March 28, 2025

Siemens Healthcare Diagnostic Products GmbH
Martina Pfeiff
Regulatory Affairs Manager
Emil-von-Behring Strasse 76
Marburg, Hessen 35041
Germany

Re: K242952
Trade/Device Name: INNOVANCE Antithrombin
Regulation Number: 21 CFR 864.7060
Regulation Name: Antithrombin III Assay
Regulatory Class: Class II
Product Code: JBQ
Dated: September 20, 2024
Received: September 25, 2024

Dear Martina Pfeiff:

We have reviewed your section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (the Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database available at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Additional information about changes that may require a new premarket notification are provided in the FDA guidance documents entitled "Deciding When to Submit a 510(k) for a Change to an Existing Device"

(https://www.fda.gov/media/99812/download) and "Deciding When to Submit a 510(k) for a Software Change to an Existing Device" (https://www.fda.gov/media/99785/download).

Your device is also subject to, among other requirements, the Quality System (QS) regulation (21 CFR Part 820), which includes, but is not limited to, 21 CFR 820.30, Design controls; 21 CFR 820.90, Nonconforming product; and 21 CFR 820.100, Corrective and preventive action. Please note that regardless of whether a change requires premarket review, the QS regulation requires device manufacturers to review and approve changes to device design and production (21 CFR 820.30 and 21 CFR 820.70) and document changes and approvals in the device master record (21 CFR 820.181).

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801 and Part 809); medical device reporting (reporting of medical device-related adverse events) (21 CFR Part 803) for devices or postmarketing safety reporting (21 CFR Part 4, Subpart B) for combination products (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR Part 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR Parts 1000-1050.

All medical devices, including Class I and unclassified devices and combination product device constituent parts are required to be in compliance with the final Unique Device Identification System rule ("UDI Rule"). The UDI Rule requires, among other things, that a device bear a unique device identifier (UDI) on its label and package (21 CFR 801.20(a)) unless an exception or alternative applies (21 CFR 801.20(b)) and that the dates on the device label be formatted in accordance with 21 CFR 801.18. The UDI Rule (21 CFR 830.300(a) and 830.320(b)) also requires that certain information be submitted to the Global Unique Device Identification Database (GUDID) (21 CFR Part 830 Subpart E). For additional information on these requirements, please see the UDI System webpage at https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/unique-device-identification-system-udi-system.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance) and CDRH Learn (https://www.fda.gov/training-and-continuing-education/cdrh-learn). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

Min Wu -S

Min Wu, Ph.D.
Branch Chief
Division of Immunology and Hematology Devices
OHT7: Office of In Vitro Diagnostics
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 07/31/2026
See PRA Statement below.

510(k) Number *(if known)*
K242952

Device Name
INNOVANCE Antithrombin

Indications for Use *(Describe)*
INNOVANCE Antithrombin is a chromogenic assay for the automated quantitation of functionally active antithrombin in human citrated plasma and can be used as an aid in the diagnosis of antithrombin deficiency.

INNOVANCE Antithrombin is indicated as an aid in monitoring antithrombin activity to support QFITLIA (fitusiran) dosing in adult and pediatric patients aged 12 years and older with hemophilia A or B with or without factor VIII or IX inhibitors.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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510(k) Summary

This summary of 510(k) safety and effectiveness information is submitted in accordance with the requirements of 21 CFR §807.92, the Safe Medical Act of 1990, and follows the FDA guidance 'The 510(k) Program: Evaluating Substantial Equivalence in Premarket Notifications [510(k)]', issued July 28, 2014.

