a market leader in life science informatics. Financial details of the agreement were not disclosed.

Together, the staffs of Silicon Genetics and Agilent will form a life science informatics team that will be an incubator for the development of Silicon Genetics and Agilent informatics products. Commenting on the acquisition, Fran DiNuzzo, Vice President and General Manager of Agilent's Integrated Biology Solutions business, said: 'Silicon Genetics brings Agilent an outstanding informatics product portfolio and a strong team of people with extensive experience in software development...our combined organizations will offer customers an unparalleled range of informatics solutions.'

Andrew Conway, Silicon Genetics' Founder and Chairman, said: 'This is an extremely exciting opportunity for Silicon Genetics' customers and employees. Our two companies will form a strong team with the opportunity to make significant contributions to an even larger audience of life science researchers.'

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