

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 14A

**Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934 (Amendment No.)**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

Preliminary Proxy Statement

Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

Definitive Proxy Statement

Definitive Additional Materials

Soliciting Material Pursuant to §240.14a-12

INTERNATIONAL ISOTOPES INC.

(Name of Registrant as Specified in its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

No fee required.

Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

1. Title of each class of securities to which transaction applies:

2. Aggregate number of securities to which transaction applies:

3. Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

4. Proposed maximum aggregate value of transaction:

5. Total fee paid:

Fee paid previously with preliminary materials.

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1. Amount Previously Paid:

2. Form, Schedule or Registration Statement No.:

3. Filing Party:

4. Date Filed:



International Isotopes Inc.

4137 Commerce Circle
Idaho Falls, Idaho 83401

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS TO BE HELD JULY 11, 2017

NOTICE IS HEREBY GIVEN that the 2017 Annual Meeting of Shareholders will be held at 2:00 p.m., Eastern time, on Tuesday, July 11, 2017, at the offices of Perkins Coie LLP located at 30 Rockefeller Plaza, 22nd Floor, New York, New York 10112, for the following purposes.

1. To elect three directors to serve for a term of one year and until their successors are elected and qualified;
2. To ratify the appointment of Eide Bailly LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017;
3. To hold an advisory vote to approve the compensation of our named executive officers; and
4. To consider any other business that may properly come before the meeting.

The foregoing items of business are more fully described in the Proxy Statement accompanying this Notice.

Important Notice Regarding the Availability of Proxy Materials for the Shareholder Meeting to be Held on July 11, 2017.

This Proxy Statement and our Annual Report to Shareholders are available at:

www.edocumentview.com/INIS

Adjournments and Postponements

Any action on the items of business described above may be considered at the Annual Meeting at the time and on the date specified above or at any time and date to which the Annual Meeting may be properly adjourned and postponed.

Record Date

You are entitled to vote only if you were a shareholder of International Isotopes Inc. as of the close of business on May 22, 2017.

Voting

Your vote is very important. Whether or not you plan to attend the annual meeting, we encourage you to read the proxy statement and to submit your proxy or voting instructions as soon as possible. You may submit your proxy or voting instructions for the annual meeting by phone, on the internet or completing, signing, dating and returning your proxy card or voting instructions in the pre-addressed envelope provided. For specific instructions on how to vote your shares, please refer to the section entitled *Questions and Answers About the Proxy Materials and the Annual Meeting* beginning on page 1 of the proxy statement and the instructions on the proxy card or voting instruction card. You may attend the meeting in person even though you have sent in your proxy or voting instruction card.

BY ORDER OF THE BOARD OF DIRECTORS,

/s/ Steve Laflin

Steve T. Laflin

President and Chief Executive Officer

Idaho Falls, Idaho
June 6, 2017



International Isotopes Inc.

4137 Commerce Circle
Idaho Falls, Idaho 83401

PROXY STATEMENT

**For Annual Meeting of Shareholders
To Be Held on July 11, 2017**

General

This proxy statement contains information relating to the solicitation of proxies by the Board of Directors (the “Board”) of International Isotopes Inc. (the “Company”, “we”, “us” or “our”) for use at the 2017 Annual Meeting of Shareholders (the “Annual Meeting”) to be held on Tuesday, July 11, 2017, at 2:00 p.m., Eastern time, or at any adjournment or postponement thereof, for the purposes set forth herein and in the accompanying Notice of Annual Meeting of Shareholders. The Annual Meeting will be held at the offices of Perkins Coie LLP located at 30 Rockefeller Plaza, 22nd Floor, New York, New York 10112.

This proxy statement and our Annual Report to Shareholders for the fiscal year ended December 31, 2016 are first being distributed on June 6, 2017 to all shareholders entitled to vote at the Annual Meeting.

QUESTIONS AND ANSWERS ABOUT THE PROXY MATERIALS AND THE ANNUAL MEETING

Q: Why am I receiving these materials?

A: The Board is providing these proxy materials to you in connection with the Annual Meeting, which will take place on July 11, 2017. As a shareholder, you are invited to attend the Annual Meeting and are entitled to and requested to vote on the items of business described in this proxy statement.

Q: What information is contained in this proxy statement?

A: The information included in this proxy statement relates to the proposals to be voted on at the Annual Meeting, the voting process, the compensation of directors and certain executive officers, and certain other required information.

Q: How may I obtain International Isotopes’ Annual Report to Shareholders and Form 10-K?

A: A copy of our 2016 Annual Report (which contains our Annual Report on Form 10-K for the year ended December 31, 2016) is enclosed. Shareholders may request any exhibit to the Form 10-K by specifically requesting a copy from our principal executive office in writing to International Isotopes Inc., Attn: Laurie McKenzie-Carter, 4137 Commerce Circle, Idaho Falls, Idaho 83401, or by telephone at (208) 524-5300.

Copies of the 2016 Annual Report are also available in the Investor Center section of our website at www.internationalisotopes.com and at the SEC's EDGAR database on the SEC's website at www.sec.gov.

Q: What items of business will be voted on at the Annual Meeting?

A: The items of business scheduled to be voted on at the Annual Meeting are:

- The election of three directors to serve for a term of one year and until their successors are elected and qualified (Proposal No. 1);
- The ratification of Eide Bailly LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017 (Proposal No. 2);
- An advisory vote to approve the compensation of our named executive officers (Proposal No. 3); and
- To consider any other business that may properly come before the Annual Meeting.

Q: How does the Board recommend that I vote?

A: The Board recommends that you vote as follows:

- “FOR” each of the three director nominees set forth in Proposal No. 1;
- “FOR” Proposal No. 2, relating to the ratification of Eide Bailly LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017; and
- “FOR” Proposal No. 3, relating to the advisory vote to approve the compensation of our named executive officers.

Any properly authorized proxy as to which no instructions are given will be voted in accordance with the foregoing recommendations.

Q: What shares can I vote?

A: Each share of our issued and outstanding common stock as of the close of business on May 22, 2017 (the “Record Date”) is entitled to be voted on all items being voted upon at the Annual Meeting. You are entitled to one vote for each share of common stock you own. You may vote all shares owned by you as of the Record Date, including (1) shares held directly in your name as the shareholder of record, and (2) shares held for you as the beneficial owner through a broker, trustee or other nominee such as a bank. On the Record Date, we had 406,730,902 shares of common stock issued and outstanding.

Q: What is the difference between holding shares as a shareholder of record and as a beneficial owner?

A: Most shareholders hold their shares through a broker or other nominee rather than directly in their own name. As summarized below, there are some distinctions between shares held of record and those owned beneficially.

Shareholder of Record

If your shares are registered directly in your name with our transfer agent, Computershare Trust Company, N.A., you are considered, with respect to those shares, the shareholder of record, and these proxy materials are being sent directly to you by us. As the shareholder of record, you have the right to grant your voting proxy directly to us or to vote in person at the Annual Meeting. We have enclosed or sent a proxy card for you to use.

