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

SCHEDULE 13G

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

Applied Therapeutics, Inc. (Name of Issuer)

Common Stock, par value \$0.0001 (Title of Class of Securities)

> 03828A101 (CUSIP Number)

June 30, 2022

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

[X] Rule 13d-1(b)
[] Rule 13d-1(c)
[] Rule 13d-1(d)

*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 the disclosures provided in a prior cover page.

The information required in 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).

Franklin Resources, Inc.

- 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP
 - (a)
 - (b) X
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

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Delaware
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- NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:
- 5. SOLE VOTING POWER

(See Item 4)

6. SHARED VOTING POWER

(See Item 4)

7. SOLE DISPOSITIVE POWER

(See Item 4)

8. SHARED DISPOSITIVE POWER

(See Item 4)

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,775,484

- 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES []
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

10.3%

12. TYPE OF REPORTING PERSON

HC, CO (See Item 4)

Charles B. Johnson

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

- (b) X
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

USA

- NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:
- 5. SOLE VOTING POWER

(See Item 4)

6. SHARED VOTING POWER

(See Item 4)

7. SOLE DISPOSITIVE POWER

(See Item 4)

8. SHARED DISPOSITIVE POWER

(See Item 4)

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,775,484

- 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES []
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

10.3%

12. TYPE OF REPORTING PERSON

HC, IN (See Item 4)

Rupert H. Johnson, Jr.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

- (b) X
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION
 - USA
- NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:
- 5. SOLE VOTING POWER

(See Item 4)

6. SHARED VOTING POWER

(See Item 4)

7. SOLE DISPOSITIVE POWER

(See Item 4)

8. SHARED DISPOSITIVE POWER

(See Item 4)

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,775,484

- 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES []
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

10.3%

12. TYPE OF REPORTING PERSON

HC, IN (See Item 4)

Franklin Advisers, Inc.

- 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP
 - (a)
 - (b) X
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

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California
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- NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:
- 5. SOLE VOTING POWER

4,775,484

6. SHARED VOTING POWER

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0
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7. SOLE DISPOSITIVE POWER

4,775,484

8. SHARED DISPOSITIVE POWER

0

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,775,484

- 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES []
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

10.3%

12. TYPE OF REPORTING PERSON

IA, CO (See Item 4)

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Item 1.
    Name of Issuer
(a)
     Applied Therapeutics, Inc.
    Address of Issuer's Principal Executive Offices
(b)
      545 Fifth Avenue, Suite 1400
      New York, NY 10017
Item 2.
(a)
     Name of Person Filing
      (i): Franklin Resources, Inc.
     (ii): Charles B. Johnson
     (iii): Rupert H. Johnson, Jr.
     (iv): Franklin Advisers, Inc.
     Address of Principal Business Office or, if none, Residence
(b)
     (i), (ii), (iii), and (iv):
           One Franklin Parkway
           San Mateo, CA 94403-1906
     Citizenship
(C)
     (i):
             Delaware
     (ii) and (iii): USA
     (iv): California
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Title of Class of Securities

CUSIP Number

03828A101

Common Stock, par value \$0.0001

(d)

(e)

13G

- - a) [] bloker of dealer registered under section is of the Act (is 0.5.c. 766)
 - (b) [] Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
 - (c) [] Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
 - (d) [] Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C 80a-8).
 - (e) [X] An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);

 - (h) [] A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
 - (i) [] A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
 - (j) [] A non-U.S. institution in accordance with \$240.13d-1(b)(ii)(J);
 - (k) [] Group, in accordance with §240.13d 1(b)(1)(ii)(K).

