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 February, 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: February 25, 2016

ADVANCED ACCELERATOR APPLICATIONS S.A.

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release dated February 25, 2016 titled "Advanced Accelerator Applications Provides Update on Lutathera and Somakit"

Exhibit 99.1

PRESS RELEASE

Advanced Accelerator Applications Provides Update on Lutathera and Somakit

Lutathera NETTER-1 Phase 3 Study Update to be Presented at the 13th Annual European Neuroendocrine Tumor Society (ENETS) Conference

Notification of PDUFA Date Extension Received for Somakit-TATE

25 February 2016, Saint-Genis-Pouilly, France – Advanced Accelerator Applications S.A. (NASDAQ:AAAP) ("AAA" or "the Company"), an international specialist in molecular nuclear medicine, today announced both updated data from the pivotal Phase 3 NETTER-1 study investigating the treatment of Lutathera (177-Lu-Dotatate) in patients with inoperable, progressive, somatostatin receptor positive midgut neuroendocrine tumors (midgut NETs) as well as Prescription Drug User Fee Act (PDUFA) date update for Somakit-TATE New Drug Application (NDA).

Lutathera NETTER-1 Phase 3 Study Update
Additional Lutathera NETTER-1 Phase 3 study data will be presented on Friday, 11 March 2016 at the 13th Annual European Neuroendocrine Tumor Society (ENETS) Conference in Barcelona, Spain. The details of the presentation are as follows:

NETTER-1 Phase III in Patients with Midgut Neuroendocrine Tumors Treated with 177-Lu-Dotatate: Efficacy and Safety Results
Speaker: Prof. Jonathan R. Strosberg, M.D.
Session 8 (Plenary): What's New in the Field?
Friday, 11 March 2016
Session from 2:15-3:35 PM CET

The Phase 3 NETTER-1 trial compared treatment using Lutathera with a double dose of Octreotide LAR in patients with inoperable midgut NETs progressive under Octreotide LAR treatment and overexpressing somatostatin receptors. The primary endpoint was the assessment of progression-free survival as per RECIST 1.1 criteria.

The first NETTER-1 results were presented on 27 September 2015 at the European Cancer Congress/ESMO in Vienna during Presidential Session II. The study 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 objective radiographic response rate was 18% with Lutathera and 3% with control (p=0.0008). Interim OS analysis (13 deaths in Lutathera group and 22 in control group; p=0.019) strongly suggests an improvement in OS. Updated results are related to Lutathera safety profile. Only 5% of the patients (6 patients) experienced Lutathera dose modifying toxicity. Adverse events grade 3 or 4 neutropenia, thrombocytopenia and lymphopenia occurred in 1%, 2% and 9% of the patients in Lutathera arm vs. none in the control group.

PDUFA date extension received for Somakit-TATE

Additionally, AAA also announced that the U.S. Food and Drug Administration (FDA) has extended the Prescription Drug User Fee Act (PDUFA) date for its Priority Review of the Company's New Drug Application (NDA) for Somakit-TATE (kit for the Preparation of 68Ga-DOTATATE for Injection), an investigational kit for neuroendocrine tumor diagnosis and follow-up. The PDUFA date has been extended by the standard extension period of three months from 1 March 2016 to the new goal date of 1 June 2016.

In response to a recent request from the FDA and prior to a Late-Cycle Review Meeting, AAA submitted English translations of documents such as validation reports and manufacturing documentation, which had previously been submitted in Italian and in summary form in English. Due to the timing of this submission, the FDA extended the PDUFA date to allow additional time for review of the English translated documents. The FDA has not asked for additional clinical data at this time.

The Somakit NDA was submitted on 1 July 2015 and it is the first NDA ever filed for a drug using Ga-68 as a positron emitter. The FDA had granted Priority Review to AAA's New Drug Application (NDA) for SomaKit-TATE in September 2015. A Priority Review designation is granted by the FDA when a proposed drug exhibits the potential to offer a significant improvement in the safety or effectiveness of the treatment, prevention, or diagnosis of a serious condition.

The kit has been designated as an orphan drug by the EMA and the FDA.