Beneficial Owner

If your shares are held in a brokerage account or by another nominee, you are considered the beneficial owner of shares held in “street name,” and these proxy materials are being forwarded to you together with a voting instruction card. As the beneficial owner, you have the right to direct your broker, trustee or nominee how to vote and are also invited to attend the Annual Meeting.

Since a beneficial owner is not the shareholder of record, you may not vote these shares in person at the Annual Meeting unless you obtain a “legal proxy” from the broker, trustee or nominee that holds your shares, giving you the right to vote the shares at the Annual Meeting. Your broker, trustee or nominee has enclosed or provided voting instructions for you to use in directing the broker, trustee or nominee how to vote your shares.

Q: How can I attend the Annual Meeting?

A: You are entitled to attend the Annual Meeting only if you were a shareholder or joint holder as of the close of business on the Record Date, or you hold a valid proxy for the Annual Meeting. You should be prepared to present photo identification for admittance at the Annual Meeting. In addition, if you are a shareholder of record, your name will be verified against the list of shareholders of record on the Record Date prior to your being admitted to the Annual Meeting. If you are not a shareholder of record but hold shares through a broker or nominee (*i.e.*, in street name), you should provide proof of beneficial ownership on the Record Date, such as your most recent account statement prior to the Record Date, a copy of the voting instruction card provided by your broker, trustee or nominee, or other similar evidence of ownership. If you do not provide photo identification or comply with the procedures outlined above upon request, you will not be admitted to the Annual Meeting. The Annual Meeting will begin promptly at 2:00 p.m., Eastern time. If you need directions to the location of the Annual Meeting, please call us at (208) 524-5300.

Q: How can I vote my shares in person at the Annual Meeting?

A: Shares held in your name as the shareholder of record may be voted in person at the Annual Meeting. Shares held beneficially in street name may be voted in person only if you obtain a legal proxy from the broker, trustee or nominee that holds your shares giving you the right to vote the shares. Even if you plan to attend the Annual Meeting, we recommend that you also submit your proxy or voting instructions as described below so that your vote will be counted if you later decide not to attend the Annual Meeting.

Q: How can I vote my shares without attending the Annual Meeting?

A: Whether you hold shares directly as the shareholder of record or beneficially in street name, you may direct how your shares are voted without attending the Annual Meeting. If you are a shareholder of record, you may vote by submitting a proxy. If you hold shares beneficially in street name, you may vote by submitting voting instructions to your broker, trustee or nominee. For directions on how to vote, please refer to the instructions below and those included on your proxy card or, for shares held beneficially in street name, the voting instruction card provided by your broker, trustee or nominee.

Shareholders of record of our common stock may submit proxies by:

(1) Completing, signing and dating their proxy card and mailing them in the accompanying pre-addressed envelope;

(2) Accessing the Internet Voting Site at www.envisionreports.com/INIS and voting by following the instructions provided on the website; or

(3) Calling 1-800-652-VOTE (8683) and voting by following the instructions provided on the phone line.

In order to vote via telephone or on the Internet, please have your proxy card in front of you. Your proxy card contains the phone number and website needed to vote. The proxy card will also contain the account number and proxy access number needed to vote via telephone or the Internet. Upon entering either the phone number or Internet address, you will be instructed on how to proceed.

Q: Can I change or revoke my vote?

A: You may change or revoke your vote at any time prior to the vote at the Annual Meeting. If you are the shareholder of record, you may change your vote by submitting a new proxy bearing a later date (which automatically revokes the earlier proxy), by providing a written notice of revocation to our Secretary prior to your shares being voted, or by attending the Annual Meeting and voting in person. Attendance at the Annual Meeting will not cause your previously granted proxy to be revoked unless you specifically so request. For shares you hold beneficially in street name, you may change your vote by submitting new voting instructions to your broker, trustee or nominee, or, if you have obtained a legal proxy from your broker or nominee giving you the right to vote your shares, by attending the Annual Meeting and voting in person.

Q: Who can help answer my questions?

A: If you have any questions about the Annual Meeting or how to vote or revoke your proxy, you should contact:

International Isotopes Inc.
Attn: Laurie McKenzie-Carter
4137 Commerce Circle
Idaho Falls, Idaho 83401
(208) 524-5300

Q: Is my vote confidential?

A: Proxy instructions, ballots and voting tabulations that identify individual shareholders are handled in a manner that protects your voting privacy. Your vote will not be disclosed either within the Company or to third parties, except: (1) as necessary to meet applicable legal requirements, (2) to allow for the tabulation of votes and certification of the vote, and (3) to facilitate a successful proxy solicitation. Occasionally, shareholders provide written comments on their proxy card, which are then forwarded to our management.

Q: How many shares must be present or represented to conduct business at the Annual Meeting?

A: The quorum requirement for holding the Annual Meeting and transacting business is that holders of a majority of shares of our common stock entitled to vote must be present in person or represented by proxy. Abstentions, votes withheld and broker non-votes are counted for the purpose of determining the presence of a quorum.

Q: How are votes counted?

A: In the election of directors (Proposal No. 1), you may vote “FOR” all of the nominees or your vote may be “WITHHELD” with respect to one or more of the nominees. For Proposal Nos. 2 and 3, you may vote “FOR,” “AGAINST” or “ABSTAIN.”

If you provide specific instructions with regard to a certain item, your shares will be voted as you instruct on such items. If you are a shareholder of record and you sign and return your proxy card without giving specific instructions, your shares will be voted in accordance with the recommendations of the Board (“FOR” all of the director nominees, “FOR” the ratification of Eide Bailly LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017, and “FOR” the advisory vote to approve the compensation of our named executive officers).

Q: What is the voting requirement to approve each of the proposals?

A: Directors are elected (Proposal No. 1) by a plurality of the votes cast, provided that a majority of the shares of common stock are present or represented and entitled to vote at the Annual Meeting. The three candidates who receive the greatest number of “FOR” votes will be elected directors.

The ratification of Eide Bailly LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017 (Proposal No. 2), and the advisory vote to approve the compensation of our named executive officers (Proposal No. 3), require the affirmative vote of a majority of the shares present in person or represented by proxy at the Annual Meeting.

Abstentions are shares that abstain from voting on a particular matter. Abstentions effectively count as being present for purposes of determining whether a quorum of shares is present at a meeting. Abstentions will have no effect on Proposal No. 1, the election of directors, since approval by a percentage of the shares present or outstanding is not required. Abstentions will have the same effect as a vote “AGAINST” Proposal No. 2, the ratification of the appointment of our independent registered public accounting firm, and Proposal No. 3, the advisory vote to approve the compensation of our named executive officers.

If your broker holds your shares in its name (also known as “street name”), and does not receive voting instructions from you, the broker is permitted to vote your shares only on “discretionary” matters. Proposal No. 2, the ratification of Eide Bailly LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2017, is the only discretionary matter that a broker is permitted to vote on at the Annual Meeting. Broker non-votes are generally not considered votes present in person or by proxy and entitled to vote at the Annual Meeting and therefore will have no direct impact on the outcome of the vote for Proposal Nos. 1 and 3. We urge you to give voting instructions to your broker on all voting items.