The assigned 510(k) number is: K242952

1. Applicant

Siemens Healthcare Diagnostics Products GmbH

Emil-von-Behring-Str. 76
35041 Marburg, Germany

Contact Person:	Martina Pfeiff
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Phone:	+ 49 (174) 3319336
Date Prepared:	September 20, 2024

2. Device

Name of Device:	INNOVANCE® Antithrombin / K242952
Regulation Number:	21CFR 864.7060
Regulation Description:	Antithrombin III assay
Product Code:	JBQ
Device Classification Name:	Antithrombin III Quantitation
Regulatory Class:	Class II
510(k) Review Panel	Hematology

3. Predicate Device

Name of Device / 510(k):	Berichrom® Antithrombin III (A) / K933125
Regulation Number:	21CFR 864.7060
Regulation Description:	Antithrombin III assay
Product Code:	JPE
Device Classification Name:	Antithrombin III, Two Stage Clotting Time Assay
Regulatory Class:	Class II
510(k) Review Panel	Hematology

No recalls are listed in FDA´s Medical device recall database for the predicate device.

No reference devices were used in this submission.

4. Device Description / Test Principle

Antithrombin (AT) is a main inhibitor of enzymatic activity in the coagulation processes and is synthesized in the liver. This serine protease inhibitor irreversibly inhibits different coagulation factors, with thrombin and factor Xa being the primary target enzymes. The inhibition of thrombin and factor Xa by antithrombin is amplified approximately 1,000-fold in the presence of heparin.

The INNOVANCE Antithrombin assay is suitable for the determination of physiologically active antithrombin on automatic analyzers and enables the diagnosis of inherited or acquired antithrombin deficiencies. A genetically caused antithrombin deficiency leads to reduced antithrombin activity with reduced protein concentration (type I deficiency) or normal protein concentration (type II deficiency). Acquired antithrombin deficiency occurs as a result of reduced synthesis, increased protein consumption, or as a result of protein loss in conditions such as DIC (disseminated intravascular coagulation), sepsis, acute hemolytic transfusion reaction, increased protein loss in nephrotic syndrome, thrombotic microangiopathies, malignant diseases, acute thrombotic episodes and asparaginase therapy. The INNOVANCE Antithrombin assay enables the detection of patients with antithrombin deficiency.

The INNOVANCE Antithrombin assay utilizes a chromogenic measuring principle. An excess of human factor Xa is added to citrated plasma. In the presence of heparin, a portion of the enzyme is complexed and inactivated by the antithrombin present in the sample. Excess, uninhibited factor Xa then cleaves a specific chromogenic substrate, causing the release of a dye. The rate of the substrate cleavage is determined by the increase in the absorbance value at 405 nm.

antithrombin + heparin ——> [antithrombin • heparin]

[antithrombin • heparin] + FXa (excess) ——> [antithrombin • heparin • FXa] + FXa (residual)

chromogenic FXa substrate $\xrightarrow{\text{FXa (residual)}}$ tripeptide + dye

The release of dye is inversely proportional to the inhibiting activity of antithrombin in the plasma sample, i.e., the smaller the concentration of functionally active antithrombin, the higher the absorbance signal per time unit.

5. Intended Use / Indications for Use

INNOVANCE Antithrombin is a chromogenic assay for the automated quantitation of functionally active antithrombin in human citrated plasma and can be used as an aid in the diagnosis of antithrombin deficiency.

INNOVANCE Antithrombin is indicated as an aid in monitoring antithrombin activity to support QFITLIA (fitusiran) dosing in adult and pediatric patients aged 12 years and older with hemophilia A or B with or without factor VIII or IX inhibitors.

6. Special Conditions for Use Statements

For in-vitro diagnostic use only.

For laboratory professional use.

For prescription use only.

7. Special instrument requirements*

- Siemens BCS® XP System
- SYSMEX® Automated Coagulation Analyzer, MODEL CA-1500
- SYSMEX Automated Coagulation Analyzer, MODEL CA-500
- Siemens Healthineers Automated Blood Coagulation Analyzer CA-620
- Sysmex Automated Blood Coagulation Analyzer CA-620
- Siemens Healthineers Automated Blood Coagulation Analyzer CA-660
- Sysmex Automated Blood Coagulation Analyzer CA-660
- Siemens Healthineers Automated Blood Coagulation Analyzer CS-2500
- Sysmex Automated Blood Coagulation Analyzer CS-2500
- Siemens Healthineers Automated Blood Coagulation Analyzer CS-5100
- Sysmex Automated Blood Coagulation Analyzer CS-5100

*The intended use related to QFITLIA (fitusiran) is available currently for the BCS XP System only.

