

**50 Health Sciences Drive,
Stony Brook, New York**

11790

(631) 840-8800

(Address of principal executive offices) (Zip Code)

(Registrant's telephone number,
including area code)

Securities registered under Section 12(b) of the Act:

| Title of Each Class | Name of each Exchange on Which Registered |
|-----------------------------------|--|
| Common Stock, \$0.001 par value | The NASDAQ Capital Market |
| Warrants to purchase Common Stock | The NASDAQ Capital Market |

Securities registered under Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

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 every Interactive Data File required to be submitted 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 such files).

Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. "

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

Large accelerated filer " Accelerated filer " Non-accelerated filer Smaller reporting company

Emerging growth company "

If an emerging growth company, indicate by a check mark if the registrant has elected to not use the extended transition period of complying with any new or revised financial accounting 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 Act). " Yes
 No

The aggregate market value of the Registrant's voting and non-voting common stock held by non-affiliates of the Registrant, based upon the last sale price of the common stock reported on The Nasdaq Capital Market as of the last business day of the Registrant's most recently completed second fiscal quarter (March 31, 2018), was approximately \$38 million. Shares of the Registrant's common stock held by each executive officer and director and by each entity or person that, to the Registrant's knowledge, owned 5% or more of the Registrant's outstanding common stock as of March 31, 2018 have been excluded in that such persons may be deemed to be affiliates of the Registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of December 14, 2018, the Registrant had outstanding 30,112,057 shares of common stock, par value \$0.001 per share.

DOCUMENTS INCORPORATED BY REFERENCE

None.

EXPLANATORY NOTE

Applied DNA Sciences, Inc. (the “Company”, “we”, “us”, or “our”) is filing this Amendment No. 1 to Form 10-K (this “Amendment”) to amend its Annual Report on Form 10-K for the fiscal year ended September 30, 2018, which was originally filed with the Securities and Exchange Commission (the “SEC”) on December 18, 2018 (the “Original Filing”).

We are filing this Amendment solely for the purpose of including in Part III the information that was to be incorporated by referenced from the Company’s definitive proxy statement for its 2019 Annual Meeting of Stockholders because the Company’s definitive proxy statement will not be filed with the SEC within 120 days after the end of the Company’s fiscal year ended September 30, 2018. This amendment amends and restates in its entirety Items 10, 11, 12, 13 and 14 of Part III and amends and restates in its entirety Part IV of the Original Filing to include the prior exhibits and additional certifications required of the principal executive officer and principal financial officer under Section 302 of the Sarbanes-Oxley Act of 2002. Because no financial statements are contained within this Amendment, we are not including new certifications pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Except as described above, no other changes have been made to the Original Filing and the Original Filing continues to speak as of the date of the Original Filing. Except as expressly set forth herein, this Amendment does not reflect events occurring after the date of the Original Filing or modify or update any of the other disclosures contained therein in any way other than as required to reflect the amendments discussed above. Accordingly, this Amendment should be read in conjunction with the Original Filing and the Company’s other filings with the SEC.

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Part III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

Board of Directors, Executive Officers and Key Employees

The Board of Directors (the “Board of Directors”) currently consists of eight members. The term of each Director expires at our next annual meeting or until his or her successor is appointed. Our executive officers are elected by, and serve at the discretion of the Board of Directors. There are no family relationships between any directors or executive officers.

The ages of the directors and executive officers are shown as of September 30, 2018.

| Name | Position |
|-------------------------------|---|
| James A. Hayward | Chief Executive Officer, President and Chairman of the Board of Directors |
| John Bitzer, III | Director |
| Robert B. Catell | Director |
| Joseph D. Ceccoli | Director |
| Charles S. Ryan | Director |
| Sanford R. Simon | Director |
| Yacov A. Shamash | Director |
| Elizabeth M. Schmalz Ferguson | Director |
| Beth Jantzen | Chief Financial Officer |
| Judith Murrah | Chief Information Officer |

Set forth below is biographical information with respect to the aforementioned individuals.

James A. Hayward, Ph.D., Sc.D. 65

Dr. James A. Hayward has been our Chief Executive Officer since March 17, 2006 and our President and the Chairman of the Board of Directors since June 12, 2007. He was previously our acting Chief Executive Officer since October 5, 2005. He also served as Acting Chief Financial Officer from August 20, 2013 through October 13, 2013.

Dr. Hayward received his Ph.D. in Molecular Biology from the State University of New York at Stony Brook in 1983 and an honorary Doctor of Science from the same institution in 2000. His experience with public companies began with the co-founding of one of England's first biotechnology companies—Biocompatibles. Following this, Dr. Hayward was Head of Product Development for the Estee Lauder companies for five years. In 1990 he founded The Collaborative Group, a provider of products and services to the biotechnology, pharmaceutical and consumer-product industries based in Stony Brook, where he served as Chairman, President and Chief Executive Officer for 14 years. During this period, The Collaborative Group created several businesses, including The Collaborative BioAlliance, a contract developer and manufacturer of human gene products that was sold to Dow Chemical in 2002, and Collaborative Labs, a service provider and manufacturer of ingredients for skincare and dermatology that was sold to Engelhard (now BASF) in 2004. Dr. Hayward also serves on the board of directors for the Regents Council, Softheon Corporation and NeoMatrix Formulations, Inc.

Dr. Hayward's experience and senior leadership positions in companies in the biotechnology, pharmaceutical and consumer-product industries, and specifically his qualifications and skills in the areas of general operations, financial operations and administration, as well as his role as the Company's Chief Executive Officer and President led the Board of Directors to conclude that Dr. Hayward should serve as a director of the Company.

Yacov Shamash 68

Dr. Yacov A. Shamash has been a member of the Board of Directors since March 17, 2006. Dr. Shamash is Vice President of Economic Development at the State University of New York at Stony Brook, a position he has held since 2000. From 1992 to 2015, he was the Dean of Engineering and Applied Sciences, and from 1995 to 2004, Dr. Shamash was also the Dean of the Harriman School for Management and Policy at the University. He was founder of the New York State Center for Excellence in Wireless and Information Technology at the University. Dr. Shamash developed and directed the NSF Industry/University Cooperative Research Center for the Design of Analog/Digital Integrated Circuits from 1989 to 1992 and also served as Chairman of the Electrical and Computer Engineering Department at Washington State University from 1985 until 1992. Dr. Shamash also serves on the board of directors of public companies Comtech Telecommunications Corp. and Keytronic Corp. Dr. Shamash holds a Ph.D. degree in Electrical Engineering from Imperial College of Science and Technology in London, England.

Dr. Shamash daily encounters leaders of businesses large and small, regional and global in their reach and, as a member of our Board of Directors, has played an integral role in our business development by providing the highest-level introductions to customers, channels to market and to the media. Dr. Shamash also brings to our Board of Directors his valuable experience gained from serving as a director at other private and public companies. The Board of Directors believes that Dr. Shamash's technical experience and other abilities make him a valuable member of the Board of Directors.

Sanford R. Simon 76

Dr. Sanford R. Simon has been a member of the Board of Directors since March 17, 2006. Dr. Simon has been a Professor of Biochemistry, Cell Biology and Pathology at Stony Brook since 1997. He joined the faculty at Stony Brook as an Assistant Professor in 1969 and was promoted to Associate Professor with tenure in 1975. Dr. Simon was a member of the board of directors of The Collaborative Group from 1995 to 2004. From 1967 to 1969, Dr. Simon was a Guest Investigator at Rockefeller University. Dr. Simon received a B.A. in Zoology and Chemistry from Columbia University in 1963, a Ph.D. in Biochemistry from Rockefeller University in 1967, and studied as a postdoctoral fellow with Nobel Prize winner Max Perutz in Cambridge, England. He maintains an active research laboratory studying aspects of cell invasion in cancer and inflammation and novel strategies of drug delivery; he also teaches undergraduate, graduate, medical and dental students.

Dr. Simon is an expert at the use of large biomolecules in commercial media, and we have made use of his expertise in formulating DNA into commercial carriers for specific customers. As a member of our Board of Directors, Dr. Simon has advised us on patents, provided technical advice, and introduced us to corporate partners and customers. The Board of Directors believes that Dr. Simon's advice makes him a valuable member of the Board of Directors.

John Bitzer, III 57

John Bitzer, III, joined the Board of Directors on August 10, 2011. Mr. Bitzer is President and Chief Executive Officer of ABARTA, a private, third and fourth generation family holding-company with operations in the soft drink, energy, and frozen food industries. In 1985, Mr. Bitzer began his career in sales for the Cleveland Coca-Cola Bottling Company. He has been Publisher of Atlantic City Magazine in Atlantic City, N.J. In 1994, he founded the ABARTA Media Group and held the position of Group Publisher. In 1997, he was named President and Chief Operating Officer of ABARTA and has been President and Chief Executive Officer since 1999. Mr. Bitzer has a bachelor's degree from the University of Southern California and a Masters of Business Administration ("MBA") from the University of Michigan. Mr. Bitzer's experience as an executive officer and director of several private companies and organizations led the Board of Directors to conclude that he should serve as a director of the Company. In connection with the investment in the Company by Delabarta, Inc. ("Delabarta"), a wholly owned subsidiary of ABARTA, during July 2011, we agreed to use best efforts to nominate its designee, Mr. Bitzer, to the Board of Directors and elect Mr. Bitzer as a director within 30 days of the closing and to nominate and include Mr. Bitzer on the slate of nominees for the Board of Directors for election by stockholders at the annual meetings of stockholders for so long as Delabarta owns at least 2% of the outstanding shares of common stock of the Company.