Q: Is cumulative voting permitted for the election of directors?

A: No. We do not allow you to cumulate your vote in the election of directors. For all matters proposed for shareholder action at the Annual Meeting, each share of common stock outstanding as of the close of business on the Record Date is entitled to one vote.

Q: What happens if additional matters are presented at the Annual Meeting?

A: Other than the three items of business described in this proxy statement, we are not aware of any other business to be acted upon at the Annual Meeting. If you grant a proxy, the persons named as proxy holders, Ralph M. Richart and Steve T. Laffin, will have the discretion to vote your shares on any additional matters properly presented for a vote at the Annual Meeting. If for any unforeseen reason any of our nominees is not available as a candidate for director, the persons named as proxy holders will vote your proxy for such other candidate or candidates as may be nominated by the Board, unless the Board chooses to reduce the number of directors serving on the Board.

Q: What should I do if I receive more than one set of voting materials?

A: You may receive more than one set of voting materials, including multiple copies of this proxy statement and multiple proxy cards or voting instruction cards. For example, if you hold your shares in more than one brokerage account, you may receive a separate voting instruction card for each brokerage account in which you hold shares. If you are a shareholder of record and your shares are registered in more than one name, you will receive more than one proxy card. Please complete, sign, date and return, with respect to each proxy card and voting instruction card that you receive, or vote via telephone or Internet, as applicable.

Q: Who will bear the cost of soliciting votes for the Annual Meeting?

A: We are making this solicitation and will pay the entire cost of preparing, assembling, printing, mailing and distributing these proxy materials and soliciting votes. In addition to the mailing of these proxy materials, the solicitation of proxies or votes may be made in person, by telephone or by electronic communication by our directors, officers and employees, who will not receive any additional compensation for such solicitation activities. Upon request, we will reimburse brokerage houses and other custodians, nominees and fiduciaries for forwarding proxy and solicitation materials to shareholders. Your cooperation in promptly voting your shares and submitting your proxy by telephone, Internet or by completing and returning the enclosed proxy card will help to avoid additional expense.

Q: Where can I find the voting results of the Annual Meeting?

A: We intend to announce the voting results of the Annual Meeting in a Current Report on Form 8-K, which we expect to file with the Securities and Exchange Commission (SEC) within four business days following the Annual Meeting.

Q: What is the deadline to propose actions for consideration at next year's annual meeting of shareholders or to nominate individuals to serve as directors?

A: You may submit proposals, including director nominations, for consideration at future shareholder meetings.

Shareholder Proposals: For a shareholder proposal to be considered for inclusion in our proxy statement for the 2018 Annual Meeting of Shareholders pursuant to SEC Rule 14a-8, the written proposal must be received by our Secretary at our principal executive offices no later than February 6, 2018. If the date of the 2018 Annual Meeting of Shareholders is moved more than 30 days before or after the anniversary date of this year's Annual Meeting, the deadline for inclusion of proposals in our proxy statement is instead a reasonable time before we begin to print and mail the proxy materials. Such proposals must also comply with SEC regulations regarding the inclusion of shareholder proposals in company-sponsored proxy materials. Proposals should be addressed to:

International Isotopes Inc.
Attn: Laurie McKenzie-Carter
4137 Commerce Circle
Idaho Falls, Idaho 83401

For a shareholder proposal that is not intended to be included in our proxy statement as described above, the shareholder must deliver a proxy statement and form of proxy to holders of a sufficient number of shares of our common stock to approve that proposal and give notice to us no later than April 22, 2018.

Nomination of Director Candidates: You may propose director candidates for consideration by the Board. Any such recommendations should include the nominee's name and qualifications for Board membership and should be directed to our Secretary at the address of our principal executive offices set forth above.

Q: How may I communicate with the Board or the non-employee directors on the Board?

A: Any shareholder or other interested party may contact the Board or any individual director, including any non-employee director or the non-employee directors as a group, by directing the communication by mail or fax addressed to International Isotopes Inc., Attn: Chairman of the Board of Directors, 4137 Commerce Circle, Idaho Falls, Idaho 83401, Fax: (208) 524-1411. In general, any shareholder communication delivered to us for forwarding to the Board or specified directors will be forwarded in accordance with the shareholder's instructions.

CORPORATE GOVERNANCE PRINCIPLES AND BOARD MATTERS

We are committed to having sound corporate governance principles, which are essential to running our business efficiently and maintaining our integrity in the marketplace. Our Code of Ethics is available at www.internationalisotopes.com in the Investor Center section of our website.

Board Independence

The Board has determined that each of the current directors and nominees, other than Steve T. Laflin, is “independent” under the NASDAQ listing rules. Mr. Laflin is not considered independent because he currently serves as our President and Chief Executive Officer. Furthermore, the Board has determined that none of the members of any of our standing committees, other than Mr. Richart, has a material relationship with us (either directly, through a family member or as a partner, executive officer or controlling shareholder of any organization that receives or makes payments from or to us) and each is “independent” within the meaning of NASDAQ’s director independence standards under the NASDAQ Listing Rules. However, Mr. Richart does not meet the independence requirements for audit committee members set forth in NASDAQ Listing Rules because he is an “affiliated person” by virtue of his beneficial ownership of 23.7% of our common stock.

Board Structure and Committee Composition

Our Board has three directors and the following two standing committees: (1) Audit Committee, and (2) Compensation Committee. Mr. Richart serves as the Chairman of the Board and Mr. Laflin serves as our President and Chief Executive Officer and as a director. The Board does not have a policy regarding separation of the roles of Chief Executive Officer and Chairman of the Board. The Board believes it is in our best interests to make that determination based on current circumstances. The Board has determined that having a separate Chairman and Chief Executive Officer at this time is appropriate given the current characteristics of our management and is in the best interest of our company and our shareholders. Mr. Richart, with his experience in the medical device and pharmaceutical industries and his prior service on public company boards of directors and corporate medical advisory boards, is most capable of effectively identifying strategic priorities, leading Board discussions and defining our strategic objectives. Mr. Laflin, as our President and Chief Executive Officer, is the individual selected by the Board to manage our company on a day-to-day basis, and his direct involvement in our operations allows him to provide valuable insights with respect to strategic planning, the operational requirements to meet our short- and long-term objectives, and management of risks facing our company. Our independent directors bring experience, oversight and expertise from outside our company and the industry.

The membership and the function of each of the committees are described below. The Audit Committee operates under a written charter adopted by the Board, which is available on our website at www.internationalisotopes.com in the Investor Center section. The Compensation Committee does not have a written charter. During fiscal 2016, the Board held five meetings. Each director attended at least 75% of all Board and applicable committee meetings.

