UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

(Mark One)

☑ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2018
Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number **001-15771**

ABEONA THERAPEUTICS INC.

(Exact name of registrant as specified in its charter)

Delaware	**83-0221517**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer I.D. No.)

1330 Avenue of the Americas, 33rd Floor, New York, NY 10019
(Address of principal executive offices)

(646) 813-4705
(Registrant's telephone number, including area code)

3333 Lee Parkway, Suite 600, Dallas, TX 75219
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer" "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐ Accelerated filer ☑

Non-accelerated filer ☐ Smaller reporting company ☐
(Do not check if a smaller reporting company)

Emerging growth company ☐

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes ☐ No ☑

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

The number of shares outstanding of the registrant's common stock as of May 10, 2018 was 47,305,285 shares.

ABEONA THERAPEUTICS INC.

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PART I –FINANCIAL INFORMATION

This Quarterly Report on Form 10-Q (including the information incorporated by reference) contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and that involve risks and uncertainties. These statements and other risks described below as well as those discussed elsewhere in this Quarterly Report on Form 10-Q, documents incorporated by reference and other documents and reports that we file periodically with the Securities and Exchange Commission ("SEC") include, without limitation, statements relating to uncertainties associated with research and development activities, clinical trials, our ability to raise capital, future cash flow, the future success of our marketed products and products in development, our sales projections and the sales projections of our licensing partners, anticipated product launches and our commercialization strategies, the terms of future licensing arrangements, our ability to secure additional financing for our operations, our ability to establish new relationships and maintain current relationships, our expectation that we will continue to incur losses, our belief that we will expend substantial funds to conduct research and development programs, preclinical studies and clinical trials of potential products, our belief that we have a rich pipeline of products and product candidates, our ability to achieve profitability on a sustained basis or at all, our expected cash burn rate, our belief that emerging insights in genetics and advances in biotechnology, as well as new approaches and collaboration between researchers, industry, regulators and patient groups, provide significant opportunities to develop breakthrough treatments for rare diseases, and our belief that the data from the expansion cohort of our Phase 1/2 clinical trial in ABO-102 (AAV-SGSH) for MPS IIIA, together with the data generated in the program to date, will allow us to submit a BLA. These statements relate to future events or our future financial performance. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "plans," "could," "anticipates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of such terms or other comparable terminology. We intend the forward-looking statements to be covered by the safe harbor for forward-looking statements in these sections. The forward-looking information is based on various factors and was derived using numerous assumptions.

Forward-looking statements necessarily involve risks and uncertainties, and our actual results could differ materially from those anticipated in the forward-looking statements due to a number of factors. The forward-looking statements contained in this Quarterly Report on Form 10-Q represent our judgment only as of the date of this report. We caution readers not to place undue reliance on such statements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason, even if new information becomes available or other events occur in the future.

ITEM 1. FINANCIAL STATEMENTS

The response to this Item is submitted as a separate section of this report. See page 14.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

Abeona Therapeutics Inc. (together with our subsidiaries, "we," "our," "Abeona" or the "Company") is a Delaware corporation. We are a clinical-stage biopharmaceutical company developing cell and gene therapies for life-threatening rare genetic diseases. Our lead programs include EB-101 (gene-corrected skin grafts) for recessive dystrophic epidermolysis bullosa (RDEB), ABO-102 (AAV-SGSH), an adeno-associated virus (AAV) based gene therapy for Sanfilippo syndrome type A (MPS IIIA) and ABO-101 (AAV NAGLU), an AAV based gene therapy for Sanfilippo syndrome type B (MPS IIIB). We are also developing ABO-201 (AAV-CLN3) gene therapy for juvenile Batten disease (JNCL), ABO-202 (AAV-CLN1) for treatment of infantile Batten disease (INCL), EB-201 for epidermolysis bullosa (EB), ABO-301 (AAV-FANCC) for Fanconi anemia (FA) disorder and ABO-302 using a novel CRISPR/Cas9-based gene editing approach to gene therapy for rare blood diseases. In addition we are developing a proprietary vector platform, AIM™, for next generation product candidates. Our principal executive office is located at 1330 Avenue of the Americas, 33 rd Floor, New York, New York 10019. Our website address is *www.abeonatherapeutics.com*.

Recent Developments

On April 23, 2018, we announced that the FDA granted Regenerative Medicine Advanced Therapy (RMAT) designation to ABO-102, our AAV-mediated gene therapy for the treatment of Sanfilippo syndrome Type A (MPS IIIA).

On April 20, 2018, we announced that the European Medicines Agency (EMA) Committee for Orphan Medicinal Products has granted Orphan Drug designation (EMA/OD/013/18) for our gene therapy program ABO-202 for the treatment of subjects with neuronal ceroid lipofuscinosis, also known as Batten Disease, a fatal lysosomal storage disease that primarily affects the nervous system in children.

On March 29, 2018, F. Carsten Thiel Ph.D. was appointed by our Board of Directors as Chief Executive Officer. Timothy J. Miller, Ph.D. will remain President and assume the position of Chief Scientific Officer in charge of our clinical and preclinical research programs.

On March 15, 2018, we announced that the FDA has granted Rare Pediatric Disease Designation for the ABO-202 program (AAV-CLN1), our AAV-based gene therapy for the treatment of CLN1 disease (infantile and late infantile onset Batten disease).

On February 12, 2018, we announced that the FDA granted Orphan Drug Designation (ODD) to our ABO-202 program (AAV-CLN1), our AAV-based gene therapy for the treatment of infantile Batten disease.

ABO-202, developed with Steven Gray, Ph.D. and the support of The Saoirse Foundation, Taylor's Tale, Garrett the Grand Batten Fighter, Hayden's Batten Disease Foundation, and the Batten Disease Support and Research Association, is anticipated to enter clinical trials in 2018.

The preclinical data for ABO-202 were presented at the WORLDSymposium for Lysosomal Diseases held in San Diego, California from February 5-9, 2018. Key findings included:

- CLN1 mice recapitulate the major features of the human disease manifestations;
- A single intrathecal (IT) injection of self-complementary adeno-associated virus 9 (scAAV9) encoding the human CLN1 gene to CLN1 mice at 1 week and 1 month (pre-symptomatic) significantly increased their survival, improved behavior and reduced motor deficits;

- Higher IT doses further improved these observations, suggesting that methods increasing CNS exposure may be beneficial and provided some survival and behavioral benefit to symptomatic INCL mice; and
- A combination approach delivering ABO-202 by both intravenous and intrathecal routes of administration further increased survival efficacy 50% and improved potential treatment options for older animals with advanced disease manifestations.

On February 8, 2018, we announced updated clinical data from the ongoing Phase 1/2 trial for ABO-102 (AAV-SGSH), the Company's investigational gene therapy for the treatment of Sanfilippo syndrome Type A (MPS IIIA), a rare autosomal-recessive lysosomal storage disease. The results demonstrate robust and durable clinical effects achieved throughout various time points post-administration. To date, 10 patients have been dosed with a single intravenous injection of ABO-102. Results were reported during the WORLDSymposium.

In the trial, subjects received a single intravenous injection of ABO-102 to facilitate systemic delivery of a corrective copy of the gene associated with onset and progression of MPS IIIA. Subjects were evaluated at multiple time points post-injection for safety assessments and signals of biopotency and clinical activity.

On February 7, 2018, we reported preliminary 30-Day safety and biopotency signals from the first patient dosed in the Company's ongoing Phase 1/2 trial for ABO-101, a gene therapy treatment for patients with MPS IIIB (Sanfilippo syndrome Type B), enrolling at Nationwide Children's Hospital in Columbus, Ohio. The ABO-101 therapy involves a single intravenous injection of AAV gene therapy for subjects with MPS IIIB, a rare autosomal recessive disease causing neurocognitive decline, speech and mobility loss, and premature death. Abeona plans to enroll a total of three patients in Cohort 1 (2E13 vg/kg) before dose-escalating to the Cohort 2 dose (5E13 vg/kg).

The Phase 1/2 study is designed to evaluate safety and preliminary indications of efficacy of ABO-101 in subjects suffering from MPS IIIB. In the first patient treated in Cohort 1:

- ABO-101, at a systemic dose of 2E13 vg/kg, is well-tolerated, with no treatment related adverse events or serious adverse events (SAEs) through 30 days of follow up;
- Early biopotency signals include significant heparan sulfate (HS) reductions observed in cerebral spinal fluid (50%), urine (69%), plasma (60%) and urinary total glycosaminoglycan (GAG) (67%);
- 50% decline in CSF heparan sulfate from baseline supports previous AAV9 clinical observations that ABO-101 crossed the blood brain barrier after intravenous administration; and
- Normalized NAGLU enzyme activity observed represented by a greater than 300-fold increase over baseline at 30 days post administration.

Subjects in the Phase 1/2 trial receive a single, intravenous injection of ABO-101, which uses an AAV vector to introduce a corrective copy of the NAGLU gene associated with MPS IIIB disease. Subjects will be evaluated at multiple time points over the initial 30 days post-injection for safety assessments and initial signals of biopotency. Results in the first patient dosed with ABO-101 suggest strong CNS and broader systemic distribution, with the potential to reduce levels of glycosaminoglycans (GAGs) that represent the lysosomal storage pathology central to MPS IIIB disease progression.

On January 29, 2018, we announced that the FDA has granted the Regenerative Medicine Advanced Therapy (RMAT) designation to EB-101, the Company's gene-corrected autologous cell therapy product for patients with recessive dystrophic epidermolysis bullosa (RDEB).

Product Development Strategy

Abeona is focused on developing and delivering gene therapy products for severe and life-threatening rare diseases. A rare disease is one that affects fewer than 200,000 people in the U.S. There are nearly 7,000 rare diseases, which may involve chronic illness, disability, and often, premature death. More than 25 million Americans and 30 million Europeans have a severe, life-threating disease. While rare diseases can affect any age group, about 50% of people affected are children (15 million) and rare diseases account for 35% of deaths in the first year of life. These rare diseases are often poorly diagnosed, very complex, and have no treatment or not very effective treatment. Over 95% of rare diseases do not have a single FDA or EMA approved drug treatment, however, most rare diseases are often caused by changes in genes. Approximately 80% of rare diseases are genetic in origin and can present at any stage of life. We believe emerging insights in genetics and advances in biotechnology, as well as new approaches and collaboration between researchers, industry, regulators and patient groups, provide significant opportunities to develop breakthrough treatments for rare diseases.

Developing Next Generation Gene Therapy

Gene therapy is the use of DNA as a potential therapy to treat a disease. In many disorders, particularly genetic diseases caused by a single genetic defect, gene therapy aims to treat a disease by delivering the correct copy of DNA into a patient's cells. The healthy, functional copy of the therapeutic gene then helps the cell function correctly. In gene therapy, DNA that encodes a therapeutic protein is packaged within a ''vector,'' often a ''naked'' virus, which is used to transfer the DNA to the inside of cells within the body. Gene therapy can be delivered by a direct injection, either intravenously (IV) or directly into a specific tissue in the body, where it is taken up by individual cells. Once inside cells, the correct DNA is expressed by the cell machinery, resulting in the production of missing or defective protein, which in turn is used to treat the patient's underlying disease and can provide long-term benefit.

Abeona is developing next-generation AAV gene therapies. Viruses such as AAV are utilized because they have evolved a way of encapsulating and delivering one or more genes of the size needed for clinical application, and can be purified in large quantities at high concentration. Unlike AAV vectors found in nature, the AAV vectors used by Abeona have been genetically-modified such that they do not replicate. Although the preclinical studies in animal models of disease demonstrate the promising impact of AAV-mediated gene expression to affected tissues such as the heart, liver and muscle, our programs use a specific virus that is capable of delivering therapeutic DNA across the blood brain barrier and into the central nervous system (CNS) and the somatic system (body), making them attractive for addressing lysosomal storage diseases which have severe CNS manifestations of the disease.

