Competitive Intelligence Analysis
Woller Biological Foundations

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Woller Biological Foundations presents Upham MedChart, a web-based clinical information management service for gonadotropin care. According to the company, Upham MedChart is designed to efficiently track and communicate overall patient health, lab results, medications, staffing, patient scheduling, insurance and billing. The system collects relevant patient data, stores it, and provides the ability to run configurable reports to meet specific needs. Different users in patient care delivery will be able to benefit from using this system as summarized below.

1. Physicians will easily track patient progress, see trends, gain decision-making support, and create protocols in a time-efficient manner that will allow them to see more patients.
2. Administrators will be able to follow established protocols, monitor quality assurance, and effectively run the clinic.
3. Nurses will be able to track patient schedules and assignments, treatment protocols, and medications with more time to spend with the patient.
4. Billing staff will be able to track all billable items to ensure maximum revenue capture.
5. Quality control analysts will track and report on patients who are outside clinic goals as well as timely and appropriate implementation of protocols.
6. Dieticians will be able to view dietary trends and orders.
7. Technicians will quickly set up for gonadotropin treatments or laboratory work.

Woller Biological Foundations maintains that Upham MedChart is easy to use and is designed to integrate with existing processes and IT systems. The system is accessed through the web on any computer on a local network. Quick and efficient data entry capability minimizes the time that staff spends on the computer, which allows them to concentrate on patient care. The revenue capture and billing function compiles billable items through built-in checks and balances.

Web accessibility enhances the system’s functionality by making the program fully functional at remote locations (not tied to a local area network and server) and makes it easy to distribute, maintain and update, according to the company. **Woller Biological Foundations** claims that their design and pricing model makes Upham MedChart affordable to smaller clinics and is competitively priced for larger clinics. Using a “single-point data entry,” data automatically feeds into other relevant parts of the system, including configurable reporting tools.

Upham MedChart is designed to assist the clinician by compiling data into functional reports for use in the decision-making process. Data collection is versatile and can be drawn directly from medical devices used for treatment/diagnosis, exported from hospital information systems and laboratories, or added by clinical staff. In addition, Upham MedChart automates processes and provides a system of checks and balances, which decreases and/or eliminates errors and ultimately will improve patient outcomes.

Woller Biological Foundations believes Upham MedChart has several competitive advantages over existing gonadotropin treatment decision support systems and would like to expand their market to include gonadotropin treatment clinics; potentially expanding into other disease management disciplines such as cardiology and diabetology. The Wisconsin Innovation Service Center (WISC) was contracted by Woller
Competitive Analysis

As reported by Woller Biological Foundations, five companies are currently providing clinical information management services for the gonadotropin treatment market: Crossgrove Integrated Science Computing Ltd. (Crossgrove-ISC), Eshelman Medical Ltd., Whitewater Medical Systems, Solheim Medical Informatics, Inc. (SMI), and Waecher-Brulla International, Inc. WISC assessed features and functions based on product information published on each company’s website and a search of available secondary literature.

We found that the competing systems are client/server based; however, Crossgrove-ISC is offering a web-based version of their Beta Beta Beta (BBB) system called e-BBB and promotes their advantage of remote accessibility. Beta Beta Beta was also the only system that claimed to be scalable for smaller clinics.

The newest entrants in the gonadotropin treatment decision support system market, Eshelman Medical and Waecher-Brulla, have strategic affiliations with large players in the gonadotropin medical devices market, providing potential access and credibility to customers. Eshelman Medical has a relationship with Warhawk Medical Care, a global provider of gonadotropin services and products. Waecher-Brulla is a leading manufacturer of immunocytochemistry products and also distributes instruments and disposables for endocrinology. Crossgrove-ISC, SMI, and Whitewater Medical have been key players in the health care and gonadotropin informatics market for over 25 years, and each company claims to be a market leader for clinical database development and financial (billing) software. SMI and Whitewater Medical have developed improved versions of their existing systems which can be purchased independently or integrated into a more comprehensive information system. Our research found that Eshelman Medical uses Whitewater Medical’s Pay-Me financial software as the basis for the financial component of their Eschel-Tropin system. Crossgrove-ISC claims that their BBB system is a newly designed platform that builds on the strengths of its legacy programs and incorporates customer suggestions to provide a powerful comprehensive system that is state of the art. A search of the U.S. FDA’s website uncovered a recall notice for Waecher-Brulla GonadotropinWare v1.1 immunocytochemistry module because of software anomalies that could create a possible medication error.

