Table 8. Microwave interaction with the auditory system of humans.

Frequency PPS (Hz) (MHz)	Pulse Width (10^{-6}sec)	Power Density Ave (W/m^2)	Peak (W/m^2)	Energy Density/ Pulse (mJ/m^2)	Author Year
1245 MHz	10-70	3.2	800	263	Frey & Messenger [1973]
1310 MHz 200 Hz		4	2750		Frey [1961]
2450 3/10 Hz	1.0-32	1200	12500-400000	400	Guy et al. [1975]
3000 MHz 200 Hz		20	3000		Frey [1961]
3000 MHz	15-20	2250-25000	23 - 30		Cain & Rissman [1978]

Note: At 915 and 2450 MHz, the peak SARs are 0.46 and 0.4 W/kg per 10 W/m^2 incident.

Studies on lesser aggregates of nervous system elements also showed that when temperature is controlled, no significant changes occur in the conduction characteristics of superior cervical ganglia and peripheral nerve preparations exposed to 2450 MHz fields [Courtney et al., 1975; Chou and Guy, 1978]. The SARs involved were as high as 1700 W/kg for CW fields in these experiments. Another study has revealed that ganglia from *aplysia* exposed to 5 W/kg at 2450 MHz produced changes in the spontaneous firing patterns of the ganglia [Wachtel et al., 1975]. The firing pattern changes were reproducible in a majority of the experiments using non-microwave convective heating. While their temperature tests with convective heating were qualitative only, temperature thresholds of 0.38 and 0.63°C were reported for membrane time constant and input resistance changes in ganglia of *Helix aspersa* [Ginsberg et al., 1992]. It is noteworthy that these temperature thresholds and the SAR of 5 W/kg are close to those observed for microwave-induced latency changes of evoked potential from the brain of cats.