If filing as a non-U.S. institution in accordance with 240.13d-1(b)(1)(ii)(J). please specify the type of institution:

Item 4. Ownership

The securities reported herein are beneficially owned by one or more open or closed end investment companies or other managed accounts that are investment management clients of investment managers that are direct and indirect subsidiaries (each, an "Investment Management Subsidiary" and, collectively, the "Investment Management Subsidiaries") of Franklin Resources Inc. ("FRI"), including the Investment Management Subsidiaries listed in this Item 4. When an investment management contract (including a sub advisory agreement) delegates to an Investment Management Subsidiary investment discretion or voting power over the securities held in the investment advisory accounts that are subject to that agreement, FRI treats the Investment Management Subsidiary as having sole investment discretion or voting authority, as the case may be, unless the agreement specifies otherwise. Accordingly, each Investment Management Subsidiary reports on Schedule 13G that it has sole investment discretion and voting authority over the securities covered by any such investment management agreement, unless otherwise noted in this Item 4. As a result, for purposes of Rule 13d-3 under the Act, the Investment Management Subsidiaries listed in this Item 4 may be deemed to be the beneficial owners of the securities reported in this Schedule 13G.

Beneficial ownership by Investment Management Subsidiaries and other FRI affiliates is being reported in conformity with the guidelines articulated by the SEC staff in Release No. 34-39538 (January 12, 1998) (the "1998 Release") relating to organizations, such as FRI, where related entities exercise voting and investment powers over the securities being reported independently from each other. The voting and investment powers held by each of FRI's affiliates whose ownership of securities is disaggregated from that of FRI in accordance with the 1998 Release ("FRI Disaggregated Affiliates") are exercised independently from FRI and from all other Investment Management Subsidiaries (FRI, its affiliates and the Investment Management Subsidiaries other than FRI Disaggregated Affiliates are collectively, "FRI Aggregated Affiliates"). Furthermore, internal policies and procedures of, on the one hand, FRI Disaggregated Affiliates, and, on the other hand, FRI establish informational barriers that prevent the flow among, on the one hand, FRI Disaggregated Affiliates (including preventing the flow between such entities), and, on the other hand, the FRI Aggregated Affiliates of information that relates to the voting and investment powers over the securities owned by their respective investment management clients. Consequently, FRI Disaggregated Affiliates report the securities over which they hold investment and voting power separately from the FRI Aggregated Affiliates for purposes of Section 13 of the Act.

Charles B. Johnson and Rupert H. Johnson, Jr. (the "Principal Shareholders") each own in excess of 10% of the outstanding common stock of FRI and are the principal stockholders of FRI. FRI and the Principal Shareholders may be deemed to be, for purposes of Rule 13d-3 under the Act, the beneficial owners of securities held by persons and entities for whom or for which FRI subsidiaries provide investment management services. The number of shares that may be deemed to be beneficially owned and the percentage of the class of which such shares are a part are reported in Items 9 and 11 of the cover pages for FRI and each of the Principal Shareholders. FRI, the Principal Shareholders and each of the Investment Management Subsidiaries disclaim any pecuniary interest in any of such securities. In addition, the filing of this Schedule 13G on behalf of the Principal Shareholders, FRI and the FRI Aggregated Affiliates, as applicable, should not be construed as an admission that any of them is, and each of them disclaims that it is, the beneficial owner, as defined in Rule 13d-3, of any of the securities reported in this Schedule 13G.

FRI, the Principal Shareholders, and each of the Investment Management Subsidiaries believe that they are not a "group" within the meaning of Rule 13d-5 under the Act and that they are not otherwise required to attribute to each other the beneficial ownership of the securities held by any of them or by any persons or entities for whom or for which the Investment Management Subsidiaries provide investment management services.

(a) Amount beneficially owned:

4,775,484

(b) Percent of class:

10.3%

- (c) Number of shares as to which the person has:
 - (i) Sole power to vote or to direct the vote
 Franklin Resources, Inc.:
 Charles B. Johnson:
 Rupert H. Johnson, Jr.:
 Franklin Advisers, Inc.:
 4,775,484
 - (ii) Shared power to vote or to direct the vote
 - 0
 - (iii) Sole power to dispose or to direct the disposition of

Franklin Resources, Inc.:	0
Charles B. Johnson:	0
Rupert H. Johnson, Jr.:	0
Franklin Advisers, Inc.:	4,775,484

Item 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [].

Item 6. Ownership of More than Five Percent on Behalf of Another Person

The clients of the Investment Management Subsidiaries, including investment companies registered under the Investment Company Act of 1940 and other managed accounts, have the right to receive or power to direct the receipt of dividends from, and the proceeds from the sale of, the securities reported herein.