Lysosomal storage diseases (LSDs) are a group of rare inborn errors of metabolism resulting from deficiency in normal lysosomal function. These diseases are characterized by progressive accumulation of storage material within the lysosomes of affected cells, ultimately leading to cellular dysfunction. Multiple tissues ranging from musculoskeletal and visceral to tissues of the CNS are typically involved in disease pathology. Since the advent of enzyme replacement therapy (ERT) to manage some LSDs, general clinical outcomes have significantly improved; however, treatment with infused protein is lifelong and continued disease progression is still evident in patients. Thus, AAV-based gene therapy may provide a viable alternative or adjunctive therapy to current management strategies for LSDs.

Our initial programs are focused on LSDs such as Mucopolysaccharidosis (MPS) III A and IIIB. MPSIII, also known as Sanfilippo syndromes type A and type B, is a progressive neuromuscular disease with profound CNS involvement. Our lead product candidates, ABO-101 and ABO-102, have been developed to replace the damaged, malfunctioning enzymes within target cells with the normal, functioning version. ABO-201 is a similar product, using an AAV to deliver the correct lysosomal gene that is defective in juvenile neuronal ceroid lipofuscinosis. Delivered via a single injection, these drugs are only given once to a patient.

EB-101 for the Treatment of Recessive Dystrophic Epidermolysis Bullosa and EB-201 for the Correction of Gene Mutations in Skin Cells (Keratinocytes)

EB-101 (LZRSE-Col7A1 Engineered Autologous Epidermal Sheets (LEAES)), is an ex vivo gene therapy for the treatment of RDEB. EB-201 (AAVDJ-Col7A1) is a pre-clinical candidate targeting a novel, AAV-mediated gene editing and delivery approach to correct gene mutations in skin cells for patients with RDEB. We entered into an agreement (the ‘‘EB Agreement’’) with EB Research Partnership (‘‘EBRP’’) and Epidermolysis Bullosa Medical Research Foundation (‘‘EBMRF’’) to collaborate on gene therapy treatments for EB.

We entered into a license with Stanford effective August 3, 2016 for the EB-101 (LZRSE-Col7A1 Engineered Autologous Epidermal Sheets (LEAES)) technology, and we have performed certain preclinical development work and are performing clinical trials of a gene therapy treatment for EB based upon such in-licensed technology.

We also entered into a license with Stanford effective August 3, 2016 for the EB-201 (AAV DJ COL7A1) technology, and we plan to perform preclinical development and clinical trials of a gene therapy treatment for EB based upon such in-licensed technology.

ABO-101 for MPS III B and ABO-102 for MPS III A (Sanfilippo syndrome)

MPS III (Sanfilippo syndrome) is a group of four inherited genetic diseases, described as type A, B, C or D, which cause enzyme deficiencies that result in the abnormal accumulation of glycosaminoglycans (sugars) in body tissues. MPS III is a lysosomal storage disease, a group of rare inborn errors of metabolism resulting from deficiency in normal lysosomal function. The incidence of MPS III (all four types combined) is estimated to be 1 in 70,000 births.

Mucopolysaccharides are long chains of sugar molecules used in the building of connective tissues in the body. There is a continuous process in the body of replacing used materials and breaking them down for disposal. Children with MPS III are missing an enzyme which is essential in breaking down used mucopolysaccharides. The partially broken down mucopolysaccharides remain stored in cells in the body causing progressive damage. Babies may show little sign of the disease, but as more and more cells become damaged, symptoms start to appear.

In MPS III, the predominant symptoms occur due to accumulation within the CNS, including the brain and spinal cord, resulting in cognitive decline, motor dysfunction, and eventual death. To date, there is no cure for MPS III and treatments are largely supportive.

Abeona is developing next-generation AAV-based gene therapies for MPS III, which involves a one-time delivery of a normal copy of the defective gene to cells of the CNS with the aim of reversing the effects of the genetic errors that cause the disease.

After a single dose in MPS III preclinical models, ABO-101 and ABO-102 induced cells in the CNS and peripheral organs to produce the missing enzymes which helped repair the damage caused to the cells. Preclinical *in vivo* efficacy studies in MPS III have demonstrated functional benefits that remain for months after treatment. A single dose of ABO-101 or ABO-102 significantly restored normal cell and organ function, corrected cognitive defects that remained months after drug administration, increased neuromuscular control and increased the lifespan of animals with MPS III over 100% one year after treatment compared to untreated control animals. These results are consistent with studies from several laboratories suggesting AAV treatment could potentially benefit patients with MPS III A and B. In addition, safety studies conducted in animal models of MPS III have demonstrated that delivery of ABO-101 or ABO-102 are well tolerated with minimal side effects.

ABO-201 for juvenile Batten disease (or Juvenile Neuronal Ceroid Lipofuscinoses) (JNCL) and ABO-202 (AAV-CLN1) gene therapy for treatment of infantile Batten disease (or Infantile Neuronal Ceroid Lipofuscinoses) (INCL)

ABO-201 (AAV CLN3) is an AAV-based gene therapy which has shown promising preclinical efficacy in delivery of a normal copy of the defective CLN3 gene to cells of the CNS with the aim of reversing the effects of the genetic errors that cause JNCL. JNCL is a rare, fatal, autosomal recessive (inherited) disorder of the nervous system that typically begins in children between 4 and 8 years of age. Often the first noticeable sign of JNCL is vision impairment, which tends to progress rapidly and eventually result in blindness. As the disease progresses, children experience loss of previously acquired skills (developmental regression). This regression usually begins with the loss of the ability to speak in complete sentences. Children then lose motor skills, such as the ability to walk or sit. They also develop movement abnormalities that include rigidity or stiffness, slow or diminished movements (hypokinesia), and stooped posture. Beginning in mid- to late childhood, affected children may have recurrent seizures (epilepsy), heart problems, behavioral problems, and difficulty sleeping. Life expectancy is greatly reduced. Most people with juvenile Batten disease live into their twenties or thirties. As yet, no specific treatment is known that can halt or reverse the symptoms of JNCL.

JNCL is the most common form of a group of disorders known as neuronal ceroid lipofuscinoses (NCLs). Collectively, all forms of NCL affect an estimated 2 to 4 in 100,000 live births in the United States. NCLs are more common in Finland, where approximately 1 in 12,500 individuals are affected, as well as Sweden, other parts of northern Europe, and Newfoundland, Canada.

Most cases of JNCL are caused by mutations in the CLN3 gene, which is the focus of our AAV-based gene therapy approach. These mutations disrupt the function of cellular structures called lysosomes. Lysosomes are compartments in the cell that normally digest and recycle different types of molecules. Lysosome malfunction leads to a buildup of fatty substances called lipopigments and proteins within these cell structures. These accumulations occur in cells throughout the body, but neurons in the brain seem to be particularly vulnerable to damage. The progressive death of cells, especially in the brain, leads to vision loss, seizures, and intellectual decline in children with JNCL.

ABO-202 (AAV9 CLN1) is an AAV-based gene therapy which has shown promising preclinical efficacy in delivery of a normal copy of the defective CLN1 gene to cells of the central nervous system with the aim of reversing the effects of the genetic errors that cause an infantile form of Batten disease (also known as infantile neuronal ceroid lipofuscinosis).

ABO-301 for Fanconi Anemia (FA) and ABO-302 for rare blood diseases using a novel CRISPR/Cas9-based gene editing approach to gene therapy for rare blood diseases

ABO-301 (AAV-FANCC) is an AAV-based gene therapy which has shown promising preclinical efficacy in delivery of a normal copy of the defective gene to cells of the hematopoietic or blood system with the aim of reversing the effects of the genetic errors that cause FA. FA is a rare (1 in 160,000) pediatric, autosomal recessive (inherited) disease characterized by multiple physical abnormalities, organ defects, bone marrow failure, and a higher than normal risk of cancer. The average lifespan for people with FA is 20 to 30 years.

The major function of bone marrow is to produce new blood cells. In FA, a DNA mutation renders the FANCC gene nonfunctional. Loss of FANCC causes skeletal abnormalities and leads to bone marrow failure. FA patients also have much higher rates of hematological diseases, such as acute myeloid leukemia or tumors of the head, neck, skin, gastrointestinal system, or genital tract. The likelihood of developing one of these cancers in people with FA is between 10 and 30 percent. Aside from bone marrow transplantation, there are no specific treatments known that can halt or reverse the symptoms of FA. Repairing fibroblast cells in FA patients with a functional FANCC gene is the focus of our AAV-based gene therapy approach.

Using a novel CRISPR (clustered, regularly interspaced short palindromic repeats)-Cas9 (CRISPR associated protein 9) system, researchers used a protein-RNA complex composed of an enzyme known as Cas9 bound to a guide RNA molecule that has been designed to recognize a particular DNA sequence. The RNA molecules guide the Cas9 complex to the location in the genome that requires repair. CRISPR-Cas9 uniquely enables surgically efficient knock-out, knock-down or selective editing of defective genes in the context of their natural promoters, unlocking the potential to treat both recessive and dominant forms of genetic diseases. Most importantly, this approach has the potential to allow for more precise gene modification.

Polymer Hydrogel Technology (PHT™)

MuGard® (mucoadhesive oral wound rinse) approved for mucositis, stomatitis, aphthous ulcers, and traumatic ulcers

MuGard is our marketed product for the management of oral mucositis, a frequent side-effect of cancer therapy for which there is no other established treatment. MuGard, a proprietary nanopolymer formulation, received marketing clearance from the FDA in the U.S. as well as Europe, China, Australia, New Zealand and Korea. We launched MuGard in the U.S. in 2010 and licensed MuGard for commercialization in the U.S. to AMAG Pharmaceuticals, Inc. (AMAG) in 2013. We licensed MuGard to RHEI Pharmaceuticals, N.V. for China and other Southeast Asian countries in 2010; Hanmi Pharmaceutical Co. Ltd. for South Korea in 2014; and Norgine B.V. for the European Union, Switzerland, Norway, Iceland, Lichtenstein, Australia and New Zealand in 2014.

LIQUIDITY AND CAPITAL RESOURCES

We have historically funded our operations primarily through public and private sales of common stock, preferred stock, convertible notes and through licensing agreements. Our principal source of liquidity is cash and cash equivalents. Licensing payments and royalty revenues provided limited funding for operations during the period ended March 31, 2018. As of March 31, 2018, our cash and cash equivalents were $131,995,000.

As of March 31, 2018, our working capital was $127,697,000. Our working capital at March 31, 2018 represented a decrease of $7,288,000 as compared to our working capital of $134,985,000 as of December 31, 2017. The decrease in working capital at March 31, 2018 reflects three months of net operating costs and changes in current assets and liabilities offset by proceeds from exercise of stock options and warrants.

On October 16, 2017, we announced a collaborative agreement between nine Sanfilippo foundations to provide up to approximately $13.85 million of grants to Abeona in installments for the advancement of the Company's clinical stage gene therapies for Sanfilippo Syndrome Type A (MPS IIIA) and Sanfilippo Syndrome Type B (MPS IIIB), subject to the achievement of certain milestones. As of March 31, 2018, we received $3.1 million in grants ($2.6 million in the fourth quarter 2017 and $0.5 million in the first quarter of 2018) and recorded them as deferred revenue. $2.6 million of the $3.1 million in grants were recorded as revenues in the first quarter of 2018.

If we raise additional funds by selling additional equity securities, the relative equity ownership of our existing investors will be diluted and the new investors could obtain terms more favorable than previous investors.

We have incurred negative cash flows from operations since inception, and have expended, and expect to continue to expend in the future, substantial funds to complete our planned product development efforts. Since inception, our expenses have significantly exceeded revenues, resulting in an accumulated deficit as of March 31, 2018 of $364,592,000. We cannot provide assurance that we will ever be able to generate sufficient product sales or royalty revenue to achieve profitability on a sustained basis, or at all.

Since our inception, we have devoted our resources primarily to fund our research and development programs. We have been unprofitable since inception and to date have received limited revenues from the sale of products. We expect to incur losses for the next several years as we continue to invest in product research and development, preclinical studies, clinical trials and regulatory compliance.

