



PRESS RELEASE  
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FOR IMMEDIATE RELEASE

**IMMUTEP ANNOUNCES THAT IMMUFAC<sup>®</sup> IMP321 HAS SUCCESSFULLY  
COMPLETED PHASE I STUDIES**

Immutep S.A. announced today that its lead product, ImmuFact<sup>®</sup> IMP321, has successfully completed two large randomised Phase I clinical studies assessing safety, tolerability and immune response in normal healthy volunteers. ImmuFact<sup>®</sup> IMP321 is a potent natural human T cell immunostimulatory factor designed to amplify the T cell immune response in therapeutic vaccines.

The randomised single-blind escalating-dose Phase I studies were conducted in healthy individuals with ImmuFact<sup>®</sup> IMP321 alone and combined with antigens. Two well-defined standard types of antigens were used: soluble influenza virus antigens (a flu vaccine) and the particulate hepatitis B surface antigen. Recruitment of 108 healthy volunteers started in April 2005 and was completed in October 2005. The doses studied ranged from one injection of 3 µg up to three injections of 100 µg.

The studies showed that IMP321 is well tolerated with no adverse events at all dose levels either alone or associated with potent antigens. Importantly, there were no anti-IMP321 antibodies detected which means that repeat dosing should be possible including protocols calling for 6 or more injections. Analysis of the immune responses showed that, even with such potent antigens, IMP321 gave rise to an increase in the number of responders, associated with a substantial increase in antigen-specific T cells and a shift to the Th1 response required for therapeutic vaccines.

The results from the early part of the study allowed the Company to initiate its first therapeutic clinical trial in metastatic renal cell carcinoma which started in September 2005. The second therapeutic clinical trial, in melanoma, will begin shortly.

Immutep and its partners will use the resulting data in the development of immunostimulatory treatments of cancer and infectious disease. ImmuFact<sup>®</sup> IMP321 can be used either alone or in combination with chemotherapy, or as an immunopotentiator in therapeutic vaccines.

"We are delighted to announce that IMP321 is safe both when used either alone or combined with strong antigens, and efficacious at inducing stronger Th1 T cell responses," said Frédéric Triebel, Scientific & Medical Director of Immutep. "For cancer vaccines, the next step will be to associate IMP321 with tumour antigens which have been tested in the clinic with suboptimal results and therefore need a non-inflammatory immunopotentiator boost for repeated injections."

For further information please visit the web-site [www.immutep.com](http://www.immutep.com) or e-mail John Hawken, CEO, at [JBHawken@immutep.com](mailto:JBHawken@immutep.com).

## **Notes to Editors**

### **Immutep S.A.**

Immutep S.A. is a biopharmaceutical company developing technologies for novel immunotherapies for the treatment of cancer and chronic infectious diseases and new approaches to immune response modulation. The Company's technologies are based on the properties of LAG-3. Immutep is developing its products both in-house and in partnership with pharmaceutical and biotech companies. The Company was formed in 2001 by Frédéric Triebel, the scientific founder, and John B. Hawken, a specialist in the management of biotech start-ups, and has its headquarters and research facilities near Paris, France. Immutep is backed by the Paris-based venture capital firm Innovent Partenaires and the venture capital fund H2I, a specialist Biotech fund managed by Unicorn Biotutors/Equitis (Paris).

### **The Technology**

The Company's range of products is derived from LAG-3 (CD223), an immunomodulatory protein expressed on the surface of activated T cells. The three unique proprietary product platforms make use of the key roles played by this natural human protein in the regulation of the immune system.

#### ***ImmuFact*<sup>®</sup> - T cell Immunostimulatory Factors for amplifying the T cell response**

The lead product, *ImmuFact*<sup>®</sup> IMP321, is a highly potent T cell immunostimulatory factor derived from the soluble form of LAG-3 that binds, with high affinity, to MHC class II molecules expressed by dendritic cells (DC). This binding leads to DC maturation, migration to the lymph nodes and enhanced cross-presentation of antigens to T cells. As a result, strong and sustained anti-tumour or anti-viral cytotoxic T cell responses are obtained when IMP321 is injected alone or in combination with antigens.

#### ***ImmuCvine*<sup>®</sup> – Immunostimulatory Vaccines**

The Company is developing a second technology that will make it possible to design novel therapeutic vaccines with even greater potency and efficacy. Covalently linking an antigen to IMP321 in a fusion protein results in both vectorisation of the antigen to the DC as well as the immunostimulatory effect described above. These dual action vaccines will be particularly useful in very difficult cases like HIV.

#### ***ImmuTune*<sup>®</sup> – Fine Tuning of the Immune Response**

The third technology uses LAG-3-specific antibodies to control signalling of the membrane-bound LAG-3 molecule into activated effector T cells or regulatory T cells (Tregs) to modulate the T cell response.

### **Clinical Development (*ImmuFact*)**

Immutep has completed two randomised single-blind escalating-dose Phase I studies in 108 healthy individuals with IMP321 alone and combined with two well-defined standard types of antigens: soluble influenza virus antigens and particulate hepatitis B surface antigen. A Phase I clinical trial in metastatic renal cell carcinoma started in September 2005 with IMP321 injected alone. Recruitment of 9-12 patients started in September and the trial will be completed in 2006. Each patient will receive 6 subcutaneous injections of IMP321 at two-weekly intervals. Dose levels will range from 50 µg to 1,250 µg per injection. Additional patients may be recruited into the trial if useful to provide more data on safety or response rates.

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