

MEDICINE NOBEL FOR TRIO

Relevant for: Pre-Specific GK | Topic: Important Prizes and Related Facts

Two Americans — William G. Kaelin Jr. and Gregg L. Semenza — and a British scientist, Peter J. Ratcliffe, won the 2019 Nobel Prize for Physiology or Medicine for discovering how the body's cells sense and react to oxygen levels, work that has paved the way for new strategies to fight anaemia, cancer and other diseases, the Nobel Committee said.

Mr. Semenza studied a gene known as EPO, which causes the body to create more red blood cells and isolated the specific DNA segments that help it to adapt to low oxygen levels.

Mr. Ratcliffe and Mr. Semenza then applied this knowledge to show that the oxygen sensing mechanism was present in virtually all human tissues.

Mr. Kaelin identified another gene, present in patients with a genetic disorder that puts them at far greater risk of certain cancers.

The gene rewires the body's ability to prevent the onset of cancer, and it plays a key role in how cancer cells respond to low oxygen levels.

Their work has "greatly expanded our knowledge of how physiological response makes life possible," the committee said.

You need to subscribe or sign-up to read Today's Paper articles.

Already have an account ? [Sign in](#)

Find mobile-friendly version of articles from the day's newspaper in one easy-to-read list.

Enjoy reading our articles without intrusion from advertisements.

A select list of articles that match your interests and tastes.

Move smoothly between articles as our pages load instantly.

A one-stop-shop for seeing the latest updates, and managing your preferences.

We brief you on the latest and most important developments, three times a day.

*Our Digital Subscription plans do not currently include the e-paper ,crossword, iPhone, iPad mobile applications and print. Our plans enhance your reading experience.

Support The Hindu's new online experience with zero ads.

Already a user? [Sign In](#)

END