FIRST QUARTER 2018 COMPARED TO FIRST QUARTER 2017

Our licensing revenue for the first quarter of 2017 was $151,000. In 2017, we recognized licensing revenue over the period of the performance obligation under our licensing agreements under ASC 605, *Revenue Recognition*. Effective January 1, 2018, we adopted Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers*, as amended (commonly referred to as ASC 606) using the modified retrospective transition method. The cumulative effect of applying the standard was an increase of $3.7 million to stockholders' equity as of January 1, 2018. There was no licensing revenue for the first quarter of 2018 due to ASC 606.

We recorded revenue for Foundation Grants of $2,548,000 for first quarter of 2018 and no revenues for the same period of 2017, an increase of $2,548,000. We recorded revenue to match expenses for the advancement of the Company's clinical stage gene therapies for Sanfilippo Syndrome Type A (MPS IIIA) and Sanfilippo Syndrome Type B (MPS IIIB).

We recorded royalty revenue for MuGard of $50,000 for first quarter of 2018 and $35,000 for the same period of 2017, an increase of $15,000. We licensed MuGard to AMAG and Norgine and receive quarterly royalties under our agreements.

Total research and development spending for the first quarter of 2018 was $8,162,000, as compared to $2,198,000 for the same period of 2017, an increase of $5,964,000. The increase in expenses was primarily due to:

- increased clinical and development work for the manufactured product for EB-101, ABO-102, ABO-101 and other gene therapy products ($4,307,000);
- increased salary and related costs ($633,000) from the hiring of scientific staff;
- increased stock option compensation expense ($488,000); and
- other net increases in research spending ($536,000).

Total general and administrative expenses were $2,878,000 for the first quarter of 2018, as compared to $3,022,000 for the same period of 2017, a decrease of $144,000. The decrease in expenses was due primarily to:

- decreased restricted common stock based compensation expense ($188,000)
- decreased stock option compensation expense ($80,000); and
- offset by increases in net other general and administrative expenses ($124,000).

Depreciation and amortization was $174,000 for the first quarter of 2018 as compared to $250,000 for the same period in 2017, a decrease of $76,000. We are amortizing the licenses for ABO-101 and ABO-201, and EB-102 over the life of the patents. The decrease is due to lower amortization of licensed technology ($116,000) offset by an increase in depreciation ($40,000). SDF Alpha was amortized through May 26, 2017. The license was returned to the licensor, Plasma Technologies, LLC in 2017.

Total operating expenses for the first quarter of 2018 were $11,214,000 as compared to total operating expenses of $5,470,000 for the same period of 2017, an increase of $5,744,000 for the reasons listed above.

Interest and miscellaneous income was $156,000 for the first quarter of 2018 as compared to $39,000 for the same period of 2017, an increase of $117,000. Most of the increase was due to increased interest income due to higher cash balances ($109,000) and other miscellaneous income ($8,000).

Interest and other expense for the first quarter of 2018 was $3,000 as compared to $2,000 for the same period of 2017.

Net loss for the first quarter of 2018 was $8,463,000, or a $0.18 basic and diluted loss per common share as compared to a net loss of $5,247,000, or a $0.13 basic and diluted loss per common share, for the same period in 2017, an increased loss of $3,216,000.

OFF-BALANCE SHEET ARRANGEMENTS

We did not have any off - balance sheet arrangements as of March 31, 2018.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to a variety of financial risks in the normal course of our business, including market risk (including currency and price risk), credit risk and liquidity risk. Our overall risk management program focuses on preservation of capital and the unpredictability of financial markets and has sought to minimize potential adverse effects on our financial performance and position.

Market Risk

Currency risk
We are exposed to foreign exchange risk arising from various currencies, primarily with respect to the U.S. dollar and to a lesser extent to the euro, Australian dollar and British pound. As our U.S. operating entity primarily conducts its operations in U.S. dollars, its exposure to changes in foreign currency is insignificant.

Price risk
The market prices for the provision of preclinical and clinical materials and services, as well as external contracted research, may vary over time.

The commercial prices of any of our products or product candidates are currently uncertain.

We are not exposed to commodity price risk.

We do not hold investments classified as available-for-sale or at fair value through profit or loss; therefore, we are not exposed to equity securities price risk.

Credit Risk

Credit risk is managed on a consolidated basis. Credit risk arises from cash and cash equivalents and deposits with banks and financial institutions, outstanding receivables and committed transactions with collaboration partners and security deposits paid to landlords. We currently have no wholesale debtors.

We deposited funds as security to our landlords related to our facility in Cleveland, Ohio and our facility in Dallas, Texas.

Our cash and cash equivalents include bank balances, demand deposits and other short-term highly liquid investments (with maturities of less than three months at the time of purchase) that are readily convertible into a known amount of cash and are subject to an insignificant risk of fluctuation in value. Restricted cash includes deposits made in relation to facility leases. Cash, cash equivalents and restricted cash were placed at Comerica Bank.

Liquidity Risk

We believe that our existing cash and cash equivalents will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months. We manage liquidity through a rolling forecast of our liquidity reserve on the basis of expected cash flow and raise cash if and when needed through the issuance of shares.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management and consultants, including the Executive Chairman (our principal executive officer) and Vice President Finance (our principal accounting officer), we have conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures ("Disclosure Controls and Procedures"), as such term is defined in Exchange Act Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as of March 31, 2018.

Conclusion of Evaluation — Based on this Disclosure Controls and Procedures evaluation, the Executive Chairman and Chief Accounting Officer concluded that our Disclosure Controls and Procedures as of March 31, 2018 were effective.

Changes In Internal Control Over Financial Reporting – During the three months ended March 31, 2018, we implemented appropriate changes to our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) to support the recognition of revenue and the preparation of additional revenue-related disclosures in accordance with ASC 606.

PART II -- OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

We are not currently subject to any material legal proceedings.

ITEM 1A. RISK FACTORS.

As of the date of this filing, there have been no material changes to the risk factors included in our Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the SEC on March 16, 2018.

ITEM 6. EXHIBITS.

Exhibits:

10.1+	Employment Agreement dated March 29, 2018 between the Company and F. Carsten Thiel
31.1	Principal Executive Officer Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Principal Financial Officer Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Principal Executive Officer Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Principal Financial Officer Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following materials from Abeona's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, formatted in XBRL (Extensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets at March 31, 2018 and December 31, 2017, (ii) Condensed Consolidated Statements of Operations for the three months ended March 31, 2018 and March 31, 2017, (iii) Condensed Consolidated Statements of Stockholders' Equity for the three months ended March 31, 2018, (iv) Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2018 and March 31, 2017, and (v) Notes to Condensed Consolidated Financial Statements, tagged as blocks of text.

* This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of the Section, nor shall it be deemed incorporated by reference in any filings under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any filing.

\+ Management contract or compensatory plan required to be filed as an Exhibit to this Form pursuant to Item 15c of the report.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ABEONA THERAPEUTICS INC.

Date: May 10, 2018

By: /s/ Steven H. Rouhandeh
Steven H. Rouhandeh
Executive Chairman
(Principal Executive Officer)

Date: May 10, 2018

By: /s/ Stephen B. Thompson
Stephen B. Thompson
Sr. Vice President Finance
(Principal Financial & Accounting Officer)

Abeona Therapeutics Inc. and Subsidiaries

Condensed Consolidated Balance Sheets

	March 31, 2018 (unaudited)	December 31, 2017
ASSETS		
Current assets		
Cash and cash equivalents	$ 131,995,000	$ 137,750,000
Receivables	64,000	107,000
Prepaid expenses and other current assets	2,092,000	2,735,000
Total current assets	134,151,000	140,592,000
Property and equipment, net	4,789,000	1,374,000
Licensed technology, net	3,890,000	3,977,000
Goodwill	32,466,000	32,466,000
Other assets and restricted cash	357,000	357,000
Total assets	$ 175,653,000	$ 178,766,000
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 5,910,000	$ 2,393,000
Current portion of deferred revenue	544,000	3,214,000
Total current liabilities	6,454,000	5,607,000
Deferred revenue, net of current portion	-	3,061,000
Total liabilities	6,454,000	8,668,000
Commitments and contingencies		
Stockholders' equity		
Common stock - $.01 par value; authorized 200,000,000 shares; issued, 47,232,940 at March 31, 2018 and 46,888,108 at December 31, 2017	472,000	469,000
Additional paid-in capital	533,319,000	529,421,000
Accumulated deficit	(364,592,000)	(359,792,000)
Total stockholders' equity	169,199,000	170,098,000
Total liabilities and stockholders' equity	$ 175,653,000	$ 178,766,000

The accompanying notes are an integral part of these condensed consolidated statements.

Abeona Therapeutics Inc. and Subsidiaries

Condensed Consolidated Statements of Operations
(unaudited)

	Three Months ended March 31,	
	2018	**2017**
Revenues		
Foundation grants	$ 2,548,000	$ -
Royalties	50,000	35,000
License revenues	-	151,000
Total revenues	2,598,000	186,000
Expenses		
Research and development	8,162,000	2,198,000
General and administrative	2,878,000	3,022,000
Depreciation and amortization	174,000	250,000
Total expenses	11,214,000	5,470,000
Loss from operations	(8,616,000)	(5,284,000)
Interest and miscellaneous income	156,000	39,000
Interest and other expense	(3,000)	(2,000)
	153,000	37,000
Net loss	$ (8,463,000)	$ (5,247,000)
Basic and diluted loss per common share	$ (0.18)	$ (0.13)
Weighted average number of common shares outstanding	47,060,523	40,254,679

The accompanying notes are an integral part of these condensed consolidated statements.

Abeona Therapeutics Inc. and Subsidiaries

Condensed Consolidated Statements of Stockholders' Equity
(unaudited)

	Common Stock		Additional paid-in capital	Accumulated deficit	Total stockholders' equity
	Shares	Amount			
Balance, December 31, 2017 – as reported	46,888,108	$ 469,000	$529,421,000	$(359,792,000)	$ 170,098,000
Cumulative effect adjustment of ASC 606 on January 1, 2018	-	-	-	3,663,000	3,663,000
Stock based compensation expense	-	-	1,900,000	-	1,900,000
Vesting of restricted common stock issued to employees	-	-	172,000	-	172,000
Common stock issued for cash exercise of options	267,196	3,000	1,682,000	-	1,685,000
Exercise of $5.00 warrants	28,874	-	144,000	-	144,000
Cashless warrant exercises	48,762	-	-	-	-
Net loss	-	-	-	(8,463,000)	(8,463,000)
Balance, March 31, 2018	47,232,940	$ 472,000	$533,319,000	$(364,592,000)	$ 169,199,000

The accompanying notes are an integral part of these condensed consolidated statements.

Abeona Therapeutics Inc. and Subsidiaries

Condensed Consolidated Statements of Cash Flows
(unaudited)

	Three Months ended March 31,	
	2018	**2017**
Cash flows from operating activities:		
Net loss	$ (8,463,000)	$ (5,247,000)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation and amortization	174,000	250,000
Stock option compensation expense	1,900,000	1,492,000
Restricted common stock issued to directors and employees	172,000	362,000
Change in operating assets and liabilities:		
Receivables	43,000	(24,000)
Prepaid expenses and other current assets	643,000	(308,000)
Accounts payable and accrued expenses	3,517,000	(2,231,000)
Deferred revenue	(2,068,000)	(151,000)
Net cash used in operating activities	(4,082,000)	(5,857,000)
Cash flows from investing activities:		
Capital expenditures	(3,502,000)	(74,000)
Net cash used in investing activities	(3,502,000)	(74,000)
Cash flows from financing activities:		
Proceeds from exercise of stock options	1,685,000	-
Proceeds from exercise of $5.00 warrants	144,000	1,000
Net cash provided by financing activities	1,829,000	1,000
Net decrease in cash, cash equivalents and restricted cash	(5,755,000)	(5,930,000)
Cash, cash equivalents and restricted cash at beginning of period	138,030,000	69,142,000
Cash, cash equivalents and restricted cash at end of period	$ 132,275,000	$ 63,212,000
Supplemental cash flow disclosures:		
Cash and cash equivalents	*$ 131,995,000*	*$ 63,212,000*
Restricted cash	*280,000*	*-*
Total cash, cash equivalents and restricted cash	*$ 132,275,000*	*$ 63,212,000*
Cash paid for interest	*$ 3,000*	*$ 2,000*

The accompanying notes are an integral part of these condensed consolidated statements.

