

A Review of the
Toronto Faculty of Dentistry Research Institute Clinic

Executive Summary

Clinical research activity within the Faculty of Dentistry at the present time only represent about 13-15% of the total research activity, based on both publication and research dollar activity. Yet, the Canadian Institutes of Health Research are currently calling for an increased amount of clinical research and translational activity within Canadian Universities. This places our faculty in a position where it will not have the means or capacity to capitalize on new opportunities that will emerge from both government and corporate sources if it does not take proactive measures to change its way of thinking, planning and execution on activities which support and promote clinical research within the Faculty.

In recognition of this situation, the 2004 Faculty of Dentistry academic plan for research called out an initiative to review the current status of the Research Institute Clinic (RIC) within the Dental Research Institute (DRI).

The current document contains the elements of this review and recommends an immediate change to the management structure and space allocation of the RIC. It further recommends an increased engagement of all clinical faculty in the process of clinical research activity, with the goal of accommodating an active and high clinical impact program within the new Faculty of Dentistry building.

Toronto Faculty of Dentistry - Research Institute Clinic

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1. Introduction

Much of the Faculty of Dentistry's research program operates today within a virtual research institute called the Dental Research Institute (DRI). DRI was formed in 1998 to find integrated solutions to health problems, and to accelerate discovery in oral health while also advancing prevention, diagnosis and treatment in areas beyond teeth and gums alone. It was formed out of recognition that the Faculty needed a more efficient manner in which to streamline research support costs, enhance communications among its investigators, and make better use of its building infrastructure if it wanted to compete with the leaders among the world's best public teaching and research universities, with respect to its discovery, preservation and sharing of knowledge, its teaching and research, and its commitment to excellence and equity. DRI is already unique in Canada for its strengths across basic science (laboratory research), clinical studies (testing treatments that are nearing application in patients) and applied technologies (translation of the basic and clinical into commercial/industrial application). The 2004 Academic plan called for the Faculty of Dentistry to engage in taking full advantage of the DRI concept to implement a plan of growth and sense of ownership by its stakeholders. DRI's greatest asset is its diversity (its faculty members are an interdisciplinary mix of health care, social scientists, engineers and basic scientists coming from a range of ethnic and training backgrounds) and growth should be built upon this attribute.

An important element of DRI's academic plan relates to the **translation of research** into the clinic. A pivotal aspect of this involves the ability to engage in clinical research at a significant level. If health care and biotechnology is going to be the next economic driver of our society then our vision must be to build today the opportunities for divesting our inventions and technologies via our clinic business operations. DRI has called out to achieve this by:

- use of its new research grants endowment fund which has now raised close to \$500,000 and is on target to achieve its goal of \$5,000,000 within the next 10 years.
- improving our research facilities through the planning of a new Faculty of Dentistry.
- Familiarizing our Faculty with the activities of the Innovations Foundation and highlighting the benefits that are derived from the translation of our research. As well, to engage faculty in contract research activity and familiarize them with the universities procedures to facilitate the advancement of translation with the simultaneous publication of clinical research findings.
- providing DRI members with a policy on translational activities within DRI and related to spin-off companies in order to take advantage of the new MaRS facility on campus. This facility (located at the corner of College and University, across from the proposed new sight for the Faculty of Dentistry) is specifically designed to assist with the start-up of new companies on campus.
- Finally and perhaps most importantly, promoting the use our Research Institute Clinic (RIC) to carry out clinical studies with industrial and other collaborators in conjunction with our tenured and non-tenured staff.

It was recommended in the [[2004-2010 Faculty of Dentistry Academic Plan](#)] that a review of the current RIC be undertaken in order to establish a Centre of Excellence in Oral-Facial Rehabilitation that would be initially recognized provincially but would establish a longer term objective for that recognition to become global. This would become a corner-stone feature to attract investment towards the Faculty. This strategy has already begun to demonstrate success with the announcement of the Nobel Biocare Chair in Prosthodontic Surgery, now taken up by Professor Asbjørn Jokstad.

Dr. Jokstad was assigned in December 2005, by Dr. Santerre (Director of the DIR) and the Interim Director of the RIC, Dr. Tenenbaum to chair a committee to review the current RIC operations. The mandate of the committee was to:

- Review current operation of the RIC with respect to
 - use of faculty resources
 - ability to service the clinical research faculty
 - assessment of Faculty resources not currently in use
 - general operation procedures.
- Provide a review of academic strengths within the faculty that could complement the RIC in terms of making it an attractive site for companies and investigators to carry out clinical research within the faculty premises
- Provide a clear plan with respect to future operations, including administration, service support, cost recovery, promotion, effective use of resources and future building planning.
- Ensure a comprehensive review in its assessment of the whole faculty and clinical investigators affiliated with the faculty.
- Generate a final report with a plan for operations of the RIC and recommendations for implementation of the plan along with a time frame for its implementation.

A committee was established in December 2005, consisting of Dr Limeback, Dr Locker, Dr Santerre, Dr Tenenbaum and Dr Valenzano. When it became clear a few months later that the planning for a new faculty building was underway, the committee was also tasked to address the role of RIC within the confines of the new faculty building. Consequently, Dr Watson as head of the new faculty building committee was also invited to attend the committee meetings. The initial time frame for the committee report was initially set for completion in December 2006, but this was changed to the July 2006 in order to provide input to the imminent room planning for the new dental faculty building.

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2. Current clinical research within the Faculty and the RIC

2.1 Research activity

In 2004, about 100 papers were with one or more coauthors from the Faculty of Dentistry [[Publications 2004](#)]. The list reflects the research profile of the faculty of dentistry over the last few years, which is an emphasis on basic research, mainly in the field of biology. The list also includes a few clinical trials, various epidemiological research and some education and materials sciences papers. The 2005 annual report of the Dental Research

Institute provides some further detail on the basic research [DRI 2005 report]. The percentage distribution of the above areas is basic (58%), clinical trials (15%), epidemiological research (10%), and education/reviews (17%).

Another index for research activity is the number of new patents. As patents can only be granted when the research findings are not in the public domain, the number of papers from some of the faculty of dentistry research groups could probably have been higher than currently reported. The Faculty of Dentistry currently has several patents filed and technology transfer agreements with companies. Specific examples of such activity are listed in Table 1.

Table 1: Examples of faculty with licensed or assigned technology

Faculty member	Type of agreement (license or assignment)	Company or Institution who has acquired rights to IP	Status (active, on-hold or non-active)
J Paul Santerre	Assignment	Interface Biologics Inc.	Active
John E. Davies	Assignment License License	Millennium Biologix Inc. BoneTec Corporation Tissue Regeneration Therapeutics Inc.	Active Active Active
Robert Pilliar		Innova LifeSciences Corp	
Dennis Cvitkovitch	License	[KaneBiotech]	Active
Celine M. Levesque	License	[KaneBiotech]	Active
Howard Tenenbaum	Patent/License (resveratrol)	INSERM, France	Active

2.2 Facilities and staffing

Clinical research can currently, in theory, be conducted in any of the undergraduate student clinics, the postgraduate clinics, the affiliated university hospitals and in the current RIC. In this last clinical environment, the oral research clinic (ORC) is currently a major program. In practice, it is very difficult to initiate and carry out a clinical study in any of these settings. There are several key reasons for this and they include:

- Absence of a well defined financial model for cost recovery of research activity within the context of the cost recovery model for the teaching clinics.
- Lack of identified resource team to assist with appropriate costing for projects prior to start.
- Current use of the RIC resources for teaching and continuing education rather than establishing research projects as its priority.
- lack of appropriate staffing
- lack of a financial plan for directed growth and activity priorities
- shortage of dedicated infrastructure facilities

2.3 Funding

A number of current researchers and research groups in the faculty of dentistry receive funding from public and commercial sources. Based on information found on the faculty public domain website and the 2005 research day abstracts 36 individuals were identified with such funding: [Research funding 2005-2006]

There is currently little funding directed towards clinical research at this time. The distribution of funding through the DRI for basic, translation and clinical studies is about 70%, 17% and 13% respectively.

Moreover, the few clinical studies that have been published acknowledge, with a few exceptions, no sponsoring body. This is perhaps not surprising given the nature of the trials; i.e. largely retrospective cohort studies and very few clinical experimental trials. This situation reflects primarily the fact that there has previously not been a concerted effort to obtain such funding. An anecdotal list of some lost funding opportunities are given below, in alphabetical order:

1. The 3i Corporation has for years funded much basic research, but no translation studies.
2. In 2004, Colgate wanted to carry out small studies (60-100 patients) to obtain feedback from patients following a changing of flavors and therapeutic formulations in their toothpaste. The absence of infrastructure to enable a quick move on these studies resulted in a lost opportunity for investigators in the preventative unit.
3. Phillips & Gillette approached the faculty to appraise sensitivity following toothbrush use, but again timing and limited resources delayed this opportunity.
4. Straumann agreed to sponsor a trial on implant placement in elderly patients, but the study was until recently put on hold.

A more concentrated effort to impress these companies of the strengths of the Faculty and the position of Toronto as a clinical trials centre must be undertaken and resources to support this must be identified.

2.4 Current Research Institute Clinic

The RIC was formed during the 1998-2003 academic planning cycle. Its original intent was to provide a unique facility within the DRI which would promote and facilitate the conduct of clinical research. This was primarily driven by investigators in the periodontal unit which did not have a facility to conduct their implant research program. The Director of the DRI at that time, Dr. Johan Heersche, facilitated the formation of the unit by providing the group with space and the use of their overhead funds to remodel clinical rooms on the 3rd floor of the Faculty. Management of the RIC up to this point has focused on creating a presence of activity, currently dominated by projects from the Department of Periodontology, for historical reasons. There have been limited resources available to dedicate the facility towards a broad Faculty service.