Charles Ryan 54

Dr. Charles S. Ryan joined the Board of Directors on August 10, 2011. Since February 2018, he has been the Chief Executive Officer of Neurotrope Bioscience, Inc. (“Neurotrope”), a public, clinical-stage biopharmaceutical company. In addition, Dr. Ryan became a member of Neurotrope’s Board of Directors effective December 14, 2017. From October 2016 until February 14, 2018, he was Chief Executive Officer of Orthobond, Inc. From March 2015 until October 2016, Dr. Ryan was Vice President and General Counsel for Cold Spring Harbor Laboratory, a preeminent international research institution. Prior to that, Dr. Ryan was the Senior Vice President, and Chief Intellectual Property Counsel at Forest Laboratories, where he was employed from 2003 to 2014. Dr. Ryan has over 20 years’ experience in managing all aspects of intellectual property litigation, conducting due diligence investigations and prosecuting patent and trademark applications in the pharmaceutical and biotechnology industries. Dr. Ryan earned a doctorate in oral biology and pathology from SUNY Stony Brook and a law degree from Western New England College School of Law. Dr. Ryan also serves on the board of directors of public company Biorestorative Therapies, Inc. Dr. Ryan is an experienced executive and the Board of Directors believes his extensive background in pharmaceuticals and biotechnology, as well as legal and public policy, is an asset to the Board of Directors.

Joseph D. Ceccoli 55

Joseph D. Ceccoli was appointed to the Board of Directors on December 3, 2014. Since 2010, Mr. Ceccoli has been the Founder, President and CEO of Biocogent, LLC (“Biocogent”), a bioscience company located at the Stony Brook Long Island High Technology Incubator. Biocogent is focused on the invention, development and commercialization of skin-active molecules and treatment products used in regulated (over-the-counter / med-care), personal care and consumer products. Prior to starting Biocogent, Mr. Ceccoli was Global Director of Operations for BASF Corporation, a global Fortune 100 company and the world’s largest global chemical company, where he was responsible for the integration, operations and growth of domestic and overseas business units from 2007 to 2008. Prior to BASF, Mr. Ceccoli was a General Manager for Engelhard Corporation, a U.S.-based Fortune 500 company and chief operating officer of Long Island-based The Collaborative Group from 2004 to 2007. Mr. Ceccoli holds a Bachelor of Science (“B.S.”) degree in Biotechnology from Rochester Institute of Technology and advanced professional training in various pharmaceutical sciences, emulsion chemistry, engineering and management disciplines. He is a member of numerous professional organizations such as the American Chemical Society and the Society of Cosmetic Chemists. Mr. Ceccoli’s experience across the bioscience and chemical markets, including in global and U.S.-based operations and management, enriches our Board of Directors. Mr. Ceccoli’s experience as an executive officer and director of several bioscience and chemical companies and organizations led the Board of Directors to conclude that he should serve as a director of the Company.

Robert Catell 81

Robert B. Catell was appointed to the Board of Directors on October 7, 2016. Since 2006, Mr. Catell has been serving as Chairman of the Advanced Energy Research and Technology Center (AERTC) at Stony Brook University and since 2009 he has been servicing as the Chairman of the New York State Smart Grid Consortium. He served on the Board of New York State Energy Research & Developmental Authority. Among other accomplishments, Mr. Catell was formerly Chairman and CEO of KeySpan Corporation and KeySpan Delivery (formerly Brooklyn Union Gas), and Chairman of National Grid, U.S. and Deputy Chairman of National Grid plc, upon National Grid's acquisition of KeySpan. He also serves on the board of several business and not-for-profit organizations, including public company BioRestorative Therapies, Inc. He has been Chairman of Applied DNA Sciences' Strategic Advisory Board since its inception in February 2016.

Mr. Catell holds both a Master's and Bachelor's degree in Mechanical Engineering from City College of New York and is a registered Professional Engineer. He has attended Columbia University's Executive Development Program, and the Advanced Management Program at the Harvard Business School. Mr. Catell's extensive executive-level management experience, including as a director at other private and public companies and within regulated and technical industries, qualifies him to serve as one of our directors.

Elizabeth Schmalz Ferguson 67

Ms. Elizabeth M. Schmalz Ferguson has been a member of the Board of Directors since June 2017. She has served as President of American Flavors & Fragrances, a fragrance company, since 2007. Ms. Ferguson also serves as President of her own consulting firm, Betsy Schmalz Ferguson & Associates. She served as Senior Vice President of Corporate Product Development at Estée Lauder. Ms. Ferguson's responsibilities included overseeing product development for some of the company's most prominent brands. Subsequently, she was Executive Vice President of Product Development at Bath and Body Works and Victoria's Secret for The Limited. Ms. Ferguson started her senior management career at Revlon with responsibility for new product development for companies including Borghese, Ultima II and Prestige fragrances. She has been Director of Applied DNA Sciences, Inc. since June 1, 2017. She is an active member of Cosmetic Executive Women. She earned a bachelor's degree in psychology from Georgian Court University. Ms. Ferguson's track record of accomplishments as a strategist and products leader within the cosmetics and personal care industries led the Board of Directors to conclude she should serve as a director of the Company.

Beth Jantzen 42

Beth Jantzen was appointed as our Chief Financial Officer, effective February 15, 2015. Ms. Jantzen has held the position of Controller since May 2013. Prior to joining the Company, Ms. Jantzen was a senior manager at Marcum LLP, our independent registered accounting firm since June 23, 2014, from January 2000, where she managed multiple engagements and specialized in SEC policies, practices and procedures, including Sarbanes-Oxley compliance. Ms. Jantzen holds a B.S. in Accounting from the State University of New York at Binghamton and is also a Certified Public Accountant (CPA).

Judith Murrah 59

Ms. Judith Murrah has been our Chief Information Officer since June 1, 2013. Ms. Murrah is responsible for information technology strategy and implementation. Ms. Murrah was previously the Senior Director of Information Technology at Motorola Solutions, which had acquired her former firm, Symbol Technologies. Her role at Motorola Solutions included overseeing global IT program management office, financial and supplier operations and quality assurance. At Symbol, Ms. Murrah held leadership positions in product line management, global account sales, corporate and marketing communications and IT. Ms. Murrah holds an MBA from Harvard Business School, and a B.S. in Industrial Engineering from the University of Rhode Island. She is an author on twelve U.S. patents. Ms. Murrah is co-founder and President of non-profit ConnectToTech, a recognized leader in engaging students in science, technology, engineering and math disciplines. Ms. Murrah was named to 2005 and 2006 Top 50 Women of Long Island and received the inaugural 2001 Diamond Award for Long Island Women Leaders in Technology.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our officers and directors and persons who beneficially own more than 10% of any class of our equity securities registered pursuant to Section 12 of the Exchange Act to file reports of securities ownership and changes in such ownership with the SEC. Officers, directors and greater than 10% beneficial owners (“10% stockholders”) also are required by SEC rules to furnish us with copies of all Section 16(a) forms they file. Based solely upon a review of the copies of such forms furnished to us during or with respect to the fiscal year ended September 30, 2016, as the case may be, and upon written representations from these reporting persons, we believe that none of our officers, directors or 10% stockholders failed to file on a timely basis, as disclosed in the forms described above, reports required by Section 16(a) during fiscal 2018, except as follows: Dr. Hayward filed one late Form 4 on August 31, 2018 for the acquisition and disposition of stock options on July 10, 2018, and one late Form 4 for the issuance of a secured convertible note, Dr. Shamash, Messrs. Bitzer and Catell, and Mses. Ferguson and Murrah each made one late filing on October 10, 2018, each for the issuance of a secured convertible note on August 31, 2018, and Mr. William W. Montgomery filed one late Form 4 on January 8, 2019 for two acquisitions of common stock.

Governance of the Company

Code of Ethics

Our Board of Directors adopted a “code of ethics” as defined by regulations promulgated under the Securities Act and the Exchange Act (our “*Code of Business Conduct and Ethics*”) that applies to all of our employees, officers and directors, including our chief executive officer, our chief financial officer and those officers and employees responsible for financial reporting. The Code of Business Conduct and Ethics is designed to codify the ethical standards that we believe are reasonably designed to deter wrong-doing and promote honest and ethical conduct.

We have established procedures to ensure that suspected violations of the Code of Business Conduct and Ethics may be reported anonymously. A current copy of our Code of Business Conduct and Ethics is available on our website at www.adnas.com/adnas_home/investors/. A copy may also be obtained, free of charge, from us upon a request directed to Applied DNA Sciences, Inc., 50 Health Sciences Drive, Stony Brook, New York 11790, c/o Investor Relations. We intend to disclose any amendments to or waivers of a provision of the Code of Business Conduct and Ethics granted to directors and officers by posting such information on our website available at www.adnas.com and/or in our public filings with the SEC.

Board Committees

The Board of Directors maintains three committees, the audit committee, compensation committee and the nominating committee.

Audit Committee

Messrs. Bitzer (Chairperson), Ryan and Shamash served during the fiscal year ended September 30, 2018, and currently continue to serve, on the audit committee. The Board of Directors has determined that each member of the audit committee is independent within the meaning of the director independence standards of the Company and NASDAQ as well as the heightened director independence standards of the SEC for audit committee members, including Rule 10A-3(b)(1) under the Securities Exchange Act of 1934, as amended (the “*Exchange Act*”). The Board of Directors has also determined that each of the members of the audit committee is financially sophisticated and is able to read and understand consolidated financial statements and that Mr. Bitzer is an “audit committee financial expert” as defined in the Exchange Act.