Audit Committee

The Audit Committee assists the Board in overseeing the integrity of our financial statements, our compliance with legal and regulatory requirements, our independent registered public accounting firm’s qualifications and independence, and the performance of our internal audit function and independent registered public accounting firm. The Audit Committee is comprised of two members, Christopher Grosso and Ralph Richart, with Mr. Grosso serving as the chairman. Mr. Grosso is an “independent” director for audit committee service under the NASDAQ listing rules and applicable SEC rules and regulations. Mr. Richart is not an independent director for audit committee service under NASDAQ listing rules because he is an “affiliated person” by virtue of his beneficial ownership of 23.7% of our common stock. The Audit Committee is directly responsible for the appointment, compensation, and oversight of our independent registered public accounting firm, and our independent auditing firm reports directly to the Audit Committee. The responsibility of the Audit Committee includes resolving disagreements between our management and the independent registered public accounting firm related to financial reporting. The Audit Committee is also responsible for establishing procedures for receipt of complaints relating to accounting, internal control, and auditing and confidential, anonymous information submitted by employees relating to questionable accounting or auditing matters. The Audit Committee has the authority to employ independent counsel and other advisors in connection with its duties. The Board has determined that Mr. Richart and Mr. Grosso are “audit committee financial experts” based on their prior experience as disclosed in their respective biographies on page 9. The Audit Committee held one meeting in 2016.

The report of the Audit Committee is included on page 11 of this proxy statement.

Compensation Committee

The Compensation Committee reviews the compensation and benefits of all of our officers annually, makes recommendations to the Board and reviews general policy matters relating to compensation and benefits of our employees, including administration of our equity compensation plans. The Compensation Committee is comprised of two members, Christopher Grosso and Ralph Richart, with

Mr. Richart serving as the chairman. The Compensation Committee held three meetings in 2016. We do not use any compensation consultants to determine, or recommend, any compensation for our officers or directors. Executive officers have no role in determining their own compensation. The non-employee directors approve the compensation of our Chief Executive Officer. The entire Board approves the compensation of our Chief Financial Officer. The practice of the Board has been to require unanimous approval to approve any action with respect to director compensation.

Nominating Committee

We do not have a standing nominating committee or committee performing similar functions or a nominating committee charter. The Board believes it is appropriate not to have such a committee because the entire Board, including both of our independent Board members, Mr. Grosso and Mr. Richart, participate in the consideration of director nominees. Mr. Richart and Mr. Grosso are both “independent” under NASDAQ listing rules. The Board will continue to assess the necessity of a nominating committee and will establish one if necessary in the future. The entire Board considers any director nominees recommended by shareholders.

Consideration of Director Nominees

Shareholder Nominees. The Board does not have a formal policy regarding the consideration of director candidates nominated by shareholders because the Board is small and there is low turnover among its members. Shareholders may nominate director candidates in writing, including the nominee’s name and qualifications for Board membership, directed to our Secretary at the address of our principal executive offices set forth above.

Director Qualifications. Board members should have high standards of professional and personal ethics, integrity and values. They should have relevant experience and ability with respect to making and overseeing policy in business, technology, government or education sectors. They should be committed to acting in our best interests and to objectively assessing Board, committee and management performance. They should have sufficient time to carry out their duties and should have the willingness and ability to serve multiple terms to develop a deeper understanding of our business affairs. Board members should be willing to avoid activities or interests that may create a conflict of interest with the director’s responsibilities and duties to us. We do not have a separate policy regarding consideration of diversity in identifying director nominees, but the Board strives to nominate directors with a variety of skills and backgrounds so that, as a group, the Board will possess a broad perspective and the appropriate talent, skills and expertise to oversee our business.

Identifying and Evaluating Nominees for Directors. The Board uses a variety of methods for identifying and evaluating nominees for director. In the event of a vacancy on the Board, various potential candidates for director will be considered. Candidates may come to the Board’s attention through current Board members, professional search firms, shareholders or other persons. These candidates will be evaluated at regular or special meetings of the Board, and may be considered at any point during the year. As noted above, properly submitted shareholder nominations for candidates to the Board will be considered. Following verification of the shareholder status of persons proposing candidates, recommendations will be aggregated and considered by the Board at a regularly scheduled meeting. If any materials are provided by a shareholder in connection with the nomination of a director candidate, such materials will be forwarded to the Board. In evaluating nominees, the Board will seek to achieve a balance of knowledge, experience and capability on the Board.

The Board’s Role in Risk Oversight

The Board oversees our risk management activities. One of the Board’s primary responsibilities under our corporate governance guidelines is reviewing our strategic plans and objectives, including our principal risk exposures. The Board addresses, at least annually, our principal current and future risk exposures. The Board receives regular reports from members of its committees, senior management and professional consultants on areas of material risk to our business, including operational, financial, legal and regulatory, and strategic and reputation risks. The Audit Committee oversees our procedures for the receipt, retention and treatment of complaints relating to accounting and auditing matters and oversees our management of legal and regulatory compliance systems. The Compensation Committee oversees risks relating to our compensation plans and programs. The Compensation Committee has reviewed and considered our compensation policies and programs in light of the Board’s risk assessment and management responsibilities and will do so in the future on an annual basis. The Compensation Committee believes that we have no compensation policies and programs that give rise to risks reasonably likely to have a material adverse effect on us.

Attendance of Directors at 2016 Annual Meeting of Shareholders

While we do not have a formal policy requiring our directors to attend shareholder meetings, directors are invited and encouraged to attend all meetings of shareholders. All of our directors attended the 2016 Annual Meeting of Shareholders.

Code of Ethics

We have adopted a Code of Ethics for our principal executive officer, principal financial officer, principal accounting officer or controller, and directors. The Code of Ethics is available under the Investor Center of our website at www.internationalisotopes.com. We intend to disclose any changes in or waivers from the Code of Business Conduct and Ethics that are required to be disclosed by posting such information on our website.

PROPOSAL NO. 1: ELECTION OF DIRECTORS

Our Board currently consists of three directors. At the Annual Meeting, each director will be elected to serve until the next annual meeting and until his or her successor is elected and qualified. Information regarding the business experience of each nominee to the Board is provided below. There are no family relationships among our executive officers and directors.

If you are a record holder and you sign your proxy card, but do not give instructions with respect to the voting of directors, your share will be voted “FOR” the three director nominees recommended by the Board. If you wish to give specific instructions with respect to the voting of directors, you may do so by indicating your instructions on your proxy card.

The Board expects that all of the director nominees will be available to serve as directors, and each of the director nominees has consented to being named in this proxy statement. In the event that any director nominee should become unavailable, however, the proxy holders, Steve T. Laflin and Ralph M. Richart, will vote for a director nominee or nominees designated by the Board, unless the Board chooses to reduce the number of directors serving on the Board.

Director Nominees

Ralph M. Richart, age 83, has served as a director since January 2002, and was elected by the Board to serve as Chairman of the Board in April 2002. Mr. Richart is professor emeritus in the Department of Pathology at Columbia University College of Physicians and Surgeons, where he was employed from 1963 to 2006. Mr. Richart has previously served on the board of directors of several public companies and corporate medical advisory boards. From 1972 to 2006, he served as Chief Executive Officer of several privately held companies in the fields of medicine and electronics. He has also consulted on clinical trials that resulted in FDA product approval, and he has served as an advisor to medical device and pharmaceutical companies as well as the Food and Drug Administration. Mr. Richart’s experience serving on a number of public company boards provides us with a unique perspective and insight into our operations, strategic goals, and challenges. In addition, Mr. Richart is our longest serving non-employee director and has extensive knowledge of our company and its operations.