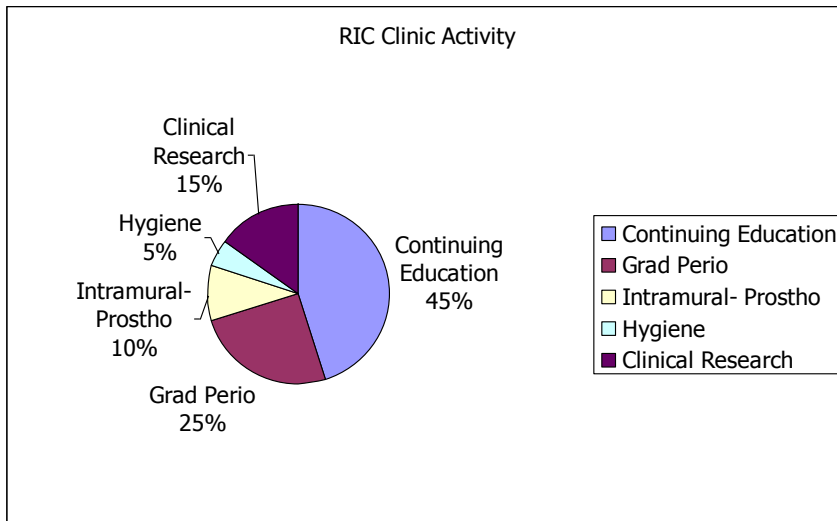
The RIC unit was originally set up for the purpose of conducting experimental clinical research. Today, the major activity relates to work within the Oral Research Clinic program (ORC). However, this program, while originally established to carry out implant studies, consists mainly of implant surgery as part of the postgraduate training of residents in periodontology and continuing education for foreign dentists. The ORC

activity is run efficiently from a clinical staffing perspective and the current administration of the patient flow is conducted in-line with the faculty clinics guidelines, although the reconciling of cost recovery has been challenging. The [\[RIC clinic layout\]](#) consists of 6 operatories with an extensive [\[clinical inventory\]](#).

The current Director of the RIC is Dr. Howard Tenenbaum who reports to the Director of the Research Institute on Research matters. The unit is one of 6 operating services within the DRI and it is by far the most complex both in terms of resource management and diversity of activity. There has been since the beginning of the RIC, a lack of discipline in terms of reporting on financial management, forward planning and execution of strategic plans on behalf of all members of the DRI. This is reflected by the historical circumstances under which the RIC was established.

The day-to-day administrative support is currently coordinated by Mary Lino, Team Leader RIC Clinic. While it was originally intended that this position should be reporting to the Director of the RIC, more recently due to administrative restructuring, the position more or less reports to the investigators carrying out Implant research. Presently, the Team Leader is involved in day to day administrative support and also serves as receptionist and occasional dental assisting duties. The current staff consists of an additional four dental assistants. The current emphasis on surgical oral procedures (namely, implants) in the RIC presently necessitates the need for highly qualified and skilled clinical support staff with specialty skills in greater numbers than in a normal clinical setting. Approximately two-thirds of the current staffing is primarily involved in clinical activities outside of their role in direct clinical research.

The time commitment for a typical week consists of the activities shown below:



A typical [\[weekly time schedule\]](#) shows a very high amount of activity related to postgraduate periodontics and continuing dental education.

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3. Regulatory directives / good clinical research practice

3.1 Good clinical research practice

Health Canada has issued through their various directorates a number of guidance documents on proper and ethical methods for clinical trials. The main guidance document is the “Food and Drug Regulations for Clinical Trials Guidelines” [[Canada trial guidelines](#)], which can be downloaded from Health Canada: [[Regulations Amending the Food and Drug Regulations \(1024 – Clinical Trials\)](#)].

Other guidance documents have also been prepared to assist in the interpretation of policies and governing statutes and regulations. They are intended to assist in preparing the various device license applications required when seeking an authorization to sell a medical device product in Canada. Central documents related to clinical trials are:

1. [Guidance for Records Related to Clinical Trials \(GUIDE-0068\)](#)
2. [Inspection Strategy for Clinical Trials](#)
3. [Preparation of an Application for Investigational Testing – Medical Devices V.3](#)
4. [Preparation of an Application for Investigational Testing – In Vitro Diagnostic Devices V.3](#)
5. [Application for Investigational Testing Authorization](#)
6. [Registration and Disclosure of Clinical Trial Information](#)
7. [Other Guidance Documents on Medical Devices](#)
8. [Other guidance Documents on Drug Products](#)

Canadian regulations are fairly similar to European policies although somewhat stricter regulations for regulating clinical trials on medicinal products were set forth by the EU commission, which became mandatory from 1st May 2005 [[EU directive](#)]

The implementation of Bioethical considerations are monitored by the existing Faculty research committee for most of the current activities. Protocols are approved in conjunction with the University of Toronto’s [[human ethics approval](#)] process.

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4. Essential needs for the conduct of good clinical research practice

Clinical studies require a clinical environment with (a) adequate and trained staff, (b) appropriate clinical and research equipment, (c) allocated research space and (d) established standard operating procedures.

4.1 Staffing, clinic and administrative management

Clinical staff is required to follow established operating routines for patient recall, examinations, registration and patient information.

Statistical expertise for support in the planning and executing stage of clinical trials will have the potential to greatly enhance the quality of trial conduct. When conducting clinical trials, a number of pitfalls can be identified [[Clinical Trial Pitfalls](#)], and at least one resource person should be employed that can assist the clinicians in addressing such

issues on a full time or part time basis, both in the planning stage of the projects and during the projects.

One of the major obstacles for conducting trials is the time and the specific competency required for writing comprehensive grant applications. It would seem very cost-effective to staff the research clinic with a person who has demonstrated skills and practice in grant writing. Whether this person is DDS trained or not is nonessential.

4.2. Infrastructure, clinic and research equipment

A research clinic should consist of standard dental operatories, preferably equipped such that only tools and apparatus specific for the conduct of the particular trial occupy the space. The clinic equipment and according layout will vary and depend on trial protocol. The operatories must therefore be flexible to adapt to various project possibilities. Appropriate research equipment needs to be identified in consultation between clinician-researchers and basic scientists. It is necessary for basic scientists and clinicians to consult regularly to clarify the potential benefits and potential uses that new and advanced research equipment may have for clinical research. Research equipment and devices currently in use in different research centers are listed separately: [[Research Equipment](#)]

4.3 Space

Regardless of the number of clinical operatories, each operatory requires additional space compared to the commonly used 3x4 meters layout. The additional space is required for placement of various additional recording or diagnostic devices, and/or an additional person for recording purposes. Moreover, there is a need for additional work bench area to allow for the placement of extra devices that may be required for a given study, in addition to the recording equipment. Finally, a large array of different size drawers and cabinets for storage should be available.

4.4 Standard operating procedures

Standard operating procedures (SOP) for good clinical research practice have to be established and made according to the Health Canada guidelines detailed in this document. Typical issues that need to be addressed are detailed in Table 2.

Table 2. List of clinical trials standard operating procedures examples

Topic	Areas to address
General Administration	Sop on Sops: Preparing, Maintaining & Training Responsibilities of the Research Team Training and Education
Subject Management	Subject Recruitment and Screening Informed Consent Development and Implementation Subject Management While on Study Adverse Event Reporting Specimen Collection and Hospital/Central Laboratory Procedures
Study Start-Up	Assessing Project Feasibility Pre-study Site Visit Investigator and Site Initiation Meetings

	Project Start-Up
Data Management	Data Management Management of Electronic Records and Signatures
Project Management	Site-Sponsor/Contract Research Organization (CRO) Communications Interactions with the Institutional Review Board Regulatory Files and Subject Records Sponsor/CRO Monitoring Visits Study Termination Visit Investigational Drug Accountability, Storage, Dispensing and Return
Quality Assurance	Audits

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5. Potential future clinical research areas

Clinical research can be identified as research where the unit of measurement is a human subject or some part of a human. In practice, this encompasses designing and executing clinical experimental trials (A). An alternative and complementary research approach is where patients receive some form of care and the process, the participants or the equipment and/or the work environment is being monitored (B).

5.1. Clinical experimental trials

The 2004 publications list from the faculty of dentistry provides some suggestions for feasible clinical experimental trials. The faculty needs to undertake an initiative to visualize and promote the strong basic sciences background contained within the faculty in order to hopefully attract interest for more translational research from potential sponsors and possibly for other grant funded clinical experimental trials (Table 3).

