# ABIVAX REPORTS EXCELLENT EFFICACY AND SAFETY OF ABX464 IN PHASE 2B CLINICAL TRIAL IN ULCERATIVE COLITIS AND PLANS TO PROCEED TO PHASE 3

- **Primary endpoint (statistically significant reduction of Modified Mayo Score[1]) was met with once-daily ABX464 (25mg, 50mg, 100mg) at week 8 in these 254 patients randomized, double-blind and placebo-controlled clinical trial (p<0.05, intent-to-treat population [ITT])**
- **Key secondary endpoints, including endoscopic improvement, clinical remission, clinical response and the reduction of fecal calprotectin showed significant difference in patients dosed with ABX464 compared to placebo**
- **ABX464 also showed rapid efficacy in patients who were previously exposed to biologics and/or JAK inhibitors treatment**
- **ABX464 was safe and well tolerated**
- **Preliminary data from 51 patients treated with 50mg ABX464 in the open-label maintenance study showed increased and durable clinical remission and endoscopic improvement after 48 weeks[2]**
- **Abivax to host webcast on Tuesday May 25, 2021 at 6 pm CEST (12 pm EST, 9 am PST), with participation of Prof. Bruce Sands, M.D., M.S.**

**PARIS, France, May 24, 2021 – 6:30 pm (CEST) –** Abivax SA (Euronext Paris: FR0012333284 – ABVX), a clinical-stage biotechnology company developing novel therapies that modulate the immune system to treat chronic inflammatory diseases, viral infections, and cancer, announces positive phase 2b clinical induction and preliminary maintenance study results. 254 patients with moderate to severe ulcerative colitis (UC) were treated with ABX464, a small molecule for once-daily administration with a first-in-class mechanism of action.

The top-line data showed significant clinical efficacy in the overall patient population on primary and key secondary endpoints and a good safety profile of ABX464 during 8 weeks of induction treatment. Importantly, the overall drop-out rate of patients in the study was only 9%, which is remarkable in view of the Covid-19 situation.

Furthermore, after 48 weeks of open-label maintenance treatment with ABX464, preliminary data from the first 51 patients showed further increased and durable clinical and endoscopic efficacy.

The phase 3 clinical program with ABX464 in UC is expected to start by year end.[3]

Abivax's clinical trial steering committee (Prof. Séverine Vermeire, Prof. William Sandborn and Prof. Bruce Sands) was convened on May 22, 2021 and reviewed and endorsed the phase 2b induction and maintenance top-line results and the corresponding conclusions.

**Prof. Séverine Vermeire, M.D., Ph.D., Head of the IBD Center at the University Hospitals Leuven, Belgium, and principal investigator of the study, said:** *"I am very pleased with the outcome of this clinical trial, as it confirms and extends the results from the previous phase 2a study. Clearly, this promising drug-candidate needs to be taken into phase 3 as quickly as possible, as the medical need for patients suffering from moderate to severe ulcerative colitis is very high and new safe and effective treatments with innovative modes of action are urgently*

[1] Modified Mayo Score refers to stool frequency, rectal bleeding and endoscopy sub score.
[2] Data cut-off date: May 11, 2021
[3] Future clinical development including phase 3 design and initiation is subject to assessment of the overall preclinical, CMC, toxicology, clinical efficacy and safety data of ABX464 by EMA, FDA and other regulatory authorities. These top-line results have not yet been reviewed by regulatory authorities.

*needed. I am looking forward to further support the planned phase 3 ulcerative colitis program as principal investigator."*

**Prof. Bruce Sands, M.D., M.S., the Dr. Burrill B. Crohn Professor of Medicine at the Icahn School of Medicine at Mount Sinai, New York City, NY, added[4]:** *"The ABX464 phase 2b induction and preliminary maintenance results are very compelling. I am especially impressed by the efficacy in severe patients who previously failed biologic and/or JAK inhibitors treatment and by the durable and increasing efficacy during maintenance treatment. Ulcerative colitis is a chronic disease and patients need long-term effective treatments, as many of them do not respond or stop responding to currently available drugs. Beyond its efficacy, safety and differentiated mode of action, ABX464 offers a once-daily easy oral administration."*

**Prof. Hartmut J. Ehrlich, M.D., CEO of Abivax, said:** *"The phase 2b results demonstrate the potential of ABX464 to become a gamechanger for the treatment of ulcerative colitis patients in need of new therapeutic management options. Interestingly, the lowest dose of 25mg was effective across the entire study population, including patients refractory to biologics and JAK inhibitors, with a safety profile that is very similar to the placebo group. Based on these data, we are now moving forward as quickly as possible with our phase 3 plan in ulcerative colitis as well as phase 2b/3 in Crohn's disease to bring ABX464 to the many patients suffering from inflammatory bowel disease."*

**Philippe Pouletty, M.D., Chairman of the Board of Abivax, commented:** *"With these excellent results, Abivax enters a new and exciting execution phase towards potential market approval of ABX464 for a major unmet medical need."*

**ABX464 phase 2b induction study confirmed short-term efficacy in patients refractory to conventional treatments as well as patients previously exposed to biological and/or JAK inhibitor treatments and demonstrated a good safety profile**

