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(71) Applicant: TAGENT CORPORATION [US/US]; 1250 Oakmead Parkway, Suite 210, Sunnyvale, CA 94085 (US).

- (72) Inventors: LOVOI, Paul, A.; 19152 Dehavilland Drive, Saratoga, CA 95070 (US). JUDELSON, Teri, E.; 19768 Glen Brae Drive, Saratoga, CA 95070 (US). JENNETTI, Anthony, G.; 747 Shasta Fir Drive, Sunnyvale, CA 94086 (US). BARON, Bernard; 1023 Burgoyne Street, Mountain View, CA 94043 (US).
- (74) Agent: FREIBURGER, Thomas, M.; P.O. Box 1026, Tiburon, CA 94920 (US).

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## (54) Title: TRACKABLE PILLS WITH ELECTRONIC ID TAGS

(57) Abstract: A medical pill intended for human or animal consumption includes an RFID tag (14) in or on the pill (11). The tag will respond to a nearby reader, the tag itself being without a battery or other constant power supply, capturing power from the reader's (12) transmitted signal and storing a portion of that power in a power supply. An antenna for the RFID tag may be integral with the tag or it may be transferred to the pill using conductive materials (22) in the pill's coating, filler or binding agents embedded within the pill or printed onto the pill. If separate from the tag the antenna is electromagnetically coupled to the tag which has a small onboard antenna. The RFID tag of each pill has data that are transmitted when the tag is interrogated by a signal from a reader. Incorporation of an ingestible ID tag is possible because of the tag's very small size compatible with ingestion and because the tag can contain an antenna within the pill that allows the tag to be read at a substantial distance. Several different methods for deactivating the RFID tag after ingestion or use of the pill are disclosed. Medicaments other than oral pills can also have the ID tags.

## INTERNATIONAL SEARCH REPORT

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C. DOCUMENTS CONSIDERED TO BE RELEVANT				
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X	US 6366206 B1 (Ishikawa) 2 April 2002 (02.04.2002	2) col. 5 lines 23-40 and col. 11 lines 25-	1,2,5,21-23	
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	YIQ 20020122201A1 (G-III) 17 Tuly 2002 (17 07 2002) dindian of Ferma 1			
у	US 20030132301A1 (Selker) 17 July 2003 (17.07.2003) see description of figure 1.		3,4,6,9,10,11,13-16,20	
λ /D:	US 20050285732A1 (Sengupta) 29 December 2005 (29.12.05) see description of figure 1 1-23			
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