The composition and responsibilities of the audit committee and the attributes of its members, as reflected in the charter, are intended to be in accordance with applicable requirements for corporate audit committees. The audit committee charter will be reviewed, and amended if necessary, on an annual basis.

The audit committee assists the Board of Directors in fulfilling its oversight responsibility relating to our financial statements and the disclosure and financial reporting process, our system of internal controls, our internal audit function, the qualifications, independence and performance of our independent registered public accounting firm, compliance with our code of ethics and legal and regulatory requirements. The audit committee has the sole authority to appoint, retain, terminate, compensate and oversee the work of the independent registered public accounting firm, as well as to pre-approve all audit and non-audit services to be provided by the independent registered public accounting firm.

Compensation Committee

Messrs. Bitzer, Ceccoli, and Shamash (Chairperson) served on the compensation committee during the fiscal year ended September 30, 2018. The compensation committee reviews and approves salaries and bonuses for all officers, administers options outstanding under our stock incentive plan, provides advice and recommendations to the Board of Directors regarding directors' compensation and carries out the responsibilities required by SEC rules. The compensation committee believes that its processes and oversight should be directed toward attracting, retaining and motivating employees and non-employee directors to promote and advance our interests and strategic goals. As requested by the compensation committee, the Chief Executive Officer will provide information and may participate in discussions regarding compensation for other executive officers. The compensation committee does not utilize outside compensation consultants but considers other general industry information and trends if available.

Nominating Committee

Messrs. Shamash (Chairperson), Bitzer and Simon served during the fiscal year ended September 30, 2018, and currently continue to serve, on the nominating committee. The Board of Directors has determined that each member of the nominating committee is independent within the meaning of the director independence standards of the Company, NASDAQ and the SEC.

The nominating committee is responsible for, among other things: reviewing Board of Directors composition, procedures and committees, and making recommendations on these matters to the Board of Directors; and reviewing, soliciting and making recommendations to the Board of Directors and stockholders with respect to candidates for election to the Board of Directors.

ITEM 11. EXECUTIVE COMPENSATION

Compensation Overview

Our compensation approach is necessarily tied to our stage of development as a company. We have historically been principally devoted to developing DNA embedded biotechnology security solutions, but have more recently also supplied DNA for use in in vitro medical diagnostics, preclinical biotechnology and preclinical drug and biologic development and manufacturing markets. We also have undertaken preliminary steps towards the development of drugs and biologics. We have necessarily limited the establishment of extensive administrative and operating infrastructure, and a formal executive compensation policy has not been established. We have a compensation committee of the Board of Directors that is responsible for all compensation matters of our directors and executive officers. The compensation of all our named executive officers is approved by our compensation committee, which in turn reviewed the recommendation of our Chief Executive Officer (except with respect to his own compensation). As discussed below, the recommendation of our Chief Executive Officer is largely discretionary, based on his subjective assessment of the particular executive. As we continue to grow, we expect that the specific direction, emphasis and components of our executive compensation program will continue to evolve. The compensation committee has overall responsibility for approving and evaluating our executive officers' compensation plans, policies and programs. Our compensation program is designed to employ best practices in executive compensation and consider all relevant regulatory guidance regarding sound incentive compensation policies. The remainder of this section provides a general summary of our compensation policies and procedures.

Our Executive Compensation Philosophy and Objectives

General

The fundamental purpose of our executive compensation program is to assist us in achieving our financial and operating performance objectives. Specifically, we attempt to tailor an executive's compensation to (1) retain and motivate the executive, (2) reward him or her upon the achievement of Company-wide, and individual performance, and (3) align the executive's interest with the creation of long-term stockholder value, without encouraging excessive risk taking. To that end, and within the context of the stage of our Company, we have compensated our named executive officers through a mix of base salary, equity-based incentives, and cash bonuses.

Our business model is based on our ability to establish long-term relationships with clients and to maintain our strong mission, client focus, entrepreneurial spirit and team orientation. We have sought to create an executive compensation package that balances short-term versus long-term components when considering cash bonuses and employee equity awards, in ways we believe are most appropriate to motivate senior management and reward them for achieving the following goals:

• Develop a culture that embodies a commitment for our business, creative contribution and a drive to achieve established goals and performance objectives;

• Provide leadership to the organization in such a way as to maximize the results of our business operations;

- Lead us by demonstrating forward thinking in the operation, development and expansion of our business;

Effectively manage organizational resources to derive the greatest value possible from each dollar invested; and

Take strategic advantage of the market opportunity to expand and grow our business and revenues.

We believe that having a compensation program designed to align executive officers to meet our business objectives and to reinforce excellent performance and accountability is the cornerstone to successfully implement and achieve our strategic plan. In determining the compensation of our executive officers, we are guided by the following key principles:

Competition. Compensation should reflect the competitive marketplace, so we can retain, attract and motivate talented executives.

Accountability for Business Performance. Compensation should be tied to financial performance, so that executives are held accountable through their compensation for contributions to the performance of our Company as a whole as well as their performance of the business unit for which they are responsible.

Accountability for Individual Performance. Compensation should be tied to the individual's performance to encourage and reflect individual contributions to our Company's performance. We consider individual performance as well as performance of the business and responsibility areas that an individual oversees, and weigh these factors as appropriate in assessing a particular individual's performance.

Alignment with Stockholder Interests. Compensation should be tied to our financial performance through equity awards to align executives' interests with those of our stockholders.

Our executive compensation structure not only aims to be competitive in our industry, but also to be fair relative to compensation paid to other professionals within our organization, relative to our short-term and long-term performance and relative to the value we deliver to our stockholders. We seek to maintain a performance-oriented culture and a compensation approach that rewards our executive officers when we achieve our goals and objectives, while putting at risk an appropriate portion of their compensation against the possibility that our goals and objectives may not be achieved.

The Chief Executive Officer is the only named executive officer with an employment agreement. In addition, there are no change in control, severance or noncompetition agreements with any other named executive officer, nor are we otherwise obligated to pay any named executive officers any amounts if there is a change in control of the Company or if such executive's employment with us terminates, except for the Chief Executive Officer, as described below in the section entitled "—Potential Payments upon Termination of Employment or a Change of Control."

Determination of Executive Compensation Awards

The compensation committee establishes and monitors the basic philosophy governing the compensation of the Chief Executive Officer. On an annual basis, the compensation committee reviews the compensation of the Chief Executive Officer including incentive compensation plans and equity-based plans. Compensation decisions for all other of our executive officers are approved by our compensation committee, which in turn reviewed the recommendation of our Chief Executive Officer. We have traditionally placed significant emphasis on the recommendation of our Chief Executive Officer with respect to the determination of executive compensation (other than his own), in particular with respect to the determination of base salary, cash incentive and equity incentive awards, and typically followed such

recommendations as presented by our Chief Executive Officer. However, the compensation committee in reviewing such recommendations is free to make decisions that are contrary to the Chief Executive Officer's recommendations. As we continue to grow, we intend to make the transition to have our compensation committee be solely responsible for administering our executive compensation program, although we expect to continue to rely, in part, upon the advice and recommendations of our Chief Executive Officer (other than with respect to his own compensation), particularly with respect to those executive officers that report directly to him. The compensation committee's composition and oversight of our executive compensation program is described in more detail above in the section entitled "—Compensation Committee."

For purposes of determining our executive officer compensation in the fiscal year ended September 30, 2018 and in prior fiscal years, we considered the following factors: our understanding of the amount of compensation generally paid by similarly situated companies to their executives with similar roles and responsibilities; the roles and responsibilities of our executives; the individual experience and skills of, and expected contributions from, our executives; the amounts of compensation being paid to our other executives; our executives' historical compensation at our Company; an assessment of the professional effectiveness and capabilities of the executive officer; and the performance of the executive officer against the corporate and other scorecards used to determine incentive compensation. While we have not used any formula or formal benchmarking to determine compensation based on these factors, we have placed the most emphasis in determining compensation on our understanding of the amount of compensation generally paid by similarly situated companies to their executives with similar roles and responsibilities and the subjective assessment of the professional effectiveness and capabilities of the executive officer. Our understanding of the amount of compensation generally paid by similarly situated companies was based on our compensation committee's and our Chief Executive Officer's own business judgment and collective experience in such matters.

Base Salary

Our compensation committee sets the Chief Executive Officer's base salary annually in accordance with the terms of his employment agreement (provided that unless otherwise consented to by the Chief Executive Officer, any change by the compensation committee may increase, but not decrease, the Chief Executive Officer's annual rate of base salary). Dr. Hayward's annual base salary was voluntarily reduced by \$100,000 in fiscal 2016. Subject to the Company obtaining certain financial targets, Dr. Hayward will receive certain bonuses. During 2017, Mr. Hayward's annual base salary was voluntarily reduced by an additional \$50,000. For more information, see "—Changes to Compensation of Executive Officers" and "Employment Agreement with Dr. James A. Hayward." The base salary for each of the other named executive officers is reviewed annually by the Chief Executive Officer and any adjustments recommended by him are subject to the review and approval by the compensation committee. Adjustments to base salary are based upon a review of a variety of factors, including the following:

• individual and Company performance, measured against quantitative and qualitative goals, such as our growth, revenue, profitability and other matters;

• duties and responsibilities as well as the executive's experience; and

• the types and amount of each element of compensation to be paid to the named executive officer.

