

August 5, 2015

VIA EDGAR

Securities and Exchange Commission  
100 F Street, N.E.  
Washington, DC 20549

Re: MELA Sciences, Inc.  
File No. 333-205797  
Registration Statement on Form S-3

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, MELA Sciences, Inc., or the Company, requests that the effective date of the Company's Registration Statement on Form S-3 (File No. 333-205797) be accelerated to 3 p.m. on Friday, August 7, 2015, or as soon thereafter as practicable. The Company acknowledges that:

- Should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- The action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- The Company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Sincerely,

MELA SCIENCES, INC.

By: /s/ Robert W. Cook  
Robert W. Cook,  
Chief Financial Officer