Table 3. Possible future clinical research areas

Patient / Condition	Study focus:			Remarks:
	Etiology / Harm	Diagnosis –establish sens. / spes.	Intervention (prevention / therapy)	
Periodontal diseases		<ul style="list-style-type: none"> • Systemic tests • Identify high risk indicators 	<ul style="list-style-type: none"> • Photodynamic therapy • Maintenance • Beta glucans 	in particular, chronic refractory periodontitis and oral mucositis in cancer patients
Caries		<ul style="list-style-type: none"> • Identify high risk indicators 	<ul style="list-style-type: none"> • Topical fluorides • Ozone 	

		<ul style="list-style-type: none"> •Saliva tests •Evaluate new monitoring devices using low energy systems such infrared, ultra-sound, etc.) 		
Pain	<ul style="list-style-type: none"> •Genetic markers •Functional magnetic RI 	<ul style="list-style-type: none"> •Genetic markers •Functional magnetic RI 		
TMD	<ul style="list-style-type: none"> •Genetic markers •Functional magnetic RI/CT scan 	<ul style="list-style-type: none"> •Genetic markers •Functional magnetic RI •CT scan 	<ul style="list-style-type: none"> •bruxism appliances 	
Local tooth pain			<ul style="list-style-type: none"> •Desensitization products •Endodontic restoratives 	interventions that either might cause or reduce pain
Dry mouth / Halitosis		<ul style="list-style-type: none"> •Salivary buffering capacity •Drug adverse effects 	<ul style="list-style-type: none"> •Fluid therapy •Salivary substitutes 	
Oral Mucosal diseases			<ul style="list-style-type: none"> •aphthous ulcers, •viral lesions, •oral mucositis in cancer patients •antimicrobial peptide studies •combination product studies 	
Oral and other Cancers	<ul style="list-style-type: none"> •Molecular markers •CT scan 	<ul style="list-style-type: none"> •Molecular markers •CT scan •salivary diagnostics (neutrophil assays) for monitoring progression of therapies 		
Rehabilitation	<ul style="list-style-type: none"> •Biocompatibility 		<ul style="list-style-type: none"> •Implant interventions •Resorbable polymers and therapeutics 	This area is a significant area of growth and has strong potential with activity in the biomaterials and growth-development and regeneration themes.
Fluorides	<ul style="list-style-type: none"> •Fluoride exposure history •Enamel biopsies 	<ul style="list-style-type: none"> •Fluorosis VAS scale 	<ul style="list-style-type: none"> •Optimal interventions •Reducing 	

	•Fluoride – association with systemic illnesses		exposures	
General health		•Saliva tests		

5.2 . Design and development of a clinical environment that may enable testing of devices and equipment used in dentistry

There is currently no independent reliable centre or organization in Canada that can provide guidance to dental care workers or industry regarding merits of dental products, - materials and –devices. The only such centre in North America is the [[Paffenbarger Research Centre](#)], which is jointly sponsored by American Dental Association, the US National Institute of Health and the National Institute of Standards and Technology. Another similar centre in Europe is the [[Nordic Institute of Dental Materials](#)]. These centers conduct testing and certification according to established standards, as well as participate in developing new international standards. According to the current chairman of the relevant dentistry technical committee in ISO, ISO TC106, Dr Derek Jones, there was a political endorsement to establish such centre also in Canada some years back, but the opportunity was subsequently lost.

The dental industry is eager to establish whether their products satisfy adaptation to the appropriate ISO requirements if such exist. Moreover, they often rely on quality feedback from customers and consultants regarding potential users’ requirements for e.g. ergonomics, health and safety, infection control possibilities, etc. Such feedback can be generated in institutions where there are many clinicians undertaking a large number of patients requiring a varied number of therapies; e.g. such as can be found in a faculty clinic. The future faculty of dentistry should consider staffing the clinic with an adequate number of supplementary engineers and other relevant personnel to enable establishing a centre that can specialize in product testing and product improvement.

It would be advisable to contact the Canadian association of dental manufacturers to establish whether such a centre would be sustainable with or without direct funding from the industry. A centre for such activities would also possibly open for collaborative projects with other University of Toronto institutions relevant to the contextual subject, and perhaps even funding from sources that traditionally have not been tapped into by the dentistry faculties. A list of possible areas for conducting such evaluations are provided in Table 4.

Table 4. Possible areas for conducting clinical testing / studies

Clinician large equipment, ergonomics, etc.	Clinician small equipment, user feedback	In office equipment, efficiency, safety etc.
<ul style="list-style-type: none"> • Dental units • Unit lightning • Delivery units 	<ul style="list-style-type: none"> • Rotary instruments • Scalers • Fiberoptics 	<ul style="list-style-type: none"> • Compressors • Vacuum systems • Pumps

<ul style="list-style-type: none"> • Patient seating • Operator seating • Cabinetry • Waterline contamination • Anesthesia equipment • Etc. 	<ul style="list-style-type: none"> • Rotary burs • Small diagnostic and therapeutic devices • Etc. 	<ul style="list-style-type: none"> • Suction • Amalgam separator • Operatory lightning • Etc.
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5.3 Funding possibilities

Potential current possible opportunities for funding are from both companies and public:

5.3.1. *Company funding opportunities*

- Curazone Company, ozone use for prophylactic reduction of caries activity
- Halitosis studies are often sponsored by large global manufacturers
- Nobel Biocare has indirectly sponsored several implant studies originating from the Implant Prosthodontic Unit (IPU).
- Ondine, British Columbia, has voiced an interest to sponsor trials on light activated drug for periodontitis
- Pharos technologies, light activated drug
- Straumann/Biora, may be willing to sponsors studies on the effect of Emdogain on hard and soft tissues
- Kane Biotech in the area of antimicrobial peptides.

5.3.2 *Public funding opportunities*

- CFI, requires seed money for building infrastructure. This requires matching funding from others, e.g. from company.
- Government and insurance agencies are interested in establishing the cost effectiveness of different modalities of treatment
- CIHR, from the perspective of establishing optimal recall rates and therapeutic delivery studies
- Veterans affairs, from the perspective of cost containments
- First nations, from the perspective of cost containments
- RCMP, from the perspective of cost containments
- National Clinical Survey, could the clinic be used as a centre for calibration?

5.3.3 *Other funding opportunities*

A systematic review of former IADR and AADR abstracts can be undertaken to identify:

- a) which funding sources Canadian investigators have had access to, and
- b) which are the biggest commercial sponsors in North America, and which are their areas of interest for sponsoring, as well as determining whether any of these sponsors have demonstrated previous support of researchers from Canada.

ISO TC106 dentistry has shifted the secretariat from UK to Canada in 2004. It is now hosted by the Canadian Dental Association (CDA), and there is good reason to believe that it would be of interest to this new secretariat to assist in establishing some sort of

dental “testing facility” for many of the standards that are under constant review within the ISO TC106 activities (List of ISO standards: [\[ISO Standards\]](#)).

A tentative list of potential commercial sources for funding is available on the sp website: [\[Manufacturers N. America\]](#)

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6. Viable initiatives that may improve clinical research activities

6.1 Undergraduate training

The Faculty of Dentistry has a very active summer student program that is administered through the DRI by the Summer Student Coordinator (currently Dr. Michael Glogauer). In this past year this program has been integrated with another CIHR training grant dedicated to recruiting the strongest undergraduate students from across Canada. The program’s name is Network of Oral Research and Training in Health - [\[NORTH\]](#).

Each summer a few of the 25-35 undergrad students that are engaged in research have the opportunity to participate in clinical research. However, these numbers are very limited in comparison to the total number of undergraduates that are in the DDS program. The current academic plan calls for instilling a culture of research throughout the whole education program in the Faculty. Specifically, at the undergraduate level there is activity in progress to establish an undergraduate research curriculum that would produce a credit course for which all undergraduate students would have access to. This initial concept of the program was presented to the Faculty’s undergraduate curriculum committee in the Fall of 2004 by Dr. Bernhard Ganss and Dr. J Paul Santerre, and the idea was endorsed however a curriculum needed to be developed that could accommodate all students equally. The following benefits will come from this initiative:

- increase motivation of students to participate in research for academic reasons
- indication of the Faculty’s interest to offer academic research as an alternative career path
- recognizes a comprehensive training that we provide for students on the ethics of science, publication writing, project design, public presentation, use of computer tools for communicating research, exposure to the broader area of dental research, conveying the importance of collaborative research, promoting the exposure of students to international dental research.
- A program for credit would clearly set out requirements that would motivate students to participate in all aspects of the program.
- promote the use of personal guided research in the regular curriculum
- It would allow the Faculty to recognize undergrad research achievements at annual graduation ceremonies.

A current aspect of this program which is requiring some thought is the method by which all students could accomplish their research requirement in the curriculum, since there are only 20-35 research projects run each summer in the Faculty. If students could

participate in a clinical research project throughout the school term via projects being carried out within the RIC, then this could be used to satisfy the research time requirement that would be set forth in the research curriculum component.

The above initiative will be further pursued in the Fall of 2006 in order to attempt to begin implementation with first year students in the Fall of 2007. The contacts for this initiative are Dr. J Paul Santerre and Dr. Michael Glogauer.

6.2 Graduate training

At the graduate level, DRI will focus on ensuring that the Associate Dean of Graduate Studies receives our full support with the further implementation of the mandatory MSc. Thesis within the specialty program. This is key to achieving our objective of being leaders among the world's best public teaching and research universities, in respect to its discovery, preservation and sharing of knowledge, its teaching and research, and its commitment to excellence and equity.

The Faculty has a CIHR training network that is directly associated with the training of PhD students in the area of Pain and Inflammation with a focus on the study of Cell Signaling effects. There are a couple of students in this program that have had clinical research components in their thesis, and which should be encouraged to conduct this research in the RIC.

6.3 Possibilities for GDPs to obtain CE points

A large proportion of the current teaching faculty is non-tenured. One possible strategy for harnessing the creativity of these individuals, particularly in the translation of research to practice or even allowing them to empower our research Faculty with new direction for solving clinical issues in the practical field is to integrate them into the RIC programs by promoting the nature of research project opportunities for them. This can be done via our Faculty website, the Alumni office, or directly in the clinics via our clinical investigators.

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7. Recommendations and Schedule for Implementation:

7.1 Within existing confines

The current activity within the RIC should not remain dominated by select graduate training. A research clinic that can provide a multidisciplinary approach and serve all the faculty's clinical research needs must become a central priority.

7.1.1 Staffing, Clinical, administration and management & Public relations

Given the difficulty that the RIC has had in identifying a clear and consistent approach to the development and administration of new clinical research projects it is strongly

recommended the future of the RIC be guided by a management board that is made up of individuals who have a clear understanding of the University's policy on grants and contracts, Intellectual Policy and technology transfer activities.