The current base salaries for our named executive officers eligible to receive an annual incentive bonus is as follows:

| | |
|----------------------|-----------|
| Dr. James A. Hayward | \$250,000 |
| Beth M. Jantzen | \$240,000 |
| Judith Murrah | \$240,000 |

Cash Bonuses

The Chief Executive Officer is paid cash bonuses in accordance with the terms of his employment agreement as well as based on the discretion of the compensation committee. We pay discretionary cash bonuses to our other named executive officers, which are recommended by the Chief Executive Officer, although the final determination of such bonuses are made by the compensation committee. The cash bonuses, if any, which are determined after the end of each fiscal year and may be paid annually, are intended to recognize and reward those named executive officers who have contributed meaningfully to our performance for the prior year. Both personal and the Company's performance are factors that the compensation committee and Chief Executive Officer typically consider in deciding whether to award a cash bonus to a named executive officer and the amount of such bonus. No cash bonuses were paid to executive officers for the fiscal year ended September 30, 2018 due to the performance of the Company.

Long-term Stock-Based Compensation

Our long-term compensation program has historically consisted solely of stock options. Option grants made to executive officers are designed to provide them with incentive to execute their responsibilities in such a way as to generate long-term benefit to us and our stockholders. Through possession of stock options, our executives participate in the long-term results of their efforts, whether by appreciation of our Company's value or the impact of business setbacks, either Company-specific or industry-based. Additionally, stock options provide a means of ensuring the retention of our executive officers, in that they are in most cases subject to vesting over an extended period of time.

Stock options provide executives with a significant and long-term interest in our success. By only rewarding the creation of stockholder value, we believe stock options provide our executive officers with an effective risk and reward profile. Although it is our current practice to use stock options as our sole form of long-term incentive compensation, the compensation committee reviews this practice on an annual basis in light of our overall business strategy, existing market-competitive best practices and other factors.

Stock options are granted periodically and are subject to vesting based on the executive's continued employment. Historically we have granted our executive officers a combination of incentive stock options that vest over a period of time or stock options that are immediately exercisable.

Stock options are granted to our executive officers in amounts determined by the compensation committee in its discretion. Stock grants have not been formula-based, but instead have historically been granted taking into account a mixture of the following qualitative factors: the executive's level of responsibility; the competitive market for the executive's position; the executive's potential contribution to our growth; and the subjective assessment of the professional effectiveness and capabilities of these executives.

During the fiscal year ended September 30, 2018, Dr. Hayward, Ms. Jantzen, and Ms. Murrah, were granted 250,000, 100,000 and 150,000 options, respectively. These options vested immediately as cash bonuses were not paid to executives during the prior fiscal year. Subsequent to September 30, 2018 certain options of the executive officers were canceled and replaced with new options with a term of an additional five years. The combined term of these options is a total of 10 years for consistency with our current compensation practices, in which employee stock options are generally granted with a term of ten years.

Benefits

We provide the following benefits to our executive officers on the same basis as the benefits provided to all employees:

health and dental insurance;

life insurance;

short-and long-term disability; and

401(k) Plan (currently there is no employer matching)

These benefits are generally consistent with those offered by other companies and specifically with those companies with which we compete for employees.

Changes to Compensation of Executive Officers

Effective March 15, 2018, the compensation committee approved a bonus of \$121,125 that would be payable to Dr. Hayward if and when the Company reaches \$3,000,000 in revenues for two consecutive quarters or \$12,000,000 in revenues for a fiscal year, provided that Dr. Hayward is still employed by the Company on such date (the “Revenue Bonus”). Effective May 2, 2018, the compensation committee increased the amount of the Revenue Bonus to \$403,623. Effective December 27, 2018, the compensation committee approved a bonus opportunity of \$150,000 for the calendar year ended December 31,2019, that would be payable to Dr. Hayward under the same terms as described above.

Summary Compensation Table

The following table sets forth the compensation of our principal executive officer, our principal financial officer and our other executive officers for the fiscal years ended September 30, 2018 and 2017. We refer to these executive officers as our “named executive officers.”

| | Year | Salary (\$ (c)) | Bonus (\$ (d)) | Stock Awards (\$ (e)) | Option Awards (\$ (f) (1)) | All Other Compensation (\$ (i)) | Total (\$ (j)) |
|---|------|--------------------|-------------------|-----------------------------|----------------------------------|---------------------------------------|-------------------|
| James A. Hayward Chairman, President and CEO | 2018 | 250,000 | — | — | 165,000 | 18,000 | 433,000 |
| | 2017 | 281,730 | — | — | 245,790 | 18,000 | 545,520 |
| Beth M. Jantzen CFO | 2018 | 221,538 | — | — | 66,000 | — | 287,538 |
| | 2017 | 246,346 | — | — | 98,316 | — | 344,662 |
| Judith Murrah CIO | 2018 | 240,000 | — | — | 99,000 | — | 339,000 |
| | 2017 | 246,346 | — | — | 98,316 | — | 344,662 |

The amounts in column (f) represent the grant date fair value calculated in accordance with ASC 718 based on the Black Scholes value of the options on the grant date. Information concerning these amounts and the assumptions (1) used to calculate these amounts are set forth in our Form 10-K for the fiscal year ended September 30, 2018 filed with the SEC on December 18, 2018 under the caption “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations —Equity Based Compensation.”

Outstanding Equity Awards at Fiscal Year-End

The following table shows information concerning outstanding equity awards as of September 30, 2018 held by the named executive officers.

| Name | Option Awards | | Option Exercise Price (\$) | Option Expiration Date |
|------|---|---|-------------------------------------|------------------------------|
| | Number of Securities Underlying Unexercised Options (#) | Number of Securities Underlying Unexercised Options (#) Unexercisable | | |

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| | Exercisable | | | | |
|------------------|--------------|--------|-----|------|------------|
| James A. Hayward | 166,667 (1) | — | | 3.60 | 6/30/2020 |
| | 666,667 (2) | — | | 3.51 | 7/11/2021 |
| | 833,334 (10) | — | | 5.82 | 10/17/2018 |
| | 175,000 | — | | 2.86 | 12/21/2024 |
| | 25,000 | 25,000 | (3) | 2.99 | 12/21/2025 |
| | 150,000 (4) | — | | 2.05 | 12/20/2026 |
| Beth M. Jantzen | 250,000 | — | | 1.19 | 08/29/2028 |
| | 4,167 (5)(7) | — | | 5.31 | 10/14/2018 |
| | 4,167 (5)(7) | — | | 6.96 | 11/28/2018 |
| | 4,167 (5)(8) | — | | 8.16 | 12/09/2018 |
| | 40,000 (5) | — | | 2.86 | 12/21/2024 |
| | 22,500 (6) | 7,500 | | 3.45 | 2/14/2025 |
| | 25,000 | 25,000 | (3) | 2.99 | 12/21/2025 |
| Judith Murrah | 60,000 (4) | — | | 2.05 | 12/20/2026 |
| | 100,000 | — | | 1.19 | 08/29/2028 |
| | 33,334 (9) | — | | 7.02 | 12/01/2018 |
| | 75,000 | — | | 2.86 | 12/21/2024 |
| | 4,167 (8) | — | | 8.16 | 12/09/2018 |
| | 25,000 | 25,000 | (3) | 2.99 | 12/21/2025 |
| | 60,000 (4) | — | | 2.05 | 12/20/2026 |
| | 150,000 | — | | 1.19 | 08/29/2028 |

(1) On June 30, 2015, these options were canceled and replaced with new options with a term of an additional five years. The combined term of these options is a total of 10 years for consistency with our current compensation practices, in which employee stock options are generally granted for a term of 10 years. The options were not in the money at the time of such extension.

(2) On July 11, 2018, these options were canceled and replaced with new options with a term of an additional three years. The combined term of these options is a total of 10 years for consistency with our current compensation practices, in which employee stock options are generally granted for a term of 10 years. The options were not in the money at the time of such extension.

(3) 25% of these options will vest and become exercisable each anniversary for the next four years, commencing on December 21, 2016, one year from the date of grant.

(4) On December 20, 2016, we granted an aggregate of 498,500 options (excluding options issued to the Board of Directors and consultants) to purchase our common stock at an exercise price of \$2.05 per share for ten years to employees, with immediate vesting. As part of this grant, Dr. Hayward, Ms. Jantzen, and Ms. Murrah, were granted 150,000, 60,000 and 60,000 options, respectively.

(5) These options were granted to Ms. Jantzen for her service as Controller prior to her appointment as the Chief Financial Officer.

(6) We granted 30,000 options to purchase our common stock at an exercise price of \$3.45 per share for ten years to Ms. Jantzen, effective February 15, 2015, with vesting at 25% each anniversary for the next four years commencing one year from the date of grant.

(7) On October 31, 2018 and November 28, 2018, these options were canceled and replaced with new options with terms of an additional five years. The combined terms of these options are a total of 10 years for consistency with our current compensation practices, in which employee stock options are generally granted for a term of 10 years. The options were not in the money at the time of such extension.

(8) On December 9, 2018, these options were canceled and replaced with new options with a term of an additional five years. The combined terms of these options are a total of 10 years for consistency with our current compensation practices, in which employee stock options are generally granted for a term of 10 years. The options were not in the money at the time of such extension.

(9) On December 1, 2018, these options were canceled and replaced with new options with a term of an additional five years. The combined term of these options is a total of 10 years for consistency with our current compensation practices, in which employee stock options are generally granted for a term of 10 years. The options were not in the money at the time of such extension.

- (10) On October 17, 2023 these options were canceled and replaced with new options with terms of an additional five years. The combined terms of these options are a total of 10 years for consistency with our current compensation practices, in which employee stock options are generally granted for a term of 10 years. These options were not in the money at the time of such extension.

Option Exercises and Stock Vested

During the fiscal year ended September 30, 2018, none of our named executive officers exercised options or acquired shares upon vesting of stock awards.