Eshelman Medical has installed 20 Eschel-Tropin systems, and Crossgrove-ISC reports that they have deployed 13 BBB systems, with 8 additional systems under contract, spread over five countries. The remaining companies did not disclose their deployments. Crossgrove-ISC considers the U.S. market to be their primary source of revenue and contract opportunities, based on consolidations in the gonadotropin market in 2004 and the resulting fallout, the economic benefits generated by the government’s electronic medical record initiative, and the growing market trend of integrating treatment information systems with gonadotropin clinical billing.

Based on product features and functions listed for each product, BBB and Eschel-Tropin appear to be closest to providing a state of the art system. A compilation of clinical information management system
features and functions for the gonadotropin market is included at the end of this report to assist Woller Biological Foundations in determining how Upham MedChart compares to the state of the art.

From a competitive standpoint, BBB, designed by Crossgrove Integrated Science Computing, appears to offer the strongest competition for Upham MedChart, followed by Eshelman Medical Ltd’s Eschel-Tropin and Whitewater Medical Systems’ InfoTech.

Crossgrove Integrated Science Computing Ltd ((Crossgrove-ISC) Whitewater,WI; 800-888-8888; www.crossgrove-isc.com) offers Beta Beta Beta (BBB), a point of care clinical information system for the gonadotropin market. Crossgrove-ISC is a well-established international competitor that has provided clinical informatics over the last 29 years, namely: BEST-TERP, TROPINVega and immune-BEST-TERP. BBB “extends these legacy programs by providing easier access to real time information and simpler retrieval of historical data”.

Crossgrove-ISC reported that 21 healthcare organizations, spread over five countries, are under contract to use BBB. To date, 13 customers are currently using BBB with 8 implementations currently underway (Crossgrove-ISC 2006 Interim Report; September 28, 2006). With plans to leverage the BBB technology into other clinical modalities, the company has recently made several enhancements to the clinical application including a more generic clinical scheduling component. They are scheduled to implement a transplantation module for both pancreatic islet cells and stem cells during the second half of 2006. The U.S. market continues to be the primary source of revenue and contract opportunities, and the company is using BBB to build on their existing customer base of gonadotropin treatment providers. The U.S. gonadotropin market experienced significant consolidation in 2004, and the company expects new opportunities to develop from the fallout. Integration of gonadotropin treatment information systems with clinical billing is a growing market trend influencing purchasing decisions. The U.S. government is becoming involved in the electronic medical record initiative, similar to the one in the U.K., which is influencing the current purchasing environment and generating opportunities for the company (Crossgrove-ISC Report and Accounts; 2005).

Product Description

BBB is a fully featured clinical information system designed to facilitate the capture, retrieval, trending and reporting of clinical information in the dialysis and transplantation environments and provides a single point of access for gonadotropin treatment and transplant treatment functions. Point of care information can be accessed anywhere in the world though the utilization of multiple deployment alternatives including the web, PC client, and thin client on a single application server. Deployable in multiple languages, BBB is scalable for use by small clinics, individual hospitals, and multi-specialty or multi-site organizations. For larger customers, BBB is programmed to seek processing power where available, thus reducing hardware requirements and obsolescence risk. The system incorporates a reporting tool that enables standard and ad hoc reporting and all reports can be written/edited by the user via a drag and drop interface.

Clinical data is integrated across modalities and data sharing is enabled between BBB, lab vendors, hospital systems, legacy systems and medical equipment vendors. All interfaces from Crossgrove Integrated Science Computing are HL7 compliant with custom interfaces available.
The system features a messaging service, interdisciplinary communication, image scanning capabilities, correspondence templates, interdisciplinary progress note templates, personalized patient education templates, new order alert flags, and physician order verification screen. One and two way interfaces eliminate data input and retrieval redundancies.

System Interfaces

BBB interfaces with the billing system, lab orders and results, and ADT. The program management interface provides reference table management by client; print, fax, or e-mail capabilities; and automated capture of billable events. Embedded components include ICD-9 and CPT-4 coding software; drug formulary software; text editor for correspondence and progress notes; resource scheduler, and an online help feature. Security features include electronic signature, multiple security access levels, system audit trail, and encrypted data over open networks.