The randomized, double-blind and placebo-controlled phase 2b induction study was conducted at 130 study sites in 15 European countries, Canada and the US. It had three once-daily oral ABX464 treatment groups (25mg, 50mg and 100mg) and one placebo group. 254 patients with moderate to severe active ulcerative colitis were enrolled into the trial. 50% of these patients had inadequate response, loss of response, or intolerance to tumor necrosis factor alpha (TNF-α) inhibitors, vedolizumab, other biologics and/or JAK inhibitors treatments while the other 50% were refractory to conventional treatments. Endoscopies were read centrally and blinded by independent reviewers. Electronic patient diaries were used to promote the reliability of the collection of stool frequency, rectal bleedings and other patient reported outcomes.

Gender, clinical, biological and endoscopic parameters were well distributed across placebo and treatment groups at enrollment time. The primary endpoint, i.e. the reduction of the modified Mayo Score from baseline after 8 weeks of treatment was statistically significant for all active treatment groups.

[4] Dr. Bruce Sands is a paid consultant for Abivax. He has not been compensated for any media work.

| Week 8 top-line results (ITT[5] population / N= 252) | | Placebo | 25mg | 50mg | 100mg |
|---|---|---|---|---|---|
| **Primary Endpoint** | | | | | |
| **Modified Mayo Score** Mean change from baseline | All patients | -1.9 | -3.1 * | -3.2 * | -2.9 * |
| | *Bio exposed* | -1.0 | -2.8 * | -2.9 * | -2.8* |
| *p-values of <0.05 versus placebo for all dose groups (ANCOVA) | | | | | |
| **Key Secondary Endpoints (not powered to show statistical significance)** | | | | | |
| **Endoscopic Improvement [6]†** | All patients | 8 (13.6%) | 20 (34.5%) * | 21 (39.6%) * | 24 (44.4%) * |
| | *Bio exposed* | 1 (2.9%) | 8 (28.6%) * | 7 (30.4%) * | 8 (26.6%) * |
| *p-values of <0.05 versus placebo for all dose groups using a likelihood ratio chi-square test | | | | | |
| **Clinical Remission [7]†** | All patients | 8 (12.5%) | 17 (27.9%) * | 11 (17.5%) | 16 (25.0%) |
| | *Bio exposed* | 1 (3.2%) | 6 (20.0%) * | 2 (6.7%) | 6 (18.8%) * |
| *p-values of <0.05 versus placebo using a likelihood ratio chi-square test but not according to the predefined Mantel-Haenszel Chi Square test (p<0.1) | | | | | |
| **Clinical Response [8]†** | All patients | 23 (35.9%) | 40 (65.6%) * | 38 (60.3%) * | 35 (54.7%) * |
| | *Bio exposed* | 5 (16.1%) | 17 (56.6%) * | 13 (43.3%) * | 15 (46.8%) * |
| *p-values of <0.05 versus placebo using a likelihood ratio chi-square test | | | | | |
| **Fecal Calprotectin (µg/g)** Mean change from baseline | All patients | -1027.7 | -2192.8 ** | -2316.8 ** | -2280.9 ** |
| **p-values of <0.01 versus placebo (MMRM) | | | | | |

Further and final results including pharmacokinetics, histology and miR-124 expression data will be available in due time.

ABX464 was shown to be effective in patients refractory to conventional treatments and, importantly, also in patients with inadequate response, loss of response, or intolerance to biologics and/or JAK inhibitors.

ABX464 was well tolerated at all dose levels during the induction phase as well as the maintenance treatment. Similarly low rates of infections were observed in the active treatment groups compared to placebo. No deaths or malignancies were reported in the study. In the ABX464 groups, serious adverse events (SAEs) occurred in 1.6% (25mg), 6.3% (50mg) and 6.2% (100mg) of patients and in 6.2% of patients in the placebo group. These safety data are in line with what has been observed in more than 650 healthy volunteers and patients who have so far been treated in other clinical trials with ABX464 across different indications.

**Preliminary phase 2b maintenance study results show the potential of ABX464 as an efficacious chronic treatment with a good safety profile**

97.7% of all patients who completed the phase 2b induction study, irrespective of treatments or treatment outcome during the induction study, enrolled into the subsequent open-label maintenance study to evaluate the long-term safety and efficacy profile of ABX464 for up to two years. Preliminary results of the open label

[5] Intent-to-treat patient population. Drop-out patients were considered as failure for all binary endpoints. Nearest neighbor imputation (as defined in the Statistical Analysis Plan) was used for missing values at week 8 and applied to MMS, clinical remission, and clinical response. Endoscopic improvement rates are presented without imputation (data available at time point).

[6] Endoscopic improvement is defined as endoscopic subscore ≤1.

[7] Clinical remission (per Modified Mayo Score) is defined as stool frequency subscore (SFS) ≤1, rectal bleeding subscore (RBS) of 0 and endoscopic subscore ≤1.

[8] Clinical response (per Modified Mayo Score) is defined as a decrease from baseline in the Modified Mayo Score ≥2 points and ≥30% from baseline, plus a decrease in RBS ≥1 or an absolute RBS ≤1.