About Lutathera and NETTER-1

Lutathera (or ^{177}Lu-DOTATATE) is a Lu-177-labeled somatostatin analogue peptide currently under development for the treatment of gastro entero 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 III development in its pivotal NETTER-1 study, Lutathera is the most advanced candidate in development for PRRT.

Lutathera's NETTER-1 study is the first Phase 3 international, multi-center, randomized, controlled trial evaluating 177Lu-DOTA0-Tyr3-Octreotate (Lutathera) in patients with inoperable, progressive, somatostatin receptor positive midgut NETs. 230 patients with Grade 1-2 metastatic midgut NETs (both functioning and not functioning) were randomized to receive Lutathera 7.4 GBq every 8 weeks (x4 administrations) versus Octreotide LAR 60 mg every 4-weeks. The primary endpoint was PFS per RECIST 1.1 criteria, with objective tumor assessment performed by an independent reading center every 12 weeks. Secondary objectives included objective response rate, overall survival, safety, and health-related quality of life.

The Phase 3 NETTER-1 study 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 median PFS in the Lutathera arm is not yet reached, whilst the median PFS in the Octreotide LAR 60 mg arm was 8.4 months.

Within the current evaluable patient dataset for tumor responses (n=201), 18 patients (18%) reported complete and partial responses (CR+PR) in the Lutathera group versus 3 (3%) in the Octreotide LAR 60 mg group (p=0.0008). Although the overall survival (OS) data is not mature enough for a definitive analysis, the number of deaths was 13 in the Lutathera group and 22 in the Octreotide LAR 60 mg group (p=0.0186 at interim analysis), which initially suggests an improvement in OS. The objective radiographic response rate was 18% with Lutathera and 3% with control (p=0.0008). Interim OS analysis (13 deaths in Lutathera group and 22 in control group; p=0.019) strongly suggests an improvement in OS. Updated results are related to Lutathera safety profile. Only 5% of the patients (6 patients) experienced Lutathera dose modifying toxicity. Adverse events grade 3 or 4 neutropenia, thrombocytopenia and lymphopenia occurred in 1%, 2% and 9% of the patients in Lutathera arm vs. none in the control group.

The Phase 3 NETTER-1 study provides evidence of a clinically meaningful and statistically significant increase in PFS and objective response rate ("ORR"), and also suggests a survival benefit in patients with advanced midgut neuroendocrine tumors treated with Lutathera.

The adverse events observed for Lutathera in the NETTER-1 study were consistent with the results of Lutathera's previous Phase I-II study, with Lutathera demonstrating a favorable safety profile.

About Somakit-TATE

Somakit-TATE, a companion PET diagnostic product candidate for Lutathera, is a novel patented kit in development for radiolabeling somatostatin analogue peptides to help diagnose somatostatin-receptor-positive NET lesions. The kit has been designated as an orphan drug by the EMA and the FDA. Somakit-TATE has the potential to offer a standardized procedure for producing diagnostic compounds based on ^{68}Ga without the need of expensive pharmaceutical manufacturing equipment and extensive quality control testing.

About Advanced Accelerator Applications

Advanced Accelerator Applications (AAA) is a radiopharmaceutical company founded in 2002 to develop innovative diagnostic and therapeutic products. AAA's main focus is in the field of Molecular Imaging and targeted, individualized therapy for the management of patients with serious conditions ("Personalized Medicine"). AAA currently has 18 production and R&D facilities able to manufacture both diagnostics and therapeutic MNM products, and currently has over 420 employees in 13 countries (France, Italy, UK, Germany, Switzerland, Spain, Poland, Portugal, The Netherlands, Belgium, 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.

Contacts

AAA Media Relations
Laetitia Defaye
Head of Corporate Communications
laetitia.defaye@adacap.com
Tel: +33 (0)6 86 65 73 52

Véronique Mermet
Communications Officer
info@adacap.com
Tel: +33 (0)4 50 99 30 70

AAA Investor Relations
Jordan Silverstein
Director of Investor Relations
jordan.silverstein@adacap.com
Tel: + 1-212-235-2394

Media enquiries

FTI Consulting
Kimberly Ha
kimberly.ha@fticonsulting.com
Tel: +1-212-850-5612

Axess Public Relations (Italy)
Dario Francolino
dario.francolino@axesspr.com
Tel: +39 3488818029