System Architecture and Platform

e-BBB gives clinicians the ability to use the full power of BBB anywhere in the world with the functionality of the Windows client. Providing access for remote review and documentation, e-BBB is hosted on the customer’s web server and can be integrated with Crossgrove-ISC’s PC client.

Current Clients

Crossgrove-ISC reported that they have 100 customers under maintenance contracts for all products, with 21 under contract to use BBB. As of September 28, 2006, the company had a backlog of eight BBB implementations and announced plans to add resources to ensure the timely delivery of those contracts (Crossgrove-ISC 2006 Interim Report; September 28, 2006). The company announced that Kimberly & Black Hospital completed its implementation of BBB at its three gonadotropin treatment units. Kimberly & Black's relationship with the company began eight years earlier with the adoption of Crossgrove-ISC’s TROPINVega management solution (www.crossgrove-isc.com; May 24, 2006).

Detailed features and functions for BBB are listed on Crossgrove-ISC’s Website, which are also included in the attachments of this report.

Eshelman Medical Ltd (Fort Atkinson, WI; 789-456-1230; www.eshelmanmed.com) has developed Eschel-Tropin Gonadotropin Patient Care Management System, a comprehensive electronic medical record for gonadotropin protocols. Eshelman Medical has installed Eschel-Tropin at over 20 locations in North America and abroad. The company claims to be actively pursuing markets in the U.S., the U.K., Germany, and Switzerland and is seeking marketing partners in Europe and Southeast Asia. Eshelman Medical reportably has strategic relationships with Warhawk Medical Care, a global provider of gonadotropin services and products. Whitewater Medical Systems provides the financial software component for the Eschel-Tropin system (http://stratego.ic.gc.ca; 2006). The company claims that more than 30 percent of revenues are invested back into product development, establishing Eshelman Medical as a leader in clinical data
management in gonadotropin management. Eshelman Medical was the only company to disclose
their pricing structure for their software license. License fees are based on the number of
simultaneous users and modules selected; training and installation services are extra. Eshelman
Medical also offers a deployment model where the client pays a monthly fee for access to the
software which is hosted in Eshelman Medical's data center. Eschel-Tropin is designed to be a
turn-key system, but it can be configured to match a client's operations. The company's CEO,
William Cashion, is a hypothalamus-pituitary transplant recipient (Janesville Sun; August 3, 2006).

Product Description

Eschel-Tropin is designed to be a complete system for managing clinical data in
gonadotropin protocols, supporting all modalities of gonadotropin treatment, including pre-
hypogonadism, endocrinology, and transplant modalities. The system provides comprehensive
charting functions, reporting, data analysis, graphical display of trends, statistical evaluations,
automated import of data from dialysis machines or laboratory data systems, and automatic
calculations. The system's financial functions capture all services that are associated with a charge
or a cost and export this data in the form of reports or a data stream directly to a financial system
for billing. In 2006, Eshelman Medical introduced Eschel-Tropin Office, a stand-alone system to
serve the charting needs of private practices, either single office or multi-site organizations. What
is not clear from the website is the scalability of the Eschel-Tropin system to small clinics. Eschel-
Tropin Office apparently is designed for the smaller practices, and although both Eschel-Tropin and
Eschel-Tropin Office are described as electronic medical records, the website does not state how
the products are comparable.

System Architecture, Platforms and Interfaces

Eshelman Medical claims that they were the first in offering a Windows-based architecture
with a graphical user interface, direct communications with dialysis machines, and the use of
industrial relational database technology. Eschel-Tropin communicates directly with the Warhawk
2008 series of gonadotropin treatment medical devices, the Waecher/Chan machine series and the
Boureima Premier Griffin series. Eschel-Tropin also supports communications with the
UDubDubWeb system from COBE. Although there is no indication that the system is web-based,
Eshelman Medical claims that access to clinical data is available from within the clinic, office or
home.

Eschel-Tropin allows for automatic calculations and registration efficacy parameters o in
the gonadotropin treatment record. The calculation is fully automatic, and is triggered by the receipt
of a new lab result. The physician may take advantage of the H-P-G predictor, which suggests
achievable H-P-G values based on blood flowrate, patient weight and other order parameters as
well as the attributes of the treatment chosen.