† Evidence of friability during endoscopy confers an endoscopic subscore of 2 or 3.

maintenance study in the first 51 patients after 48 weeks of once-daily treatment with 50mg ABX464 are in line with the previously observed outcomes in the phase 2a study, with 53% (ITT) in clinical remission and 59% (ITT) with endoscopic improvement at 48 weeks (centrally read per protocol values). ABX464 continued to be well tolerated.

Abivax plans to submit the phase 2b study results to a peer-reviewed journal as well as at the major upcoming scientific conferences specializing in inflammatory bowel diseases.

Taking into consideration the positive results reported in this press release for the phase 2b clinical study in ulcerative colitis, medical need, competitive environment and market opportunity, for now, Abivax plans to prioritize its resources and funding on late-stage development of ABX464 for the treatment of inflammatory bowel diseases.

### ABX464 phase 2b/3 in Crohn's disease, phase 2a clinical trial in rheumatoid arthritis (RA) and ABX196 phase 1/2 clinical trial in hepatocellular carcinoma (HCC)

A dose ranging, randomized, placebo-controlled phase 2b/3 trial in Crohn's disease patients is expected to be initiated before the end of the year.

The double-blind, placebo-controlled proof-of-concept phase 2a study in rheumatoid arthritis is ongoing. The induction treatment of this study has been completed and top-line results are expected to become available in July 2021. Based on the outcome of this study, Abivax will assess the development options for ABX464 in this indication.

Top-line results of the dose escalation phase for the phase 1/2 proof-of-concept study with ABX196 for the treatment of hepatocellular carcinoma are expected to become available in Q3 2021. Details of the subsequent expansion phase will be decided based on the results of the dose escalation.

### About ABX464[9] [10]

ABX464 is a highly differentiated oral drug candidate, with a novel mechanism of action based on the upregulation of a single microRNA (miR-124) with potent anti-inflammatory properties. ABX464 was shown to exert its anti-inflammatory effects through binding to the cap binding complex (CBC), which sits at the 5' end of every RNA molecule in the cell. By binding to the CBC, ABX464 reinforces the biological functions of CBC in cellular RNA biogenesis. Specifically, ABX464 enhances the selective splicing of a single long non-coding RNA to generate the anti-inflammatory microRNA, miR-124, which downregulates pro-inflammatory cytokines and chemokines like TNF-α, IL-6, MCP-1 and IL-17, as well as Th17+ cells thereby "putting a brake" on inflammation and suggesting broad potential as a novel anti-inflammatory therapeutic agent. A seven- to ten-fold increase in miRNA-124 levels was observed in colorectal biopsies of UC patients treated with ABX464. ABX464 does not impact the splicing of cellular genes. Ulcerative colitis phase 2a induction and maintenance data after one and two years of treatment were previously reported.

### Epidemiology and market size in inflammatory bowel diseases

In 2020, there were an estimated 3.5M diagnosed cases of ulcerative colitis in G7 countries (US, France, Germany, Italy, Spain, UK and Japan). The total market opportunity for ABX464 is USD 6.0B annually, based on 2020 pharmaceutical sales estimates for ulcerative colitis in these countries. For inflammatory bowel diseases (ulcerative colitis and Crohn's disease), sales were USD 17.9B in 2020 and are estimated to grow to USD 25.0B by 2025, i.e. the year ABX464 is expected to reach the market for ulcerative colitis.[11]

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[9] J. Tazi et al.: Specific and selective induction of miR-124 in immune cells by the quinoline ABX464: a transformative therapy for inflammatory diseases, Drug Discovery Today, Volume 26, Issue 4, April 2021, Pages 1030-1039

[10] S. Vermeire et al.: Induction and long-term follow-up with ABX464 for moderate-to-severe ulcerative colitis: Results of phase 2a trial, Gastroenterology, March 2021

[11] Source: Informa for 2nd and 3rd line treatments

**Investor webcast on phase 2b study results**

Abivax will host a **webcast** on **Tuesday, May 25, 2021 at 6:00 pm CEST (12:00 pm EST, 9 am PST)**, to present the top-line data of its ABX464 phase 2b clinical study in UC. Following the formal presentation, Abivax senior management and KOL Prof. Bruce Sands, M.D., M.S., will be available to answer questions.

To participate in the webcast, please follow the weblink: https://media.rampard.com/20210525/

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The trading of the Abivax shares on Euronext Paris will resume on Tuesday, May 25, 2021.

## About Abivax (www.abivax.com)

Abivax, a clinical stage biotechnology company, is developing novel therapies that modulate the physiological inflammation and immunological pathways to treat patients with chronic inflammatory diseases, viral infections, and cancer. Abivax is listed on Euronext compartment B (ISIN: FR0012333284 – Mnémo: ABVX). Based in Paris and Montpellier, Abivax has two drug candidates in clinical development, ABX464 to treat severe inflammatory diseases, and ABX196 to treat hepatocellular carcinoma. More information on the company is available at www.abivax.com. Follow us on Twitter @ABIVAX_.

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