Pension Benefits

None of our named executive officers participates in or has account balances in qualified or non-qualified defined benefit plans sponsored by us.

Nonqualified Defined Contribution Plans

None of our named executive officers participates in or has account balances in non-qualified defined contribution plans maintained by us.

Deferred Compensation

None of our named executive officers participates in or has account balances in deferred compensation plans or arrangements.

Employment Agreement with Dr. James A. Hayward

The following is a discussion of our employment agreement with Dr. Hayward as of September 30, 2018 and, where indicated, compensation actions prior to such date.

On July 28, 2017, an employment agreement was entered into with the Company's Chief Executive Officer ("CEO"), effective July 1, 2017. The employment agreement provides that Dr. Hayward will be the Company's CEO and will continue to serve on the Company's Board of Directors. The initial term was from July 1, 2017 through June 30, 2018, with automatic one-year renewal periods. As of June 30, 2018, the employment agreement renewed for an additional year. Under the new employment agreement, the CEO will be eligible for a special cash incentive bonus of up to \$800,000, \$300,000 of which is payable if and when annual revenue reaches \$8 million and \$100,000 of which would be payable for each \$2 million of annual revenue in excess of \$8 million, provided the CEO is still employed by the Company on such date(s). Pursuant to the employment agreement, the CEO's annual salary is \$400,000. Due to previous voluntary reductions of the CEO's annual salary, Dr. Hayward's base salary for the 2018 fiscal year was \$250,000.

The Board of Directors, acting in its discretion, may grant annual bonuses to the CEO. The CEO will be entitled to certain benefits and perquisites and will be eligible to participate in retirement, welfare and incentive plans available to the Company's other employees.

The agreement with the CEO also provides that if he is terminated before the end of the initial or a renewal term by the Company without cause or if the CEO terminates his employment for good reason, then, in addition to earned and unpaid salary, bonus and benefits, and subject to the delivery of a general release and continuing compliance with restrictive covenants, the CEO will be entitled to receive a pro rata portion of the greater of either (X) the annual bonus he would have received if employment had continued through the end of the year of termination or (Y) the prior year's bonus; salary continuation payments for two years following termination equal to the greater of (i) three times base salary or (ii) two times base salary plus bonus; Company-paid COBRA continuation coverage for 18 months post-termination; continuing life insurance benefits (if any) for two years; and extended exercisability of outstanding vested options (for three years from termination date or, if earlier, the expiration of the fixed option term). If termination of employment as described above occurs within six months before or two years after a change in control of the Company, then, in addition to the above payments and benefits, all of the CEO's outstanding options and other equity incentive awards will become fully vested and the CEO will receive a lump sum payment of the amounts that would otherwise be paid as salary continuation. In general, a change in control will include a 30% or more change in ownership of the Company.

Upon termination due to death or disability, the CEO will generally be entitled to receive the same payments and benefits he would have received if his employment had been terminated by the Company without cause (as described in the preceding paragraph), other than salary continuation payments.

Effective March 15, 2018, the compensation committee, approved a bonus of \$121,125 that would be payable to the CEO when the Company reaches \$3,000,000 in revenues for two consecutive quarters or \$12,000,000 in revenues for a fiscal year, provided that the CEO is still employed by the Company on such date (the "Revenue Bonus"). Effective May 2, 2018, the compensation committee of the Company's Board of Directors, increased the amount of the Revenue Bonus to \$403,623. Effective December 27, 2018, the compensation committee approved a bonus opportunity of

\$150,000 for the calendar year ended December 31, 2019, that would be payable to Dr. Hayward under the same terms as described above.

Potential Payments upon Termination of Employment or a Change of Control

There is a change-in-control provision included in Dr. Hayward's employment agreement, and we are obligated to pay severance or other enhanced benefits to him upon termination of his employment. For additional information, see "Employment Agreement with Dr. James A. Hayward" above.

If Dr. Hayward's employment was terminated on September 30, 2018 by us without "cause" or by Dr. Hayward for "good reason" (in either case, other than in connection with a change in control), he would have been entitled to a base salary component of \$750,000 (three times his annual base salary) paid in equal installments over 2 years, extended exercisability of his outstanding vested options - (for three years from termination date or, if earlier, the expiration of the fixed option term) and Company-paid COBRA continuation coverage for 18 months post-termination.

In context of a “change in control” of the Company had it occurred on September 30, 2018, and within six months before or two years after such change in control and Dr. Hayward’s employment was terminated by us without “cause” or by Dr. Hayward for “good reason”, he would have been entitled to an estimated lump sum payment of \$750,000 (three times his annual base salary) and other benefits set forth in the preceding paragraph. In addition to the above payments and benefits, all of Dr. Hayward’s outstanding options and other equity incentive awards would have become fully vested.

If a “change in control” of the Company occurred on September 30, 2018 and Dr. Hayward’s employment was not terminated, then all of Dr. Hayward’s outstanding options and other equity incentive awards would have become fully vested.

Director Compensation: Fiscal 2018

During the fiscal year ended September 30, 2018, we did not provide any cash compensation to our non-employee directors for their service on our Board of Directors. On December 14, 2015, the Board of Directors approved the recommendation from the compensation committee that each of the non-employee directors shall annually receive, for as long as they are a member of the Board of Directors, a 10-year stock option, fully vested after one year, to purchase a number of shares of common stock having a fair value of \$75,000 as determined using the Black Scholes value, or as determined by the compensation committee. Additionally, the Board of Directors approved the recommendation from the compensation committee that stock options to purchase shares of our common stock having an aggregate fair value of \$50,000 using the Black Scholes value be granted to certain non-employee directors.

| | Fees Earned or Paid in Cash (\$) | Stock Awards (\$) | Option Awards (\$)(1) | All Other Compensation (\$) | Total (\$)(1)(9) |
|-------------------------------------|---|-------------------------|-----------------------------|-----------------------------------|---------------------|
| Sanford R. Simon (6) | — | — | 80,404 | — | 80,404 |
| Yacov A. Shamash (2)(5) | — | — | 94,704 | — | 94,704 |
| John Bitzer, III (4) | — | — | 81,304 | — | 81,304 |
| Joseph D. Ceccoli(2) | — | — | 87,500 | — | 87,500 |
| Charles S. Ryan (4) | — | — | 81,304 | — | 81,304 |
| Robert C. Catell(2) | — | — | 87,500 | — | 87,500 |
| Elizabeth M. Schmalz Ferguson(2)(3) | — | — | 131,250 | — | 131,250 |

- (1) A 10-year option to purchase 63,919 shares of our common stock was granted by the Board of Directors to each of the non-employee directors on March 15, 2018 at an exercise price of \$1.57 per share, with one year vesting.
- (2) A 10-year option to purchase an additional 10,653 shares of our common stock at an exercise price of \$1.57 per share was granted to each for Mr. Catell, Mr. Ceccoli, Ms. Schmalz Ferguson and Mr. Shamash on March 15, 2018, with one year vesting.
- (3) A 10-year option to purchase 37,286 shares of our common stock was granted by the Board of Directors to Ms. Schmalz Ferguson on March 15, 2018 at an exercise price of \$1.57 per share, with one year vesting.
- (4) A 10-year option to purchase 6,304 shares of our common stock was granted by the Board of Directors to each of Mr. Bitzer, and Mr. Ryan on March 15, 2018 at an exercise price of \$1.57 per share, with immediate vesting.
- (5) A 10-year option to purchase 7,204 shares of our common stock was granted by the Board of Directors to Mr. Shamash, on March 15, 2018 at an exercise price of \$1.57 per share, with immediate vesting.
- (6) A 10-year option to purchase 5,404 shares of our common stock was granted by the Board of Directors to Mr. Simon on March 15, 2018 at an exercise price of \$1.57 per share, with immediate vesting.

The amounts represent the grant date fair value calculated in accordance with ASC 718 based on the Black Scholes value of the options on the grant date. Information concerning these amounts and the assumptions used to calculate these amounts are set forth in our Form 10-K for the fiscal year ended September 30, 2018 filed with the SEC on December 18, 2018 under the caption "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations —Equity Based Compensation." As of September 30, 2018, Mr. Simon, Mr. Shamash, Mr. Bitzer, Mr. Ceccoli, Mr. Catell, Ms. Schmalz Ferguson and Mr. Ryan had total outstanding option awards (including warrants) of 242,362, 298,170, 313,204, 187,924, 152,830, 111,858 and 236,281 shares of our common stock, respectively.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table provides information as of September 30, 2018 with respect to shares of our common stock that may be issued under our existing equity compensation plans.

| Plan Category | Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights | Weighted Average Exercise Price of Outstanding Options, Warrants and Rights | Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in the first Column) |
|--|---|---|---|
| Equity compensation plans approved by security holders | | | |
| 2005 Incentive Plan | 6,183,214 | \$ 3.13 | 1,353,466 |
| Equity compensation plans not approved by security holders | — | — | — |
| TOTAL | 6,183,214 | \$ 3.13 | 1,353,466 |

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth certain information regarding the shares of our common stock beneficially owned as of January 24, 2019, (i) by each person who is known to us to beneficially own 5% or more of the outstanding common stock, (ii) by each of the executive officers named in the table under “Executive Compensation” and by each of our directors and (iii) by all executive officers and directors as a group.