As well, this board should have representation from the Faculty's Director of clinics since costing operations are currently in place for all the clinic teaching and there could be a significant amount of overlapping activity that would be beneficial to the RIC. A permanent director is needed and this individual should have experience in conducting clinical research studies. Lastly, there should be a permanent manager position established for the day-to-day execution of clinical logistics within the RIC.

The management board formed from the Director of the DRI, the Director of Clinics and the Director of the RIC with the Dean of the Faculty being an ad-hoc member would be chaired by the Director of the RIC and would convene 2-4 times a year to oversee activities and general operating of the RIC to ensure that activities were planned according to the practice of clinics within the Faculty, and the policies administrating research contracts and grants within the University. This committee would decide on where to direct overhead funding brought into the RIC from research projects associated with grant activities carried out in the RIC. Executive action recommended to the RIC by the management board would be carried out by the Director of the RIC with that individual's assigned staff.

All clinical research project proposals must be passed through for review to the RIC Principals/Executive. The proposals should be reviewed to ensure proper clinical research protocols, RIC suitability and clinic operation financial viability have been adequately addressed. To assist with this task a reviewer pool made up of one representative from each clinical division will be made available to the director of the RIC.

A formula needs to be determined for the optimal proportion of permanent support staff for the RIC and assigned and/or hired for a specific research project.

The requirements of administrating an efficient research clinic would best be served if the role of the Team Leader is limited to the administrative duties with occasional dental assistant duties and there is provision for a dedicated receptionist.

The potential for a variety of clinical research activity in the RIC would necessitate the need for retaining staff that are highly qualified with specialized skills and have a diverse dental background. A dedicated dental receptionist should be added to the current complement of clinical support staff to permit the Team Leader / Receptionist to focus more fully on the day to day administrative duties and responsibilities in the RIC. Consideration should also be given to increasing the complement of clinical support staff as the needs of the RIC increases to ensure ultimately at least one dental assistant is dedicated to each operatory.

It is also proposed that we develop a pool of patients who would be willing to participate in, and appropriate for participation in various and sundry clinical research projects that are taking place or being proposed. It is difficult to attract patients just at the time of

inception of any particular program and therefore having such a pool will facilitate the timely prosecution of clinical research projects. Patients should be derived from a variety of resources including the undergraduate and graduate clinical pools. In addition, it is proposed that the RIC actually advertise in professional publications as well as newspapers (including the so-called subway newspapers) on a regular basis in order to attract potential generic recruits as well as those patients who would be suitable for already identified clinical research programs.

7.1.2 Infrastructure

A potential model of an efficiently run clinical research clinic is detailed in a separate graphical figure: [\[RIC Model\]](#)

7.1.3 Standard Operation Procedures and Space Requirements

There is a need to establish standard operating procedures (SOP) for good clinical research practice according to Health Canada guidelines and adapted to suit the special circumstance of the RIC with the Faculty of Dentistry. The director of the RIC should oversee that all SOPs are followed, while another committee will need to audit. This task could perhaps be delegated to a committee formed from members of the Faculty's Research Committee and members of the Clinical Management staff in units outside of the RIC but within the Faculty.

The RIC is presently running at capacity and is currently undertaking a very limited amount of clinical research. Resources and space limitations within our present building do not allow for expansion of the existing facility. Therefore, change to the existing schedule of clinical activity must be seriously considered to ensure the future viability and success of a clinical research facility at the Faculty of Dentistry, University of Toronto.

7.1.4 Consequences of changes

It must be recognized that the changes that are being proposed in this document will also have effects on other parts of our faculty. We propose that all Graduate level implant and reconstructive dentistry training currently being carried out in the RIC be moved, possibly to develop a new collaborative implant dentistry training program (possibly in the IPU). Although this unit was developed for several purposes, those being training, service and prospective research data collation and analysis, this program does not necessarily need to be done in the RIC. Similarly, there is a continuing dental education program that is closely tied to the Graduate Periodontology program as well as to the research activity mentioned above. This program would also be expected to move out of the RIC. These moves would of course create more space/time availability for clinical research programs that will eventually develop. However, this leads to an impact on space and time availability in other parts of the Faculty that will have to be accommodated. It is also proposed that other programs, tied to a specific discipline (e.g. Periodontology's Severe/refractory Periodontal Disease Investigation and Treatment Unit) currently in the RIC, but not related to the implant dentistry training/research/CE program continue to operate in this clinic.

The faculty clinics in general are functioning at a high usage capacity so the availability of operatory chairs for clinical research is very limited. The undergraduate clinics would have limited availability of 2-3 operatories in Clinic 1, that are presently designated for undergraduate periodontal surgery. All other undergraduate operatories are in use during the traditional academic year, September – June, however, there would be availability during the summer months. It should be noted that the undergraduate operatories available during this time would not provide a great degree of privacy as the operatories to the most part would be considered open concept operatories. The graduate operatories though more suitable for clinical research would have extremely limited availability due the varied schedules in the graduate programs and also the high usage rate of the graduate clinics. To utilize the graduate clinics would also pose numerous scheduling problems, logistical challenges and seems administratively very difficult to manage.

It would seem logical that the RIC unit, which originally was set up for the purpose of conducting experimental clinical research, should be structured so this once again becomes the primary activity in this unit. This means that the clinic should not remain dominated by projects such as the ORC program which is focused on the surgical training of postgraduate periodontal residents in implants. The latter should be reallocated to the postgraduate periodontology clinic, therefore allowing human resources to be redirected towards new research projects and the relevant clinical research projects that are currently associated with the RIC.

Consideration must be given to decreasing or completely phasing out the Graduate Periodontology and/ or Continuing Education clinical activity in the RIC to allow for increased available time for experimental clinical research and clinical trials.

7.1.5 Financial model

Financial management remains a challenge in terms of project budgeting in advance of the start of new projects. This results primarily from the fact that clear guidelines for project budgeting are not available for PIs wishing to undertake such activities.

When approached by any commercial venture to begin a clinical investigation on any product, there should be a startup fee levied that offsets the efforts required to draft a new proposal. This might not apply to companies that supply their own protocols (e.g. Ondine with Dr Jim Lai as P.I) but even here, the protocols have to be rewritten to improve scientific validity or for complying with Human Ethics issues.

Following approval of a clinical research proposal and upon commencement of the project to ensure the financial stability and viability of the RIC, the following mechanisms should be followed:

- a) All clinic overhead expenses should be identified, confirmed and approved prior to commencement of the project.
- b) Upon commencement of any new clinical research project in the RIC, an invoice would be initiated and forwarded to the principal investigator for the full amount of anticipated clinic overhead expenses for the fiscal year.

- c) All patients must be appropriately identified in Axiom by the Team Leader. Procedural expenses and visits will be tracked in Axiom as well as the appropriate adjustments to the patient chart.
- d) Upon completion of the project, a budget report analysis will be completed and reviewed.
- e) Capital expenditures for the RIC should be addressed by the RIC management board and the PI review committee pool

7.2 New faculty building

In order to truly integrate clinical and basic research sciences with the clinical undergraduate and graduate educational experience it will be necessary to allow for changes in the physical layout of the Faculty of Dentistry. In this regard it is proposed that in the future building provisions should be made to develop clinical and research spaces that are more contiguous. It is suggested in fact that the layout of such space follow the philosophy that pertains to the concept of '*bench to chairside*' research/education/clinical treatment. Hence, it is proposed that newly developed space allow for basic science research laboratories to be, for example, contiguous with the clinics but that in between, we could house translational laboratory facilities. The latter facilities would operate on the principle that patients coming through our Faculty would also be subjects of various clinical/translational research programs. Similarly, the basic research labs would still have communication with the undergraduate and graduate clinical areas but via the translational labs.

The planned room details for the future RIC are described elsewhere: [\[RIC rooms\]](#). These facilities will evolve in concept over the next years and the RIC will engage, with the faculty, in an active campaign of fundraising and achieve the vision of the RIC facility within the new Faculty of Dentistry building.

7.3 Schedule

The following tables (Tables 6 and 7) list the recommendations and planned resource allocation to implement the recommendations (Table 6) and the assignment milestones for implementation of the recommendations over the next 3 years.

Table 6: Recommendations and resource allocations

Recommendations:	Resource Allocation:
7.1.1: Staffing, clinical administration and management & public relations	
1. Establish a management structure	Faculty salaried positions assigned from current faculty and clinic teaching staff
2. Establish a Clinical Project Reviewer Committee	Faculty salaried positions assigned from current faculty
3. Assign current clinic staff allocation as detailed in section 7.1.1	Faculty salaried positions assigned from clinic teaching staff.
7.1.2: Infrastructure	
1. Review and Implement the RIC model	To be determined
7.1.3 Standard Operation Procedures and Space Requirements	
1. Director of RIC to assemble and adopt SOPs and plan space needs	To be determined
7.1.4 Consequences of changes	
To be determined	To be determined
7.1.5 Financial model	
To be determined	To be determined
7.2 New faculty building	
To be determined	To be determined

Table 7: Milestones

Recommendation	2006 Q3	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4	2008 Q1	2008 Q2	2008 Q3	2008 Q8
7.1.1	x	x								
7.1.2		x	x	x	x					
7.1.3			x	x	x	x				
7.1.4		x	x	x						
7.1.5	x	x	x	x	x	x				
7.2	x	x	x	x	x	x	x	x	x	x

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Appendix.