Christopher Grosso, age 49, has served as a director since April 2002. Mr. Grosso has been a partner of Kershner Grosso, Inc., a New York based money management firm, since 1998. From 1989 to 1998, Mr. Grosso was a Senior Research Analyst and Portfolio Manager with Kershner Grosso. He currently leads the firm’s investment research, stock selection and trading activities. Prior to joining Kershner Grosso, Mr. Grosso was with Howe and Rusling Investment Management and Chase Manhattan Bank. Mr. Grosso received a B.S. in Business Administration from Skidmore College. Mr. Grosso’s significant financial expertise, including extensive experience with capital markets, investment banking and venture capital transactions, provides invaluable expertise to our Board in matters regarding our capital requirements and strategic direction.

Steve T. Laflin, age 60, has served as a director since June 2001. Since August 2001, Mr. Laflin has also served as our President and Chief Executive Officer. From 1996 to 2001, he served as President and General Manager of International Isotopes Idaho Inc., one of our subsidiaries. Mr. Laflin received a B.S. degree in Physics from Idaho State University and has been employed in various senior engineering and management positions in the nuclear industry since 1992. In addition to his institutional knowledge from his long tenure of service to us and his position as an executive officer, Mr. Laflin’s significant engineering and management background in the nuclear industry is invaluable to the Board.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR”
THE ELECTION OF EACH OF THE NOMINEES TO THE BOARD OF DIRECTORS.**

PROPOSAL NO. 2: RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Eide Bailly LLP (“Eide Bailly”) has been appointed by the Audit Committee to serve as our independent registered public accounting firm for the fiscal year ending December 31, 2017. Eide Bailly has served as our independent registered public accounting firm since September 1, 2013. Representatives of Eide Bailly are expected to attend the Annual Meeting via teleconference, where they will be available to respond to appropriate questions and, if they desire, to make a statement.

Although shareholder approval is not required, we desire to obtain from our shareholders an indication of their approval or disapproval of the Audit Committee’s action in appointing Eide Bailly as our independent registered public accounting firm of our company for 2017. If our shareholders do not ratify and approve this appointment, the Audit Committee will consider whether it should select other independent auditors.

Independent Public Accountant Fees

Fees billed by Eide Bailly in fiscal years 2015 and 2016 were as follows:

Services Rendered	2015	2016
Audit Fees ⁽¹⁾	\$111,965	\$84,750
Audit-Related Fees	—	—
Tax Fees	—	—
All Other Fees	—	—
Total	\$111,965	\$84,750

(1) For professional services for auditing our annual financial statements and reviewing the financial statements included in our other periodic reports filed with the SEC.

Pre-Approval Policies and Procedures

The Audit Committee is required to pre-approve all audit and non-audit services provided by our independent registered public accounting firm. The Audit Committee approved the engagement of Eide Bailly LLP to provide audit services prior to their engagement and approved all of the services and fees of our independent registered public accounting firm for 2015 and 2016.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE
RATIFICATION OF EIDE BAILLY LLP AS OUR INDEPENDENT REGISTERED PUBLIC
ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2017.**

AUDIT COMMITTEE REPORT

The Audit Committee has reviewed and discussed our audited financial statements for the fiscal year ended December 31, 2016 with our management and Eide Bailly LLP, our independent registered public accounting firm. Management is responsible for the preparation, presentation and integrity of the financial statements, accounting and financial reporting principles and internal control over financial reporting. Eide Bailly LLP is responsible for performing an independent audit of the financial statements in accordance with generally accepted auditing standards and for expressing opinions on the conformity of the financial statements with accounting principles generally accepted in the United States.

The Audit Committee has discussed with Eide Bailly LLP the matters required to be discussed by PCAOB AS Section 1301, *Communications with Audit Committees*, and related regulations, and has received the written disclosures and the letter from Eide Bailly LLP regarding its independence as required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the Audit Committee concerning independence. The Audit Committee has discussed with Eide Bailly LLP their independence.

Based on the review and discussions referred to above, the Audit Committee recommended to the Board that the audited financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2016 for filing with the SEC.

Audit Committee Report Submitted by:

Christopher Grosso, Chairman
Ralph M. Richart

**PROPOSAL NO. 3: ADVISORY VOTE TO APPROVE THE COMPENSATION
OF OUR NAMED EXECUTIVE OFFICERS**

Pursuant to Section 14A of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), we are asking our shareholders to vote to approve, on a nonbinding, advisory basis, the compensation of our named executive officers, commonly referred to as the “say-on-pay” vote. In accordance with the Exchange Act requirements, we are providing our shareholders with an opportunity to express their views on our named executive officers’ compensation. Although this advisory vote is nonbinding, our Board and Compensation Committee will review and consider the voting results when making future decisions regarding our named executive officer compensation and related executive compensation programs. Our current policy is to provide shareholders with an opportunity to approve the compensation of our named executive officers each year at the annual meeting of shareholders until the next required shareholder vote on the frequency of such votes.

At our annual meeting of shareholders in July 2016, we held our annual vote on an advisory resolution to approve the compensation of our named executive officers. The compensation of our named executive officers reported in our 2016 proxy statement was approved by approximately 99% of the votes cast at the 2016 Annual Meeting of Shareholders. Our Board and the Compensation Committee believe this affirms our shareholders’ support of our approach to executive compensation, and therefore, the Board and the Compensation Committee did not change their approach to executive compensation in 2016. The Board and the Compensation Committee will continue to consider the outcome of our say-on-pay votes when making future compensation decisions for our named executive officers.

We encourage shareholders to read the “Compensation of Directors and Executive Officers” section in this proxy statement, including the compensation tables and the related narrative disclosure, which describes the structure and amounts of the compensation of our named executive officers in fiscal year 2016. The compensation of our named executive officers is designed to enable us to attract and retain talented and experienced executives to lead us successfully in a competitive environment. The Compensation Committee and our Board believe that our executive compensation strikes the appropriate balance between utilizing responsible, measured pay practices and effectively incentivizing our named executive officers to dedicate themselves fully to value creation for our shareholders.

Accordingly, we ask our shareholders to vote “FOR” the following resolution at the Annual Meeting:

“RESOLVED, that the stockholders approve, on an advisory basis, the compensation of our named executive officers, as disclosed pursuant to Item 402 of Regulation S-K, including the compensation tables and any other related disclosure in this proxy statement.”

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE ADVISORY VOTE
TO APPROVE THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS.**

MANAGEMENT

The following table sets forth certain information regarding our executive officers who are responsible for overseeing the management of our business and one key employee as of May 1, 2017:

Names	Age	Positions with the Company
Executive Officers:		
Steve T. Laflin	60	Director, President and Chief Executive Officer
Laurie A. McKenzie-Carter	60	Chief Financial Officer and Secretary
Key Employee:		
John Miller	52	Radiation Safety and Regulatory Manager

Please refer to the biographical information for Steve T. Laflin set forth on page 9 of this proxy statement.