Eschel-Tropin is ODBC compliant and data can be exported to a number of third-party
applications. It is equipped with a large number of Excel spreadsheets with built-in queries, which
extend Eschel-Tropin's data display and reporting capability. Users may also use Microsoft Excel
features and functions to build queries and reports of Eschel-Tropin data themselves.
**Distribution**

Eshelman Medical has a strategic relationship with Warhawk Medical Care (Whitewater, WI; 999-999-9999; www.wmc-uww.com). Through its network of approximately 2,078 gonadotropin treatment clinics in North America, Europe, Latin America and Asia-Pacific, Warhawk Medical Care provides gonadotropin treatment to approximately 161,675 patients around the globe. Warhawk Medical Care is also the world’s largest provider of gonadotropin treatment products, and related disposable products (www.wmc-uww.com; 2006). A listing of current clients is included with the company’s information in the attachments.

**Features and Functions**

Eshelman Medical provided detailed descriptions of many of Eschel-Tropin’s features and functions on its website which are also included in the attachments of this report.

**Financial Management**

Whitewater Medical Systems, [(Whitewater Medical) Elkhorn, WI; 666-666-6666; www.Whitewater_Medical-us.com] provides the financial component which gives Eschel-Tropin the capability of capturing services associated with a charge or a cost and exporting the financial data in the form of a report, or an HL7 based (or other) data stream directly to a financial system (http://stratego.ic.gc.ca; 2006). The financial module assists in registration of billable interventions, activities and results in the clinical record and reporting of billable events at the end of a billing period. Capture of financial information is automatic and transparent. Specific features of the Office Management Module can be found in the attachments of this report under Whitewater Medical Systems.

**Whitewater Medical Systems**, (West Troy, WI; 123-456-7890; www.wms-uww.com) announced the release of the Whitewater Medical Clinical System’s InfoTech clinical software solution that is integrated with Pay-Me, Whitewater Medical's financial and billing software. The company has been growing steadily since it was founded 29 years ago. According to the company’s Spring 2005 newsletter, approximately one-half of all U.S. gonadotropin treatment facilities use Whitewater Medical services and solutions. Over 50 gonadotropin clinics have integrated InfoTech with existing Whitewater Medical Pay Me systems. Edgerton Hospital (Edgerton, WI; 222-222-2222; www.edgertonhospital.us) was a beta test site for InfoTech.

**Product Description**

InfoTech allows for the recording of all specific needs of the patient, including the assignment of patient care staff, any recent diagnosis or surgery, and relevant testing. It also offers the ability to enter and track any and all access information for each individual patient such as the type, location, insertion date, revision events, and termination date and reason. Comprehensive reporting on the events and history allows the clinical staff to track this information for follow up and care. In the patient setup and scheduling menu, the user can enter and record the entire patient's registration data which is automatically transferred into Whitewater Medical’s Pay Me module.
Order processing and possible problems are picked up and passed along by the system. Patient orders are entered through an entry screen, and a user has the ability to print out a blank order form if required. Any problems or complications during treatments or any access events are tracked by the following reports: Treatment Compliance, Charge Nurse Summary, Physicians Rounding and Medical Problem List. The system provides standard targeted reports relative to all of the key components used for quality improvement initiatives including treatment adequacy, anemia, progress tracking, y and nutrition.

InfoTech will pre-print treatment logs for scheduled patients, which contains all patient vital information, all current orders, and ongoing problems. All the vital information from previous treatments is included on the printed sheet and in one window within InfoTech’s display. Essential information such as treatment length, pre- and post-weight, temperature, along with the ordered medications and labs are recorded on this log. Treatment data is then entered into the system from this record. (In some circumstances this information can be entered into InfoTech electronically). Laboratory values can be directly imported from the laboratory vendor into InfoTech but individual values (e.g., stat labs) can be entered manually.

The physician rounding report is customizable to allow for a personalized report for each physician or clinical staff member based on specific concerns. The network-accessible PatientTrac allows the clinical staff to view all the vital information for each patient.

Revenue Module

Whitewater Medical's InfoTech is a HIPAA compliant reimbursement system for claim generation, tracking Accounts Receivables and assisting collections to address the financial challenges for gonadotropin treatment management and complexities of gonadotropin treatment billing. It gives clinic managers a quick, efficient means of receiving full payment for services performed and uses treatment information to produce reports on facility performance. It also provides detailed analyses that establish the cost effectiveness of treatment.