Unless otherwise indicated below, each person or entity has an address in care of our principal executive offices at 50 Health Sciences Drive, Stony Brook, New York 11790

| Name and Address of Beneficial Owner | Title of Class | Number of Shares Owned (1)(2) | | Percentage of Class (3) | |
|---|-----------------|-------------------------------------|---------|-------------------------------|---|
| Executive Officers and Directors: | | | | | |
| James A. Hayward | Common Stock | 4,732,562 | (4) | 12.36 | % |
| Yacov A. Shamash | Common Stock | 312,375 | (5)(17) | | * |
| John Bitzer, III | Common Stock | 1,525,926 | (6)(7) | 4.25 | % |
| Robert C. Catell | Common Stock | 181,240 | (11) | | * |
| Joseph D. Ceccoli | Common Stock | 210,652 | (8) | | * |
| Beth M. Jantzen | Common Stock | 275,342 | (12) | | * |
| Judith Murrah | Common Stock | 375,661 | (13) | 1.04 | % |
| Charles S. Ryan | Common Stock | 250,486 | (6) | | * |
| Sanford R. Simon | Common Stock | 245,203 | (9) | | * |
| Elizabeth Schmalz Ferguson | Common Stock | 123,222 | (14) | | * |
| All directors and officers as a group (10 persons) | Common Stock | 8,232,669 | (10) | 20.35 | % |
| 5% Stockholder: | | | | | |
| William W. Montgomery | Common Stock | 5,230,900 | (15) | 14.69 | % |

* indicates less than one percent

- Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to the shares shown. Except as indicated by footnote and subject to community property laws where applicable, to our knowledge, the stockholders named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. A person is deemed to be the beneficial owner of securities that can be acquired by such person within 60 days upon the exercise of options, warrants or convertible securities (in any case, the "Currently Exercisable Options").
- (1) Does not include the remaining unvested shares subject to options granted on December 21, 2015 pursuant to the 2005 Incentive Stock Plan, which vest 25% of the underlying shares ratably on each anniversary date thereafter until fully vested on the fourth anniversary date of grant, including 12,500 for each of Dr. Hayward, Ms. Jantzen and Ms. Murrah. Does not include the remaining 10,000 unvested shares subject to options granted on May 1, 2017 to Mr. Catell.
- (2) Based upon 35,612,057 shares of common stock outstanding as of January 24, 2019. Each beneficial owner's percentage ownership is determined by assuming that the Currently Exercisable Options that are beneficially held by such person (but not those held by any other person) have been exercised and converted.
- (3) Includes 2,671,262 shares underlying currently exercisable options and warrants.
- (4) Includes 298,170 shares underlying currently exercisable options and warrants.
- (5) Includes 236,281 shares underlying currently exercisable options for Messrs. Bitzer and Ryan.
- (6) Includes 1,185,855 shares of common stock and 76,923 currently exercisable warrants to purchase our common stock owned by Delabarta, a wholly-owned subsidiary of ABARTA. Mr. Bitzer is President and a member of the board of directors of each of Delabarta and ABARTA. Mr. Bitzer disclaims beneficial ownership of the shares held by Delabarta except to the extent of his pecuniary interest therein.
- (7) Includes 187,924 shares underlying currently exercisable options.
- (8) Includes 242,362 shares underlying currently exercisable options.
- (9) Includes 4,846,393 shares underlying currently exercisable options and warrants.
- (10) Includes 152,830 shares underlying currently exercisable options.
- (11) Includes 272,501 shares underlying currently exercisable options.
- (12) Includes 360,001 shares underlying currently exercisable options.
- (13) Includes 111,858 shares underlying currently exercisable options.
- (14) This information is based on a Form 4 filed with the SEC on January 24, 2019 by William W. Montgomery.
- (15) William W. Montgomery reported sole voting and sole dispositive power of 5,230,900 shares of common stock. The address of William W. Montgomery is 34211 Seavey Loop Road, Eugene, Oregon 97405.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Delabarta / John Bitzer, III

John Bitzer, III, one of our directors, is President and Chief Executive Officer of ABARTA, a private, third- and fourth-generation family holding-company, which owns Delabarta. On June 23, 2014, Delabarta purchased 7,275 shares of our common stock at a purchase price of \$6.87 per share for gross proceeds of \$50,000 in a private placement transaction. Delabarta also received 7,275 warrants to purchase shares of our common stock as part of this private placement transaction. In connection with the investment in the Company by Delabarta during July 2011, we agreed to use best efforts to nominate its designee, Mr. John Bitzer, III to the Board and elect Mr. Bitzer as a director within 30 days of the closing and to nominate and include Mr. Bitzer on the slate of nominees for the Board of Directors for election by stockholders at the annual meetings of stockholders for so long as Delabarta owns at least 2% of the outstanding shares of common stock.

On June 28, 2017, our officers and directors purchased approximately \$545,000 of our common stock as part of a private placement in the dollar amounts listed below:

| Name | Amount (\$) |
|--|-------------|
| James A. Hayward, Chief Executive Officer, President and Chairman of the Board | 250,000 |
| Yacov A. Shamash, Director | 25,000 |
| Delabarta, Director Affiliate | 100,000 |
| Robert B. Catell, Director | 50,000 |
| Joseph D. Ceccoli, Director | 40,000 |
| Beth M. Jantzen, Chief Financial Officer | 5,000 |
| Judith Murrah, Chief Information Officer | 25,000 |
| Charles S. Ryan, Director | 25,000 |
| Sanford R. Simon, Director | 5,000 |
| Elizabeth Schmalz Ferguson, Director | 20,000 |

On August 31, 2018, we entered into a securities purchase agreement with certain investors, including Delabarta and William Montgomery, who subsequently became a 5% or greater stockholder, and certain of our officers and directors, pursuant to which we issued and sold an aggregate of \$1.65 million in principal amount of secured convertible notes (the "Notes") bearing interest at a rate of 6% per annum to persons in the amounts listed below. As of September 30, 2018, no principal and interest was due to be paid. As of January 24, 2019, \$1,650,000 remains outstanding.

| Name | Amount (\$) |
|---|-------------|
| James A. Hayward Chief Executive Officer, President and Chairman of the Board | 1,000,000 |
| Yacov A. Shamash, Director | 25,000 |
| Delabarta, Director Affiliate | 100,000 |
| Robert B. Catell, Director | 25,000 |
| William Montgomery, 5% or greater stockholder | 200,000 |
| Judith Murrah, Chief Information Officer | 25,000 |
| Elizabeth Schmalz Ferguson, Director | 10,000 |

On November 29, 2018, we entered into a securities purchase agreement (“Purchase Agreement”), pursuant to which we issued and sold an aggregate of \$550,000 in principal amount of additional Notes. Dr. Hayward, our chairman, president and chief executive officer, purchased \$500,000 in principal amount of the Notes. As of January 24, 2019, \$550,000 remains outstanding.

The Notes are convertible, in whole or in part, at any time, at the option of the purchasers, into shares of our common stock, in an amount determined by dividing the principal amount of each Note, together with any and all accrued and unpaid interest, by the conversion price of \$2.50. We have the right to require the purchasers to convert all or any part of their Notes into shares of our common stock at a conversion price of \$2.50 if the price of our common stock remains at a closing price of \$3.50 or more for a period of twenty consecutive trading days.

Upon any Change in Control (as defined in the Notes), the purchasers have the right to require us to redeem the Notes, in whole or in part, at a redemption price equal to such Notes' outstanding principal balance plus accrued interest.

The Notes contain certain events of default that are customarily included in financing of this nature. If an event of default occurs, the purchasers may require us to redeem the Notes, in whole or in part, at a redemption price equal to such notes' outstanding principal balance plus accrued interest.

The Notes bear interest at the rate of 6% per annum, payable semi-annually in cash or in kind, at our option, and are due and payable in full on August 30, 2021. Until the principal and accrued but unpaid interest under the Notes is paid in full, or converted into shares of common stock pursuant to their terms, our obligations under the Notes will be secured by a lien on substantially all assets of the Company and the assets of APDN (B.V.I.) Inc., our wholly-owned subsidiary ("APDN BVI"), in favor of CSC Corporation, as collateral agent for the purchasers pursuant to security agreements dated as of the date of the Purchase Agreement.

We also entered into a registration rights agreement, dated as of the date of the Purchase Agreement, with the purchasers, pursuant to which the Company has agreed to prepare and file a registration statement with the SEC to register under the Securities Act of 1933, as amended, resales from time to time of the common stock issued or issuable upon conversion or redemption of the Notes. We are required to file a registration statement within 60 days of receiving a demand registration request from holders of a majority of the outstanding principal balance of the Notes, and to cause the registration statement to be declared effective within 45 days (or 90 days if the registration statement is reviewed by the SEC).

Director Independence

The Board of Directors has determined that currently and at all times during the fiscal year ended September 30, 2018, each of our directors other than Dr. Hayward—consisting of John Bitzer, III, Robert B. Catell, Joseph D. Ceccoli, Charles S. Ryan, Yacov A. Shamash, Sanford R. Simon, and Elizabeth M. Schmalz Ferguson—are and were "independent" as defined by the listing standards of The NASDAQ Stock Market LLC ("Nasdaq"), constituting a majority

of independent directors on our Board of Directors as required by the rules of Nasdaq. The Board of Directors considers in its evaluation of independence whether any director has a relationship with us that would interfere with the exercise of independent judgment in carrying out his or her responsibilities of a director.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Audit and Other Fees

The following table sets forth fees billed to us by our current independent auditors during the fiscal years ended September 30, 2018 and 2017 for: (i) services rendered for the audit of our annual financial statements and the review of our quarterly financial statements, (ii) services by our auditor that are reasonably related to the performance of the audit or review of our financial statements and that are not reported as Audit Fees, (iii) services rendered in connection with tax compliance, tax advice and tax planning, and (iv) all other fees for services rendered.

| Marcum LLP | | Fiscal year ended September 30, 2018 | Fiscal year ended September 30, 2017 |
|------------|--------------------|---|---|
| (i) | Audit Fees | \$ 192,955 | \$ 169,157 |
| (ii) | Audit Related Fees | - | - |
| (iii) | Tax Fees | 29,244 | 12,713 |
| (iv) | All Other Fees | - | - |
| | Total Fees | \$ 222,199 | \$ 181,870 |

Audit Fees — Consists of fees billed for professional services rendered for the audit of our consolidated financial statements, review of the interim consolidated financial statements included in quarterly reports, and services that are normally provided by our independent auditors in connection with statutory and regulatory filings or engagements, including registration statements.