8. Comparison of Technological Characteristics with the Predicate Device

The following table presents a comparison of the similarities and differences between the proposed device INNOVANCE Antithrombin (K242952) and the predicate device Berichrom Antithrombin III (A) (K933125).

Item	**Proposed Device (K242952)** INNOVANCE Antithrombin	**Predicate Device (K933125)** Berichrom Antithrombin III (A)
Regulation Number	864.7060	same
Regulation Description	Antithrombin III assay	same
510(k) Review Panel	Hematology	same
Regulatory Class	Class II	same
Product Code	JBQ	JPE
Device Classification Name	Antithrombin III quantitation	Antithrombin III, two stage clotting time assay
Indications for Use / Intended Use	INNOVANCE Antithrombin is a chromogenic assay for the automated quantitation of functionally active antithrombin in human citrated plasma and can be	For the quantitative determination of the functional activity of antithrombin III (AT III) in plasma using automated analyzers for diagnosing reduced AT III synthesis

Item	Proposed Device (K242952) INNOVANCE Antithrombin	Predicate Device (K933125) Berichrom Antithrombin III (A)
	used as an aid in the diagnosis of antithrombin deficiency. *INNOVANCE Antithrombin is indicated as an aid in monitoring* antithrombin *activity to support QFITLIA* (*fitusiran) dosing in adult and pediatric patients aged 12 years and older with hemophilia A or B with or without factor VIII or IX inhibitors.*	or increased consumption and for monitoring substitution therapy.
Sample Type	Human citrated plasma	same
Analyte	Antithrombin III	same
Units	% of the norm	same
Measurement	Quantitative	same
Test Principle	Chromogenic (405 nm)	same
Instrument Type	automated coagulation analyzers	automated coagulation analyzers or manually
Storage	up to the expiry date at 2–8 °C	same
Calibrator (sold separately)	Standard Human Plasma	same
Controls (sold separately)	Control Plasma N, Control Plasma P	same
Linearity	7.3 - 127.9% AT	3.7 - 120% AT
Precision	Control N - Repeatability CV: 2.8 % - Within-Device/Lab CV: 3.7 % Control P - Repeatability CV: 2.6 % - Within-Device/Lab CV: 4.5 % Pathological plasma pool (mean: 61.7 % of norm) - Repeatability CV: 1.9 % - Within-Device/Lab CV: 3.5 % <u>*Additional Data*</u> *Pathological Plasma Pool 1 (mean: 15.73 % of norm)* - *Repeatability CV: 8.77 %*	Control N: - Within Run CV: 2.4 % - Run to Run CV: 2.2 % - Total CV: 3.1 % Control P: - Within Run CV: 4.7 % - Run to Run CV: 0.8 % - Total CV: 4.5 %

