



## **Atlantic Healthcare confirms alicaforsen targets TLR-9, providing a second mechanism of action to treat new and existing inflammatory indications**

*Patent applications filed based on novel discovery, which may provide biological rationale for alicaforsen's previously observed durable response in inflammatory bowel disease*

Cambridge, UK, and Raleigh, NC February 28, 2017. Atlantic Healthcare plc ("Atlantic Healthcare"), an emerging trans-Atlantic pharmaceutical company with a core focus on gastrointestinal (GI) disorders, announces that, in addition to targeting ICAM-1, alicaforsen has been shown to target Toll-like receptor 9 (TLR-9). TLR-9 is a recognised target for the treatment of autoimmune diseases including inflammatory bowel disease (IBD). Alicaforsen is currently being evaluated in a pivotal Phase 3 trial for the treatment of pouchitis, a serious form of IBD for which there are limited treatment options.

Alicaforsen is already known to target ICAM-1<sup>[1]</sup>, a cell-surface adhesion molecule protein over-expressed in IBD patients that is involved in inflammation responses of both the adaptive and innate components of the immune system. The newly confirmed target, TLR-9, is an intracellular receptor involved in signalling pathways to activate multiple cells within the innate immune system<sup>[2]</sup>. Atlantic Healthcare has filed patent applications based on alicaforsen targeting TLR-9.

**Toby Wilson Waterworth, CEO at Atlantic Healthcare said:** *"This second target of alicaforsen, TLR-9, could have an important impact on the future value of the product. A dual mechanism of action could support Atlantic Healthcare's strategy to broaden the commercial potential of alicaforsen and build a deeper pipeline of applications based on the product. Alicaforsen is initially targeting IBD with potential in multiple inflammatory diseases of the GI tract and elsewhere."*

*"Furthermore, the filing of patent applications around the use of alicaforsen to target TLR-9 has the potential to strengthen the Atlantic Healthcare portfolio of intellectual property, which aims to provide global patent protection for the product."*

*"I'd like to acknowledge the work of Atlantic Healthcare team members, Dr. Janette Thomas, Director of International Operations, Dr. Lorin Johnson, Non-Executive Director, and Dr. Mike Webb, VP of Manufacturing, whose combined activities resulted in this new research and new patent applications."*

Additionally, the discovery that alicaforsen acts on the TLR-9 signalling pathway may provide a biological rationale for durable responses previously observed in IBD patients receiving alicaforsen. Recent published data, on the use of alicaforsen enema for the treatment of ulcerative colitis and pouchitis, have shown highly durable response rates, with patients experiencing remission times from six to 20 months<sup>[1,3,4]</sup> following a single once-a-day, six-week course of treatment. In IBD such durable responses are not typically observed from a single course of treatment.

**Prof. Brian Feagan, Senior Scientist Robarts Clinical Trials, and Chief Investigator on the alicaforsen pouchitis Phase 3 trial added:** *"The durable response we are observing<sup>[1,3,4]</sup> suggests that alicaforsen is acting to modify the biology that gives rise to disease rather than just treating disease symptoms. If further studies demonstrate that alicaforsen can reliably extend remission times, we may have the ability to transform current treatment paradigms and radically improve quality of life for patients living with various types of IBD. Additionally, the discovery of a second target of alicaforsen also has the potential to extend the product's application into many other inflammatory and autoimmune disease areas."*

**For more information please contact:**

**Atlantic Healthcare**

Toby Wilson Waterworth (CEO)  
+44 1799 512 055

Adam Michael (Head of Communications)  
+44 1799 512 055  
+44 777 588 1813  
[adam.michael@atlantichc.com](mailto:adam.michael@atlantichc.com)

**U.S. Investor Relations**

Lazar Partners  
Fern Lazar / David Carey  
+1 212-867-1762  
[atlantic.healthcare@lazarpartners.com](mailto:atlantic.healthcare@lazarpartners.com)

**Consilium Strategic Communications**

Mary-Jane Elliott / Matthew Neal / Jessica Hodgson / Melissa Gardiner  
+44 20 3709 5700  
[atlantichealthcare@consilium-comms.com](mailto:atlantichealthcare@consilium-comms.com)