Abeona Therapeutics Inc. (together with our subsidiaries, "we," "our," "Abeona" or the "Company") is a Delaware corporation. We are a clinical-stage biopharmaceutical company developing cell and gene therapies for life-threatening rare genetic diseases. Our lead programs include EB-101 (gene-corrected skin grafts) for recessive dystrophic epidermolysis bullosa (RDEB), ABO-102 (AAV-SGSH), an adeno-associated virus (AAV) based gene therapy for Sanfilippo syndrome type A (MPS IIIA) and ABO-101 (AAV NAGLU), an AAV based gene therapy for Sanfilippo syndrome type B (MPS IIIB). We are also developing ABO-201 (AAV-CLN3) gene therapy for juvenile Batten disease (JNCL), ABO-202 (AAV-CLN1) for treatment of infantile Batten disease (INCL), EB-201 for epidermolysis bullosa (EB), ABO-301 (AAV-FANCC) for Fanconi anemia (FA) disorder and ABO-302 using a novel CRISPR/Cas9-based gene editing approach to gene therapy for rare blood diseases. In addition we are developing a proprietary vector platform, AIM™, for next generation product candidates. Our efforts have been principally devoted to research and development, resulting in significant losses.

(1) Interim Financial Statements

The condensed consolidated balance sheet as of March 31, 2018, the condensed consolidated statements of operations for the three months ended March 31, 2018 and 2017, the condensed consolidated statements of stockholders' equity for the three months ended March 31, 2018, and the condensed consolidated statements of cash flows for the three months ended March 31, 2018 and 2017, were prepared by management without audit. In the opinion of management, all adjustments, consisting only of normal recurring adjustments, except as otherwise disclosed, necessary for the fair presentation of the financial position, results of operations, and changes in financial position for such periods, have been made.

Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted. It is suggested that these interim financial statements be read in conjunction with the consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2017. The results of operations for the period ended March 31, 2018 are not necessarily indicative of the operating results which may be expected for a full year. The condensed consolidated balance sheet as of December 31, 2017 contains financial information taken from the audited Abeona consolidated financial statements as of that date.

As of March 31, 2018, we had 5,807,531 options and 2,838,576 warrants that were not included in the EPS calculation as their effect would be antidilutive.

(2) New Accounting Standards Implemented

Revenue Recognition

Effective January 1, 2018, we adopted Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers*, as amended (commonly referred to as ASC 606) using the modified retrospective transition method. The cumulative effect of applying the standard was an increase of $3.7 million to stockholder's equity as of January 1, 2018. Our statement of operations for the quarterly period ended March 31, 2018 and our balance sheet as of March 31, 2018 are presented under ASC 606, while our statement of operations for the quarterly period ended March 31, 2017 and our balance sheet as of December 31, 2017 are presented under ASC 605, *Revenue Recognition*. See below for disclosure of the impact of the adoption of ASC 606 on our statement of operations and balance sheet for the quarterly period ended March 31, 2018, and the effect of changes made to our consolidated balance sheet as of January 1, 2018.

The table below presents the cumulative effect of the changes made to the consolidated January 1, 2018 balance sheet due to the adoption of ASC 606.

Balance Sheet (in thousands)	**December 31, 2017, As Reported Under ASC 605**	**Adjustments Due to ASC 606**	**January 1, 2018 As Adjusted Under ASC 606**
Liabilities			
Current liabilities			
Current portion of deferred revenue	$ 3,214	$ (602)	$ 2,612
Total current liabilities	3,214	(602)	2,612
Deferred revenue, net of current portion	3,061	(3,061)	-
Total liabilities	8,668	(3,663)	5,005
Stockholders' Equity			
Accumulated deficit	(359,792)	3,663	(356,129)
Total equity	$ 170,098	$ -	$ 170,098

The table below presents the impact of the adoption of ASC 606 on our statement of operations.

	First Quarter Ended March 31, 2018		
STATEMENT OF OPERATIONS (in thousands except per share amounts)	**Under ASC 605**	**Effect of ASC 606**	**As Reported Under ASC 606**
Revenues			
License revenues	$ 151	$ (151)	$ -
Total revenues BS	2,749	(151)	2,598
Loss from operations	$ (8,465)	$ (151)	$ (8,616)
Net loss	$ (8,312)	$ (151)	$ (8,463)
Basic and diluted loss per common share	$ (0.18)	$ 0.00	$ (0.18)

The table below presents the impact of the adoption of ASC 606 on our balance sheet.

Balance Sheet (in thousands)	March 31, 2018 Under ASC 605	Effect of ASC 606	As Reported Under ASC 606
Liabilities and Stockholders' Equity			
Current liabilities			
Current portion of deferred revenue	$ 1,146	$ (602)	$ 544
Total current liabilities	7,056	(602)	6,454
Deferred revenue, net of current portion	2,910	(2,910)	-
Total liabilities	9,966	(3,512)	6,454
Stockholders' Equity			
Accumulated deficit	(368,255)	(3,663)	(364,592)
Total stockholders' equity	$ 165,536	$ 3,663	$ 169,199

We received upfront cash payments for licenses of our technology in years 2008-2014. The revenue was recognized straight-line over the life of the patent. Our obligation was performed at the time the license was granted. Following the revenue recognition policies in accordance with ASC 606, we decreased the accumulated deficit by $3,663,000 as of January 1, 2018 and decreased deferred revenue by the same amount.

Royalty revenues will continue to be recognized in the period of sales. Royalties recognized in the first quarter of 2018 are $50,000.

On October 16, 2017, we announced a collaborative agreement between nine Sanfilippo foundations to provide up to approximately $13.85 million of grants to Abeona in installments for the advancement of the Company's clinical stage gene therapies for Sanfilippo Syndrome Type A (MPS IIIA) and Sanfilippo Syndrome Type B (MPS IIIB), subject to the achievement of certain milestones. As of March 31, 2018, we received $3.1 million in grants ($2.6 million in the fourth quarter 2017 and $0.5 million in the first quarter of 2018) and recorded them as deferred revenue. $2.6 million of the $3.1 million in grants were recognized as revenue in the first quarter of 2018. Deferred revenue was $544,000 at March 31, 2018.

We recorded revenue for Foundation Grants of $2,548,000 for first quarter of 2018 and no revenues for the same period of 2017, an increase of $2,548,000. We record revenue to match expenses for the advancement of the Company's clinical stage gene therapies for Sanfilippo Syndrome Type A (MPS IIIA) and Sanfilippo Syndrome Type B (MPS IIIB).

We recorded revenue for Foundation Grants of $2,548,000 for first quarter of 2018 and no revenues for the same period of 2017, an increase of $2,548,000. We record revenue to match expenses for the advancement of the Company's clinical stage gene therapies for Sanfilippo Syndrome Type A (MPS IIIA) and Sanfilippo Syndrome Type B (MPS IIIB).

Restricted cash disclosure

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows, Restricted Cash* requiring restricted cash and restricted cash equivalents to be included with cash and cash equivalents on the statement of cash flows when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The guidance is effective for interim and annual periods beginning after December 15, 2017, with early adoption permitted. We adopted this standard during the first quarter of 2018. Restricted cash is now included as a component of cash, cash equivalents, and restricted cash on our unaudited condensed consolidated statements of cash flows. Restricted cash is recorded within other non-current assets in the accompanying unaudited condensed consolidated balance sheets. The inclusion of restricted cash increased beginning balances of the unaudited condensed consolidated statements of cash flows by $280,000 and $0, respectively, and the ending balances by $280,000 and $0, respectively, for the three months ended March 31, 2018 and 2017.

(3) Licensed Technology

On May 15, 2015, we acquired Abeona Therapeutics LLC which had a an exclusive license through Nationwide Children's Hospital to the AB-101 and AB-102 patent portfolios for developing treatments for patients with Sanfilippo Syndrome Type A and Type B. The license is amortized over the life of the license of 20 years.

On August 3, 2016, we announced we entered into an agreement (the "EB Agreement") with EB Research Partnership ("EBRP") and Epidermolysis Bullosa Medical Research Foundation ("EBMRF") to collaborate on gene therapy treatments for EB.

We also entered into a license with Stanford for the AAV-based gene therapy EB-201 (AAV DJ COL7A1) technology, and we shall perform preclinical development and perform clinical trials of a gene therapy treatment for EB based upon such in-licensed technology. EB-201 (AAV DJ COL7A1) is a pre-clinical candidate targeting a novel, AAV-mediated gene editing and delivery approach (known as homologous recombination) to correct gene mutations in skin cells (keratinocytes) for patients with recessive dystrophic epidermolysis bullosa (RDEB). The licenses are amortized over the life of the license of 20 years.

Licensed technology consists of the following:

	March 31, 2018	December 31, 2017
Licensed technology	$ 4,608,000	$ 4,608,000
Less accumulated amortization	718,000	631,000
Licensed technology, net	$ 3,890,000	$ 3,977,000

Intangible assets consist of the following (in thousands):

	March 31, 2018		December 31, 2017	
	Gross carrying value	Accumulated amortization	Gross carrying value	Accumulated Amortization
Amortizable intangible assets				
Licensed technology	$ 4,608	$ 718	$ 4,608	$ 631

Amortization expense related to intangible assets totaled $87,000 for the three months ended March 31, 2018 and totaled $203,000 for the three ended March 31, 2017. The aggregate estimated amortization expense for intangible assets remaining as of March 31, 2018 is as follows (in thousands):

2018	$ 259
2019	346
2020	346
2021	346
2022	346
over 5 years	2,247
Total	$ 3,890

(4) Fair Value Measurements

We calculate the fair value of our assets and liabilities which qualify as financial instruments and include additional information in the notes to the consolidated financial statements when the fair value is different than the carrying value of these financial instruments. The estimated fair value of receivables, prepaids and other and accounts payable approximate their carrying amounts due to the relatively short maturity of these instruments.

U.S. GAAP defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. This guidance establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 – Quoted prices in active markets for identical assets or liabilities.
- Level 2 – Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.

· Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities. This includes certain pricing models, discounted cash flow methodologies and similar valuation techniques that use significant unobservable inputs.

The guidance requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

We have segregated all financial assets and liabilities that are measured at fair value on a recurring basis (at least annually) into the most appropriate level within the fair value hierarchy based on the inputs used to determine the fair value at the measurement date in the table below.

Financial assets and liabilities measured at fair value on a non-recurring and recurring basis as of March 31, 2018 and December 31, 2017 are summarized below:

(in thousands)

Description	As of March 31, 2018	Level 1	Level 2	Level 3	Total Gains (Losses)
Non-recurring					
Assets:					
Licensed technology (net)	$ 3,890	$ -	$ -	$ 3,890	$ 87
Goodwill	32,466	-	-	32,466	-

(in thousands)

Description	As of December 31, 2017	Level 1	Level 2	Level 3	Total Gains (Losses)
Non-recurring					
Assets:					
Licensed technology (net)	$ 3,977	$ -	$ -	$ 3,977	$ 127
Goodwill	32,466	-	-	32,466	-
Recurring					
Liabilities:					
Contingent consideration	$ -	$ -	$ -	$ -	$ 1,391

(5) Stock Based Option Compensation and Restricted Stock Compensation

For the three months ended March 31, 2018, we recognized stock-based compensation expense of $1,900,000 for granted options. For the three months ended March 31, 2017, we recognized stock-based compensation expense of $1,492,000.

The following table summarizes stock-based compensation for the three months ended March 31, 2018 and 2017:

	Three months ended March 31,	
	2018	2017
Research and development	$ 1,056,000	$ 356,000
General and administrative	844,000	1,136,000
Stock-based compensation expense included in operating expense	$ 1,900,000	$ 1,492,000

For the three months ended March 31, 2018, we granted 645,000 stock options and for the three months ended March 31, 2017, we granted no stock options.

