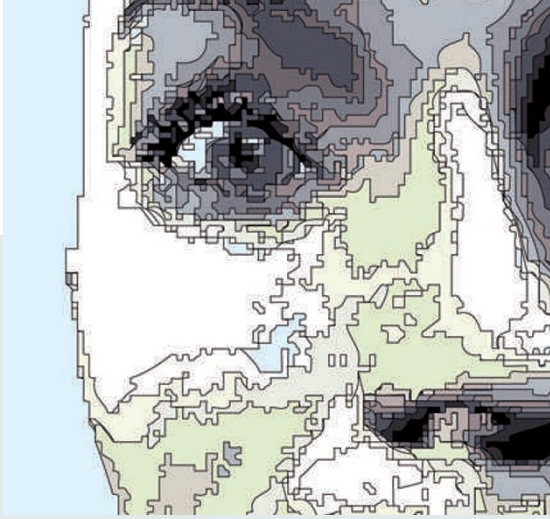
BIOBUSINESS BRIEFS



DEAL WATCH

Alcon licenses complement pathway inhibitor for macular degeneration

The eye-care company Alcon Research has entered into licensing and purchase option agreements with Potentia Pharmaceuticals to develop Potentia's leading drug candidate — a complement pathway inhibitor known as POT-4 — for the treatment of age-related macular degeneration (AMD). The financial terms of the deal were not disclosed.

AMD is the main cause of blindness in the elderly in the developed world. Approximately 10% of patients suffer from the wet form of the disease, which is characterized by pathological neovascularization under the macula. The remaining 90% of patients have the dry form, which is associated with atrophic cell death in the macula. Wet AMD is primarily treated with drugs that target vascular endothelial growth factor, such as ranibizumab (Lucentis; Genentech/Novartis), which inhibit the growth of abnormal new blood vessels and bleeding in the eye. No drugs are yet approved for the dry form of AMD.

POT-4 is an analogue of the small cyclic synthetic peptide compstatin that was licensed to Potentia through the University of Pennsylvania, and is the first complement inhibitor to enter clinical trials for ophthalmological use. In March this year, Potentia completed a Phase I trial for POT-4 in patients with wet AMD, which showed good tolerability and no drug-related side effects. Alcon will continue the development of POT-4 for the potential treatment of both wet and dry AMD.

Modulation of the complement system — a key component of innate immunity that detects foreign or dysfunctional cells and tags them for elimination — has recently emerged as a promising approach for treating a number of diseases. "Under normal circumstances, a panel of complement regulators protects healthy cells from an attack by complement," explains John Lambris, the Ralph and Sallie Weaver Professor of Research Medicine at the University of Pennsylvania, USA, who discovered POT-4. "However, any disturbance of the balance between activation and regulation may contribute to inflammatory or autoimmune disorders."

There is evidence that complement activation can lead to local inflammation in the eye and to the development of AMD. "Most importantly, complement appears to be involved in early stages of the disease process, which renders inhibition of complement a promising approach to tackle AMD before it leads to the dramatic loss in vision that occurs during the later stages," Lambris says.

POT-4 acts at a central stage of the complement cascade, blocking the amplification of the complement response and downstream effector functions independently of the activation pathway; this could be important in targeting AMD at an early stage. Like the angiogenesis inhibitors that are currently used to treat wet AMD, POT-4 can be administered locally. In addition, one potential advantage could be the "...intrinsic ability of POT-4 to form a drug deposit in the eye, leading to a sustained release of the compound, which might positively influence costs and patient compliance," concludes Lambris.