Audit Related Fees — Consists of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements and are not reported under “Audit Fees,” such as accounting consultation and audits in connection with acquisitions.

Tax Fees — Consists of fees billed for professional services for tax compliance, tax advice and tax planning.

All Other Fees — Consists of fees for products and services other than the services reported above.

The Board of Directors has considered whether the provision of non-audit services is compatible with maintaining the principal accountant’s independence and has determined that independence has been maintained.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this Form 10-K/A, as previously included on Form 10-K, filed December 18, 2018:

| Exhibit Number | Description | Incorporated by Reference | | | Filed or Furnished Herewith |
|----------------|---|---------------------------|--------------|-------------------|-----------------------------|
| | | Form | Exhibit | File No. | |
| <u>3.1</u> | <u>Certificate of Incorporation</u> | <u>8-K</u> | <u>3.1</u> | <u>002-90539</u> | <u>1/16/2009</u> |
| <u>3.2</u> | <u>Certificate of Amendment of Certificate of Incorporation</u> | <u>8-K</u> | <u>3.1</u> | <u>002-90539</u> | <u>6/30/2010</u> |
| <u>3.3</u> | <u>Second Certificate of Amendment of Certificate of Incorporation</u> | <u>8-K</u> | <u>3.1</u> | <u>002-90539</u> | <u>1/30/2012</u> |
| <u>3.4</u> | <u>Third Certificate of Amendment of Certificate of Incorporation</u> | <u>8-K</u> | <u>3.1</u> | <u>002-90539</u> | <u>10/29/2014</u> |
| <u>3.5</u> | <u>Form of Certificate of Designations of the Series A Convertible Preferred Stock</u> | <u>8-K</u> | <u>3.1</u> | <u>002-90539</u> | <u>11/29/2012</u> |
| <u>3.6</u> | <u>Form of Certificate of Designations of the Series B Convertible Preferred Stock</u> | <u>8-K</u> | <u>3.1</u> | <u>002-90539</u> | <u>7/22/2013</u> |
| <u>3.7</u> | <u>By-Laws</u> | <u>8-K</u> | <u>3.2</u> | <u>002-90539</u> | <u>1/16/2009</u> |
| <u>4.1</u> | <u>Form of Underwriter's Warrant to be issued to Maxim Group LLC</u> | <u>S-1/A</u> | <u>10.26</u> | <u>333-199121</u> | <u>10/30/2014</u> |
| <u>4.2</u> | <u>Form of Senior Indenture, to be entered into between Applied DNA Sciences, Inc. and the Trustee designated therein</u> | <u>S-3</u> | <u>4.1</u> | <u>333-202432</u> | <u>3/2/2015</u> |
| <u>4.3</u> | <u>Form of Subordinated Indenture, to be entered into between Applied DNA Sciences, Inc. and the Trustee designated therein</u> | <u>S-3</u> | <u>4.3</u> | <u>333-202432</u> | <u>3/2/2015</u> |
| <u>4.4</u> | <u>Form of Underwriter's Warrant</u> | <u>8-K</u> | <u>4.1</u> | <u>001-36745</u> | <u>3/27/2015</u> |
| <u>4.5</u> | <u>Form of Purchase Warrant</u> | <u>8-K</u> | <u>4.1</u> | <u>001-36745</u> | <u>11/23/2015</u> |
| <u>4.6</u> | <u>Form of Placement Agent Warrant issued to Maxim Group LLC</u> | <u>8-K</u> | <u>4.2</u> | <u>001-36745</u> | <u>11/23/2015</u> |
| <u>4.7</u> | <u>Form of Placement Agent Warrant issued to Maxim Group LLC and Imperial Capital, LLC</u> | <u>8-K</u> | <u>4.1</u> | <u>001-36745</u> | <u>11/2/2016</u> |

| | | | | | |
|---------------|--|--------------|--------------|------------------|-------------------|
| <u>10.1†</u> | <u>Applied DNA Sciences, Inc. 2005 Incentive Stock Plan and form of employee stock option agreement thereunder, as amended and restated as of January 21, 2015</u> | <u>10-K</u> | <u>10.1</u> | <u>001-36745</u> | <u>12/14/2015</u> |
| <u>10.2*</u> | <u>Joint Development and Marketing Agreement, dated April 18, 2007 by and between Applied DNA Sciences and International Imaging Materials, Inc.</u> | <u>8-K</u> | <u>10.1</u> | <u>002-90539</u> | <u>4/24/2007</u> |
| <u>10.3</u> | <u>Form of Subscription Agreement, dated July 15, 2011, by and among Applied DNA Sciences, Inc. and the investors named on the signature pages thereto</u> | <u>10-K</u> | <u>10.28</u> | <u>002-90539</u> | <u>12/9/2011</u> |
| <u>10.4</u> | <u>Form of Warrant, dated July 15, 2011, issued to the investors named on the signature pages</u> | <u>10-K</u> | <u>10.29</u> | <u>002-90539</u> | <u>12/9/2011</u> |
| <u>10.5†</u> | <u>Employment Agreement, dated July 1, 2017, between James A. Hayward and Applied DNA Sciences, Inc.</u> | <u>8-K</u> | <u>10.1</u> | <u>001-36745</u> | <u>8/2/2016</u> |
| <u>10.6*</u> | <u>Exclusive Sales Agreement dated November 1, 2011 by and between Applied DNA Sciences, Inc. and Nissha Printing Co., Ltd.</u> | <u>10-Q</u> | <u>10.1</u> | <u>002-90539</u> | <u>2/14/2012</u> |
| <u>10.7</u> | <u>Software Distribution Agreement, dated as of January 25, 2012, by and between Applied DNA Sciences, Inc. and DivineRune, Inc.</u> | <u>10-Q</u> | <u>10.1</u> | <u>002-90539</u> | <u>5/15/2012</u> |
| <u>10.8</u> | <u>Form of Subscription Agreement dated June 21, 2012, by and among Applied DNA Sciences, Inc. and the investor named on the signature page thereto</u> | <u>10-K</u> | <u>10.37</u> | <u>002-90539</u> | <u>12/20/2012</u> |
| <u>10.9†</u> | <u>Form of Indemnification Agreement dated as of September 7, 2012, by and between Applied DNA Sciences, Inc. and each of its directors and executive officers</u> | <u>8-K</u> | <u>10.1</u> | <u>002-90539</u> | <u>9/13/2012</u> |
| <u>10.10</u> | <u>Asset Purchase Agreement dated May 10, 2013, between Applied DNA Sciences, Inc. and RedWeb Technologies Limited</u> | <u>10-Q</u> | <u>10.1</u> | <u>002-90539</u> | <u>8/13/2013</u> |
| <u>10.11</u> | <u>Agreement of Lease dated June 14, 2013, between Applied DNA Sciences, Inc. and Long Island High Technology Incubator, Inc.</u> | <u>10-Q</u> | <u>10.2</u> | <u>002-90539</u> | <u>8/13/2013</u> |
| <u>10.12*</u> | <u>Term sheet for Mutual Cooperation with Borealis AG dated March 31, 2014</u> | <u>8-K/A</u> | <u>10.1</u> | <u>002-90539</u> | <u>7/22/2014</u> |

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| | | | | | |
|----------------|--|--------------|--------------|-------------------|-------------------|
| <u>10.13</u> | <u>Form of Subscription Agreement dated June 3, 2014</u> | <u>8-K</u> | <u>10.1</u> | <u>002-90539</u> | <u>6/6/2014</u> |
| <u>10.14</u> | <u>Form of Warrant dated June 3, 2014</u> | <u>8-K</u> | <u>10.2</u> | <u>002-90539</u> | <u>6/6/2014</u> |
| <u>10.15</u> | <u>Form of Award/Contract issued by U.S. Missile Defense Agency dated July 14, 2014</u> | <u>8-K</u> | <u>10.1</u> | <u>002-90539</u> | <u>7/18/2014</u> |
| <u>10.16</u> | <u>Form of Promissory Note</u> | <u>8-K</u> | <u>10.1</u> | <u>002-90539</u> | <u>9/17/2014</u> |
| <u>10.17</u> | <u>Form of Award/Contract awarded by Office of Secretary of Defense on behalf of Defense Logistics Agency dated August 28, 2014</u> | <u>8-K/A</u> | <u>10.1</u> | <u>002-90539</u> | <u>9/8/2014</u> |
| <u>10.18</u> | <u>Warrant Repurchase Option Agreement dated October 28, 2014 between Applied DNA Sciences, Inc. and Crede CG III, Ltd.</u> | <u>S-1/A</u> | <u>10.28</u> | <u>333-199121</u> | <u>10/30/2014</u> |
| <u>10.19</u> | <u>Letter Agreement dated November 11, 2014 between Applied DNA Sciences, Inc. and James A. Hayward regarding Exchange of 12.5% Promissory Note</u> | <u>S-1/A</u> | <u>10.29</u> | <u>333-199121</u> | <u>11/12/2014</u> |
| <u>10.20</u> | <u>Underwriting agreement between Applied DNA Sciences, Inc. and Maxim Group LLC dated November 17, 2014</u> | <u>S-1/A</u> | <u>1.1</u> | <u>333-199121</u> | <u>11/12/2014</u> |
| <u>10.21</u> | <u>Form of Warrant Agreement between Applied DNA Sciences, Inc. and American Stock Transfer & Trust Company, LLC, as warrant agent</u> | <u>S-1/A</u> | <u>10.25</u> | <u>002-90539</u> | <u>11/12/2014</u> |
| <u>10.22</u> | <u>First Amendment to Warrant Agreement dated April 1, 2015 between Applied DNA Sciences, Inc. and American Stock Transfer & Trust Company, LLC as warrant agent</u> | <u>8-K</u> | <u>4.1</u> | <u>001-36745</u> | <u>4/1/2015</u> |
| <u>10.23*</u> | <u>Mutual License Agreement dated March 25, 2015 between Applied DNA Sciences, Inc. and Divatex Home Fashion, Inc.</u> | <u>10-Q</u> | <u>10.1</u> | <u>001-36745</u> | <u>5/11/2015</u> |
| <u>10.24</u> | <u>Underwriting Agreement dated March 27, 2015, between Applied DNA Sciences, Inc. and Maxim Group LLC, as representative of the underwriters named on Schedule A thereto.</u> | <u>8-K</u> | <u>1.1</u> | <u>001-36745</u> | <u>3/27/2015</u> |
| <u>10.25**</u> | <u>Asset Purchase Agreement dated September 11, 2015 between Applied DNA Sciences, Inc. and Vandalia Research, Inc.</u> | <u>8-K</u> | <u>2.1</u> | <u>001-36745</u> | <u>9/17/2015</u> |