Item	Proposed Device (K242952) INNOVANCE Antithrombin	Predicate Device (K933125) Berichrom Antithrombin III (A)
	– *Within-Device/Lab CV: 9.65 %* – *Total combined lots CV: 9.95 %* *Pathological Plasma Pool 1 (mean: 15.54 % of norm)* – *Reproducibility CV: 8.85 %* *Pathological Plasma Pool 2 (mean: 9.75 % of norm)* – *Repeatability SD: 1.36 % of Norm* – *Within-Device/Lab SD: 1.59 % of Norm* – *Total combined lots SD: 1.59 % of norm* *Pathological Plasma Pool 2 (mean: 11.05 % of norm)* – *Reproducibility Lab SD: 2.19 % of Norm*	
Reagent Composition	**Reagent** – human FXa – salts, stabilizers bovine serum albumin – sodium glutamate, aprotinin, heparin, hirudin in Tris/HCl, pH 8.0 – preservatives: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H- isothiazol-3-one **Substrate** – benzyloxycarbonyl-D-Leu-Gly-Arg-ANBA-methylamide-acetate in sodium acetate buffer pH 5.6 – preservatives: 5-chloro-2-methyl-2-Hisothiazol-3-one and 2-methyl-2H-isothiazol- 3-one **Buffer** – salts in Tris/HCl, pH 8.0 – preservatives: 5-chloro-2-methyl-2-Hisothiazol-3-one	**Thrombin Reagent** – Thrombin, bovine – Heparin sodium, porcine – Aprotinin **Substrate** – Tos-Gly-Pro-Arg-ANBA-IPA **Buffer Solution** – TRIS/HCl – NaCl – Preservative: Sodium azide

Item	Proposed Device (K242952) INNOVANCE Antithrombin	Predicate Device (K933125) Berichrom Antithrombin III (A)
	and 2-methyl-2H-isothiazol- 3-one	
Physical Form	Liquid (all components)	Lyophilized (Thrombin Reagent, Substrate) Liquid (Buffer Solution)
On-board stability	48 hours	24 hours
Sample stability	Please refer to the instructions in the CLSI document H21-A52 for frozen storage conditions and sample stability. 4 hours at 15 to 25 °C Frozen plasma specimens should be rapidly thawed at 37 °C; then gently mixed and tested immediately. Do not freeze multiple times. Use the plasma undiluted.	1 month at −20 °C 2 days at 2 to 8 °C 6 hours at 15 to 25 °C Plasma stored at −20 °C is to be thawed within 10 minutes at 37 °C, after which the assay is to be performed within 2 hours. Do not freeze multiple times. Use the plasma undiluted.
Interference of bilirubin, hemoglobin, triglycerides	No interference up to: - Triglycerides 211 mg/dL - Hemoglobin 1000 mg/dL - Bilirubin 60 mg/dL	No interference up to: - Triglycerides 600 mg/dL - Hemoglobin 800 mg/dL - Bilirubin 60 mg/dL

Items shown for the proposed device derive from K081769 (initial clearance) and K242952. Information indicated in italics refers to new claims introduced with K242952.

The differences between the predicate device and proposed device do not result in a change to the intended use, the indications for use, or to safety and efficacy when used according to the product labeling.

9. Performance Data

The following performance data were provided to support the extension of the intended use and in support of the substantial equivalence determination to Berichrom AT.

Based on the results of the risk analysis, precision study and interference studies were identified as verification activity and acceptance criteria established. Clinical validation for the added claim was done by the legal manufacturer of the therapeutic drug QFITLIA (fitusiran), Sanofi.

9.1. Analytical Performance Studies

Repeatability/Reproducibility, analytical specificity and Limit of Quantification studies were performed for the extension of the intended use of INNOVANCE Antithrombin. All Performance claims cleared under K081769 remain valid.

9.1.1 Repeatability/Reproducibility

A precision (single site) study and a reproducibility (multi-site) study were performed in accordance with the CLSI document EP05-A3 'Evaluation of Precision of Quantitative Measurement Procedures; Approved Guideline - Third Edition' to investigate the precision performance characteristics in the lower measuring range of INNOVANCE Antithrombin on the BCS XP System.

The reproducibility investigation was performed in a multi-site study, including three (3) internal study sites (Sites 1, 2, and 3). The precision investigation was performed internally at the Siemens company site in Germany (Site 1). Two (2) pathological plasma pools were investigated as test samples. These two pools were chosen to cover the lower AT activity measuring interval of INNOVANCE Antithrombin (≤20% of norm) and the medical decision point for QFITLIA (fitusiran) dosing (15% of norm). The order of samples and control materials for each run and day varied to avoid an inherent bias to the study. The internal reproducibility study was carried out at three (3) internal sites, on five (5) days, with two (2) runs per day and three (3) replicates of each sample per run (3x5x2x3). All internal sites performed the reproducibility study with the same reagent/calibrator lot combination.

