UEGW 2012 - Abstract Submission

6. IBD (including microscopic colitis)
6.5. Treatment-medical
UEGW12-1975

ONE YEAR EXTENSION OF PHASE I/II STUDY WITH MULTIPLE INJECTIONS OF ANTIGEN SPECIFIC T REGULATORY LYMPHOCYTES IN REFRACTORY CROHN'S DISEASE

P. Desreumaux [1], M. Allez [2], L. Beaugerie [3], X. Hébuterne [4], Y. Bouhnik [5], M. Nachury [6], V. Brun [7], A. Duchange [8], N. Clerget-Chossat [7], A. Foussat [7], M. Forte [7], J.-F. Colombel [9,*]
[1]Huriez Hosptial, Lille, [2]St-Louis Hospital, [3]St-Antoine Hospital, Paris, [4]L'Archet Hospital, Nice, [5]Beaujon Hospital, Clichy, [6] Minjoz Hospital, Besançon, [7]TxCell, Valbonne, [8]Effi-Stat, Paris, [9]Huriez Hospital, Lille, France

Has this abstract previously been presented?: No
Has this abstract been previously published?: No
This abstract should be considered as Basic Science: No
This abstract should be taken into consideration for the "Today's science; tomorrow's medicine" session: No
Does the presenting author fulfil the criteria and want to apply for the travel grant?: No

INTRODUCTION: CATS1 was the first study with Ovasave, an antigen-specific Treg therapy of Crohn's Disease (CD). This study was extended to assess the tolerability of a 2nd injection of Ovasave and to provide multiple injections for patients who benefited from the initial injections.
AIMS&METHODS: CATS1 extension is an open label phase I/II study, amended for re-injections, in patients with refractory CD, active inflammation and no concomitant use of immunosuppressors or anti-TNFs. Ovasave was produced *ex vivo* from patients' PBMC (peripheral blood mononuclear cells) exposed to ovalbumin, followed by cell cloning and expansion using feeder cells prior to formulation for infusion. Safety was assessed by clinical and laboratory parameters and efficacy by CDAI (response: decrease ≥100; remission: <150). The impact of Ovasave on the proliferative response of patients' PBMC to ovalbumin was assessed *in vitro*.
RESULTS: Seven patients received a 2nd injection and 2 were treated for up to 1 year (4 received 10^9 followed by 10^6 cells; 2 received 2 doses of 10^6 cells and one 2 doses of 10^8 cells). Mean age was 34.5 and disease duration 12.9 years. Disease was extensive with baseline CDAI of 365±85 (n=7); Patients were refractory to standard therapy and 6/7 to immunosuppressors and anti-TNFs. Ovasave was well tolerated with 17 adverse events (AE) post-second injection: 16 not related; 1 related (recovered) and 3 serious AE not related. Upon re-injection of 2 patients who showed immunogenicity to feeder cells after the 1st highest dose injection 1 presented a mild acute reaction and the other was successfully treated with the induction of tolerance protocol. Two patients showed a perceived sustained benefit and were treated for up to 1 year, receiving a total of 4 and 5 injections, respectively (1st injections at 10^9 and 10^6; all subsequent at 10^6) with good tolerability. Reduction of *in vitro* PBMC proliferation to ovalbumin was only observed at the 10^6 cell injections.
CONCLUSION: Although with a very limited number of patients, the results of CATS1 extension suggest good tolerability and patient benefit of multiple injections of Ovasave for up to one year. These data together with the existing ability to produce several years treatment from a single patient batch are supportive of planned studies to assess chronic treatment of refractory CD with antigen specific Treg cells.

I confirm having declared any potential Conflict of Interest for ALL authors listed on this abstract: Yes
Contact E-mail Address: forte@txcell.com

Disclosure of Interest: P. Desreumaux Other: Principal Investigator, M. Allez Other: Investigator, L. Beaugerie Other: Investigator, X. Hébuterne Other: Investigator, Y. Bouhnik Other: Investigator, M. Nachury Other: Investigator, V. Brun Consultancy for: employee, A. Duchange Consultancy for: Contractor, N. Clerget-Chossat Other: employee, A. Foussat Consultancy for: employee, M. Forte Consultancy for: employee, J.-F. Colombel Other: Investigator

Keywords: Crohn's disease, Regulatory T cell