For the three months ended March 31, 2018, the fair value of options was estimated at the date of grant using the Black-Scholes option pricing model with the following weighted average assumptions: dividend yield of 0%; volatility of 1.09%; risk-free interest rate of 2.37%; and expected lives of 5.0 years. The weighted average fair value of options granted was $10.83 per share. The weighted average grant date fair value is $10.83 and the weighted average exercise price is $13.72.

For the three months ended March 31, 2018, we recognized restricted common stock compensation expense of $172,000 for granted restricted common stock. For the three months ended March 31, 2017, we recognized restricted stock compensation expense of $362,000 for granted restricted common stock compensation expense.

The following table summarizes restricted common stock compensation expense for the three months ended March 31, 2018 and 2017:

	Three months ended March 31,	
	2018	2017
Research and development	$ -	$ -
General and administrative	172,000	362,000
Stock-based compensation expense included in operating expense	$ 172,000	$ 362,000

For the three months ended March 31, 2018 and 2017, no stock was granted.

(6) Commitments and Contingencies

We are not currently subject to any material pending legal proceeding.

At March 31, 2018, we had construction in-progress to build out manufacturing facilities at our Cleveland location. We had a remaining construction commitment of $1,456,000 at March 31, 2018.

Exhibit 10.1

EMPLOYMENT AGREEMENT

EMPLOYMENT AGREEMENT, dated this March 29, 2018 (this "Agreement"), by and between Abeona Therapeutics, Inc., a Delaware corporation with its executive offices located at 1330 Avenue of the Americas, 33rd Floor, New York, NY 10019 (the "Company"), and Frank Carsten Thiel (the "Executive") (each of the Executive and the Company, a "Party," and collectively, the "Parties").

WHEREAS, the Company desires to employ the Executive and pursuant to which to enter into this Agreement with the Executive, such employment to commence on March 29, 2018 (the "Effective Date"); and

WHEREAS, the Executive desires to be so employed pursuant to the terms of this Agreement as of the Effective Date and to perform and to serve the Company on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other valid consideration, the sufficiency of which is acknowledged, the Parties hereto agree as follows:

Section 1. Employment.

1.1. Term. Subject to Section 3 hereof, the Company agrees to employ the Executive, and the Executive agrees to be employed by the Company, in each case pursuant to this Agreement, for a period commencing on the Effective Date and ending on the fifth anniversary of the Effective Date (the "Initial Term"); provided, however, that the period of the Executive's employment pursuant to this Agreement shall be automatically extended for successive one-year periods thereafter (each, a "Renewal Term"), in each case unless either Party provides the other Party with written notice that such period shall not be so extended at least six (6) months in advance of the expiration of the Initial Term or the then-current Renewal Term, as applicable (the Initial Term and any Renewal Term, collectively, the "Term"). Each additional one-year Renewal Term shall be added to the end of the next scheduled expiration date of the Initial Term or Renewal Term, as applicable, as of the first day after the last date on which notice may be given pursuant to the preceding sentence. The Executive's employment shall terminate upon the expiration of the Employment Period unless the Parties otherwise agree in writing. The Executive's period of employment pursuant to this Agreement shall hereinafter be referred to as the "Employment Period."

1.2. Duties. During the Employment Period, the Executive shall serve as the Company's Chief Executive Officer and shall report directly to the Executive Chairman of the Board of Directors of the Company ("Board") (on the date hereof, Steven Rouhandeh). In the event Steven Rouhandeh ceases to be Executive Chairman for any reason, the Executive shall report directly to the Board. In the Executive's position as Chief Executive Officer, the Executive shall perform such duties, functions and responsibilities during the Employment Period as are commensurate with such position, as reasonably and lawfully directed by the Executive Chairman or Board (as applicable), and pursuant to which all officers and other employees of the Company (other than the Executive Chairman, if applicable) shall report directly or indirectly to the Executive (unless the Executive Chairman and Executive shall agree in writing otherwise). The Executive's principal place of employment shall be the Company's operations in New York, NY. The Executive shall be appointed to the Board at the Company's annual meeting scheduled to be held in May 2018 and nominated for reelection each year thereafter. Executive shall, if later requested by the Executive Chairman or the Board (as applicable), also serve as a member of the Board of any corporation, organization, association, partnership, sole proprietorship, or other type of entity, directly or indirectly controlling, controlled by, or under direct or indirect common control with the Company for no additional compensation.

1.3. Exclusivity. During the Employment Period, the Executive shall devote substantially all of his business time and attention to the business and affairs of the Company, shall faithfully serve the Company, and shall conform and comply with the lawful and reasonable directions and instructions given to the Executive by the Executive Chairman or Board (as applicable), consistent with Section 1.2 hereof. During the Employment Period, the Executive shall use his best efforts to promote and serve the interests of the Company and shall not engage in any other business activity, whether or not such activity shall be engaged in for pecuniary profit. Nothing herein shall preclude the Executive from engaging in charitable or community affairs and managing his personal, financial, and legal affairs, so long as such activities do not materially interfere or conflict with his carrying out his duties and responsibilities under this Agreement. Notwithstanding the foregoing, the Executive will be permitted to act or serve as a director or member of the boards of other private or public companies with the express written consent of the Executive Chairman or Board (as applicable) which consent shall not be unreasonably withheld.

Section 2. Compensation.

2.1. Salary. As compensation for the performance of the Executive's services hereunder, during the Employment Period, the Company shall pay to the Executive a salary at an annual rate of $550,000, payable in accordance with the Company's standard payroll policies (the "Base Salary"). The Base Salary will be reviewed annually and may be increased (but not decreased) by the Board (or a committee thereof) in its discretion. Any such increase shall be the Executive's "Base Salary" for all purposes thereafter.

2.2. Annual Bonus. For each calendar year ending during the Employment Period, the Executive shall be eligible to receive an annual lump sum cash bonus (the "Annual Bonus") to be based upon Company performance and other criteria for each such calendar year as determined by the Board pursuant to the Company's annual incentive plan. The Executive's target Annual Bonus opportunity for each calendar year that ends during the Employment Period shall equal fifty percent (50%) of the Base Salary (the "Target Annual Bonus Opportunity") and a maximum bonus opportunity of not less than 200% of the Target Annual Bonus Opportunity. The amount of the Annual Bonus actually paid shall depend on the extent to which the performance goals are achieved or exceeded as determined by the Board. The Annual Bonus shall be paid within two and one-half (2-1/2) months after the end of the calendar year for which such Annual Bonus was earned. The Annual Bonus shall be pro-rated for any partial years of employment subject to the provisions of Section 3 hereof.

2.3. Long-Term Incentives.

(a) Annual Grants. Executive shall be entitled to participate in the Company's 2015 Equity Incentive Plan (the "Equity Incentive Plan") and any other equity and other long-term incentive plans and programs, as in effect from time to time. In accordance therewith, the Compensation Committee may from time to time, but without any obligation to do so, grant stock options, restricted stock awards or other equity and other long-term incentive compensation awards to the Executive upon such terms and conditions as the Compensation Committee shall determine in its sole discretion.

(b) Sign-On Grant. On the Effective Date, the Company shall grant, pursuant to a form of stock option notice and agreement attached hereto as Exhibit A (the "Option Agreement") to be entered into between the Company and the Executive, a stock option (the "Option") to purchase 375,000 shares of the Company's Common Stock (the "Option Shares") at an exercise price per share equal to the Fair Market Value of a share of Common Stock (each term as defined in the Equity Incentive Plan) on the date of grant. The Option Shares will vest over a forty-eight (48) month period, with one quarter (25%) of vesting on the one-year anniversary of the Effective Date and the remaining seventy-five percent (75%) of the Option Shares vesting in equal monthly installments thereafter over the remaining thirty-six (36) months, on the same date of each month as the Effective Date commencing with first such month following the first anniversary of the Effective Date, subject to the Executive's continued employment with the Company and/or its Affiliates through to the applicable vesting dates, and subject to the terms and conditions of the Company's Equity Incentive Plan, except as provided below.

2.4. Employee Benefits. During the Employment Period, the Executive shall be eligible to participate in such health and other group insurance and other employee benefit plans and programs of the Company as in effect from time to time on the same basis as other senior executives of the Company.

2.5. Vacation. During the Employment Period, the Executive shall be entitled to four weeks of vacation per calendar year in accordance with the Company's vacation policy. The number of vacation days shall be pro-rated for any partial years.

2.6. Business Expenses. The Company shall pay or reimburse the Executive, upon presentation of documentation, for all commercially reasonable business out-of-pocket expenses that the Executive incurs during the Employment Period in performing his duties under this Agreement in accordance with the expense reimbursement policy of the Company as approved by the Board (or a committee thereof), as in effect from time to time.

2.7. Professional Fees Incurred in Negotiating the Agreement. The Company will pay or the Executive shall be reimbursed for the Executive's reasonable documented professional fees incurred in negotiating and drafting this Agreement and all related agreements hereunder up to a maximum of $20,000.00.

Section 3. Employment Termination.

3.1. Termination of Employment. The Company may terminate the Executive's employment hereunder for any reason during the Term, and the Executive may voluntarily terminate his employment hereunder for any reason during the Term, in each case at any time upon written notice to the other Party (the date on which the Executive's employment terminates for any reason is herein referred to as the "Termination Date"). Upon the termination of the Executive's employment with the Company for any reason, the Executive shall be entitled to (i) payment of any Base Salary earned but unpaid through the date of termination, (ii) earned but unpaid Annual Bonus for calendar years completed prior to the Termination Date (payable in the ordinary course pursuant to Section 2.2), (iii) any accrued unused vacation days, (iv) additional vested benefits (if any) in accordance with the applicable terms of applicable Company arrangements, and (v) any unreimbursed expenses in accordance with Section 2.5 hereof (collectively, the "Accrued Amounts"); provided, however, that if the Executive's employment hereunder is terminated (x) by the Company for Cause, or (y) by the Executive voluntarily without Good Reason and not for death or Disability, then Executive shall not be eligible for, earn or receive any Annual Bonus awarded pursuant to Section 2.2 in a prior calendar year, but not yet paid or due to be paid.

3.2. Certain Terminations.

(a) Termination by the Company other than for Cause, Death or Disability; Termination by the Executive for Good Reason . If the Executive's employment is terminated (x) by the Company other than for Cause, death or Disability (including a termination for any reason upon the expiration of the Term following notice of nonrenewal of the Term given by the Company pursuant to Section 1.1) or (y) by the Executive for Good Reason, in addition to the Accrued Amounts, the Executive shall be entitled to: (i) a payment equal to the product of the sum of his Base Salary plus Target Annual Bonus Opportunity amount (such product, the "Severance Amount"); (ii) to the extent permitted pursuant to the applicable plans, continuation on the same terms as an active employee (including, where applicable, coverage for the Executive and his dependents) of medical insurance benefits that the Executive would otherwise be eligible to receive as an active employee of the Company for twelve months (12) months following the Termination Date or, if earlier, until the Executive becomes eligible for medical benefits from a subsequent employer ("Medical Benefit Continuation") (iii) a pro rata bonus based on actual performance for the year in which the Termination Date occurs (based on the applicable Company performance requirements for such year without any exercise of negative discretion disproportionate to any such exercise respecting other executives, all subjective performance requirements deemed fully satisfied, and for such proration to be based on the number of days employed during the calendar year), such bonus to be payable when bonuses are paid to other executives; and (iv) accelerated vesting equivalent to twelve (12) months of continued employment from the Termination Date (disregarding such termination for such purpose) with respect to all unvested equity and other long-term incentive awards granted to the Executive (including the Option). The Company's obligations to pay the Severance Amount and to provide Medical Benefit Continuation shall be conditioned upon the Executive's continued compliance with his obligations under Section 4 of this Agreement. Notwithstanding any provision to the contrary herein, and without limitation of any remedies to which the Company may be entitled, the Severance Amount shall be paid in equal installments during a twelve (12) month period commencing 45 days following the Termination Date (with the first such payment to include all installment amounts from the Termination Date; provided, that, the Executive has signed and delivered to the Company the release of claims substantially in the form attached hereto as Exhibit B (the "Release") and the period (if any) during which the Release can be revoked has expired within such 45-day period.

