

New drug for coronary diseases could be in offing

New Delhi, June 11th (India Science Wire): Council of Scientific and Industrial Research (CSIR)'s Lucknow-based constituent laboratory Central Drug Research Institute (CDRI) and Marc Laboratories Ltd, India have come together to develop a new safer drug for heart attack and stroke. They have signed the license agreement for developing drug for coronary and cerebral artery diseases.

Marc Laboratories is an Uttar Pradesh-based young progressive enterprise with operating base in 13 other states. This agreement between CSIR-CDRI and Marc Laboratories could pave the way for developing a synthetic compound S-007-867 as modulator of blood coagulation cascade, in particular as inhibitor of collagen-induced platelet aggregation. This could be helpful in treating coronary and cerebral artery diseases, CSIR-CDRI statement said.

Arterial thrombosis is an acute complication that develops on the chronic lesions of atherosclerosis leading to heart attack and stroke. Therefore, inhibition of platelet–collagen interaction is anticipated to be a promising therapeutic strategy to treat intravascular thrombosis. The compound, S-007-867, significantly inhibits collagen-mediated platelet activation and subsequently reduces release of ATP from dense granules and thromboxane A₂ via COX1 activation. Thus it effectively maintains blood flow velocity and delays vascular occlusion (blockage of the blood vessel, usually with a clot) and inhibits thrombogenesis (formation of blood clot) without compromising hemostasis.

This drug has less bleeding risk as compare to presently existing therapies for coronary and cerebral artery diseases. In animal experiments, the compound elicited better antithrombotic protection than the standard of care with minimal bleeding tendency. The Institute has recently obtained permission to initiate Phase I clinical trials for the drug.

Besides, in COVID-19 disease, critical patients with Acute respiratory distress syndrome (ARDS) have high D-dimer and reduced prothrombin time (PT), suggesting pro-thrombotic state. In addition, these patients have high number of circulating neutrophils, inflammatory mediators/cytokine, CRP and lymphocytopenia. Therefore, drugs reducing platelet reactivity and neutrophil activation could be beneficial, and based on these criteria the prophylactic use of this compound could be an option due to its high safety and less effect on bleeding time.

On this occasion, Prof. Tapas K. Kundu, Director (CDRI) said, "This is a great moment for CSIR-CDRI, the premiere drug development and research institute of the country to license out an in-house developed compound for further investigations as part of our commitment of affordable healthcare for all." He was optimistic that this compound would reach the market soon to benefit the humanity.

Likewise, Mr. Prem Kishore, Chairman Marc Laboratories said, "Marc's association with CSIR-CDRI will be beneficial to both parties and they will be working hard to take the compound forward so that it sees light of the day soon."

“This Industry-Institute partnership will surely be very beneficial for development of Pharma cluster in Uttar Pradesh and will open up new avenues for it by their collective efforts as broadly visualized by honourable Union Minister for Health & Family Welfare, Dr Harsh Vardhan; Director General, CSIR, Dr Shekhar C. Mande and honourable Chief Minister, U.P., Yogi Adityanath,” Prof. Kundu added. (India Science Wire)

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MoU with CSIR-CDRI and Marc Laboratories