Unveiled to the Middle East and Africa market at the AEEDC exhibition in Dubai, the new A-dec LED dental operatory light is now available to dentists around the world.

“Designed for optimal visual acuity and treatment-room ergonomics, the A-dec LED is an outstanding solution that outperforms all other industry options,” says A-dec Product Manager Tom McCleskey. “By evolving LED technology, we’ve established a new benchmark for operatory lighting.”

A-dec’s advanced light emitting diode (LED) technology has been optically engineered specifically for dentists and the dental operatory. The A-dec LED stands alone in the market because of how well it reduces eye strain and provides optimal ergonomics while ensuring ample illumination, clarity and depth during treatment.

The new offering features multiple intensity levels, cure-safe mode, low cost of ownership, and intuitive ergonomics.

Adjustable intensity levels of 15,000 lux, 25,000 lux, and 50,000 lux at 5,000K are able to flood the oral cavity with a consistently neutral white light for true-to-life tones, which help practitioners, diagnose clearly. The light’s cure-safe mode emits a brilliant yellow light at 25,000 lux, enabling the dental team to work effectively without curing photo-initiated resins.

McCleskey also mentions the solution’s ability to reduce eye fatigue because of how the light’s “stadium effect” mitigates shadows and maintains a uniform light pattern. Plus, its unencumbered controls, unparalleled positionability, and fluid movement, combine to create outstanding ergonomics.

This latest addition sets a premium standard for A-dec Dental Lights, a family of lighting solutions that also include the A-dec 500® Halogen 3-Axis and A-dec 300® Halogen 2-Axis.

Bad breath gas used to make liver cells from teeth

TOKYO, Japan: A team of Japanese researchers has demonstrated that hydrogen sulphide, one of the main causes of bad breath, could be a key component in developing future medical therapies. In a recent study conducted at the Nippon Dental University in Tokyo, they reported that stem cells isolated from dental pulp transform into liver cells after being incubated with the characteristically foul-smelling gas for at least three days.

While dental pulp stem cells have been found to have the ability to transform into a number of different cells, including muscle and blood cells, this is the first time that researchers have claimed to have produced a huge number of cells that were able to store glycogen and collect urea — the two main functions of the liver.

They said that although more research might be needed on the possible carcinogenic effects of the method, results indicate that it produced cells with little potential to differentiate, hence limiting the risk of developing tumours after transplantation.

“Hydrogen sulphide did not cause apoptotic changes in the cells,” the researchers stated in the report.

Common methods of producing hepatic cells for human transplantation include the use of foetal bovine serum, which is heavily regulated worldwide. The researchers however extracted stem cells for their study from patients undergoing regular tooth extractions. These were then divided into two groups, of which one was incubated with hydrogen sulphide and the other with a different medium.

Commonly associated with the smell of rotten eggs, hydrogen sulphide is produced in small amounts by the human body for signalling and other biological functions. In the oral cavity, where it is considered highly toxic to tissue, it is produced by forms of bacteria that do not require oxygen to grow.