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|--------------|--|--------------|--------------|------------------|-------------------|
| <u>10.26</u> | <u>Placement Agency Agreement by and between Applied DNA Sciences, Inc. and Maxim Group LLC, dated November 23, 2015</u> | <u>8-K/A</u> | <u>10.1</u> | <u>001-36745</u> | <u>11/23/2015</u> |
| <u>10.27</u> | <u>Form of Securities Purchase Agreement</u> | <u>8-K/A</u> | <u>10.2</u> | <u>001-36745</u> | <u>11/23/2015</u> |
| <u>10.28</u> | <u>Placement Agency Agreement between Maxim Group LLC, Imperial Capital, LLC and Applied DNA Sciences, Inc. dated November 2, 2016</u> | <u>8-K</u> | <u>10.1</u> | <u>001-36745</u> | <u>11/2/2016</u> |
| <u>10.29</u> | <u>Securities Purchase Agreement dated November 2, 2016</u> | <u>8-K</u> | <u>10.2</u> | <u>001-36745</u> | <u>11/2/2016</u> |
| <u>10.30</u> | <u>Registration Rights Agreement dated November 2, 2016</u> | <u>8-K</u> | <u>10.3</u> | <u>001-36745</u> | <u>11/2/2016</u> |
| <u>10.31</u> | <u>Second Amendment to Warrant Agreement dated November 2, 2016</u> | <u>8-K</u> | <u>10.4</u> | <u>001-36745</u> | <u>11/2/2016</u> |
| <u>10.32</u> | <u>Form of Subscription Agreement</u> | <u>8-K</u> | <u>10.1</u> | <u>001-36745</u> | <u>6/28/2017</u> |
| <u>10.33</u> | <u>Form of Convertible Note</u> | <u>8-K</u> | <u>10.1</u> | <u>001-36745</u> | <u>12/6/2018</u> |
| <u>10.34</u> | <u>Registration Rights Agreement, dated November 29, 2018</u> | <u>8-K</u> | <u>10.2</u> | <u>001-36745</u> | <u>12/6/2018</u> |
| <u>10.35</u> | <u>Securities Purchase Agreement, dated November 29, 2018</u> | <u>8-K</u> | <u>10.3</u> | <u>001-36745</u> | <u>12/6/2018</u> |
| <u>10.36</u> | <u>Form of Convertible Note</u> | <u>8-K/A</u> | <u>10.1</u> | <u>001-36745</u> | <u>12/10/2018</u> |
| <u>10.37</u> | <u>Registration Rights Agreement, dated August 31, 2018</u> | <u>8-K/A</u> | <u>10.2</u> | <u>001-36745</u> | <u>12/10/2018</u> |
| <u>10.38</u> | <u>Securities Purchase Agreement, dated August 31, 2018</u> | <u>8-K/A</u> | <u>10.3</u> | <u>001-36745</u> | <u>12/10/2018</u> |
| <u>10.39</u> | <u>Collateral Agency Agreement dated October 19, 2018</u> | <u>10-K</u> | <u>10.39</u> | <u>001-36745</u> | <u>12/18/2018</u> |
| <u>10.40</u> | <u>Security Agreement dated October 19, 2018</u> | <u>10-K</u> | <u>10.40</u> | <u>001-36745</u> | <u>12/18/2018</u> |
| <u>10.41</u> | <u>First Amendment to Security Agreement dated November 26, 2018</u> | <u>10-K</u> | <u>10.41</u> | <u>001-36745</u> | <u>12/18/2018</u> |
| <u>10.42</u> | <u>Guaranty and Security Agreement dated October 19, 2018</u> | <u>10-K</u> | <u>10.42</u> | <u>001-36745</u> | <u>12/18/2018</u> |

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|--------------|--|--------------|--------------|-------------------|-------------------|--------------|
| <u>10.43</u> | <u>Intellectual Property Security Agreement dated October 19, 2018</u> | <u>10-K</u> | <u>10.43</u> | <u>001-36745</u> | <u>12/18/2018</u> | |
| <u>10.44</u> | <u>Intellectual Property Security Agreement dated October 19, 2018</u> | <u>10-K</u> | <u>10.44</u> | <u>001-36745</u> | <u>12/18/2018</u> | |
| <u>10.45</u> | <u>Securities Purchase Agreement, dated August 31, 2018</u> | <u>10-K</u> | <u>10.45</u> | <u>001-36745</u> | <u>12/18/2018</u> | |
| <u>21.1</u> | <u>Subsidiaries of Applied DNA Sciences, Inc.</u> | <u>S-1/A</u> | <u>21.1</u> | <u>333-199121</u> | <u>10/30/2014</u> | |
| <u>23.1</u> | <u>Consent of Marcum LLP</u> | <u>10-K</u> | <u>23.1</u> | <u>001-36745</u> | <u>12/18/2018</u> | |
| | <u>Certification of Chief Executive Officer, pursuant to Rules</u> | | | | | |
| | <u>13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934,</u> | | | | | |
| <u>31.1</u> | <u>as amended, as adopted pursuant to Section 302 of the</u> | <u>10-K</u> | <u>31.1</u> | <u>001-36745</u> | <u>12/18/2018</u> | |
| | <u>Sarbanes-Oxley Act of 2002</u> | | | | | |
| | <u>Certification of Chief Financial Officer, pursuant to Rules</u> | | | | | |
| | <u>13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934,</u> | | | | | |
| <u>31.2</u> | <u>as amended, as adopted pursuant to Section 302 of the</u> | <u>10-K</u> | <u>31.2</u> | <u>001-36745</u> | <u>12/18/2018</u> | |
| | <u>Sarbanes-Oxley Act of 2002</u> | | | | | |
| | <u>Certification of Chief Executive Officer, pursuant to Rules</u> | | | | | |
| | <u>13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934,</u> | | | | | |
| <u>31.3</u> | <u>as amended, as adopted pursuant to Section 302 of the</u> | | | | | <u>Filed</u> |
| | <u>Sarbanes-Oxley Act of 2002</u> | | | | | |
| | <u>Certification of Chief Financial Officer, pursuant to Rules</u> | | | | | |
| | <u>13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934,</u> | | | | | |
| <u>31.4</u> | <u>as amended, as adopted pursuant to Section 302 of the</u> | | | | | <u>Filed</u> |
| | <u>Sarbanes-Oxley Act of 2002</u> | | | | | |
| | <u>Certification of Chief Executive Officer, pursuant to 18 U.S.C.</u> | | | | | |
| | <u>Section 1350, as adopted pursuant to Section 906 of the</u> | | | | | |
| <u>32.1</u> | <u>Sarbanes-Oxley Act of 2002</u> | <u>10-K</u> | <u>32.1</u> | <u>001-36745</u> | <u>12/18/2018</u> | |
| | <u>Certification of Chief Financial Officer, pursuant to 18 U.S.C.</u> | | | | | |
| | <u>Section 1350, as adopted pursuant to Section 906 of the</u> | | | | | |
| <u>32.2</u> | <u>Sarbanes-Oxley Act of 2002</u> | <u>10-K</u> | <u>32.2</u> | <u>001-36745</u> | <u>12/18/2018</u> | |

† Indicates a management contract or any compensatory plan, contract or arrangement.

* A request for confidentiality has been granted for certain portions of the indicated document. Confidential portions have been omitted and filed separately with the SEC as required by Rule 24b-2 promulgated under the Exchange Act.

** Schedules (or similar attachments) have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Applied DNA Sciences, Inc. agrees to furnish supplementally a copy of any such omitted schedule or attachment to the U.S. Securities and Exchange Commission upon request; provided, however, that Applied DNA Sciences, Inc. may request confidential treatment pursuant to Rule 24b-2 under the Exchange Act for any schedule or attachment so furnished.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: January 28, 2019

APPLIED DNA SCIENCES, INC.

/s/ James A. Hayward

James A. Hayward

President and Chief Executive Officer

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