

## **II International congress addressed to the integral care of diabetic foot ulcer patient with the use of Heberprot-P 2012: healthy doorways wide-open to the 2014 edition**

Manuel Raíces

Dirección de Negocios, Centro de Ingeniería Genética y Biotecnología, CIGB  
Ave. 31 e/ 158 y 190, Cubanacán, Playa, CP 11 600, La Habana, Cuba  
E-mail: manuel.raices@cigb.edu.cu

**REPORT**

### **ABSTRACT**

The second edition of the international congress addressed to the Integral care of diabetic foot patient with the use of Heberprot-P was successfully celebrated last December 12-14th, at the Memories Varadero hotel, in Cuba. Up to 500 delegates from 37 countries attended and were pleased with the update in the treatment of diabetic foot ulcers (DFUs) with Heberprot-P and strategies for the integral care of diabetic patients. The meeting counted on with several world leaders in DFU treatment. During the three working days, 11 plenary lectures, 31 oral presentations and 130 posters were discussed. Main topics comprised the mechanisms of wound healing using the human epidermal growth factor and its safety for DFU therapy. The use of Heberprot-P in Cuban patients as part of the nationwide integral care program for the treatment of DFUs was highlighted. This program have been extended to 43 major hospitals and 197 local clinics, with more than 15 000 patients treated and diminishing amputation rates in more than 65 %. This is a remarkable result considering that Heberprot-P successfully targets and generally cicatrizes complex Wagner 3-5 ulcers, mainly ischemic.

**Keywords:** Heberprot-P, pharmaceutical development, epidermal growth factor, infiltration, diabetes mellitus, diabetic foot ulcer, amputation

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### **RESUMEN**

**II edición del congreso internacional sobre la Atención integral al paciente con úlceras del pie diabético con el uso de Heberprot-P 2012: Puertas sanas abiertas a la edición de 2014.** La segunda edición del congreso internacional sobre la Atención integral al paciente con úlceras del pie diabético con el uso de Heberprot-P se celebró exitosamente del 12 al 14 de diciembre pasado en el hotel Memories Varadero, en Cuba. Más de 500 delegados de 37 países asistieron y fueron actualizados en el tratamiento con Heberprot-P de las úlceras del pie diabético (UPD) y las estrategias para el cuidado de los pacientes diabéticos. El congreso reunió a varios líderes mundiales sobre tratamiento de UPD. Durante las tres jornadas se presentaron 11 conferencias plenarias, 31 presentaciones orales y 130 carteles. Los temas principales abarcaron los mecanismos de curación de úlceras con el uso del factor de crecimiento epidérmico humano y su seguridad para la terapia de las UPD. Se resaltó el empleo del Heberprot-P en pacientes cubanos, como parte del programa nacional para el cuidado integral de las úlceras del pie diabético. Este programa se ha extendido a 43 hospitales generales y 197 policlínicos, con más de 15 000 pacientes tratados y una reducción de más de 65 % en las tasas de amputación. Este es un resultado muy significativo, puesto que el Heberprot-P es dirigido satisfactoriamente y cicatriza generalmente las úlceras complejas Wagner 3-5, principalmente las isquémicas.

**Palabras clave:** Heberprot-P, desarrollo farmacéutico, factor de crecimiento epidérmico, infiltración, diabetes mellitus, úlcera del pie diabético, amputación

### **Introduction**

As every medical expert is aware of today, diabetes represents a global non-transmissible disease pandemic, affecting more than 290 million people worldwide. Among them, a significant amount (up to 15 %) suffers from diabetic foot ulcers (DFUs), which commonly derive in amputation at a high rate because of the diminished capacity for wound healing of diabetic patients [1]. In this scenario, Heberprot-P has changed the behavior of DFUs towards an effective healing, and significantly decreased amputation rates, in just six years since implemented.

During that period, the treatment with Heberprot-P has been extended to 20 countries, with sanitary registration in 16 (Cuba, Venezuela, Algeria, Argentina, Uruguay, Dominican Republic, Ecuador, Mexico, Libya, Paraguay, Colombia, Guatemala, Georgia, Ukraine, Vietnam, and the Philippines) and actions for

that purpose are ongoing in other 17 nations (Brazil, China, Egypt, Indonesia, Kazakhstan, Laos, Morocco, Namibia, Pakistan, Panama, Peru, Russia, Syria, South Africa, Thailand, Tunisia and Turkey). This is accompanied by the growing interest to be updated on the use and properties of the product and its promising therapy, as reflected during the second edition of the congress addressed to the *Integral care of diabetic foot ulcer patient with the use of Heberprot-P*, together with its accompanying *II International workshop - course about the practical application of Heberprot-P in diabetic foot ulcers*. This event gave evidences on the lines of development for the product and also demonstrated the great attention that Heberprot-P is gathering from field leaders throughout the world, as an effective therapy for DFUs treatment.

