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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of January, 2016

Commission File Number: 001-36826

ADVANCED ACCELERATOR APPLICATIONS S.A.

(Exact name of registrant as specified in its charter)

20 rue Diesel
01630 Saint Genis Pouilly, France
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F X Form 40-F _____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes _____ No X

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes _____ No X

SIGNATURE

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.

ADVANCED ACCELERATOR APPLICATIONS S.A.

By: /s/ Heinz Mäusli
Name: Heinz Mäusli
Title: Chief Financial Officer

Date: January 7, 2016

ADVANCED ACCELERATOR APPLICATIONS S.A.

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release dated January 7, 2016 titled "Advanced Accelerator Applications Acquires the IDB Group"

PRESS RELEASE

Advanced Accelerator Applications Acquires the IDB Group

Transaction expands global supply chain in preparation for the commercial launch of Lutathera

7 January 2016, Saint-Genis-Pouilly, France – Advanced Accelerator Applications S.A. ("AAA" or "the Company") (Nasdaq: AAAP), an international specialist in Molecular Nuclear Medicine ("MNM"), announced today that it has acquired 100% of the shares of the IDB Group. The IDB Group includes IDB Holland bv, IDB Radiopharmacy bv and Beheermaatschappij Welde bv and is a leading manufacturer of Lutetium 177 (Lu-177). IDB produces, markets and sells Lu-177 under the brand name LuMark®, and has established this product as the leading brand of Lutetium 177 worldwide. LuMark® is the only Lu-177 product to have received European Marketing Authorization.

Acquiring the IDB Group will enable AAA to own one of its two providers of Lu-177 for Lutathera and build its own Lu-177 manufacturing business. This acquisition strengthens AAA's leadership position in European MNM and is in-line with the Company's v ertical integration strategy. Owning the IDB Group will help AAA maintain a reliable supply of Lu-177 for the production of Lutathera and AAA's future product candidates.

Stefano Buono, Chief Executive Officer of AAA commented: "*We believe that our key product candidate Lutathera (177Lu-DOTATATE) has the potential to dramatically shift the treatment paradigm for patients with progressive neuroendocrine tumors and improve the standard of care for this disease. With this shift in treatment, Lu-177 chloride has a significant opportunity to be recognized as an important radiopharmaceutical precursor.*"

Lu-177 is an emitter of high-energy beta particles (particles used for many years in radiation oncology to treat solid cancers) that can be effectively used to deliver toxic effects to metastatic cancers, using a targeted radiopharmaceutical approach similar to Lutathera. A small gamma emission ensures the possibility to visualize and measure the quantity of drug that is delivered both to the target lesions and to the rest of the body to facilitate the safe use of this class of drugs.

"*We intend to use Lu-177 chloride extensively in the development of other product candidates for other indications. This acquisition uniquely positions AAA with the ability to independently produce this critical radionuclide for our own use, while possibly creating new avenues of development for our expansion into a unique and uncovered territory for our existing and forthcoming portfolio products*," Buono added.

The IDB Group is located in Baarle-Nassau, The Netherlands. It is an International franchise in isotope manufacturing and sale. In 2014 the IDB Group net sales represented approximately 7 million Euros. The IDB Group's key assets include a business with historically increasing revenue, and an experienced leadership team with a lean and efficient management structure. Products distributed by IDB include a Ge-68/Ga-68 generator, which is used in state-of-the-art PET peptide imaging such as Somakit.

Gérard Ber, Chief Operating Officer of AAA added: “Acquiring the IDB Group enables AAA to gain the potential to expand the Company’s presence to The Netherlands for both our current portfolio of F-18 products as well as our product candidates Somakit and Lutathera. AAA will continue to serve IDB clients around the world and further expand and improve our *services. This acquisition provides AAA with a key strategic asset allowing the Company to build an independent Lu-177 manufacturing business, while helping to expand the current presence of its F-18 portfolio, Lutathera, and Somakit, in The Netherlands*.”

About Lutathera and Somakit

Lutathera (or ^{177}Lu-DOTATATE) is a Lu-177-labeled somatostatin analogue peptide currently under development for the treatment of GastroEntero Pancreatic Neuroendocrine Tumors (GEP-NETs). This novel compound has received Orphan Drug Designation from the European Medicines Agency (EMA) and the US Food and Drug Administration (FDA). Lutathera was also granted fast-track designation by the FDA in April 2015 for the treatment of inoperable progressive midgut NETs. The FDA provides fast-track designation to product candidates that treat serious conditions and fill an unmet medical need in order to facilitate their development and expedite their review. Lutathera is also currently administered on a compassionate use and named patient basis for the treatment of NETs in ten European countries.