If the Executive is not permitted to continue participation in the Company's medical insurance plan pursuant to the terms of such plan or pursuant to a determination by the Company's insurance providers or such continued participation in any plan would result in the imposition of an excise tax on the Company pursuant to Section 4980D of the Internal Revenue Code of 1986, as amended (the "Code"), the Company shall pay to the Executive a lump sum amount equal to 12 months of the COBRA premium in effect for coverage of the Executive (and family) immediately prior to the Termination Date, such payment to be made on the date payments of the Severance Amount commence (which payment shall be considered the "Medical Benefit Continuation" hereunder).

(b) Change in Control Termination. Notwithstanding any other provision contained herein (including any expiration of the Term), if the Executive's employment hereunder is terminated by the Executive for Good Reason or by the Company without Cause (other than on account of the Executive's death or Disability), in each case within twelve (12) months following a Change in Control, the Executive shall be entitled to receive the Severance Amount and Medical Benefits Continuation provided under Section 3.2(a), except that: (i) the Severance Amount shall be equal to two (2) times the sum of his Base Salary and Target Annual Bonus Opportunity amount, and payable in a lump sum; (ii) such pro rata bonus shall be deemed achieved at a target level of performance; and (iii) notwithstanding the terms of any equity incentive plan or award agreements, as applicable, all outstanding unvested stock options/stock appreciation rights granted to the Executive during the Employment Term (including the Option) shall become fully vested and exercisable for six (6) months following the Change of Control date and all outstanding equity-based and other long-term compensation awards, other than stock options/stock appreciation rights, shall become fully vested and the restrictions thereon shall lapse; provided, that, any delays in the settlement or payment of such awards that are set forth in the applicable award agreement and that are required under Section 409A shall remain in effect. The Company's obligations to provide the Severance Amount and Medical Benefit Continuation described in this Section 3.2(b) shall be conditioned upon the Executive's continued compliance with his obligations under Section 4 of this Agreement and the Executive's execution and delivery to the Company of the Release attached hereto as Exhibit B and the period (if any) during which the Release can be revoked has expired within such 45-day period.

(c) Definitions. For purposes of Section 3, the following terms have the following meanings:

(1) "Cause" shall mean: (i) the Executive's substantial failure to perform his duties (other than any such failure resulting from incapacity due to physical or mental disability) that continues for 15 calendar days after written notice from the Company; (ii) the Executive's failure to comply with any valid and legal directive of the Company's Executive Chairman or the Board (as applicable) that continues for 15 calendar days after written notice from the Company; (iii) the Executive's engagement in dishonesty, illegal conduct, or misconduct, which, in each case, materially harms or is reasonably likely to materially harm the Company or its subsidiaries; (iv) the Executive's embezzlement, misappropriation, or fraud, whether or not related to the Executive's employment with the Company; (v) the Executive's conviction of or plea of guilty or nolo contendere to a crime that constitutes a felony; (vi) the Executive's willful violation of a material policy of the Company; (vii) the Executive's willful or grossly negligent unauthorized disclosure of Confidential Information (as defined below); or (viii) the Executive's material breach of any material obligation under this Agreement or any other written agreement between the Executive and the Company that continues for 15 calendar days after written notice from the Company (if such breach is reasonably curable); or (ix) any willful material failure by the Executive to comply with the Company's written policies or written rules, as they may be in effect from time to time.

(2) "Change in Control" shall have the meaning defined in subparagraph (ii) of the definition of such term under the Appendix in the Equity Incentive Plan as in effect on the date hereof.

(3) "Disability" shall occur when the Executive is entitled to receive long-term disability benefits under the Company's long-term disability plan, or if there is no such plan, the Executive's inability, due to physical or mental incapacity, to perform the essential functions of his job for one hundred eighty (180) calendar days out of any three hundred sixty-five (365) day period or one hundred twenty (120) consecutive calendar days. Any question as to the existence of the Executive's Disability as to which the Executive and the Company cannot agree shall be determined in writing by a qualified independent physician mutually acceptable to the Executive and the Company. If the Executive and the Company cannot agree as to a qualified independent physician, each shall appoint such a physician and those two physicians shall select a third who shall make such determination in writing. The determination of Disability made in writing to the Company and the Executive shall be final and conclusive for all purposes of this Agreement.

(4) "Good Reason" shall mean the occurrence of any of the following, in each case without the Executive's written consent: (i) a material reduction of at least ten (10) percent of the Executive's Base Salary other than a general reduction in Base Salary that affects all similarly situated executives in substantially the same position; (ii) a material reduction of at least thirty (30) percent of the Target Annual Bonus Opportunity; (iii) a permanent relocation of the Executive's principal place of employment by more than 35 miles; (iv) any material breach by the Company of any material provision of this Agreement; (v) a material adverse change in the Executive's title, authority, duties, or responsibilities (including the reporting structure applicable to the Executive, (other than temporarily while the Executive is physically or mentally incapacitated; or (vi) a failure to nominate the Executive as a member of the Board; provided, however, Executive cannot terminate his employment for Good Reason unless he has provided written notice to the Company of the existence of the circumstances providing grounds for termination for Good Reason within 60 calendar days of the initial existence of such grounds and the Company has had 30 calendar days from the date on which such notice is provided to cure such circumstances. If the Executive does not terminate his employment for Good Reason within 60 calendar days after expiration of the cure period (in which the Company shall not have so cured such grounds), then the Executive will be deemed to have waived his right to terminate for Good Reason with respect to such grounds.

3.3. Exclusive Remedy. The foregoing payments and benefits upon termination of the Executive's employment shall constitute the exclusive severance payments and benefits due the Executive upon a termination of his employment.

3.4. Resignation from All Positions. Upon the termination of the Executive's employment with the Company for any reason, the Executive shall resign, as of the Termination Date, from all positions he then holds as an officer, director, and employee and member of the boards of directors (and any committee thereof) of the Company and its subsidiaries. The Executive shall be required to execute such writings as are required to effectuate the foregoing.

3.5. Cooperation. Following the termination of the Executive's employment with the Company for any reason, the Executive shall reasonably cooperate with the Company upon reasonable request of the Board or the Executive Chairman and be reasonably available to the Company (taking into account the Executive's other business endeavors) with respect to matters arising out of the Executive's services to the Company and its subsidiaries, including, in connection with any legal proceeding, providing testimony and affidavits; provided that, the Company shall make reasonable efforts to minimize disruption of the Executive's other activities. The Company shall reimburse the Executive for reasonable expenses incurred in connection with such cooperation.

Section 4. Unauthorized Disclosure; Non-Competition; Non-Solicitation; Interference with Business Relationships; Proprietary Rights.

4.1. Acknowledgements. The Executive understands that the nature of the Executive's position gives him access to and knowledge of Confidential Information and places him in a position of trust and confidence with the Company. The Executive understands and acknowledges that the services he provides to the Company are unique, special, or extraordinary. The Executive further understands and acknowledges that the Company's ability to reserve these for the exclusive knowledge and use of the Company is of great competitive importance and commercial value to the Company, and that improper use or disclosure by the Executive is likely to result in unfair or unlawful competitive activity. The Executive further understands and acknowledges because of the Executive's experience with and relationship to the Company, he will have access to and learn about much or all of the Company's customer information. The Executive further acknowledges that the Company conducts business throughout the United States and in various parts of the world.

4.2. Unauthorized Disclosure. The Executive agrees and understands that in the Executive's position with the Company, the Executive has been and will be exposed to and has and will receive information relating to the confidential affairs of the Company and its affiliates, including, without limitation, technical information, intellectual property, business and marketing plans, strategies, customer information, software, other information concerning the products, promotions, development, financing, expansion plans, business policies and practices of the Company and its affiliates and other forms of information considered by the Company and its affiliates to be confidential or in the nature of trade secrets (including, without limitation, ideas, research and development, know-how, formulas, technical data, designs, drawings, specifications, customer and supplier lists, pricing and cost information and business and marketing plans and proposals) (collectively, the "Confidential Information"). Confidential Information shall not include information that is generally known to the public or within the relevant trade or industry other than due to the Executive's violation of this Section 4.2 or disclosure by a third party who is known by the Executive to owe the Company an obligation of confidentiality with respect to such information. Except as the Executive reasonably determines necessary to discharge his duties or otherwise as provided in Section 4.8, the Executive agrees that at all times during the Executive's employment with the Company and thereafter, the Executive shall not disclose such Confidential Information, either directly or indirectly, to any individual, corporation, partnership, limited liability company, association, trust or other entity or organization (each a "Person") without the prior written consent of the Company and shall not use or attempt to use any such information in any manner other than in connection with his employment with the Company. This confidentiality covenant has no temporal, geographical or territorial restriction. Upon termination of the Executive's employment with the Company, the Executive shall promptly supply to the Company all property, keys, notes, memoranda, writings, lists, files, reports, customer lists, correspondence, tapes, disks, cards, surveys, maps, logs, machines, technical data and any other tangible product or document which has been produced by, received by or otherwise submitted to the Executive during or prior to the Executive's employment with the Company, and any copies thereof in his (or capable of being reduced to his) possession. To the extent the Executive maintains and Confidential Information or material of the Company on any personal computer, email account, PDA, cloud, or other storage device, the Executive agrees to fully cooperate with the Company in permanently removing such information and material from such devices.

4.3. Non-Competition. In consideration for the promises made by the Company herein, the Executive agrees that the Executive shall not, during the Executive's employment with the Company (whether during the Initial or Renewal Term) and for the one year period following the Executive's termination of employment for any reason (the "Restriction Period"), directly or indirectly, own, manage, operate, join, control, be employed by, or participate in the ownership, management, operation or control of, or be connected in any manner with, including, without limitation, holding any position as a stockholder, director, officer, consultant, independent contractor, employee, partner, or investor in, any Restricted Enterprise (as defined below); provided, that in no event shall ownership by the Executive of two percent (2%) or less of the outstanding securities of any class of any issuer whose securities are registered under the Securities Exchange Act of 1934, as amended, standing alone, be prohibited by this Section 4.3, so long as the Executive does not have, or exercise, any rights to manage or operate the business of such issuer other than rights as a stockholder thereof. For purposes of this paragraph, "Restricted Enterprise" shall mean any Person that, on the Termination Date, is engaged, directly or indirectly, in (or intends or proposes to engage in, or has been organized for the purpose of engaging in) a business of developing or commercializing biopharmaceutical therapies for those therapeutic indications that the Company or its subsidiaries has either commercialized products or programs in pre-clinical or clinical development or has undertaken material efforts to so engage on the Termination Date, in any country or territory in which on the Termination Date the Company or any of its affiliates markets any of its services or products or has material plans to begin marketing any of its services or products in such country or territory; provided, that if such business of any such Person which otherwise would be a Restricted Enterprise is immaterial to the other businesses of such Person and part of a separate division or subsidiary from that which Executive is then employed, then such Person shall not be deemed to be a Restricted Enterprise.

4.4. Non-Solicitation of Employees. During the Restriction Period, the Executive shall not directly or indirectly, hire, contact, recruit, induce or solicit (or assist any Person to hire, contact, induce or solicit) for employment or other services any person who is, or within twelve (12) months prior to the date of such hiring, contacting, inducing or solicitation was, an employee, independent contractor, or consultant of the Company or any of its subsidiaries. For purposes of this Paragraph 4.4, independent contractors and consultants refer to such persons, companies, or entities that on or prior to the Termination Date performed services related to the business of the Company.

4.5. Non-Solicitation of Customers. During the Restriction Period, the executive shall not directly or indirectly, solicit, contact (including but not limited to e-mail, regular mail, express mail, telephone, fax, and instant message), attempt to contact, or meet with the Company's current, former, or prospective customers for purposes of offering or accepting goods or services for Restricted Enterprises or cause any such customer to terminate or diminish their commercial relationship with the Company. For purposes of this Agreement, a "prospective customer" is any person or entity with whom the Company is or was engaged in material communications with respect to potential business transactions at the time of employment termination or six (6) months prior to date of the Termination Date.

