

**EXPERIMENTAL LICENSE PROGRESS REPORT
OF THE ALFRED MANN FOUNDATION
November 16, 2011**

As required under the experimental license renewal granted on November 16, 2009 (Call Sign WD2XLW; File No. 0228-EX-RR-2009), the Alfred Mann Foundation for Scientific Research (“AMF”) submits this semi-annual progress report on the experimental operations of the medical micropower network (“MMN”) system. AMF continues to make progress with its innovative system. AMF has implemented and continues to implement improvements that will enhance the radio communication performance and reliability of the MMN devices, including the following:

1. AMF has completed the previously reported animal study under clinical conditions,¹ and the results of that study are being used to improve system reliability.
2. Several new antenna designs are being tested for incorporation in the next version of the Master Control Unit, and link margin studies are ongoing.
3. AMF has conducted additional tests demonstrating the performance of the system in the presence of co-channel, wideband incumbent signals. Specifically, a test environment was created to evaluate MMN system performance in the presence of (i) simulated FM remote pickup broadcast signals with channel widths of 50 kHz and 100 kHz; and (ii) simulated narrowband FM/FSK land mobile radio signals. In all test cases, the MMN system successfully mitigated interference by detecting the

¹ See Experimental License Progress Report of AMF, File No. 0228-EX-RR-2009, at 1 (Nov. 16, 2010).

- incumbent signals and then, depending on the severity of the total interfering environment, either excising the signals or changing channels.
4. AMF is assembling additional implant devices for testing in upcoming clinical trials.

Finally, Table 1 below describes the four channels implemented in the experimental hardware.

Table 1 – Radio Channel Frequencies (MHz)

	Lower Edge	Center	Upper Edge
Band 1	413.919	416.405	418.891
Band 2	426.349	428.835	431.321
Band 3	438.779	441.265	443.751
Band 4	451.209	453.695	456.181
Guard bands 7.458 MHz		Band Width 4.972 MHz	