1. Global diabetes market breakout. 2010. Foothill Ranch: MedMarket Diligence, LLC; c2001-2012 [cited 2012 Dec 23]. Available from: <http://mediligence.com/>

## // International workshop - course about the practical application of Heberprot-P in diabetic foot ulcer patients

The pre-congress course-workshop was imparted two days before the congress, on December 10-11<sup>th</sup>, being attended by 32 specialists from 15 countries (Argentina, Paraguay, Panama, Brazil, Colombia, Ukraine, Russia, France, Italy, Israel, China, Saudi Arabia, Jordan, Kuwait and South Africa). Procedures and experiences on Heberprot-P application were provided by re-known Cuban medical specialists with extensive records on the successful treatment of DFU patients. Theoretical sessions were held on the first day at the Meliá Havana hotel, providing the background on how to select the patient, prepare the lesions and apply Heberprot-P for a successful healing. On the second day, activities were moved to the Guillermo Fernandez Hospital, located in *El Rincón*, Havana, Cuba. This facility is regarded as a nationwide reference hospital for treating DFU patients. During the course-workshop, participants were also updated on the pharmacological surveillance program in Cuba, in place since the introduction of this treatment in 2006 and during its extension in 2007.

### The conference

The congress was held on December 12-14<sup>th</sup>, at the Varadero Memories resort, in Matanzas, Cuba. It was organized in plenary lectures and oral presentations, and poster sessions in parallel during the last two days. Four main topics were addressed: 1) Molecular biology of the epidermal growth factor and other molecules able to promote healing; 2) Clinical trials in novel DFUs treatments; 3) Therapeutic experiences in DFU patients' care; and 4) Organizational strategies for implementing and developing health network services for better attention of DFU patients. Topics were organized in two symposia in parallel, with topics 1 and 2 in the first one.

The congress was aimed at improving the quality of life of DFU patients by sharing updated basic and clinical research knowledge on wound healing and medical data compiled from the healing of complex DFU.

Five out of the 12 plenary lectures were delivered by Cuban specialists. Among the international speakers, there were eminent field leaders as Prof. Andrew Boulton from the United Kingdom, and Professors David Armstrong, William Marston, Aristidis Veves, Desmond Bell and Kelman Cohen, from the United States. Their presentations covered key aspects on the complexity of DFUs and the challenge they represent for modern societies because of the expansion of diabetes, which imposes a heavy burden for health authorities and systems. We were also pleased to have a plenary lecture by Professor Talal Khader Talal from Qatar, who gave a lecture on the induction of healing of highly complex ulcers with Heberprot-P in 30 patients in 2012. During the second and third days, 31 oral presentations and 130 posters were discussed.

As expected by the majority of delegates, Cuban participation was central, sharing updated results on the implementation of the *Integral care program for the treatment of diabetic foot ulcer patients (DFU)*,

with the use of Heberprot-P. Particularly, Venezuela was the foreign country with more delegates in the congress, who shared very impressive results regarding the improvement in the quality of life of DFU patients. There was a massive use of Heberprot-P in 15 Venezuelan states, with more than 73 000 patients treated and about 15 000 of them saved their feet from amputations, as a result of using Heberprot-P in complex ulcers Wagner class 3 to 5, most of them responsive to healing.

Regarding oral presentations, the audience highly appreciated the information about the Cuban biotechnology industry given by Dr. Luis Herrera Martínez, General Director of the Center for Genetic Engineering and Biotechnology (CIGB) of Havana, Cuba. Well expected was the lecture of Dr. Jorge Berlanga, Head of the Healing Department at CIGB, and leading investigator of Heberprot-P development, on the molecular mechanisms of the human epidermal growth factor to promote cell division, differentiation and migration during the healing process. Other topics covered were: the clinical history of Heberprot-P which supported its registration in 2006, provided by Dr. Pedro López Saura; the impact of Heberprot-P in inducing the healing of complex diabetic foot ulcers, by Professor José Fernández Montequín; and the main achievements of Heberprot-P in the national and international arenas, in nearly 100 000 treated patients from 20 different countries, and the registration actions in more than 20 other countries so far, provided by M.Sc. Ernesto López Mola [2].

Attendees also discussed on the need for diabetes control programs and effective metabolic control in diabetic patients, as part of an integral care of the disease. It was consensus the need for a team work comprising political commitment, health systems intended for metabolic control among diabetic patients, adequate habits and quality of life, early wound detection, and, when wounds present, good therapies to induce healing and bring hope for successful outcome to the patients. All this requires concerted efforts and support of national health systems. In this sense, Heberprot-P, as part of an integral care program for the attention of DFU patients, demonstrated that the joint work of patients, their families and the medical system makes possible to reduce amputation risks and rates.

### Conclusions

Altogether, the congress contributed to concert and to foster the effective improvement in the quality of life of DFU patients, with the participation and contribution of all delegates. The impressive positive impact of all the extension of Heberprot-P therapy in Cuba and Venezuela supports both its maintenance and extension there and in other countries. Noteworthy, the Cuban health authorities proposed to maintain this type of meeting, giving birth to a series of congresses that will focus on the integral care of diabetic foot ulcer patients with the use of Heberprot-P every two years. The CIGB, together with the Cuban Ministry of Public Health (MINSAP), is pleased to announce the next edition of the bi-annual congress *Integral care of diabetic foot ulcer patient with the use of Heberprot-P* in 2014. Hopefully, new data will continue to prove that this desire could be transformed into a fact.

2. López-Mola E. Heberprot-P®: an idea turned into a product. *Biotecnol Apl.* 2012;29(4):262-5.