Laurie A. McKenzie-Carter has served as our Chief Financial Officer since November 2007. Ms. McKenzie-Carter joined us in August 2007 as our Chief Accounting Officer. In addition to overseeing the management and coordination of all of our financial reporting functions, Ms. McKenzie-Carter works closely with the Chief Executive Officer on strategic planning activities such as budgeting and forecasting and has been instrumental in managing compliance issues including developing and maintaining our system of internal controls. Ms. McKenzie-Carter's professional experience includes over twenty years of public and private accounting work and she is our key employee for SEC reporting and works closely with legal and audit counsel to assure accurate and timely filings. Ms. McKenzie-Carter holds a bachelor's degree in Political Science from the University of California, Davis, and is a Certified Public Accountant licensed in the states of Idaho and New Mexico.

John Miller has served as our Radiation Safety and Regulatory Manager since 2001. In addition to overseeing our radiation and safety programs, Mr. Miller is the lead employee for regulatory issues and licensing. Considering the extensive requirements for regulatory compliance, licensing, and permits, Mr. Miller plays an especially important role for our business. Mr. Miller has over 25 years of nuclear physics, safety, and licensing experience and has been instrumental in preparation and approval of our Nuclear Regulatory Commission (NRC) license for operations in Idaho and more than 28 subsequent amendments to that license. Mr. Miller was also instrumental in our successful completion of NRC licensing for our proposed uranium de-conversion and fluorine extraction processing facility in New Mexico. Mr. Miller has a BS in Physics, an MS in Environmental Engineering, and is a Certified Health Physicist.

COMPENSATION OF DIRECTORS AND EXECUTIVE OFFICERS

2016 Summary Compensation Table

The following table provides information concerning the compensation of our named executive officers for the fiscal years ended December 31, 2015 and 2016.

Name and Principal Position	Year	Salary (\$)	Bonus Awards	Stock Awards (\$)(1)	All Other Compensation (2)	Total (\$)
Steve T. Laflin President and CEO	2016	\$ 219,042	\$ 25,000	\$ 15,107	\$ 113,786	\$ 372,935
	2015	\$ 215,010	\$ 20,000	\$ 14,000	\$ 112,924	\$ 361,934
Laurie McKenzie-Carter Chief Financial Officer	2016	\$ 113,736	\$ 11,571	\$ —	\$ 523	\$ 125,830
	2015	\$ 107,667	\$ 4,000	\$ —	\$ 315	\$ 111,982

- (1) The amounts included under the “Stock Awards” column reflect aggregate grant date fair value of the stock awards granted in each respective fiscal year, computed in accordance with FASB ASC Topic 718, excluding the effect of any estimated forfeitures. Assumptions used in the calculations of these amounts are included in Note 9 to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2016.
- (2) Consists of a monthly housing allowance of \$6,000 per month plus related tax gross-up payments for Mr. Laflin, and life insurance premiums paid by the Company for both Mr. Laflin and Ms. McKenzie-Carter.

Narrative Disclosure to Summary Compensation Table

Steve Laflin Employment Agreement. Effective February 2012, we entered into an Amended and Restated Employment Agreement, as further amended by that certain Modification #1 to the Amended and Restated Employment Agreement, dated as of October 12, 2016 (collectively, the “Employment Agreement”) with Mr. Laflin to serve as our President and Chief Executive Officer at a base salary of \$200,000 with an annual \$5,000 increase to his base salary, subject to further adjustment annually by the Board. Mr. Laflin may also receive an annual bonus at the end of each year, at the discretion of the Board. Upon each anniversary of the Employment Agreement, Mr. Laflin is entitled to receive \$28,000 of fully vested shares of our common stock issued pursuant to our equity compensation plans, calculated based on the average closing price of our common stock for the 20 trading days prior to the date of grant; provided, however, that if the average closing price of our common stock for the 20 trading days prior to the date of grant is below \$0.05 per share, then the number of shares of common stock to be issued shall be calculated based on a price of \$0.05 per share. In addition, pursuant to the Employment Agreement, Mr. Laflin will receive a monthly housing allowance for \$6,000 plus additional tax gross up payments for the monthly housing allowance. Mr. Laflin is also subject to confidentiality, noncompete and nondisparagement provisions under the Employment Agreement. The term of the Employment Agreement continues until February 28, 2022.

Mr. Laflin is also entitled to certain payments upon the occurrence of certain events under the Employment Agreement. If we terminate Mr. Laflin without cause, or if we were to be dissolved or sold, or if we were to become a private company whose shares are no longer traded on a public exchange, the Board would have the power to terminate Mr. Laflin's employment and Mr. Laflin would be entitled to receive salary and benefits under his employment agreement through the date of termination and for an additional 12 months thereafter. In the event that Mr. Laflin is terminated for cause or if Mr. Laflin terminates the Employment Agreement, he would be entitled to receive any salary and benefits that have accrued through the termination date.

2016 Equity Grants. As described above, pursuant to his Employment Agreement, Mr. Laflin is entitled to a stock award each year equal to \$28,000 of shares of our common stock, subject to certain stock price limitations. In connection therewith, Mr. Laflin was granted a fully vested stock award of 280,000 shares of common stock in February 2016, calculated based on a stock price of \$0.10 per share. We withheld 112,140 shares to satisfy Mr. Laflin's tax obligations in connection with this issuance. The net shares issued on February 29, 2016 totaled 167,860 shares.

2016 Outstanding Equity Awards at Fiscal Year-End Table

The following table provides information regarding the number and estimated value of outstanding stock awards held by each of our named executive officers as of December 31, 2016.

Name	Grant Date	Option Awards			
		Number of Securities Underlying Unexercised Options (#)		Option Exercise Price (\$)	Option Expiration Date
		Exercisable	Unexercisable		
Steve T. Laflin	5/4/2009 ⁽¹⁾	3,000,000	—	\$0.035	5/4/2019
	10/27/2014 ⁽⁴⁾	4,000,000	—	\$0.035	10/27/2024
Laurie McKenzie-Carter	10/31/2007 ⁽²⁾	500,000	—	\$0.035	10/31/2017
	5/4/2009 ⁽³⁾	500,000	—	\$0.035	5/4/2019
	10/27/2014 ⁽⁴⁾	1,250,000	—	\$0.035	10/27/2024

(1) The option vested and became exercisable in four equal annual installments beginning on May 4, 2010.

(2) The option vested and became exercisable in five equal annual installments beginning on October 29, 2007.

(3) The option vested and became exercisable in four equal annual installments beginning on May 4, 2010.

(4) The option vested and became exercisable in three equal annual installments beginning on the grant date.