4.6. Proprietary Rights. The Executive shall disclose promptly to the Company any and all inventions, discoveries, and improvements (whether or not patentable or registrable under copyright or similar statutes), and all patentable or copyrightable works, initiated, conceived, discovered, reduced to practice, or made by him, either alone or in conjunction with others, during the Executive's employment with the Company, and related to the business or activities of the Company and its affiliates, other than such works initiated, conceived, discovered, reduced to practice, or made by the Executive on his personal time and without using any Company resources, equipment or facilities, (the "Developments"). Except to the extent any rights in any Developments constitute a work made for hire under the U.S. Copyright Act, 17 U.S.C. § 101 et seq. that are owned ab initio by the Company and/or its applicable affiliate, the Executive assigns and agrees to assign all of his right, title and interest in all Developments (including all intellectual property rights therein) to the Company or its nominee without further compensation, including all rights or benefits therefor, including without limitation the right to sue and recover for past and future infringement. The Executive acknowledges that any rights in any Developments constituting a work made for hire under the U.S. Copyright Act, 17 U.S.C. § 101 et seq. are owned upon creation by the Company and/or its applicable affiliate as the Executive's employer. Whenever requested to do so by the Company, the Executive shall execute any and all applications, assignments or other instruments which the Company shall deem necessary to apply for and obtain trademarks, patents or copyrights of the United States or any foreign country or otherwise protect the interests of the Company and its affiliates therein. These obligations shall continue beyond the end of the Executive's employment with the Company with respect to inventions, discoveries, improvements or copyrightable works initiated, conceived or made by the Executive while employed by the Company, and shall be binding upon the Executive's employers, assigns, executors, administrators and other legal representatives. If the Company is unable for any reason, after reasonable effort, to obtain the Executive's signature on any document needed in connection with the actions described in this Section 4.6, the Executive hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as the Executive's agent and attorney in fact to act for and on the Executive's behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of this Section 4.6 with the same legal force and effect as if executed by the Executive.

4.7. Remedies. The Executive agrees that any breach of the terms of this Section 4 would result in irreparable injury and damage to the Company for which the Company would have no adequate remedy at law; the Executive therefore also agrees that in the event of said breach or any threat of breach, the Company shall be entitled to an immediate injunction and restraining order to prevent such breach and/or threatened breach and/or continued breach by the Executive and/or any and all Persons acting for and/or with the Executive, without having to prove damages, post any bond, or furnish any other security. The terms of this paragraph shall not prevent the Company from pursuing any other available remedies for any breach or threatened breach hereof, including, without limitation, the recovery of damages from the Executive. The Executive and the Company further agree that the provisions of the covenants contained in this Section 4 are reasonable and necessary to protect the businesses of the Company and its affiliates because of the Executive's access to Confidential Information and his material participation in the operation of such businesses. In the event that the Executive willfully and materially breaches any of the covenants set forth in this Section 4, then in addition to any injunctive relief, the Executive will promptly return to the Company any portion of the Severance Amount that the Company has paid to the Executive.

4.8. Disclosure Exceptions. Nothing in this Agreement shall prohibit or restrict Executive from lawfully (a) initiating communications directly with, cooperating with, providing information to, causing information to be provided to, or otherwise assisting in an investigation by any governmental or regulatory agency, entity, or officials, including the Securities and Exchange Commission and the Equal Employment Opportunity Commission (collectively, "Governmental Authorities") regarding a possible violation of any law; (b) responding to any inquiry or legal process directed to Executive individually (and not directed to the Company) from any such Governmental Authorities; (c) testifying, participating or otherwise assisting in an action or proceeding by any such Governmental Authorities relating to a possible violation of law; or (d) making any other disclosures that are protected under the whistleblower provisions of any applicable law. Notwithstanding the foregoing, Executive agrees that in making any such disclosures or communications, Executive will take all reasonable precautions to prevent any unauthorized use or disclosure of any information that may constitute Company Confidential Information to any parties other than any Governmental Authority. Executive further understands that Executive is not permitted to disclose the Company's attorney-client privileged communications or attorney work product unless required by applicable law. Additionally, pursuant to the federal Defend Trade Secrets Act of 2016, Executive shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (i) is made (A) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (B) solely for the purpose of reporting or investigating a suspected violation of law; or (ii) is made to Executive's attorney in relation to a lawsuit for retaliation against Executive for reporting a suspected violation of law; or (iii) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Nor does this Agreement require Executive to obtain prior authorization from the Company before engaging in any conduct described in this Section 4.8, or to notify the Company that he has engaged in any such conduct.

Section 5. Representations. The Executive represents and warrants that (a) he is not subject to any contract, arrangement, policy or understanding, or to any statute, governmental rule or regulation, that in any way limits his ability to enter into and fully perform his obligations under this Agreement and (b) he is not otherwise unable to enter into and fully perform his obligations under this Agreement.

Section 6. Non-Disparagement. Subject to Section 4.8, the Executive agrees and covenants that he will not at any time make, publish or communicate to any person or entity or in any public forum any defamatory or disparaging remarks, comments, or statements concerning the Company or its businesses, or any of its employees, officers, and existing and prospective customers, suppliers, investors and other associated third parties. The Company agrees and covenants that it will instruct its Board members and executive officers to not at any time make, publish or communicate to any person or entity or in any public forum any defamatory or disparaging remarks, comments, or statements concerning the Executive or his business.

Section 7. Taxes.

7.1. Withholding. All amounts paid to the Executive under this Agreement during or following the Employment Period shall be subject to withholding and other employment taxes imposed by applicable law. The Executive shall be solely responsible for the payment of all taxes imposed on the Executive relating to the payment or provision of any amounts or benefits hereunder.

Section 8. Miscellaneous.

8.1. Indemnification. In the event that the Executive is made a party or threatened to be made a party to any action, suit, or proceeding, whether civil, criminal, administrative or investigative (a "Proceeding"), other than any Proceeding initiated by the Executive or the Company related to any contest or dispute between the Executive and the Company or any of its affiliates with respect to this Agreement or the Executive's employment hereunder, by reason of the fact that the Executive is or was a director or officer of the Company, or any affiliate of the Company, or is or was serving at the request of the Company as a director, officer, member, employee or agent of another corporation or a partnership, joint venture, trust or other enterprise, the Executive shall be indemnified and held harmless by the Company to the maximum extent permitted under applicable law from and against any liabilities, costs, claims and expenses, including all costs and expenses incurred in defense of any Proceeding (including attorneys' fees). Costs and expenses incurred by the Executive in defense of such Proceeding (including attorneys' fees) shall be paid by the Company in advance of the final disposition of such litigation upon receipt by the Company of: (i) a written request for payment; (ii) appropriate documentation evidencing the incurrence, amount and nature of the costs and expenses for which payment is being sought; and (iii) an undertaking adequate under applicable law made by or on behalf of the Executive to repay the amounts so paid if it shall ultimately be determined that the Executive is not entitled to be indemnified by the Company under this Agreement. The Executive shall be covered under any directors' and officers' insurance that the Company maintains for its directors and other officers in the same manner and on the same basis as the Company's directors and other executive officers. This Section 8.1 shall survive any expiration or termination of this Agreement or any termination of the Executive's employment.

8.2. Amendments and Waivers. This Agreement and any of the provisions hereof may be amended, waived (either generally or in a particular instance and either retroactively or prospectively), modified or supplemented, in whole or in part, only by written agreement signed by the Parties hereto; provided, that, the observance of any provision of this Agreement may be waived in writing by the Party that will lose the benefit of such provision as a result of such waiver. The waiver by any Party hereto of a breach of any provision of this Agreement shall not operate or be construed as a further or continuing waiver of such breach or as a waiver of any other or subsequent breach, except as otherwise explicitly provided for in such waiver. Except as otherwise expressly provided herein, no failure on the part of either Party to exercise, and no delay in exercising, any right, power or remedy hereunder, or otherwise available in respect hereof at law or in equity, shall operate as a waiver thereof, nor shall any single or partial exercise of such right, power or remedy by such Party preclude any other or further exercise thereof or the exercise of any other right, power or remedy.

8.3. Assignment; No Third-Party Beneficiaries. This Agreement, and the Executive's rights and obligations hereunder, may not be assigned by the Executive, and any purported assignment by the Executive in violation hereof shall be null and void. Nothing in this Agreement shall confer upon any Person not a party to this Agreement, or the legal representatives of such Person, any rights or remedies of any nature or kind whatsoever under or by reason of this Agreement, except the personal representative of the deceased Executive may enforce the provisions hereof applicable in the event of the death of the Executive. The Company is authorized to assign this Agreement to a successor to substantially all of its assets; provided, following such assignment, a "Restricted Enterprise" shall be only those Persons constituting as such immediately prior to such assignment.

8.4. Notices. Unless otherwise provided herein, all notices, requests, demands, claims and other communications provided for under the terms of this Agreement shall be in writing. Any notice, request, demand, claim or other communication hereunder shall be sent by (i) personal delivery (including receipted courier service) or overnight delivery service, with confirmation of receipt, (ii) facsimile during normal business hours, with confirmation of receipt, to the number indicated, (iii) reputable commercial overnight delivery service courier, with confirmation of recipient or (iv) registered or certified mail, return receipt requested, postage prepaid and addressed to the intended recipient as set forth below:

If to the Company:

Abeona Therapeutics, Inc.
1330 Avenue of the Americas, 33rd Floor
New York, NY 10019
Attention: _____

with a copy to:

John J. Concannon III, Esq.
Morgan Lewis & Bockius LLP
One Federal Street
Boston, MA 02110

If to the Executive: At his principal office at the Company (during the Employment Period), and at all times to his principal residence as reflected in the records of the Company.

All such notices, requests, consents and other communications shall be deemed to have been given when received. Either Party may change its facsimile number or its address to which notices, requests, demands, claims and other communications hereunder are to be delivered by giving the other parties hereto notice in the manner then set forth.

8.5. Governing Law. This Agreement shall be construed and enforced in accordance with, and the laws of the State of New York, without giving effect to the conflicts of law principles thereof.

8.6. Section 409A.

(a) To the extent applicable, it is intended that this Agreement (including all amendments hereto) either meet the requirements for exclusion from coverage under Section 409A of the Internal Revenue Code and the Treasury Regulations thereunder ("Section 409A"), or alternatively comply with the requirements of Section 409A, so that the income inclusion provisions of Section 409A(a)(1) do not apply to the Executive. This Agreement shall be interpreted and administered in a manner consistent with this intent.

(b) To the extent that payment of amounts under this Agreement that are subject to Section 409A are payable upon the Executive's termination of employment, such amounts shall only be payable if such termination also constitutes a "separation from service," within the meaning of Section 409A, from the Company. If the Executive is deemed on the date of his separation from service to be a "specified employee" (within the meaning of Section 409A(a)(2)(B)) of the Company, then, notwithstanding any other provision herein, with regard to any payment that is "nonqualified deferred compensation" subject to Section 409A and that is payable on account of the Executive's "separation from service," such payment shall not be made prior to the earlier of (i) the expiration of six months following the date of the Executive's separation from service, and (ii) the date of the Executive's death, following which all payments so delayed shall be paid to the Executive in a lump sum without interest.

(c) Any taxable reimbursement of business or other expenses provided for under this Agreement that is subject to Section 409A shall be subject to the following conditions: (i) the expenses eligible for reimbursement in one taxable year shall not affect the expenses eligible for reimbursement in any other taxable year; (ii) the reimbursement of an eligible expense shall be made no later than the end of the year after the year in which such expense was incurred; and (iii) the right to reimbursement shall not be subject to liquidation or exchange for another benefit.

(d) In applying Section 409A to amounts paid pursuant to this Agreement, any right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments. Whenever a payment under this Agreement specifies a payment period within a specified number of days, the actual date of payment within the specified period shall be within the sole discretion of the Company.