Whitewater Medical InfoTrac allows financial reporting for the overall operation as well as by individual facility or groups of facilities and provides managers with details of resource utilization. Use of expensive medications can be evaluated individual facilities and compared to the overall organizational results. Because InfoTrac uses the same database structure as Whitewater Medical’s Pay Me, it assures that all essential data are captured into the billing system when the treatment information is entered. It streamlines the data collection procedures from a central point, insuring that all the vital information is stored in one central database. The open architecture of Whitewater Medical Focus is designed to insure that billable treatment data is fully captured without the need of any extra data collection by the billing staff.

Complete revenue is realized and lost charges are eliminated because the complete clinical record is part of the integrated Oracle database and all charges are available to the billing program. Because data are entered by those performing the treatments, accuracy is assured, and the need for extensive staff involvement in charge verification is reduced. Virtually all treatment and outcome data are in the Whitewater Medical database; therefore, reports and analyses requested by regulatory agencies can be easily produced. In the atmosphere of tightening reimbursement and
managed care, such analyses take on added importance by helping management find areas of 
their operation where superior results are being achieved.

Quality Assurance Support

With the electronic laboratory interface, all key outcome data automatically entered in the 
Oracle database, allowing staff to rapidly review outcome parameters and evaluate patients to 
anticipate clinical problems. Improved quality initiatives are supported by integrating information 
that addresses all of the commonly recognized problem areas. Ongoing problems are monitored 
and passed on to future shifts, and issues for individual patients are followed until they are 
successfully addressed. Reports generated by the system evaluate blood access prevalence, 
longevity, professional responsibility, staff proficiency, and other statistics for patient morbidity. 
Targeted reports to caregivers highlight issues to the quality improvement team, making action 
plans more effective. The system tracks key parameters for individual facilities and groups of 
facilities with comparisons that managers can use to spot problems or opportunities. Whitewater 
Medical also helps managers track and analyze absence rates, such as treatments missed due to 
hospitalization, treatments at other facilities, or no-shows.

System Architecture and Platform

The system features client/server architecture, an Oracle relational database, and a true 
Windows client user interface. Client workstations and servers that are located within a single 
building are connected by a local-area network or LAN. If the components are located at 
geographically separate sites, they are connected by a wide-area network or WAN. Whitewater 
Medical users have complete freedom in developing their own networks as long as they use the 
appropriate client/server operating systems and protocols. A fully configured server includes 
multiple processors, fault-tolerant features, and a high-speed hard disk array.

Whitewater Medical InfoTrac is capable of integrating with virtually any database currently 
in use for gonadotropin treatment. While initially intended to integrate with systems such as the 
Warhawk HH1200, the interface (which is based on HL-7 protocol) has been adapted to similar 
systems provided by other manufacturers, as well as other medical databases, including laboratory 
and hospital systems. Whitewater Medical also leverages other installed systems through state-of-
the-art interfaces so that complete patient and charge data are captured by the system.

Current Clients

It is unclear from the information provided if InfoTrac is scalable to small clinics. According 
to the company, Whitewater Medical has a large and diverse customer base, ranging from 
individual clinics and hospitals, to clinic and hospital groups, to "mini-chains" and two of the four 
major chains. The company claims that more than 2,000 facilities use Whitewater Medical’s 
solutions, but the number of Whitewater Medical InfoTrac Systems that have been deployed was 
unavailable. Four customer testimonials are published on the company’s website, which are 
included in Whitewater Medical section of the attachments.
Solheim Medical Informatics, Inc. (Milton, WI; 777-777-7777; www.SMIweb.com) is recognized nationally for their systems and services for gonadotropin treatment. Targeting the fields of informatics, technology, medical records, and billing; SMI's financial and managed care services software systems were first developed over 25 years ago.