Supplementary documentation hyperlinked from within in report

Topic	File type	Page
Faculty Publications 2004	word	5
DRI 2005 report	pdf	6
Research funding 2005-2006	pdf	7
RIC clinic layout	word	8
RIC inventory	Excel	8
Weekly time schedule	word	9
Canada Health trial guidelines	pdf	9
EU directive for medical device	pdf	10
Clinical Trial process - Pitfalls	ppt	10
Relevant Research Equipment	doc	10
ISO Standards	word	15
Manufacturers North America	pdf	15
RIC Model	ppt	19
Future RIC rooms	word	20

External WWW sites hyperlinked from within in report

5	2004-2010 Dentistry Academic Plan	http://www.utoronto.ca/dentistry/abouttheschool/academicplan.html
6	KaneBiotech	http://www.kanebiotech.com/
9	Regulations Amending the Food and Drug Regulations (1024 – Clinical Trials).	http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/compli-conform/1024_e.pdf
9	Guidance for Records Related to Clinical Trials (GUIDE-0068)	http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/compli-conform/gui_68_e.pdf
9	Inspection Strategy for Clinical Trials	http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/compli-conform/insp_strat_e.pdf
9	Preparation of an Application for Investigational Testing – Medical Devices V.3	http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/md-im/itapp_demee_form_e.pdf
9	Preparation of an Application for Investigational Testing – In Vitro Diagnostic Devices (IVDD) V.3	http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/md-im/test_iv3_e.pdf
9	Application for Investigational Testing Authorization	http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/md-im/itapp_demee_form_e.pdf
9	Registration and Disclosure of Clinical Trial Information	http://www.hc-sc.gc.ca/dhp-mps/prodpharma/activit/proj/enreg-clini-info/index_e.html
9	Other Guidance Documents on Medical Devices	http://www.hc-sc.gc.ca/dhp-mps/md-im/applic-demande/guide-ld/index_e.html
9	Other guidance Documents on Drug Products	http://www.hc-sc.gc.ca/dhp-mps/prodpharma/applic-demande/guide-ld/clini/index_e.html
10	Human ethics approval	http://www.research.utoronto.ca/ethics/index.html
14	Paffenbarger Research Centre	http://www.ada.org/ada/prod/adaf/paffenbarger/index.asp
14	Nordic Institute of Dental Materials	http://www.niom.no/
16	NORTH (Network for oral health research training and health)	http://www.northdentalresearch.ca/portal/html/index.php

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RED: PUBLICATIONS IDENTIFIED IN MEDLINE

BLACK: PUBLICATIONS REPORTED IN THE DRI ANNUAL REPORT

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name	interest	fund
Bradley, Grace	molecular biology of oral precancer and cancer	The Head and Neck Cancer Foundation - 2003 - 2004
Cheifetz, Sela	Bone morphogenetic proteins and receptors and their role in regulating osteogenesis. Studies primarily involve cell culture based work. -Role of a novel BMP-induced zinc-finger transcription factor (A.118/7fb354C/Kid3) in	CIHR Operating Grant - TGF- β and BMP Regulation of Osteogenesis -- Co-applicant with Dr. Sodek (PI) (125,718 pa) (2000-2005) CIHR Operating Grant - Molecular Mechanisms of Bone Sialoprotein Expression -- Co-applicant with Drs. Sodek (PI) & Ganss --(105,817 pa) (2000-2005)
Cvitkovich, Dennis	the role of the acid tolerance response of Streptococcus mutans -Using a variety of molecular biological, biochemical and in silico technologies - unraveling the mechanisms of cell-cell signaling and its role in	NIH (USA) operating grant R01DE013230 - The competence regulon in Streptococcus mutans biofilms (Co-investigator with R Ellen) CIHR grant MT-15431
Davies, John	Peri-implant bone healing ():Novel biomaterials ():Bone tissue engineering ():Sourcing and expanding human mesenchymal cells ():Cell based therapies	ORDCF (Ontario Research and Development Challenge Fund) matching funds - industry grants 3i Corporation
El-Badrawy, Wafa	Composite resin properties, techniques of placement, composite bond strength, bonding agents, bonded amalgam, resin cements, light curing, and effect of bleaching on tooth structure.	Stickteck company, Turku, Finland

name	interest	fund
Ellen, Richard	Host-parasite interactions in infection and immunity. Mechanisms by which outer sheath proteins of oral spirochetes dysregulate calcium signaling and actin dynamics in periodontal cells and remodeling of extracellular matrix	CIHR Strategic Training Grant STP53877 - Cell Signalling in Mucosal Inflammation & Pain Dr. R. Ellen (PI) \$299,970. 2001–2006 CIHR Operating Grant MOP-5619 - Signaling pathways for actin perturbation in fibroblasts by Treponema denticola NIH (USA) operating grant R01DE013230 - The competence regulon in Streptococcus mutans biofilms (Co-investigator with PI: Dennis Cvitkovitch)
El-mowafy, Omar	Properties and clinical performance of composite restorations. Properties and clinical performance of resin cements. All-ceramic restoration. Resin-bonded fixed partial dentures. Post-core materials. Light-curing of composites	Stickteck company, Turku, Finland Kuraray Ultradent Dentsply Patterson Dental Vita Ribbond-THM 3M/ESPE Egyptian Ministry of Higher Education
Finer, Yoav	Composite resin biodegradation, bacterial role and host-biomaterial interactions -Physical and surface characterization of dental polymers, dental biomaterial development -Developing diverse metallic options for	CIHR Operating grant - Biodegradation of dental composite resin: Marginal breakdown and clinical investigations, co-investigator with Santerre J.P., Tam. L. University of Toronto Connaught Start-up fund, Characterization of biofilms at the composite resin-tooth interface
Friedman, Shimon		Canadian Academy of Endodontics Pentron Clinical Technologies
Ganss, Bernhard	molecular biology / regulation of gene transcription -developmental biology of mineralized connective tissue (tooth, bone, cartilage) -molecular genetic strategies for tissue regeneration	Hospital for Sick Children Foundation New Investigator Research Grant - The Role of the Zinc Finger Transcription Factor Krox-26 in Developmental Defects of Tooth and Enamel Formation” 2003 – 2005 CIHR Operating Grant - Controlled Expression of Bone Morphogenetic Proteins in Transplanted Cells for the Regeneration of Periodontal and Bone Defects” 2003 – 2006 CIHR Operating Grant - The Role of the Zinc Finger Transcription Factor Zfp60 in Cartilage Differentiation and Bone Growth” 2004 – 2007

name	interest	fund
Glogauer, Michael	oral neutrophils -cytoskeleton and signal transduction -innate immune function -Periodontal diseases	CIHR Infection and Immunity Pilot Project Grant for New Investigators 2004 CFI New Innovations Award - Understanding the molecular mechanisms involved in neutrophil function and the development of a novel clinical assay to improve monitoring and management of patients with neutrophil related disorders” . 2003 Hospital For Sick Children Foundation – Non-invasive oral neutrophil assay to monitor engraftment following hematopoietic stem cell transplantation in children. 2003-2005 Shwachman Diamond Canada – Relationship of Oral Disease and
Gong, Siew G	Molecular Aspects of Clefts of the lip with or without clefts of the palate in mouse models and in humans.	Canada Research Chair in Craniofacial Biology 2005-2010.
Grynpas, Marc	Structure and chemistry of bone mineral and matrix -Changes in bone mineral with age and diseases -Chemistry and organization of cartilaginous tissues ():Effect of trace elements on bone -Space induced	CIHR– Effect of Vanadium Treatment on Bone Loss and Bone Quality in Rat Models of Osteoporosis and Diabetes” National Science Engineering and Research Council of Canada – Mechanisms of Degradation of Calcium – Polyphosphates” National Science Engineering Research Council – Tissue-Engineered for Cartilage Repair” (Collaborative) CIHR– The Role of Stem Cell Antigen-1 (Sca-1) in Bone Development and Homeostasis” (Collaborative) CIHR– Importance of harikiri in regulation of oocyte and embryo survival” (Collaborative)
Hu, James	Primary afferent and brain stem pathways of pain transmission and pain control from face, teeth, cornea, TMJ, neck and masticatory muscles. Neuroplasticity in adult and developing trigeminal sensory system. Inflammation process in	CIHR Operating grant MOP-84910 - Sex-differences in jaw joint and muscle afferent sensitivity
Kenny, David	Toronto Dental Trauma Research Group ():Feeding Disorders Research Group of	Bloorview MacMillan Children’s Centre - Casas MJ, Kenny DJ, Morris AR: Characterization of ankylosis in traumatized incisors and implants. (2003-2004: \$34,315) Bloorview Childrens Hospital Foundation - Casas MJ, Kenny DJ, Morris AR, Naumann S, Behdinan K: Biomechanical modeling of oral-facial trauma. (2002-2003: \$64,532; 2003-2004: \$43,302)