8.7. Severability. Whenever possible, each provision or portion of any provision of this Agreement, including those contained in Section 4 hereof, will be interpreted in such manner as to be effective and valid under applicable law but the invalidity or unenforceability of any provision or portion of any provision of this Agreement in any jurisdiction shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of this Agreement, including that provision or portion of any provision, in any other jurisdiction. In addition, should a court or arbitrator determine that any provision or portion of any provision of this Agreement, including those contained in Section 4 hereof, is not reasonable or valid, either in period of time, geographical area, or otherwise, the Parties hereto agree that such provision should be interpreted and enforced to the maximum extent which such court or arbitrator deems reasonable or valid.

8.8. Entire Agreement; Inconsistency. From and after the Effective Date, this Agreement constitutes the entire agreement between the Parties hereto, and supersedes all prior representations, agreements and understandings (including any prior course of dealings), both written and oral, between the Parties hereto with respect to the subject matter hereof. In the event of any inconsistency between this Agreement and any other plan, program, practice or agreement in which the Executive is a participant or a party, this Agreement shall control unless such other plan, program, practice or agreement is more favorable to the Executive (term by term) or specifically refers to this Agreement as not controlling.

8.9. Counterparts. This Agreement may be executed by .pdf or facsimile signatures in any number of counterparts, each of which shall be deemed an original, but all such counterparts shall together constitute one and the same instrument.

8.10. Binding Effect. This Agreement shall inure to the benefit of, and be binding on, the successors and assigns of each of the Parties, including, without limitation, the Executive's heirs and the personal representatives of the Executive's estate and any successor to all or substantially all of the business and/or assets of the Company.

8.11. General Interpretive Principles. The name assigned this Agreement and headings of the sections, paragraphs, subparagraphs, clauses and subclauses of this Agreement are for convenience of reference only and shall not in any way affect the meaning or interpretation of any of the provisions hereof. Words of inclusion shall not be construed as terms of limitation herein, so that references to "include," "includes" and "including" shall not be limiting and shall be regarded as references to non-exclusive and non-characterizing illustrations. Any reference to a Section of the Code shall be deemed to include any successor to such Section.

[signature page follows]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

Abeona Therapeutics, Inc.

By: /s/Steven H. Rouhandeh
Name: Steven H. Rouhandeh
Title: Executive Chairman

EXECUTIVE

/s/ Frank Carsten Thiel
Frank Carsten Thiel

[Signature Page to [●]'s Employment Agreement]

Exhibit A

[Attach Agreed Form of Stock Option Notice and Agreement]

Exhibit B

YOU ARE ADVISED TO CONSULT AN ATTORNEY BEFORE SIGNING THIS RELEASE OF CLAIMS.

1. In consideration of the payments and benefits to be made under the Employment Agreement, dated as of [●], 2018 (the "Employment Agreement"), by and between Frank Carsten Thiel (the "Executive") and Abeona Therapeutics, a Delaware corporation located at 4848 Lemmon Avenue, Suite 517, Dallas, Texas 75219 (the " Company") (each of the Executive and the Company, a "Party" and collectively, the "Parties"), the sufficiency of which the Executive acknowledges, the Executive, with the intention of binding himself and his heirs, executors, administrators and assigns, does hereby release, remise, acquit and forever discharge the Company and each of its subsidiaries and affiliates (the "Company Affiliated Group "), their present and former officers, directors, executives, shareholders, agents, attorneys, employees and employee benefit plans (and the fiduciaries thereof), and the successors, predecessors and assigns of each of the foregoing (collectively, the "Company Released Parties"), of and from any and all claims, actions, causes of action, complaints, charges, demands, rights, damages, debts, sums of money, accounts, financial obligations, suits, expenses, attorneys' fees and liabilities of whatever kind or nature in law, equity or otherwise, whether accrued, absolute, contingent, unliquidated or otherwise and whether now known or unknown, suspected or unsuspected, which the Executive, individually or as a member of a class, now has, owns or holds, or has at any time heretofore had, owned or held, arising on or prior to the date hereof, against any Company Released Party that arises out of, or relates to, the Employment Agreement, the Executive's employment with the Company or any of its subsidiaries and affiliates, or any termination of such employment, including claims (i) for severance or vacation benefits, unpaid wages, salary or incentive payments, (ii) for breach of contract, wrongful discharge, impairment of economic opportunity, defamation, intentional infliction of emotional harm or other tort, (iii) for any violation of applicable state and local labor and employment laws (including, without limitation, all laws concerning unlawful and unfair labor and employment practices) and (iv) for employment discrimination under any applicable federal, state or local statute, provision, order or regulation, and including, without limitation, any claim under Title VII of the Civil Rights Act of 1964 ("Title VII"), the Civil Rights Act of 1988, the Fair Labor Standards Act, the Americans with Disabilities Act (" ADA"), the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), the Age Discrimination in Employment Act ("ADEA"), and any similar or analogous state statute, excepting only:

A. rights of the Executive arising under, or preserved by, this Release or Section 3 of the Employment Agreement;

B. the right of the Executive to receive COBRA continuation coverage in accordance with applicable law;

C. claims for benefits under any health, disability, retirement, life insurance or other, similar employee benefit plan (within the meaning of Section 3(3) of ERISA) of the Company Affiliated Group;

D. rights to indemnification the Executive has or may have under Section 8.1 of the Employment Agreement, the by-laws or certificate of incorporation of any member of the Company Affiliated Group, or applicable law, and rights an insured under any director's and officer's liability insurance policy now or previously in force; and

E. rights granted to Executive during his employment related to the purchase and/or grant of equity of the Company.

2. The Executive acknowledges and agrees that this Release is not to be construed in any way as an admission of any liability whatsoever by any Company Released Party, any such liability being expressly denied.

3. This Release applies to any relief no matter how called, including, without limitation, wages, back pay, front pay, compensatory damages, liquidated damages, punitive damages, damages for pain or suffering, costs, and attorneys' fees and expenses.

4. The Executive specifically acknowledges that his acceptance of the terms of this Release is, among other things, a specific waiver of his rights, claims and causes of action under Title VII, ADEA, ADA and any state or local law or regulation in respect of discrimination of any kind; provided, however, that nothing herein shall be deemed, nor does anything contained herein purport, to be a waiver of any right or claim or cause of action which by law the Executive is not permitted to waive.

5. As to rights, claims and causes of action arising under ADEA, the Executive acknowledges that he has been given but not utilized a period of [twenty-one (21)]/[forty-five (45)] days to consider whether to execute this Release. If the Executive accepts the terms hereof and executes this Release, he may thereafter, for a period of seven (7) days following (and not including) the date of execution, revoke this Release as it relates to the release of claims arising under ADEA. If no such revocation occurs, this Release shall become irrevocable in its entirety, and binding and enforceable against the Executive, on the day next following the day on which the foregoing seven-day period has elapsed. If such a revocation occurs, the Executive shall irrevocably forfeit any right to payment of the Severance Amount or provision of the Medical Benefit Continuation (as each is defined in the Employment Agreement), but the remainder of the Employment Agreement shall continue in full force.

6. Other than as to rights, claims and causes of action arising under ADEA, this Release shall be immediately effective upon execution by the Executive.

7. The Executive acknowledges and agrees that he has not, with respect to any transaction or state of facts existing prior to the date hereof, filed any complaints, charges or lawsuits against any Company Released Party with any governmental agency, court or tribunal.

8. The Executive acknowledges that he has been advised to seek, and has had the opportunity to seek, the advice and assistance of an attorney with regard to this Release, and has been given a sufficient period within which to consider this Release.

9. The Executive acknowledges that this Release relates only to claims that exist as of the date of this Release.

10. The Executive acknowledges that the severance payments and benefits he is receiving in connection with this Release and his obligations under this Release are in addition to anything of value to which the Executive is entitled from the Company.

11. Each provision hereof is severable from this Release, and if one or more provisions hereof are declared invalid, the remaining provisions shall nevertheless remain in full force and effect. If any provision of this Release is so broad, in scope, or duration or otherwise, as to be unenforceable, such provision shall be interpreted to be only so broad as is enforceable.

12. This Release constitutes the complete agreement of the Parties in respect of the subject matter hereof and shall supersede all prior agreements between the Parties in respect of the subject matter hereof except to the extent set forth herein.

13. The failure to enforce at any time any of the provisions of this Release or to require at any time performance by another party of any of the provisions hereof shall in no way be construed to be a waiver of such provisions or to affect the validity of this Release, or any part hereof, or the right of any party thereafter to enforce each and every such provision in accordance with the terms of this Release.

14. This Release may be executed in several counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument. Signatures delivered by facsimile shall be deemed effective for all purposes.

15. This Release shall be binding upon any and all successors and assigns of the Executive and the Company.

16. Except for issues or matters as to which federal law is applicable, this Release shall be governed by and construed and enforced in accordance with the laws of the State of New York without giving effect to the conflicts of law principles thereof.

[signature page follows]

IN WITNESS WHEREOF, this Release has been signed by or on behalf of each of the Parties, all as of March 29, 2018.

Abeona Therapeutics, Inc.

By: /s/ Steven H. Rouhandeh
Name: Steven H. Rouhandeh
Title: Executive Chairman

EXECUTIVE

/s/ Frank Carsten Thiel
Frank Carsten Thiel

EXHIBIT 31.1

PRINCIPAL EXECUTIVE OFFICER CERTIFICATION PURSUANT TO 18 U.S.C.
SECTION 1350, AS ADOPTED PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Steven H. Rouhandeh, certify that:

1. I have reviewed this report on Form 10-Q of Abeona Therapeutics Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's first fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 10, 2018

/s/ Steven H. Rouhandeh
Steven H. Rouhandeh
Executive Chairman
Principal Executive Officer

EXHIBIT 31.2

PRINCIPAL FINANCIAL OFFICER CERTIFICATION PURSUANT TO 18 U.S.C.
SECTION 1350, AS ADOPTED PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen B. Thompson, certify that:

1. I have reviewed this report on Form 10-Q of Abeona Therapeutics Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's first fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 10, 2018

/s/ Stephen B. Thompson
Stephen B. Thompson
Sr. Vice President Finance
Principal Financial and
Accounting Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C.
SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

This certification set forth below is hereby made solely for the purposes of satisfying the requirements of Section 906 of the Sarbanes-Oxley Act of 2002 and may not be relied upon or used for any other purposes.

A signed original of this written statement required by Section 906 has been provided to Abeona Therapeutics Inc. and will be retained by Abeona Therapeutics Inc. and furnished to the SEC or its staff upon its request.

Pursuant to Section 906 of the Public Company Accounting Reform and Investor Act of 2002 (18 U.S.C. 1350, as adopted, the “Sarbanes-Oxley Act”), Steven H. Rouhandeh, Executive Chairman of Abeona Therapeutics Inc. (the "Company") hereby certifies that to his knowledge the report on Form 10-Q for the period ended March 31, 2018 of the Company filed with the Securities and Exchange Commission on the date hereof (the "Report") fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the period specified.

Signed at the City of New York, in the State of New York, this 10th day of May, 2018.

/s/ Steven H. Rouhandeh
Steven H. Rouhandeh
Executive Chairman
Principal Executive Officer

EXHIBIT 32.2

CERTIFICATION PURSUANT TO 18 U.S.C.
SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

This certification set forth below is hereby made solely for the purposes of satisfying the requirements of Section 906 of the Sarbanes-Oxley Act of 2002 and may not be relied upon or used for any other purposes.

A signed original of this written statement required by Section 906 has been provided to Abeona Therapeutics Inc. and will be retained by Abeona Therapeutics Inc. and furnished to the SEC or its staff upon its request.

Pursuant to Section 906 of the Public Company Accounting Reform and Investor Act of 2002 (18 U.S.C. 1350, as adopted, the “Sarbanes-Oxley Act”), Stephen B. Thompson, Vice President Finance of the Company hereby certifies that to his knowledge the report on Form 10-Q for the period ended March 31, 2018 of the Company filed with the Securities and Exchange Commission on the date hereof (the "Report") fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the period specified.

Signed at the City of New York, in the State of New York, this 10th day of May, 2018.

/s/ Stephen B. Thompson
Stephen B. Thompson
Sr. Vice President Finance
Principal Financial and Accounting Officer