

# New natural molecule better than morphine to be tested on humans

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A new molecule, opiorphin, that treats pain as effectively as morphine without the serious side effects has been discovered by Catherine Rougeot, Director of Research at Institut Pasteur.

Researchers from Paris-Sud University and Inserm, founding members of Université Paris-Saclay, looked into the benefits of opiorphin in a postoperative animal pain model, in collaboration with the Institut Gustave Roussy, Bicêtre Hospital in Paris, and the Institut Pasteur.

They found that opiorphin, a peptide naturally produced by our body, avoids the most feared effect of morphine; respiratory failure due to a lack of stimulation to breathe, causing death.

Opiorphin has already been proven to avoid dependence and constipation, but unlike morphine – which is fixed to multiple receptors in the body and multiplies the risks of side effects – opiorphin only acts where there's a painful stimulus. Indeed Opiorphin prevents the degradation of our natural morphine, enkephalins.

The new molecule also showed no adverse effect on the respiratory rate, oxygen saturation, arterial pressure or heart rate.

“Relieving pain after surgery is as essential as it is delicate,” says Dr. Philippe Sitbon from Paris-Sud University. “Morphine and its derivatives are the most powerful pain-killers used today, but tolerance can set in quickly. A classic solution is to increase the dosage and therefore the side effects associated with the drug, like serious breathing problems that can lead to death, confusion, somnolence, nausea, vomiting, and constipation.

“Opiorphin and its stable form STR-324, which will be developed in humans and shows the same analgesic properties, represents a new class of potent and safe painkiller.”

STR-324 could also come to relieve other kinds of pain, such as neuropathic pain that is often difficult to ease by conventional analgesics.

The first tests on humans are due to start at the end of 2017.

These findings were published in the journal Anesthesiology.

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For more information, a copy of the article, or to speak to Dr. Sitbon, please contact Stephanie Mullins at BlueSky PR on [smullins@bluesky-pr.com](mailto:smullins@bluesky-pr.com) or call +44 (0)1582 790 706.