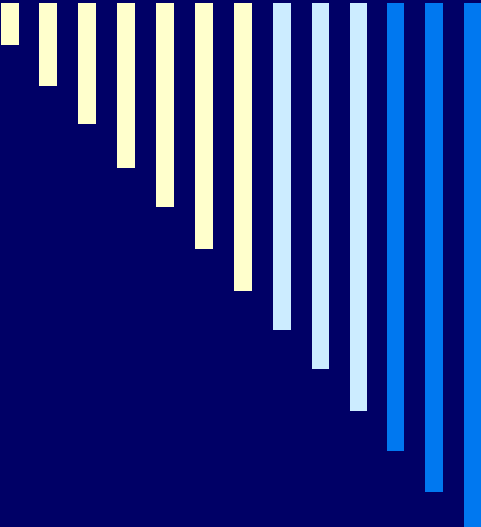
name	interest	fund
Kulkarni, Gajanan	Molecular Mechanisms in Craniofacial Anomalies of Down's Syndrome -Investigating candidate genes causative for congenitally missing teeth in the EL mouse model: Differential gene expression, mutation analysis and apoptotic	Hospital for Sick Children Foundation - Molecular Mechanisms in Craniofacial Anomalies of Down Syndrome. 2002-04. \$ 128,930. Sole Principal Investigator. Alpha Omega Foundation - Development of a Novel Alternative for Treatment of Pulpally Involved Primary Teeth: Comparison of a New Diode Laser Pulpotomy and Conventional Formocresol Pulpotomy in Human Primary Teeth 2002. \$ 2,000. Sole Principal Investigator. Dentistry Canada Fund - Development and Testing of an Audio-visual Aid for Improvement of Infant Oral Health Through Primary
Lai, Jim	Dental education -Web-based curriculum development	U of T Information Technology Courseware Development Fund
Lawrence, Herenia	Dental Health Services -Oral Epidemiology -Geriatric Dentistry -Aboriginal Peoples Oral Health -Oral Health Outcom	CIHR Institute of Aboriginal Peoples Health (IAPH) Operating Grant - Fluoride Varnish in the Prevention of Dental Caries in Aboriginal and Non-Aboriginal Children. The Hospital for Sick Children Foundation (HSCF) External Grants Program – Innovative Investigations Grants -Fluoride Varnish in the Prevention of Dental Caries in Aboriginal Children.
Limeback, Hardy	Basic sciences: tooth development, enamel proteins, dentine, bone, fluoride, collagen, non-collagenous proteins -Clinical sciences: caries, risk assessment, geriatric dentistry, preventive dentistry, dental fluorosis, enamel defects	CurOzone USA Inc - Effectiveness of ozone to reverse active caries
Manolson, Morris		CIHR Operating Grant - Structure, Interactions, and Function of the V-ATPase α subunit", Dr. M.F. Manolson, \$114,947 (renewable). 2004 – 2007: The Arthritis Society of Canada Operating Grant - Elucidating interactions and developing inhibitors specific for the osteoclast-specific α 3 V-ATPase subunit: A potential target for antiresorptive agents to prevent bone loss in inflammatory arthritis", Dr. M.F. Manolson, \$97,900 (renewable). 2002 – 2005: CIHR Operating Grant - Elucidating differences in activity and activation mechanisms between large and small osteoclasts and

name	interest	fund
McCulloch, Christopher	Regulation of connective tissue cells in periodontium -Cell signaling -Periodontal regeneration	CIHR - Fibroblast differentiation: role of actin in matrix remodeling, McCulloch, C.A.G., (PI) 2004 – 2009 Heart and Stroke Foundation of Canada - Regulation of actin gene expression by mechanical loading, McCulloch, C.A.G., 2004 – 2007 CIHR Operating Grant - Neutrophil Collagenase (MMP-8) in inflammation, P.I., Overall, C., 2003 Canadian Arthritis Network, Regulation of inflammatory signaling by perturbation of adhesion complexes. McCulloch, C.A.G. (PI), 2003
Sandor, George	Bone Regeneration and Tissue Engineering -Hyperbaric Oxygen -Congenital Deformities, Growth and Development -Pediatric Dental Implantology	Straumann Canada Grant - The Effects of Hyperbaric Oxygen on the Healing of Rabbit Critical Sized Calvarial Defects
Santerre, Paul	Study of enzyme and white blood cell biodegradation interactions with polymeric biomaterials ():Development of drug delivery strategies -Development of novel materials for tissue regeneration and their	CIHR Operating grant - 2004-2007, \$98,000/year; Santerre J.P., Tam L., Finer Y., Biodegradation of dental composite resin: Marginal breakdown and clinical investigations. Interface Biologics Inc., Grant in kind - \$281,600, 2003-2004; Santerre, J.P., Development of Polymeric Biomaterial Technologies for Biomedical Applications. MMO Enabling project -, \$60,000/year 2003 - 2005; Pilliar RM, Santerre JP, Novel Biodegradable implants for bone fracture repair. NSERC Discovery grant - \$40,000/year - 2002- 2007; Santerre
Seltzer, Ze'ev		CFI (Canadian Foundation for Innovation) OIT (Ontario Innovation Trust) CRC (Canada Research Chair Program) Newron Pharmaceuticals, Milan, Italy
Sessle, Barry	Neurophysiology and neuroanatomy of the trigeminal system; neural mechanisms and clinical correlates of sensory dysfunction and chronic orofacial pain and its control; electromyographic and neurophysiological aspects of orofacial motor	CIHR Grant MT-4918 - 2004-09 'NEURAL MECHANISMS OF OROFACIAL FUNCTION' ; (Principal Investigator). NIH Grant 2R01 DE04786-24 - 2002-06 ' DENTAL AND OROFACIAL PAIN : BRAINSTEM MECHANISMS' (Principal Investigator). NIH Grant DE015420-02 - 2003-07 'PERIPHERAL NMDA RECEPTORS AND TMD PAIN MECHANISMS'; (Principal Investigator). NHMRCA Grant 2004-06 - 'EFFECTS OF JAW MUSCLE PAIN ON JAW MUSCLE ACTIVITY AND JAW MOVEMENT IN

name	interest	fund
Seth, Arun	Simultaneous Monitoring of Gene Expression During Bone Development -Interactions Between Ets Proteins and Cbfa Family Transcription Factors -Identifying and molecularly characterizing genes regulated by ETS	CIHR - Ets transcription factors in bone development Heart & Stroke Foundation of Canada - Regulation of actin gene expression by mechanical loading, Co-PI OCRN - The effect of melatonin on the circadian sleep-activity cycle and circadian gene expression in cancer patients, Co-PI NCIC/Canadian Breast Cancer Research Initiative: Function and Regulation of Novel Breast Cancer Associated Genes CBCRA/ NCIC: Molecular Analysis of Breast Cancer Progression, Co-PI CIHR-UII: Characterization of Novel Candidate Genes for CAST
Sigal, Michael	Dental care for persons with disabilities, medically compromised or special health care needs. ():Hospital dentistry. ():Clinical pediatric dentistry. ():	
Sodek, Jaroslav		CIHR Operating grant MOP- 36333 CIHR Operating grant MOP-457134 CIHR Operating Grant- TGF- β and BMP Regulation of Osteogenesis -- Dr. Sodek (PI) (125,718 pa) (2000-2005) CIHR Operating Grant -Molecular Mechanisms of Bone Sialoprotein Expression -- Dr Sodek (PI) & Ganss --(105,817 pa) (2000-2005)
Tam, Laura	tooth bleaching :resin composite materials ():dental materials	Southern Dental Industries. CIHR IMHA 2004
Tenenbaum, Howard	Bone Cell Biology -Orofacial Pain and Chronic Pain -Novel Methods for Treatment of Periodontitis	CIHR UOP48091 University / Industry Grant - Prevention of environmental and cigarette smoke derived aryl hydrocarbon effects on osteogenesis with the aryl hydrocarbon antagonists, resveratrol and 7-ketocholesterol; and a search for additional endogenous ligands" Role: PI, with Co PI's: Drs. R. Casper and B. Ganss, \$55,266 per annum. 2001 – 2004 CIHR Strategic Training Grant STP53877 - Cell Signalling in Mucosal Inflammation & Pain Dr. R. Ellen (PI) \$299,970. 2001–2006 CIHR Equipment Grant - Confocal Microscope with Dr. C.

name	interest	fund
Tompson, Bryan		Osteogenesis Imperfecta Foundation Inc
Von Schroeder, Herb	Osteoblast biology -Avascular necrosis, osteonecrosis -Intercellular interactions, Intracellular signalling	CIHR - Elucidating differences in activity and activation mechanisms between large and small osteoclasts and between osteoclasts originating from diseased and healthy bone: implications for pharmacological intervention. Heersche JN, Bogoch ER, Manolson MF, von Schroeder HP. (2002 - 2004) The Physicians' Services Incorporated Foundation - Biology of scaphoid fracture non-unions. von Schroeder HP (2004-2006)
Watson, Phil		Environment Canada: Amalgam Waste 2001
Yarev, Ghassan		Canadian Academy of Endodontics endowment fund
Yu, Xianmin	molecular mechanisms underlying functional plasticity of neurons associated with pathophysiological processes in the central nervous system, such as neuronal degeneration, chronic pain and mental disorders. Multiple	CIHR Operating grant NA5448 - principal investigator (PI) Heart and Stroke Foundation of Ontario MOP-15117 - Understanding the actions of intracellular sodium in the regulation of NMDA receptor activity and excitotoxicity \$165,530 2004-2006. CIHR 01002-O - The role of protein tyrosine phosphatase alpha in the regulation of NMDA receptors \$294,321 / Sole applicant. 2001-2004. Ontario Neurotrauma Foundation MT-15581 - Functional sodium-calcium interaction in the regulation of NMDA channel activity \$239,640 2001-2004

name	interest	fund
Zohar, Ron	Connective Tissues wound healing. -Osteopontin roles and Signalling	CIHR Operating grant MOP-36333 CIHR Operating grant MOP-457134 Sick Kids Foundation grant MOP-459476



Conducting Clinical Trials Problems to avoid

Asbjorn Jokstad



Avoid problems with design

- inferior design
 - opens for investigator bias
 - over-optimistic results
 - publication bias
 - pre-existing data presented as “experimental”
 - choice of sample
 - different observers
 - sample size
-



Avoid problems with execution

- Adherence to protocol
 - Missing data
 - Randomization
-



Avoid problems with analysis

- ❑ analysis methods when assumptions not met
 - ❑ analysing paired data ignoring pairing
 - ❑ failing to take into account ordered categories
 - ❑ treating multiple observations on one subject
 - ❑ multiple paired comparisons
 - ❑ within-group and subsequent between-gr compar.
 - ❑ CI include impossible values
 - ❑ correlation instead of comparison
 - ❑ correlation of two time-related observations
 - ❑ diagnostic test solely on sensitivity/specificity
 - ❑ using subsets of participants
-



