

Thompson Karen  
Form SC 13D/A  
October 10, 2006

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934  
(Amendment No. 1)\*

IsoRay, Inc.  
(Name of Issuer)

Common Stock  
(Title of Class of Securities)

46489V104  
(CUSIP Number)

Stephen R. Boatwright, Esq.  
Keller Rohrback, PLC  
3101 North Central Ave., Suite 900  
Phoenix, AZ 85012  
(602) 248-0088

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

August 23, 2006  
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box. €

*Note.* Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. *See* Rule 13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the Notes).

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<b>CUSIP NO. 46489V104</b>	<b>13D</b>	<b>Page 2 of 4 Pages</b>
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1	NAME OF REPORTING PERSONS/I.R.S. IDENTIFICATION NOS. OF ABOVE PERSON (ENTITIES ONLY)  Karen Thompson	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)  (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions)  SC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH		
7	SOLE VOTING POWER	5,728
8	SHARED VOTING POWER	455,729
9	SOLE DISPOSITIVE POWER	5,728
10	SHARED DISPOSITIVE POWER	455,729
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  461,457	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  3%	
14	TYPE OF REPORTING PERSON (See Instructions)	

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**Item 5.**

**Interest in Securities of the Issuer.**

(a) As of the date of the filing of this statement, Ms. Thompson beneficially owns 461,457 shares of Common Stock, representing 3% of the shares of Common Stock reported to be outstanding in the Issuer's Registration Statement on Form SB-2/A filed on June 6, 2006.

(b) Ms. Thompson has the sole power to vote or to direct the vote and to dispose or direct the disposition of 5,728 shares of Common Stock beneficially owned by her. Ms. Thompson has shared power to vote or to direct the vote and to dispose or direct the disposition of 455,729 shares of Common Stock beneficially owned by her. Of these 455,729 shares of Common Stock 200,590 shares of Common Stock are held of record by the Lawrence Family Trust, organized under the laws of California, with its business address at 285 Dondero Way, San Jose, California 95119. Ms. Thompson is a trustee and one of four beneficiaries of the Lawrence Family Trust. The Lawrence Family Trust has not, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors), nor has the Lawrence Family Trust been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction resulting in judgment, decree or final order enjoining future violation of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws. The remaining 255,139 shares of Common Stock are held of record by the William Wesley Thompson and Karen Louise Thompson Rev. Trust DTD 1.6.99, organized under the laws of California, with its business address at 285 Dondero Way, San Jose, California 95119. Ms. Thompson is one of two trustees, the other being William Wesley Thompson, and one of five beneficiaries of the William Wesley Thompson and Karen Louise Thompson Rev. Trust DTD 1.6.99. The William Wesley Thompson and Karen Louise Thompson Rev. Trust DTD 1.6.99 has not, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors), nor has the William Wesley Thompson and Karen Louise Thompson Rev. Trust DTD 1.6.99 been a party to a civil proceeding or a judicial or administrative body of competent jurisdiction resulting in judgment, decree or final order enjoining future violation of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(c) Except as disclosed in this Schedule 13D/A, Ms. Thompson has not effected any transaction in Common Stock during the past 60 days.

(d) Not applicable.

(e) August 23, 2006

**Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.**

None

**Item 7. Material To Be Filed As Exhibits.**

None

**SIGNATURE**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: September 21, 2006

/s/ Karen Thompson

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Karen Thompson

**13D Amendment**

**13D**

**Page 4 of 4 Pages**

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