A single-site precision study was carried out on one (1) BCS XP System in twenty (20) days, with two (2) runs per day, two (2) samples per run, in combination with three (3) reagent lots and one (1) calibrator lot (3x20x2x2x1x1; i.e., n=240). The results are presented in the following tables:

		Precision (n = 240)					
		Repeatability		Within-device/lab		Total (combined lots)	
Sample	**Mean [% of Norm]**	**SD[1] [% of Norm]**	**CV[2] [%]**	**SD[1] [% of Norm]**	**CV[2] [%]**	**SD[1] [% of Norm]**	**CV[2] [%]**
Pathological Plasma Pool 1	15.73	-	8.77	-	9.65	-	9.95
Pathological Plasma Pool 2	9.75	1.36	-	1.59	-	1.59	-

			Combined laboratories	
Sample	**n**	**Mean [% of Norm]**	**SD[1] [% of Norm]**	**CV[2] [%]**
Pathological Plasma Pool 1	90	15.54	-	8.85
Pathological Plasma Pool 2	90	11.05	2.19	-

[1] SD: Standard Deviation
[2] CV: Coefficient of Variation

9.1.2 Analytical Specificity/Interference

The effects of potentially interfering substances were investigated in an interference study according to CLSI document EP07 'Interfering Testing in Clinical Chemistry. 3rd ed.'. Paired-difference experiments were carried out to evaluate the amount of interferent up to which no interference is to be expected. The

concentration of the different interferents used was calculated in accordance with CLSI EP7-A3 based on the highest expected interferent concentration in plasma. For desmopressin and Tranexamic acid, the recommended dose for hemophilia patients was used as given in their respective US Prescribing Information. For Recombinant Factor VIIa, Coagulation Factor VIII, Coagulation Factor IX and activated Prothrombin Complex Concentrate (aPCC) doses tested in the interference study were based on the highest doses recommended for bleed management for subjects on QFITLIA (fitusiran).

Samples with and without interferent were compared within the studies. Such interference testing was performed with a panel of exogenous substances. Two (2) plasma pools, a low plasma pool at approximately 10-15 % of norm Antithrombin activity and a high plasma pool at approximately 90 % of norm Antithrombin activity were used.

No interferences up to the indicated concentrations of following therapeutics were observed:

Therapeutic	**No interference up to**
Desmopressin	0.0144 µg/mL
Tranexamic Acid	0.48 mg/mL
Recombinant Factor VIIa	2.16 µg/mL
Coagulation Factor VIII	0.96 IU/mL
Coagulation Factor IX	1.44 IU/mL
activated Prothrombin Complex Concentrate (aPCC)	2.4 IU/mL

9.1.3 Detection Capabilities

The limit of quantitation (LoQ) was determined according to the CLSI document EP17-A2:2012, Evaluation of Detection Capability for Clinical CLSI Laboratory Measurement Procedures; Approved Guideline - Second Edition.

To determine the LoQ, plasma samples with concentrations ranging from approximately 6 - 10 % of normal Antithrombin activity were prepared. Four replicates of five patient samples were run once per day for three days using two (2) INNOVANCE Antithrombin reagent lots on one BCS XP System totaling in n=120 determinations. The LoQ estimates were evaluated separately for each reagent lot.

The LoQ was calculated according to CLSI document based on an Total Error goal of not exceed 4% of norm. The LoQ was set to 7.32% of norm as the maximum of the reagent lot specific LoQ values.