Franklin Biotechnology Discovery Fund, a sub-fund of Franklin Templeton Investment Funds, a Luxembourg registered SICAV has an interest in 3,199,830 shares, or 6.9%, of the class of securities reported herein.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company

See Attached Exhibit C

Item 8. Identification and Classification of Members of the Group

Not Applicable

Item 9. Notice of Dissolution of Group

Not Applicable

Item 10. Certification

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

This report shall not be construed as an admission by the persons filing the report that they are the beneficial owner of any securities covered by this report.

Exhibits.

Exhibit A Joint Filing Agreement Exhibit B Limited Powers of Attorney for Section 13 Reporting Obligations Exhibit C Item 7 Identification and Classification of Subsidiaries

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: July 8, 2022

Franklin Resources, Inc.

Charles B. Johnson

Rupert H. Johnson, Jr.

Franklin Templeton Investment Funds on behalf of Franklin Biotechnology Discovery Fund

By: /s/LORI A. WEBER

Lori A. Weber Assistant Secretary of Franklin Resources, Inc.

Attorney-in-Fact for Charles B. Johnson pursuant to Power of Attorney attached to this Schedule 13G

Attorney-in-Fact for Rupert H. Johnson, Jr. pursuant to Power of Attorney attached to this Schedule $13\mathrm{G}$

Attorney-in-Fact for Franklin Templeton Investment Funds pursuant to Power of Attorney attached to this Schedule 13G

Franklin Advisers, Inc.

 EXHIBIT A

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree to the joint filing with each other of the attached statement on Schedule 13G and to all amendments to such statement and that such statement and all amendments to such statement are made on behalf of each of them.

IN WITNESS WHEREOF, the undersigned have executed this agreement on July 8, 2022.

Franklin Resources, Inc.

Charles B. Johnson

Rupert H. Johnson, Jr.

Franklin Templeton Investment Funds on behalf of Franklin Biotechnology Discovery Fund

By: /s/LORI A. WEBER

Lori A. Weber Assistant Secretary of Franklin Resources, Inc.

Attorney-in-Fact for Charles B. Johnson pursuant to Power of Attorney attached to this Schedule 13G

Attorney-in-Fact for Rupert H. Johnson, Jr. pursuant to Power of Attorney attached to this Schedule $13\mathrm{G}$

Attorney-in-Fact for Franklin Templeton Investment Funds pursuant to Power of Attorney attached to this Schedule 13G

Franklin Advisers, Inc.

EXHIBIT B

LIMITED POWER OF ATTORNEY

FOR SECTION 13 AND 16 REPORTING OBLIGATIONS

Know all by these presents, that the undersigned hereby makes, constitutes and appoints each of Alison E. Baur, Steven J. Gray, Beth McAuley O'Malley, Thomas C. Merchant, Kimberly H. Novotny, Virginia E. Rosas, Navid J. Tofigh and Lori A. Weber each acting individually, as the undersigned's true and lawful attorney-in-fact, with full power and authority as hereinafter described on behalf of and in the name, place and stead of the undersigned to:

1. prepare, execute, acknowledge, deliver and file Forms ID, Schedules 13D and 13G, and Forms 3, 4 and 5 (including any amendments thereto and any related documentation) with the United States Securities and Exchange Commission and any national securities exchanges relating to Franklin Resources, Inc. ("FRI") and/or any registered closed-end company to which an affiliate of FRI is an investment adviser (each, a "Reporting Entity"), as considered necessary or advisable under Regulation S-T and Sections 13(d) and 16(a) of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder, as amended from time to time (the "Exchange Act"); and

2. seek or obtain, as the undersigned's representative and on the undersigned's behalf, information on transactions in the securities of any Reporting Entity from any person, including brokers, employee benefit plan administrators and trustees, and the undersigned hereby authorizes any such person to release any such information to the undersigned and approves and ratifies any such release of information; and