Termination and Change in Control Arrangements

Under our 2006 Equity Incentive Plan, to maintain all of the participants' rights in the event of (i) a merger or consolidation where we are not the surviving company; (ii) the dissolution of the Company, or (iii) a transfer of all or substantially all of our assets, any outstanding options will become fully exercisable and vested to the full extent of the original grant and the plan administrator can provide a cash-out for awards in connection with the transaction. As of December 31, 2016, all equity awards for Mr. Laflin and Ms. McKenzie-Carter were fully vested, and therefore, neither would be entitled to any cash-out for unvested equity.

As described above, Mr. Laflin is entitled to certain payments upon the occurrence of certain events under his Employment Agreement. If we terminated Mr. Laflin without cause, or if we were to be dissolved or sold, or if we were to become a private company whose shares were no longer traded on a public exchange, the Board would have the power to terminate Mr. Laflin's employment and Mr. Laflin would be entitled to receive salary and benefits under his employment agreement through the date of termination and for an additional 12 months thereafter, which would be a payment of approximately \$220,000 (excluding benefits) assuming any of such events occurred as of December 31, 2016. In the event that Mr. Laflin was terminated for cause or if Mr. Laflin terminated the Employment Agreement, he would only be entitled to receive any salary and benefits that had accrued through the termination date.

2016 Director Compensation

The following table sets forth information regarding compensation for each of our non-employee directors for the year ended December 31, 2016. We do not pay our non-employee directors retainer fees or other fees for service related to the Board or its committees. Equity awards may be granted to the members of the Board from time to time under our equity compensation plans. We also reimburse our non-employee directors for their costs associated with attending Board and committee meetings. In 2016, we did not reimburse Mr. Grosso or Mr. Richart for any expenses in connection with attending any of our Board and committee meetings. We did not grant any equity awards to our non-employee directors during 2016, therefore, our non-employee directors did not receive any director compensation in 2016, as shown in the table below. Steve Laflin does not receive any additional compensation for his service as a director. See "2016 Summary Compensation Table" above for the compensation earned in 2016 by Mr. Laflin for his service as our President and Chief Executive Officer.

Name	Fees Earned or Paid in Cash (\$)	Option Awards (\$)	All Other Compensation (\$)	Total (\$)
Ralph M. Richart	—	—	—	—
Christopher Grosso	—	—	—	—

As of December 31, 2016, the aggregate number of shares underlying outstanding stock option awards for each non-employee director was as follows: Mr. Richart - 4,500,000 shares; and Mr. Grosso - 4,500,000 shares.

Equity Compensation Plan Information

We currently maintain three equity compensation plans that provide for the issuance of our common stock to officers and other employees, directors and consultants, each of which have been approved by our shareholders: our 2002 Long Term Incentive Plan, our Employee Stock Purchase Plan and our 2015 Incentive Plan (which amended and restated our 2006 Equity Incentive Plan). Each of our equity compensation plans were previously approved by our shareholders. The following table sets forth information regarding outstanding options and shares reserved for future issuance under the foregoing plans as of December 31, 2016:

	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Equity compensation plans approved by shareholders	23,316,667	\$0.06	24,361,393 ⁽¹⁾
Equity compensation plans not approved by shareholders	—	—	—
Total	23,316,667	\$0.06	24,361,393 ⁽¹⁾

- (1) Includes 23,552,680 shares available for issuance under the 2015 Incentive Plan and 808,713 shares available for issuance under our Employee Stock Purchase Plan. Shares available for issuance under the 2015 Incentive Plan may be granted in the form of stock options, stock awards, restricted stock awards, restricted stock units, stock appreciation rights or any other form of equity compensation approved by the Board or the Compensation Committee.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information known to us regarding the beneficial ownership of our common stock as of April 26, 2017 by:

- each person who to our knowledge beneficially owned more than 5% of our common stock on that date;
- each of our named executive officers and directors; and
- all of our executive officers and directors as a group.

The number of shares beneficially owned by each entity or person is determined under the SEC rules, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the individual has the sole or shared voting power or investment power and also any shares that the individual has the right to acquire within 60 days of April 26, 2017 through the exercise of any stock option or other right. Except as otherwise indicated, each person named in the tables below has sole voting and investment power with respect to all shares of our common stock shown as beneficially owned by such person.

Unless otherwise indicated, the address for all persons named below is c/o International Isotopes Inc., 4137 Commerce Circle, Idaho Falls, Idaho 83401.

Name and address of Beneficial Owner	Amount and Nature of Beneficial Ownership	Percent of Class ⁽¹⁾
<i>Greater than 5% Shareholders:</i>		
Kennerman Associates Inc. ⁽²⁾ 480 Broadway, Suite 310 Saratoga Springs, New York 12866	195,304,771	43.3%
John M. McCormack ⁽³⁾ 1303 Campbell Road Houston, TX 77055	90,620,339	21.1%
William Nicholson 121 Post Oak Lane, #2105 Houston, TX 77055	24,183,637	5.9%
<i>Directors and Named Executive Officers:</i>		
Ralph M. Richart ⁽⁴⁾	103,074,155	23.7%
Christopher Grosso ⁽⁵⁾⁽⁷⁾	36,287,322	8.7%
Steve T. Laflin ⁽⁶⁾	11,846,311	2.9%
Laurie McKenzie-Carter ⁽⁸⁾	2,285,443	*
All Directors and Executive Officers as a Group (4 persons)	153,993,231	33.9%

* Less than 1%.

(1) Percentage beneficially owned below is based on 406,730,902 shares of our common stock outstanding on April 26, 2017.

(2) Based on a Schedule 13G/A filed with the SEC on May 1, 2017, for which Kennerman Associates, Inc. has shared dispositive power and includes shares of various investment advisory clients and shares held by Ralph M. Richart and Christopher Grosso, a principal of Kennerman Associates, Inc.

(3) Includes (i) 58,734,166 shares beneficially owned by trusts for the benefit of Mr. McCormack's family members, (ii) 7,000,000 shares issuable upon conversion of the Company's Series C Convertible Redeemable Preferred Stock, and (iii) warrants to purchase 16,000,000 shares of our common stock that is currently exercisable.

(4) Includes (i) 4,500,000 shares subject to stock options exercisable within 60 days of April 26, 2017, (ii) 7,040,000 shares issuable upon conversion of the Company's Series C Convertible Redeemable Preferred Stock, (iii) warrants to purchase 16,020,000 shares of our common stock which are currently exercisable and (iv) 1,374,866 shares held in a family trust.

(5) Includes (i) 4,500,000 shares subject to vested stock options exercisable within 60 days April 26, 2017, (ii) warrants to purchase 2,520,000 shares of our common stock which are currently exercisable, (iii) 5,040,000 shares issuable upon conversion of the Company's Series C Convertible Redeemable Preferred Stock, and (iv) 3,230,834 shares beneficially held by family members. Excludes 159,017,449 shares of common stock owned by various investment advisory clients of Kennerman Associates, Inc. d/b/a Kershner Grosso & Co.

(6) Includes 6,000,000 shares subject to stock options exercisable within 60 days of April 26, 2017.