9.2. Clinical Validation Data

The safety and effectiveness of the INNOVANCE Antithrombin assay as an aid in monitoring the antithrombin (AT) activity in patients on QFITLIA (fitusiran) was demonstrated through testing of specimens from hemophilia A and B patients with and without inhibitors enrolled in the clinical trial program for QFITLIA. In particular, INNOVANCE Antithrombin assay on the BCS XP analyzer was used to guide AT-based dosing of QFITLIA (AT-based dose regimen, AT-DR) in the ATLAS-OLE study (ClinicalTrials.gov Identifier NCT03754790). Please refer to the QFITLIA drug labeling at Drugs@FDA for more details.

A total of 227 patients were treated with QFITLIA in this multicenter study which was initiated as an open-label extension study to evaluate the long-term safety and efficacy of QFITLIA in adult and pediatric

patients aged ≥12 years with hemophilia A or B, with or without inhibitory antibodies to FVIII or FIX. Eligible patients initially received QFITLIA 80 mg subcutaneously (SC) once monthly. The study was amended to evaluate the efficacy and safety of the AT-DR. A total of 213 patients were subsequently transitioned to an AT-DR with the target AT activity range of 15-35%.

The INNOVANCE Antithrombin assay was used to measure AT activity at baseline (prior to QFITLIA initiation) as well as after QFITLIA exposure throughout the ATLAS-OLE study (AT activity was measured monthly for 12 months after first dose or after dose adjustment, and every 4 months thereafter). The dose of QFITLIA was adjusted based on AT activity levels, if needed, to target AT activity range of 15-35%. Of the total AT-DR population, 199 patients started at the 50 mg dose every other month with dosing guided by the INNOVANCE Antithrombin assay.

In the AT-DR, the QFITLIA starting dose was 50 mg every two months and the dosing was individually adjusted based on AT activity level. The dose could be increased to 50 mg every month or 80 mg every month, or decreased to 20 mg every two months or 20 mg every month, or treatment discontinued if AT activity was <15% at the lowest dose. No patients required escalation to 80 mg every month to achieve the target AT range. The dose required to maintain AT activity 15-35% in patients who initiated dosing on 50 mg every two months was as follows: 35.8% received 50 mg every two months, 15.7% received 50 mg every month, 30.9% received 20 mg every two months, 2.9% received 20 mg every month, and 14.7% discontinued due to more than one AT activity <15%.

Efficacy of QFITLIA was evaluated for a duration of 7 months (primary efficacy period) following a 6-month dose adjustment period. Median observed annualized bleeding rate (IQR) for treated bleeds was 3.7 (0.0; 7.5) overall, 1.9 (0.0; 5.6) in inhibitor patients and 3.8 (0.0; 11.2) in non-inhibitor patients.

Clinical data from the ATLAS-OLE study demonstrate that individualized QFITLIA AT-DR using the INNOVANCE Antithrombin assay was successful at achieving AT levels within the targeted AT activity range of 15-35% and can thus be used for supporting the safe and effective dosing of QFITLIA. In conclusion, INNOVANCE Antithrombin assay can be used as an aid in monitoring antithrombin activity to support QFITLIA (fitusiran) dosing in adult and pediatric patients aged 12 years and older with hemophilia A or B with or without factor VIII or IX inhibitors.

10. Comments on Substantial Equivalency

The Siemens Healthcare Diagnostics Products GmbH believes that the data presented in this 510(k) premarket notification as well as the descriptions of similarities and differences support a decision of substantial equivalence between the INNOVANCE Antithrombin assay and the predicate device, Berichrom Antithrombin III (A) (K933125). These two medical devices have equivalent intended uses, technology and performance specifications. Therefore, a premarket clearance is supported based on the performance testing data provided in this submission and in NDA 219019 from Sanofi.

11. Conclusion

Based on the analytical and clinical performance data as documented in this 510(k), in K081769 and NDA 219019, INNOVANCE Antithrombin was found to have a safety and effectiveness profile that is substantially equivalent to the predicate device Berichrom Antithrombin III (A) (K933125). In addition, the data submitted for this premarket notification demonstrates that the modified device raises no concerns regarding safety and effectiveness.