Lutathera belongs to an emerging form of treatments called Peptide Receptor Radionuclide Therapy (“PRRT“), which involves targeting carcinoid tumors with radiolabeled somatostatin analogue peptides. Currently at the end of its Phase 3 development in its pivotal NETTER-1 study, Lutathera is the most advanced candidate in development for PRRT.

The Phase 3 NETTER-1 study evaluating Lutathera in patients with advanced midgut neuroendocrine tumors met its primary endpoint by demonstrating that treatment with Lutathera was associated with a statistically significant and clinically meaningful risk reduction of 79% in disease progression or death versus a treatment with a double dose of Octreotide LAR (hazard ratio 0.21, 95% CI: 0.13-0.34; $p<0.0001$). The results were presented on 27 September 2015 at the European Cancer Congress in Vienna during Presidential Session II.

Lutathera’s companion PET diagnostic Somakit is a patented Kit for the preparation of 68Ga-DOTATATE for injection, which is in development to help diagnose and manage somatostatin receptor-positive NET patients using Positron Emission Tomography (“PET“). We believe that Somakit has the potential to significantly improve the accuracy of diagnosis while reducing radiation exposure for patients.

About Neuro Endocrine Tumors (NETs)

Neuro Endocrine Tumors, also known as NETs, are a group of tumors originating in the neuroendocrine cells of many different organs. NETs can remain clinically silent for years delaying the diagnosis in a large number of patients. These cancers are rare but, for example, they are the second most common type of gastrointestinal malignancy and their incidence is increasing.

The estimated incidence of NETs for the combined populations of the United States and the European Union was approximately 47,300 in 2013.

NETs are classified as orphan diseases by European and U.S. regulatory authorities, meaning that they affect a relatively small population of individuals in the relevant jurisdiction. In the United States, orphan drugs are defined as drugs that treat diseases or conditions that affect 200,000 or fewer individuals in the country. In the European Union, orphan drugs are defined as drugs that treat diseases or conditions that affect fewer than five out of 10,000 individuals in the European Union.

About Advanced Accelerator Applications

Advanced Accelerator Applications (AAA) is a radiopharmaceutical company founded in 2002 that develops innovative diagnostic and therapeutic products. AAA's main focus is in the field of molecular imaging and targeted, individualized therapy for patients with serious conditions ("Personalized Medicine"). AAA currently has 17 production and R&D facilities able to manufacture both diagnostics and therapeutic MNM products, and has over 390 employees in 11 countries (France, Italy, UK, Germany, Switzerland, Spain, Poland, Portugal, Israel, U.S. and Canada). In 2014, AAA reported sales of €69.9 million (+29.9% vs. 2013). AAA is listed on the Nasdaq Global Select Market under the ticker "AAAP". For more information please visit: www.adacap.com

About Molecular Nuclear Medicine ("MNM")

Molecular Nuclear Medicine is a medical specialty using trace amounts of active substances, called radiopharmaceuticals, to create images of organs and lesions and to treat various diseases, such as cancer. The technique works by injecting targeted radiopharmaceuticals into the patient's body that accumulate in the organs or lesions and reveal specific biochemical processes. Molecular Nuclear Diagnostics employs a variety of imaging devices and radiopharmaceuticals. PET (Positron Emission Tomography) and SPECT (Single Photon Emission Tomography) are highly sensitive imaging technologies that enable physicians to diagnose different types of cancer, cardiovascular diseases, neurological disorders and other diseases in their early stages.

Cautionary Statement Regarding Forward-Looking Statements

This press release may contain forward-looking statements. All statements, other than statements of historical facts, contained in this press release, including statements regarding the Company's strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements reflect the Company's current expectation regarding future events. These forward-looking statements involve risks and uncertainties that may cause actual results, events or developments to be materially different from any future results, events or developments expressed or implied by such forward-looking statements. Such factors include, but are not limited to, changing market conditions, the successful and timely completion of clinical studies, the timing of our submission of applications for regulatory approvals, EMA, FDA and other regulatory approvals for our product candidates, the occurrence of side effects or serious adverse events caused by or associated with our products and product candidates; our ability to procure adequate quantities of necessary supplies and raw materials for Lutathera and other chemical compounds acceptable for use in our manufacturing processes from our suppliers; our ability to organize timely and safe delivery of our products or product candidates by third parties; any problems with the manufacture, quality or performance of our products or product candidates; the rate and degree of market acceptance and the clinical utility of Lutathera and our other products or product candidates; our estimates regarding the market opportunity for Lutathera, our other product candidates and our existing products; our anticipation that we will generate higher sales as we diversify our products; our ability to implement our growth strategy including expansion in the U.S.; our ability to sustain and create additional sales, marketing and distribution capabilities; our intellectual property and licensing position; legislation or regulation in countries where we sell our products that affect product pricing, taxation, reimbursement, access or distribution channels; and general economic, political, demographic and business conditions in Europe, the U.S. and elsewhere.Except as required by applicable securities laws, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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