



## CERTIFICATE OF US PATENT

As a registered patent agency, we would like to certify that the inventors  
 Safa Nihad Abed Shubar <sup>1</sup> , Zainab Mohammed Abass <sup>2</sup> , Baraa Bahaa Aldin <sup>1</sup> ,  
 Shahad Saad Mohammed <sup>3</sup> , Aseel H. Al-Sabary <sup>4</sup> , Murtadha Abdullah Abbood <sup>5</sup> ,  
 Mustafa Ahmed Zainy <sup>5</sup> , Nadia Mahmoud Tawfiq Jebril <sup>6</sup> , Massar Aamer Merza  
<sup>7</sup> , Zahraa Saadi Jasim Mohamed <sup>8</sup> , Hawraa Majid Hassan <sup>9</sup> , Lilyan Qasim Alwan  
<sup>10</sup> , Hadeel Luay Kareem <sup>11</sup> , Shahad Fahim Aljanabi <sup>12</sup> , Hind Hassan Fadhil AL-  
 Saadi <sup>13</sup> , Rawaa Gabbar Abdullah <sup>14</sup>

<sup>1</sup> Department of Medical Laboratory Techniques, Al-Mussaib Technical Institute, Al-Furat Al- Awsat Technical University, Iraq

<sup>2</sup> Department of Medical Physiology, Hammurabi College of Medicine, University of Babylon, Iraq.

<sup>3</sup> Department of Community Health Techniques, Technical Institute of Babylon, Al-Furat Al- Awsat Technical University , Iraq.

<sup>4</sup> College of Medicine, Al-Mustaqbal University, Iraq.

<sup>5</sup> Department of Microbiology, College of Medicine, University of Kerbala, Iraq.

<sup>6\*</sup> Department of Biology, College of Science for Women, University of Babylon, Iraq.

<sup>7</sup> Department of Microbiology, Hammurabi College of Medicine, University of Babylon, Iraq.

<sup>8</sup> Department of Clinical Pharmacy, College of Pharmacy, University of Babylon, Iraq.

<sup>9</sup> DNA Research Center, University of Babylon, Iraq.

<sup>10</sup> Department of Applied Geology, College of Science, University of Babylon, Iraq.

<sup>11</sup> Department of Basic Sciences, College of Dentistry, University of Babylon, Iraq

<sup>12</sup> Information networks, Information technology, University of Babylon, Babylon, Iraq

<sup>13</sup> Department of Anesthesia Techniques, College of Health and Medical Technologies, Al- Mustaqbal University, Iraq

<sup>14</sup> Department of Laboratory and Clinical Sciences, College of Pharmacy, University of Babylon, Iraq.

have successfully registered the invention entitled

### A NEW LIBS APPLICATION IN BIOLOGY SECTOR UNDER BIOREMEDIATION PROCESS

as a provisional US patent issued by USPTO with filing application  
 number 63958780

Tyler Weiss

MANAGING EDITOR

DATE: January 13, 2026