Avoid problems with presentation

- SE or CI for descriptive data
 - presenting means without variability
 - results of stat. analyses solely as P value
 - spurious precision versus no precision
 - graphical presentation tricks
 - zero on axis -- change of scale in axis ---3D
 - coincidence in scatterplots -- regression without scatter
 - superimposing different scales --- plotting means wo. var.
-



Avoid problems with interpretation

- P is not the probability that the observed effect is due to chance, but the probability of obtaining the observed effect when the null hypothesis test is true. (i.e. when there is no such differences in the population)
 - $P = .001$ is not a “stronger” effect than $P = .01$
 - P levels are not absolute yes/no limits.
 - Association and causation is not identical
 - The study sample must be representative
-



Avoid problems with omission

- If important information is lacking in the text it is assumed that invalid procedures have been used.
 - Use a checklist!
-

Research equipment and – facilities relevant to clinical research

General

- Sterilization and glasswashing rooms
- water purification systems
- storerooms for glassware, supplies and chemicals
- Walk-in cold room to store materials, reagents with bench space
- Sample storage facilities that may include liquid nitrogen storage containers, -90 degree freezers and other freezers

Dental biomaterials

- Computer driven Materials Testing System, enabling automated testing of tensile compression and flexing, fatigue and resilience.
- Induction casting machine
- potentiostat
- gold film mercury detector
- thermocycler
- Grinder polishers
- Economent
- Isomet saws and a high speed saw are used to prepare and examine biomaterials.
- A Harrick plasma cleaner to prepare surfaces for comparisons of interactions with biological materials

Cariology and microbiology

- Hard tissue microtomes
- Polarized light microscopes for mineralized tissue preparation and evaluation.
- A microprocessor based system that enables research requiring automated titration, pH stat or chemostat conditions
- Atomic absorption spectrophotometer for elemental analysis.
- Equipment necessary to grow and maintain anaerobic and aerobic cultures
- Fermenter for large-scale cultures
- Scientific anaerobic chambers
- Spectronic spectrophotometers
- nephelometer
- pH meter
- gyratory shaking water bath
- CO2 incubators
- 37° incubator
- spiral plater system

- A biological safety hood and associated support equipment available for projects requiring the use of potential pathogens

Histology/ultrastructure

- Equipment and facilities for light microscopy and electron microscopy.
- Sample preparation area including cryostats, fume hoods, ventilated enclosed bench areas, automated tissue processors, wax embedder sectioning instruments microtomes, critical point dryers & vacuum sputter coater
- Photomicroscopes for light microscopy that include fluorescence, dark field, light field, polarizing and phase contrast
- A scanning electron microscope with an x-ray analysis detector supervised and maintained by a certified electron microscopist
- A transmission electron microscope supervised and maintained by a certified electron microscopist

Tissue culture

- Facilities permitting preparation and maintenance of primary isolates, organ cultures, and long-term cultures
- Facilities permitting preparation production of monoclonal antibodies
- Incubators and laminar flow safety hoods for tissue preparation and cell, tissue, or organ culture

Oral soft tissue

- Perfusion chambers for isotopic measurements of molecular flow across tissues
- Sorvall tissue chopper and Sherwood vibratome for sectioning unembedded soft tissues.
- Equipment for lipid analysis by thin layer chromatography,
- high pressure chromatography gas chromatography.
- N-evap for drying samples
- rotary evaporator
- fume hood for prep work and an acid resistant hood for sulfuric acid spraying.
- Gyrotory shakers
- electrophoresis equipment (vertical and horizontal units)
- ultraviolet transilluminate camera with hood
- camera for photodocumentation of nucleic acids
- GTI/Spectrovision FD-500 fluorimeter
- Labconco Centrivap concentrator.

Molecular biology and biochemistry

- UV and visible light spectrophotometers

- Coulter counter
- gas chromatographs
- ultracentrifuge
- gamma and scintillation counters
- Gell electrophoresis equipment for molecular biology, including for probe preparation and identification equipment

Image analysis core equipment

- Automated image analysis capable of analyzing real-time video images obtained from a microscope slide, a scanning electron microscope or flatbed image sources.
- Software that provides statistical analysis and downloading of data to spreadsheet programs or other statistical software.
- Sonic digitizer to manually trace flatbed images or 35 mm transparencies
- Polarized light microscope and Image Pro Plus image analysis system to digitize and analyse polarized light images of mineralized tissue
- High resolution camera,
- Monitors
- Dedicated PCs.
- Possibility to archive to compact disc or transferred to any networked PC for further analysis or statistical evaluation digitized polarized light or conventional light images and any measurements derived from images
- Transilluminators
- PhotoDocumentation camera systems.

Statistical consulting and grant preparation

- Statistician for gathering pilot data and for planning projects for submission of externally funded grant applications.
- Assistance with proposal writing and budget preparation

TC106 Standards

Title	Standard	convenor	Workgroup
Dental equipment -- Graphical symbols	ISO 9687:1993		?
Dental CAD/CAM Systems		/van der Zel	SC1/SC2/SC4/SC6
Dentistry -- Zinc oxide/eugenol and zinc oxide/non-eugenol cements	ISO 3107:2004	SA/ ND Ruse	SC1/WG1 zinc oxide/eugenol cements and non-eugenol cements
Dentistry - Water-based cements -- Part 1: Powder/liquid acid-base cements	ISO 9917-1:2003	BSI	SC1/WG10 Dental luting cements, bases and liners
Dentistry- Water-based cements -- Part 2: Resin modified cements	ISO 9917-2:1998	BSI/ J McCabe	SC1/WG10 Dental luting cements, bases and liners
Dental Materials- Requirements and test methods for dental water-based cements Part 3 Self-curing resin-modified cements	ISO 9917-3:xxx	BSI	SC1/WG10 Dental luting cements, bases and liners
Dental materials -- Testing of adhesion to tooth structure	ISO/TS 11405:2003	SN	SC1/WG11 Adhesion test methods
Dentistry – Orthodontic Products: Wires	ISO 15841	/J Horn	SC1/WG13 Orthodontic products
Dentistry-Orthodontic Products Part 2: Elastomeric Auxilliaries	ISO 21606	/P Brockhurst / ND Ruse	SC1/WG14 Orthodontic elastics
Dental absorbent points	ISO 7551:1996	BSI /G Wilson /ND Ruse	SC1/WG2 Endodontic materials
Dental root-canal obturating points	ISO 6877:1995	BSI /G Wilson /ND Ruse	SC1/WG2 Endodontic materials
Dental root canal sealing materials	ISO 6876:2001	BSI /G Wilson /ND Ruse	SC1/WG2 Endodontic materials
Dental resin-based pit and fissure sealants	ISO 6874:1988	BSI /P Jacobsen /ND Ruse	SC1/WG5 Pit and fissure sealants
Dentistry -- Corrosion tests for amalgam	ISO/TS 17576:2004	BSI	SC1/WG7 Amalgam/mercury
Dentistry -- Mercury and alloys for dental amalgam	ISO 24234:2004	BSI	SC1/WG7 Amalgam/mercury SC6/WG2?
Dentistry -- Polymer-based filling, restorative and luting materials	ISO 4049:2000	BSI /Dorin Ruse	SC1/WG9 Resin-based filling materials
Dental ceramic	ISO 6872:1995/Amd 1:1997	ANSI / Dr Kelly	SC2/WG1 Dental ceramics
Dentistry-Ceramic Materials	ISO 6872.2:xxx	ANSI / Dr Kelly	SC2/WG1 Dental ceramics
Dentistry -- Soft lining materials for removable dentures -- Part 1: Materials	ISO 10139-1:2005	BSI/ Dr Basker	SC2/WG10 Resilient lining materials

TC106 Standards

Title	Standard	convenor	Workgroup
for short-term use			
Dentistry -- Soft lining materials for removable dentures -- Part 2: Materials for long-term use	ISO 10139-2:1999	BSI/ Dr Basker	SC2/WG10 Resilient lining materials
Dentistry -- Denture base polymers	ISO 1567:1999/Amd 1:2003	SN / Dr Ruyter	SC2/WG11 Denture base polymers
Dental metallic materials -- Corrosion test methods	ISO 10271:2001/Cor 1:2005	ANSI /C Ingersoll	SC2/WG12 Corrosion test methods
Dental phosphate-bonded casting investments	ISO 9694:1996	ANSI /Dr Sarma	SC2/WG13 Investments
Dental gypsum-bonded casting investments	ISO 7490:2000	ANSI /Dr Sarma	SC2/WG13 Investments
Dental gypsum products	ISO 6873:1998	ANSI /Dr Sarma	SC2/WG13 Investments
Dental brazing investments	ISO 11244:1998	ANSI /Dr Sarma	SC2/WG13 Investments
Dental restorations -- Phosphate-bonded refractory die materials	ISO 11245:1999	ANSI /Dr Sarma	SC2/WG13 Investments
Dentistry -- Polymer-based die materials	ISO 14233:2003	ANSI /Dr Sarma	SC2/WG13 Investments
Dentistry-Casting Investments and Refractory Die Materials,	ISO 15912:xxx	ANSI /Dr Sarma	SC2/WG13 Investments
Dentistry -Brazing materials	ISO 9333:1990	DIN /Dr Lindigkeit	SC2/WG14 Dental brazing materials
Dentistry -- Polymer-based crown and bridge materials	ISO 10477:2004	DIN	SC2/WG16 Polymer veneering and die materials
Dentistry -- Casting and baseplate waxes	ISO 15854:2005	ANSI /Dr Sarma	SC2/WG18 Dental waxes and baseplate waxes
Dental materials -- Guidance on testing of wear -- Part 2: Wear by two- and/or three body contact	ISO/TS 14569-2:2001	NEN /Dr Feilzer	SC2/WG19 Wear test methods
Dental materials -- Guidance on testing of wear -- Part 1: Wear by toothbrushing	ISO/TS 14569-1:1999	NEN /Dr Feilzer	SC2/WG19 Wear test methods
Dental base metal casting alloys -- Part 2: Nickel-based alloys	ISO 6871-2:1994/Amd 1:2005	DIN	SC2/WG2 Dental base alloys
Dentistry -- Base metal materials for fixed dental restorations	ISO 16744:2003	DIN	SC2/WG2 Dental base alloys
Dental base metal casting alloys -- Part 1: Cobalt-based alloys	ISO 6871-1:1994/Cor 1:1998/Amd 1:2005	DIN	SC2/WG2 Dental base alloys
Metal-ceramic dental restorative systems	ISO 9693:1999	DIN	SC2/WG2 Dental base alloys?