**Notes to Editors:**

**About Atlantic Healthcare plc** ([www.atlantichc.com](http://www.atlantichc.com))

“Atlantic Healthcare” or “the Group” is an emerging trans-Atlantic pharmaceutical company with a core focus on gastrointestinal disorders including Inflammatory Bowel Disease (IBD). The Group’s lead product is alicaforsen enema, in a pivotal Phase 3 trial for pouchitis, and in preparation for Phase 3 clinical development in ulcerative colitis (UC). Alicaforsen is also generating early repeat revenues in Europe through unsolicited requests via the Named Patient Supply protocols. The Group has FDA and EMA orphan drug designations, and FDA Fast-Track designation, in pouchitis. Atlantic Healthcare has a highly committed investor base, and an experienced international leadership team. Atlantic Healthcare’s fundraising to date includes £1.9m through SBRI funding with Innovate UK, the UK Government’s innovation agency ([www.innovateuk.gov.uk](http://www.innovateuk.gov.uk)). In 1Q 2016 the Group closed a \$24m round led by LDC (the private equity division of Lloyd’s Banking Group), with investment from founders of both Salix Pharmaceuticals and Clinigen Group, and existing shareholders.

**About Alicaforsen**

Alicaforsen is being developed as a locally active, topical formulation with the potential to establish a new class of therapy, with clear differentiating features, for the treatment of inflammatory bowel disease (IBD). Atlantic Healthcare has received agreement from FDA to initiate a rolling submission of its New Drug Application (NDA) for alicaforsen to treat pouchitis.

Alicaforsen enema is currently in a Phase 3 trial agreed with U.S., Canadian and European regulatory agencies in patients with active, chronic pouchitis. The trial is recruiting 138 patients to approximately 40 trial centres across the U.S., Canada, Europe, and Israel. Alicaforsen enema is in preparation to commence a pivotal Phase 3 for active distal ulcerative colitis (UC). There is currently no approved treatment for pouchitis in the U.S. or Europe and there are limited treatment options for UC.

Alicaforsen has shown, in five Phase 2 clinical studies involving 377 patients, to reduce inflammation and promote mucosal healing with good tolerability and a durable effect. Alicaforsen also has a good safety profile based on data from more than 1,000 patients.

Alicaforsen is an antisense oligonucleotide which has been designed to interact with mRNA for ICAM-1, a well-recognised cell-surface protein that is involved in the inflammatory response of both the adaptive and innate components of the immune system, and is over-expressed in patients with IBD<sup>[5]</sup>. Research at Atlantic Healthcare has also provided evidence that alicaforsen can interact with TLR-9, an intracellular receptor involved in TLR-9 signalling pathways that activate cells of the innate immune system, and are involved in inflammatory responses<sup>[2]</sup>.

As noted above, alicaforsen in pouchitis has been granted FDA Fast-Track designation, plus U.S. and European Orphan Drug designations. Alicaforsen is generating early repeat revenues in Europe through unsolicited requests via the Named Patient Supply protocols. This has demonstrated further evidence of efficacy and safety in the pouchitis<sup>[1]</sup> and UC indications<sup>[3,4]</sup>.

**References:**

1. Alicaforsen, an antisense inhibitor of ICAM-1, as treatment for chronic refractory pouchitis after proctocolectomy: A case series. Thomas Greuter, Luc Biedermann, Gerhard Rogler, Bernhard Sauter and Frank Seibold. [UEG Journal \(2015\) DOI: 10.1177/2050640615593681](#)
2. Toll-like receptors: the swiss army knife of immunity and vaccine development Jennifer K Dowling and Ashley Mansell. [Clinical & Translational Immunology \(2016\) 5, e85: doi:10.1038/cti.2016.22](#)
3. Alicaforsen Retention Enema Induces Long-Term Remission in Patients with Ulcerative Colitis. Zaid Heetun, David Gibson, Denise Keegan, Kathryn Byrne, Hugh E Mulcahy, Garret Cullen, Glen A Doherty. Irish Soc Gastroenterol Nov 2014
4. Alicaforsen, ICAM-1 enema as a treatment option when treating distal ulcerative colitis . LA. Bark 1 , I. Löfberg 1 , B. Håkansson 1 , U. Sjöqvist 1 (<http://www.atlantichc.com/la-bark-abstract-pdf>)
5. Inflammatory Bowel Disease. Imre Szabo. [ISBN 978-953-51-0879-5](#)

– ENDS –