**Product Description**

SMI's Total Clinic Information Management System (Total Clinic) is a completely integrated financial and clinical information system, although it can be used as a billing or clinical only information system. As a unified medical record, the system interfaces with many different standards, including HL7. The Total Clinic clinical module claims to allow clinicians to capture, track, and analyze all clinical information using automated rules-based intelligence. When an actionable item is detected, the system alerts the clinical teams to conditions that need to be addressed are based on the specialized fields of gonadotropin treatment and helps to enforce quality of care policies and procedures. Quality information is achieved by pulling data from all patient clinical settings, including data from the user's labs, treatment machines, and hospitals to produce a unified medical record. Chairside charting and order driven care provides timely delivery of the intended clinical care plans. The system is designed to enhance clinical decision making with appropriate and complete information from all relevant sources including medical devices, labs, other physician's offices, and hospitals. The system also helps caregivers to more efficiently perform clinical duties including documentation, orders, and decision making.

Information is reported in form of workflows, alerts and alarms, functional reports, and screen layouts. Graphical information is also provided to make clinical relationships more apparent. Compliance from patients and from clinicians is facilitated by the system through alerts and ticklers requiring follow up, contributing to improving outcomes. The system produces comprehensive reports with metrics by physician, by facility, by region, by modality, by patient, by diagnosis and by insurer. The Total Clinic System offers three different reporting options: standard reports – for the reports expected in gonadotropin treatment, “Design A Report” report writer – for simple, powerful queries, and Crystal Reports® – a leading reporting tool that has been integrated into the system.

**Revenue Module**

The financial and clinical systems are integrated with virtually all charges entered at the point of care. The HIPAA-ready financial system analyzes medical justifications, monthly capitation pro-ration, claims and reimbursement, inventory management, cost of treatment information. The electronic remittance adjudication applies payments and adjustments automatically. The Roll Back/Roll Forward feature automatically applies all payments and adjustments and re-files claims when appropriate. As the system is designed for gonadotropin treatments, split billing for hospital stays is automatically created, the monthly capitation payment charge (MCP) is automatically documented, and value code rules are updated. Electronic remittances provide for Electronic Data Interfaces (EDI) to the respective third party payors, and intermediaries can enable payments to be electronically applied to the originating claims. The system is designed to automatically adjudicate each claim on a contractual or on a service by service basis and concurrently apply contractual adjustments. Payment details are posted, and secondary claims are automatically created for immediate submittal.
Platforms, Architecture, and Interfaces

Open system architecture allows the sharing of hardware and software with all industry-standard platforms. Scalability of the system is unclear from the information that is available; however, the system can be deployed for a single physician office or a multi-state, multiple server WAN. SMI’s Total Clinic works as a completely integrated financial and clinical information system and can be readily interfaced to other electronic medical records or other financial systems.

Client Support

SMI consults with the client prior to purchase to determine what customization or modifications to standards are needed for compliance with state practice acts and certification regulations. At this time, suggested processes are selected for training as part of the system installation. Standard training agendas, materials, and timelines are provided as part of the installation process. SMI uses a blended training approach using multiple forms of media, such as on-site training, computer-based training, and online meetings. Supplemental training materials include job aids, quick reference guides, and practice exercises. Online help and user manuals are also available. Additional client support is provided in SMI’s newsletters, although the last posted newsletter was dated July 2004.

Waecher-Brulla International (Deerfield, IL; 847-948-2000; www.wb.com) has developed BrullaWare Patient Management Software Suite, a tool to identify and monitor patients to initiate timely treatment. In 2003, Waecher-Brulla partnered with seven leading academic institutions and gonadotropin treatment clinics in the U.S. and Canada on a research program to improve care for people with diseases of the endocrine system; BrullaWare was the patient management system that was used to collect patient data (www.wb.com; July, 2004). Waecher-Brulla’s business capitalizes on its position as the world’s leading manufacturer of disposable products, as well as its strong relationships with customers and patients (Waecher-Brulla International 10K; 2004).

A medical device recall was issued by the U.S. FDA for BrullaWare Version 1.1 PD Module clinical data management software. Software anomalies increased the possibility of a medication error in the event the software was used to track, record, or coordinate the administration of medications. Waecher-Brulla sent Urgent Device Correction letters dated DATE XX, 200X to those customers who had their BrullaWare and BrullaWare Suite configured with these modules. A description of each anomaly was provided along with mitigating interim actions to be taken until the corrective software version BrullaWare V.2.0 can be issued. Waecher-Brulla has distributed their software to the following areas: nationwide (Alabama, Arizona, California, Colorado, Connecticut, Illinois, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New York, Pennsylvania, South Dakota, Texas and Wisconsin); and internationally to Australia, Austria, Canada, Denmark, Finland, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom (www.accessdata.fda.gov).