(7) Mr. Grosso and Mr. Richart are members of a group pursuant to Rule 13d-3 of the Securities Exchange Act of 1934, as amended, because Mr. Grosso has investment power of the shares owned by Mr. Richart. The beneficial ownership number and percentage set forth in the table above for Mr. Grosso excludes shares beneficially owned by Mr. Richart. Mr. Grosso disclaims beneficial ownership of shares owned by Mr. Richart.

(8) Includes 1,750,000 shares subject to stock options exercisable within 60 days of April 26, 2017.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our officers and directors and persons who own more than 10% of a registered class of our equity securities to file reports of ownership and changes in ownership with the SEC. To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations from certain of our officers and directors that no other reports were required, we believe that all required reports of our officers, directors and greater than ten percent stockholders under Section 16(a) were timely filed during the year ended December 31, 2016, except for:

- One late Form 4 for Steve Laflin related to a stock award granted to Mr. Laflin in accordance with his employment agreement in February 2016, filed on March 23, 2016; and
- One late Form 4 for Laurie McKenzie-Carter related to the cashless exercise of stock options, filed on May 31, 2016.

OTHER MATTERS

Related Person Transactions

In September 2016, the Company borrowed an aggregate of \$360,000 from Mr. Richart, our Chairman of the Board of Directors and Mr. Grosso, one of our directors, under the terms of a promissory note. The \$360,000 promissory note bears interest at 6%, which is payable upon maturity of the note on March 31, 2017, and was secured by all unencumbered assets of the Company. Per the terms of the note, at any time, the lenders may settle any or all of the principal and accrued interest with shares of the Company's common stock, or other securities of the Company, based on the average closing price of the Company's common stock over a 20-day period. In February 2017, all principal plus accrued interest under this promissory note was converted into shares of our Series C Convertible Redeemable Preferred Stock (the "Series C Preferred Stock") and warrants that we offered through a private placement transaction, as described below.

In February 2017, the Company completed a private placement transaction with certain investors, including Mr. Richart and Mr. Grosso, for the sale of an aggregate of 3,433 shares of our Series C Preferred Stock and Class M warrants to purchase an aggregate of 17,165,000 shares of our common stock, for total gross proceeds of approximately \$3.4 million (the "Series C Private Placement"). The Series C Preferred Stock accrues dividends at a rate of 6% per annum, payable annually on February 17 of each year, commencing on February 17, 2018. The Series C Preferred Stock are convertible at the option of the investors at any time into shares of our common stock at an initial conversion price equal to \$0.10 per share, subject to certain adjustments. At any time after February 17, 2019, if the volume-weighted average closing price of our common stock over a period of 90 consecutive trading days is greater than \$0.25 per share, we may redeem all or any portion of the outstanding Series C Preferred Stock at the original purchase price per share plus any accrued and unpaid dividends, payable in shares of common stock. All outstanding shares of Series C Preferred Stock will be redeemed by the Company on February 17, 2022 at the original purchase price per share, payable in cash or shares of common stock, at the option of the holder. The Class M Warrants are immediately exercisable at an exercise price of \$0.12 per share, subject to adjustment as set forth in the warrant, and have a term of five years. Mr. Richart and Mr. Grosso participated in the Series C Private Placement by exchanging outstanding the principal plus accrued interest on a promissory note (as described above), and purchasing additional shares of Series C Preferred Stock in cash. Mr. Richart purchased an aggregate of 704 shares of Series C Preferred Stock and Class M warrants to purchase an aggregate of 3,520,000 shares of common stock in the Series C Private Placement for aggregate consideration of \$704,000. Mr. Grosso and his family members purchased an aggregate of 704 shares of Series C Preferred Stock and Class M warrants to purchase an aggregate of 3,520,000 shares of common stock in the Series C Private Placement for aggregate consideration of \$704,000.

Policy on Transactions with Related Persons

The full Board reviews and approves any business transactions in which related persons may have an interest. In determining whether to approve or ratify any such transaction, the Board considers, in addition to other factors it deems appropriate, whether the transaction is on terms no less favorable to us than those involving unrelated parties. All transactions disclosed above were reviewed and approved in accordance with the policy set forth above.

Householding

As permitted by the SEC's proxy statement rules, we will deliver only one set of proxy materials to multiple shareholders sharing the same address, unless we have received contrary instructions from one or more of the shareholders. We will, upon written or oral request, promptly deliver a separate copy of the proxy materials to a shareholder at a shared address to which a single copy of the proxy materials was delivered and will include instructions as to how the shareholder can notify us that the shareholder wishes to receive a separate copy of the proxy holders. Registered shareholders wishing to receive separate proxy materials in the future or registered shareholders sharing an address wishing to receive a single copy of the proxy materials in the future may contact our transfer agent at Computershare Trust Company, N.A., 250 Royall Street, Canton, MA 02021, Telephone: (800) 962-4284.

Other Matters

We do not intend to bring before the Annual Meeting any matters other than the proposals specifically described above, and we know of no matters other than those to come before the Annual Meeting. If any other matters properly come before the Annual Meeting or any postponement or adjournment thereof, it is the intention of the persons named in the accompanying proxy to vote such proxy in accordance with the recommendation of our management on such matters, including any matters dealing with the conduct of the Annual Meeting.

BY ORDER OF THE BOARD OF DIRECTORS,

/s/ Steve T. Laflin

Steve T. Laflin

President and Chief Executive Officer

Idaho Falls, Idaho
June 6, 2017

▼ IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼



International Isotopes Inc.

Proxy — International Isotopes Inc.

4137 Commerce Circle, Idaho Falls, ID 83401

Annual Meeting of Shareholders of International Isotopes Inc. to be held on July 11, 2017

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED IN THE MANNER DIRECTED HEREON BY THE UNDERSIGNED SHAREHOLDER(S). IF NO CHOICE IS SPECIFIED, THIS PROXY WILL BE VOTED FOR THE ELECTION OF EACH OF THE NOMINEES LISTED IN THE ACCOMPANYING PROXY STATEMENT; FOR THE RATIFICATION OF OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM AND FOR THE APPROVAL OF THE ADVISORY VOTE TO APPROVE THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS. IN THEIR DISCRETION, THE PROXIES ARE AUTHORIZED TO VOTE UPON SUCH OTHER MATTERS AS MAY PROPERLY COME BEFORE THE MEETING.

The undersigned shareholder(s) hereby appoint(s) Steve T. Laffin and Ralph M. Richart, and either of them, Proxies with full power of substitution in each and hereby authorize(s) them to represent and vote, as designated above, all the shares of Common Stock held of record by the undersigned on May 22, 2017, at the 2017 Annual Meeting of Shareholders of International Isotopes Inc., to be held at 2:00 p.m. Eastern time on July 11, 2017, at the offices of Perkins Coie LLP located at 30 Rockefeller Plaza, 22nd Floor, New York, New York 10112, or any adjournments or postponements thereof. The proxies are authorized to vote upon the proposals on the reverse side and, in their discretion, upon all other matters that may properly come before the 2017 Annual Meeting of Shareholders.

(Continued and to be signed on the reverse side.)