3. perform any and all other acts which in the discretion of such attorney-in-fact are necessary or desirable for and on behalf of the undersigned in connection with the foregoing. The undersigned acknowledges that:

1. this Limited Power of Attorney authorizes, but does not require, each such attorney-in-fact to act in their discretion on information provided to such attorney-in-fact without independent verification of such information;

2. any documents prepared and/or executed by any such attorney-in-fact on behalf of the undersigned pursuant to this Limited Power of Attorney will be in such form and will contain such information and disclosure as such attorney-in-fact, in his or her discretion, deems necessary or desirable;

3. none of FRI, any Reporting Entity nor any of such attorneys-in-fact assumes (i) any liability for the undersigned's responsibility to comply with the requirements of the Exchange Act, (ii) any liability of the undersigned for any failure to comply with such requirements, or (iii) any obligation or liability of the undersigned for profit disgorgement under Section 16(b) of the Exchange Act; and

4. this Limited Power of Attorney does not relieve the undersigned from responsibility for compliance with the undersigned's obligations under the Exchange Act, including without limitation, the reporting requirements under Section 16 of the Exchange Act.

The undersigned hereby gives and grants each of the foregoing attorneys-in-fact full power and authority to do and perform all and every act and thing whatsoever requisite, necessary or appropriate to be done in and about the foregoing matters as fully to all intents and purposes as the undersigned might or could do if present, hereby ratifying all that each such attorney-in-fact of, for and on behalf of the undersigned, shall lawfully do or cause to be done by virtue of this Limited Power of Attorney, and indemnifies each of the foregoing attorneys-in-fact against any loss of any nature whatsoever arising in connection therewith.

This Limited Power of Attorney shall remain in full force and effect until revoked by the undersigned in a signed writing delivered to each such attorney-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Limited Power of Attorney to be executed as of this 16th day of August, 2021.

<u>/s/CHARLES B. JOHNSON</u> Signature <u>Charles B. Johnson</u> Print Name

LIMITED POWER OF ATTORNEY

FOR SECTION 13 AND 16 REPORTING OBLIGATIONS

Know all by these presents, that the undersigned hereby makes, constitutes and appoints each of Alison E. Baur, Steven J. Gray, Beth McAuley O'Malley, Thomas C. Merchant, Kimberly H. Novotny, Virginia E. Rosas, Navid J. Tofigh and Lori A. Weber each acting individually, as the undersigned's true and lawful attorney-in-fact, with full power and authority as hereinafter described on behalf of and in the name, place and stead of the undersigned to:

1. prepare, execute, acknowledge, deliver and file Forms ID, Schedules 13D and 13G, and Forms 3, 4 and 5 (including any amendments thereto and any related documentation) with the United States Securities and Exchange Commission and any national securities exchanges relating to Franklin Resources, Inc. ("FRI") and/or any registered closed-end company to which an affiliate of FRI is an investment adviser (each, a "Reporting Entity"), as considered necessary or advisable under Regulation S-T and Sections 13(d) and 16(a) of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder, as amended from time to time (the "Exchange Act"); and

2. seek or obtain, as the undersigned's representative and on the undersigned's behalf, information on transactions in the securities of any Reporting Entity from any person, including brokers, employee benefit plan administrators and trustees, and the undersigned hereby authorizes any such person to release any such information to the undersigned and approves and ratifies any such release of information; and

3. perform any and all other acts which in the discretion of such attorney-in-fact are necessary or desirable for and on behalf of the undersigned in connection with the foregoing. The undersigned acknowledges that:

1. this Limited Power of Attorney authorizes, but does not require, each such attorney-in-fact to act in their discretion on information provided to such attorney-in-fact without independent verification of such information;

2. any documents prepared and/or executed by any such attorney-in-fact on behalf of the undersigned pursuant to this Limited Power of Attorney will be in such form and will contain such information and disclosure as such attorney-in-fact, in his or her discretion, deems necessary or desirable;

3. none of FRI, any Reporting Entity nor any of such attorneys-in-fact assumes (i) any liability for the undersigned's responsibility to comply with the requirements of the Exchange Act, (ii) any liability of the undersigned for any failure to comply with such requirements, or (iii) any obligation or liability of the undersigned for profit disgorgement under Section 16(b) of the Exchange Act; and

4. this Limited Power of Attorney does not relieve the undersigned from responsibility for compliance with the undersigned's obligations under the Exchange Act, including without limitation, the reporting requirements under Section 16 of the Exchange Act.