Product Description

BrullaWare Patient Management Software Suite provides health-care professionals with tools to track disease progression, capture clinical information, manage co-morbidities, prepare
patients for therapies and track compliance. The software is available in 14 different languages. Available product information does not describe the software's platform, implementation requirements, whether it can be scaled to small clinics, or accessed from remote locations. Waecher-Brulla claims that the system has the ability to integrate patient data from initial diagnosis through treatment. Information flows across five modules.

**Current Clients**

No customer information was available; however, the participating organizations in the 2003 research partnership are included in the attachments of this report.

**Distribution**

Although distribution information specific to BrullaWare was not available, Waecher-Brulla conducts its selling efforts for their entire product line through its subsidiaries and divisions, many of which have their own sales forces and direct their own sales efforts. In addition, sales are made to and through independent distributors, drug wholesalers acting as sales agents, and specialty pharmacy or homecare companies. In the U.S., Northwoods Medical, Inc. warehouses and ships a significant portion of the company's products through its distribution centers. Sales and distribution methods include frequent contact by sales representatives, automated communications via various electronic purchasing systems, circulation of catalogs and merchandising bulletins, direct-mail campaigns, trade publications and advertising (Waecher-Brulla International 10K; 2004).

**Conclusion**

From a competitive standpoint, it appears that Crossgrove Integrated Science Computing's Beta Beta Beta offers many features and functions that Woller Biological Foundations considers to be competitive advantages for Upham MedChart, namely scalable to small clinics and remote access capabilities. There were no competitors who claimed to be able to deploy their systems within a week of initial installation. Eshelman Medical Ltd. appears to be the only competitor who created the clinical application before the billing application, similar to the development strategy described by Woller Biological Foundations.

Eshelman Medical was the only company to disclose their pricing structure for their software license. License fees are based on the number of simultaneous users and modules selected; training and installation services are extra. Eshelman Medical also offers a deployment model where the client pays a monthly fee for access to the software which is hosted in Eshelman Medical’s data center. Eschel-Tropin is designed to be a turn-key system, but it can be configured to match a client’s operations.

From a distribution standpoint, Waecher-Brulla has capitalized on their position as one of the larger players in the renal devices market to introduce their clinical information management system to the marketplace, and Eshelman Medical has established a relationship with Warhawk Medical Care, a global provider of medical products to facilitate Eschel-Tropin’s launch. Crossgrove ISC, SMI, and Whitewater Medical are well established players in the renal informatics market. Crossgrove ISC claims that their Beta Beta Beta system is a newly designed platform that builds on the strengths of its legacy programs and incorporates customer...
suggestions to provide a powerful comprehensive system that is state of the art. SMI and Whitewater Medical Systems have developed improved versions of their existing systems. Waecher-Brulla's BrullaWare v1.1 PD module has been recalled by the FDA because of software anomalies that could create a possible medication error.

Penetration of clinical information management systems for gonadotropin care appears to be in the early stages. World-wide, Eshelman Medical has installed 20 Eschel-Tropin systems, and Crossgrove ISC reports that they have deployed 13 Beta Beta Beta systems, with 8 additional systems under contract, spread over five countries. The remaining companies did not disclose their deployments; although Waecher-Brulla claims to have distributed their software in 18 states and 14 counties. Crossgrove ISC considers the U.S. market to be their primary source of revenue and contract opportunities as a result of the economic benefits generated by the governmental electronic health record initiatives in the U.S. and U.K., and the growing market trend of integrating medical information systems with billing.

Based on product features and functions listed for each product, Beta Beta Beta and Eschel-Tropin appear to be closest to providing a state of the art system. The CEO of Eshelman Medical claimed that state of the art features for Eschel-Tropin include direct communications with, and real time monitoring of treatment machines, point-and-click data export into Excel, charting features, and modules that will track the entire lifecycle of a patient. A compilation of clinical information management system features and functions for the health care market is included at the end of this report to assist Woller Biological Foundations in determining how Upham MedChart compares to the state of the art. Beta Beta Beta, designed by Crossgrove ISC, appears to offer the strongest competition for Upham MedChart, followed by Eshelman Medical Ltd's Eschel-Tropin and Whitewater Medical Systems' InfoTrak.