The undersigned hereby gives and grants each of the foregoing attorneys-in-fact full power and authority to do and perform all and every act and thing whatsoever requisite, necessary or appropriate to be done in and about the foregoing matters as fully to all intents and purposes as the undersigned might or could do if present, hereby ratifying all that each such attorney-in-fact of, for and on behalf of the undersigned, shall lawfully do or cause to be done by virtue of this Limited Power of Attorney, and indemnifies each of the foregoing attorneys-in-fact against any loss of any nature whatsoever arising in connection therewith.

This Limited Power of Attorney shall remain in full force and effect until revoked by the undersigned in a signed writing delivered to each such attorney-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Limited Power of Attorney to be executed as of this 16th day of August, 2021.

<u>/s/RUPERT H. JOHNSON, JR.</u> Signature <u>Rupert H. Johnson, Jr.</u> Print Name

LIMITED POWER OF ATTORNEY FOR SECTION 13 REPORTING OBLIGATIONS

Know all by these presents, that we Franklin Templeton Investment Funds (the "Issuer"). an entity organized and existing in the Grand Duchy of Luxembourg and having our registered office at 8A rue Albert Borschette, L-1246 Luxembourg, in the person of Gregory Johnson and Vijay Advani, Directors of the Issuer, hereby makes, constitutes and appoints each of Lori Weber and Kimberly Novotny, each acting individually as the undersigned's true and lawful attorney-in-fact, with full power and authority as hereinafter described on behalf of and in the name, place and stead of the undersigned to:

(1) prepare, execute, acknowledge, deliver and file Schedules 13D and 13G (including any amendments thereto or any related documentation) with the United States Securities and Exchange Commission, any national securities exchanges and Franklin Resources, Inc., a Delaware corporation (the "Reporting Entity"), as considered necessary or advisable under Section 13 of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder, as amended from time to time (the "Exchange Act"); and (2) perform any and all other acts which in the discretion of such attorney in fact are necessary or desirable for and on behalf of the undersigned in connection with the foregoing.

The undersigned acknowledges that:

(1) this Limited Power of Attorney authorizes, but does not require, each such attorney in fact to act in their discretion on information provided to such attorney in fact without independent verification of such information;

(2) any documents prepared and/or executed by either such attorney in fact on behalf of the undersigned pursuant to this Limited Power of Attorney will be in such form and will contain such information and disclosure as such attorney in fact, in his or her discretion, deems necessary or desirable;

(3) neither the Reporting Entity nor either of such attorneys in fact assumes (i) any liability for the undersigned's responsibility to comply with the requirements of the Exchange Act or (ii) any liability of the undersigned for any failure to comply with such requirements; and

(4) this Limited Power of Attorney does not relieve the undersigned from responsibility for compliance with the undersigned's obligations under the Exchange Act, including without limitation the reporting requirements under Section 13 of the Exchange Act.

The undersigned hereby gives and grants each of the foregoing attorneys-in-fact full power and authority to do and perform all and every act and thing whatsoever requisite, necessary or appropriate to be done in and about the foregoing matters as fully to all intents and purposes as the undersigned might or could do if present, hereby ratifying all that each such attorney in fact of, for and on behalf of the undersigned, shall lawfully do or cause to be done by virtue of this Limited Power of Attorney.

This Limited Power of Attorney shall remain in full force and effect until revoked by the undersigned in a signed writing delivered to each such attorney in fact.

IN WITNESS WHEREOF, the undersigned has caused this Limited Power of Attorney to be executed as of this 13th day of October, 2015.

For and on behalf of Franklin Templeton Investment Funds

<u>/s/Gregory Johnson</u> Director

> <u>/s/Vijay Advani</u> Director

Franklin Advisers, Inc.