TC106 Standards			
Title	Standard	convenor	Workgroup
Dentistry -- Ceramic denture teeth	ISO 4824:1993/Amd 1:1997	ANSI	SC2/WG20 Artificial teeth
Dentistry-Artificial Teeth for Dental Prostheses,	ISO 22112:xxx	ANSI	SC2/WG20 Artificial teeth
Dentistry -- Synthetic polymer teeth	ISO 3336:1993	ANSI	SC2/WG20 Artificial teeth
Dentistry-Metallic Materials for Fixed and Removable Dental Restorations and Appliances	ISO 22624:xxx	DIN /Dr Kappert	SC2/WG21 Metallic materials
Dental materials -- Determination of colour stability	ISO 7491:2000	DIN	SC2/WG6 Colour stability test methods
Dentistry -- Reversible-irreversible hydrocolloid impression material systems	ISO 13716:1999	ANSI /R Baez	SC2/WG7 Impression materials
Zinc Oxide Impression Materials	ISO 22871:xxx	ANSI /R Baez	SC2/WG7 Impression materials
Dentistry -- Elastomeric impression materials	ISO 4823:2000/Cor 1:2004	ANSI /R Baez	SC2/WG7 Impression materials
Dentistry -- Duplicating material	ISO 14356:2003	ANSI /R Baez	SC2/WG7 Impression materials
Dental ethyl silicate bonded casting investments	ISO 11246:1996	ANSI /R Baez	SC2/WG7 Impression materials
Dental alginate impression material	ISO 1563:1990	ANSI /R Baez	SC2/WG7 Impression materials
Dental aqueous impression materials based on agar	ISO 1564:1995	ANSI /R Baez	SC2/WG7 Impression materials
Dental casting alloys with noble metal content of at least 25 % but less than 75 %	ISO 8891:1998	DIN	SC2/WG8 Noble metal casting alloys
Dentistry -- Casting gold alloys	ISO 1562:2004	DIN	SC2/WG8 Noble metal casting alloys
Dentistry - Structure and content of codification normative documents	ISO/TR 16059.2	AFNOR /N Pechamat	SC3/WG1 Harmonization of dental codes and abbreviations?
Digital coding of oral health and care	ISO/TR 13668:1998	AFNOR /N Pechamat	SC3/WG1 Harmonization of dental codes and abbreviations?
Digital codification of dental laboratory procedures	ISO/TR 15599:2002/Cor 1:2003	AFNOR /N Pechamat	SC3/WG1 Harmonization of dental codes and abbreviations?
Dentistry -- Designation system for teeth and areas of the oral cavity	ISO 3950:1984	AFNOR /N Pechamat	SC3/WG1 Harmonization of dental codes and abbreviations?
Dentistry -- Application of OSI clinical codification to the classification and coding of dental products	ISO/TR 15300:2001	AFNOR /N Pechamat	SC3/WG1 Harmonization of dental codes and abbreviations?

TC106 Standards			
Title	Standard	convenor	Workgroup
Digital codification of dental laboratory procedures	ISO/TR 15599:2002	AFNOR /N Pechamat	SC3/WG1 Harmonization of dental codes and abbreviations?
Dental vocabulary -- Part 2: Dental materials	ISO 1942-2:1989/Amd 1:1992/Amd 2:1992	ANSI /R Baez	SC3/WG2 Dental vocabulary (Revision of ISO 1942 and thematic coding of its terms)
Dental vocabulary -- Part 5: Terms associated with testing	ISO 1942-5:1989	ANSI /R Baez	SC3/WG2 Dental vocabulary (Revision of ISO 1942 and thematic coding of its terms)
Dental vocabulary -- Part 1: General and clinical terms	ISO 1942-1:1989/Amd 1/2:1992/Amd 3/4/5:1993	ANSI /R Baez	SC3/WG2 Dental vocabulary (Revision of ISO 1942 and thematic coding of its terms)
Dental vocabulary -- Part 3: Dental instruments	ISO 1942-3:1989/Amd 1:1992/Amd 2:1992	ANSI /R Baez	SC3/WG2 Dental vocabulary (Revision of ISO 1942 and thematic coding of its terms)
Dental vocabulary -- Part 4: Dental equipment	ISO 1942-4:1989/Amd 1:1992	ANSI /R Baez	SC3/WG2 Dental vocabulary (Revision of ISO 1942 and thematic coding of its terms)
Dentistry- Vocabulary		ANSI /R Baez	SC3/WG2 Dental vocabulary (Revision of ISO 1942 and thematic coding of its terms)
Dental rotary instruments -- Cutters -- Part 1: Steel laboratory cutters	ISO 7787-1:1984	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Mandrels	ISO 13295:1994	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Bore diameters for discs and wheels	ISO 10323:1991	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dentistry - Test methods for rotary instruments	ISO 8325:2004	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Cutters -- Part 4: Miniature carbide laboratory cutters	ISO 7787-4:2002	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Laboratory abrasive instruments	ISO 7786:2001	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Cutters -- Part 2: Carbide laboratory cutters	ISO 7787-2:2000	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Diamond instruments -- Part 1: Dimensions, requirements,	ISO 7711-1:1997	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments

TC106 Standards

Title	Standard	convenor	Workgroup
marking and packaging			
Dentistry - Polishers	ISO 21671:xxx	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dentistry - Diamond rotary instruments -- Part 3: Grit sizes, designation and colour code	ISO 7711-3:2004	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dentistry - Rotary bur instruments -- Part 2: Finishing burs	ISO 3823-2:2003	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Burs -- Part 1: Steel and carbide burs	ISO 3823-1:1997	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Shanks -- Part 1: Shanks made of metals	ISO 1797-1:1992/Amd 1:1997	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Cutters -- Part 3: Carbide laboratory cutters for milling machines	ISO 7787-3:1991	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Diamond instruments -- Part 2: Discs	ISO 7711-2:1992	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Shanks -- Part 2: Shanks made of plastics	ISO 1797-2:1992	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Dental rotary instruments -- Nominal diameters and designation code number	ISO 2157:1992	DIN /G Offerhammer	SC4/WG1 Dimensions of rotary instruments
Sterile dental injection needles for single use	ISO 7885:2000	BSI /J Meecham	SC4/WG10 Dental injection systems
Dental cartridges for local anaesthetics	ISO 11499:1997	BSI /J Meecham	SC4/WG10 Dental injection systems
Dental cartridge syringes	ISO 9997:1999	BSI /J Meecham	SC4/WG10 Dental injection systems
Dentistry - Reusable cartridge syringes intended for intraligamentary injections	ISO 21533:2003	BSI /J Meecham	SC4/WG10 Dental injection systems
Dentistry - Number coding system for rotary instruments - Part 1: General characteristics	ISO 6360-1:2004	DIN /A Pieper	SC4/WG5 Numbering system
Dentistry - Number coding system for rotary instruments - Part 6: Specific characteristics of abrasive instruments	ISO 6360-6:2004	DIN /A Pieper	SC4/WG5 Numbering system
Dentistry - Number coding system - Part 5: Root-canal	ISO 6360-5:2004	DIN /A Pieper	SC4/WG5 Numbering system

TC106 Standards

Title	Standard	convenor	Workgroup
instruments			
Dentistry - Number coding system for rotary instruments - Part 4: Specific characteristics of diamond instruments	ISO 6360-4:2004	DIN /A Pieper	SC4/WG5 Numbering system
Dentistry - Number coding system for rotary instruments - Part 2: Shapes	ISO 6360-2:2004	DIN /A Pieper	SC4/WG5 Numbering system
Dentistry - Graphical symbols	ISO 21531:xxx	SC4/WG5 Numbering system	SC4/WG5 Numbering system
Dental handpieces -- Hose connectors	ISO 9168:1991	DIN /J Nille	SC4/WG7 Dental Handpieces
Dental handpieces -- Coupling dimensions	ISO 3964:1982	DIN /J Nille	SC4/WG7 Dental Handpieces
Dental handpieces -- Part 2: Straight and geared angle handpieces	ISO 7785-2:1995	DIN /J Nille	SC4/WG7 Dental Handpieces
Dental handpieces -- Dental low-voltage electrical motors	ISO 11498:1997	DIN /J Nille	SC4/WG7 Dental Handpieces
Dental handpieces -- Dental air-motors	ISO 13294:1997	DIN /J Nille	SC4/WG7 Dental Handpieces
Dental handpieces -- Part 1: High-speed air turbine handpieces	ISO 7785-1:1997	DIN /J Nille	SC4/WG7 Dental Handpieces
Dental handpieces -- Air-powered scalers and scaler tips	ISO 15606:1999	DIN /J Nille	SC4/WG7 Dental Handpieces
Dentistry - Dental handpieces -- Electrical powered scalers and scaler tips	ISO 22374:xxx	DIN /J Nille	SC4/WG7 Dental Handpieces
Dental tweezers -- Part 1: General requirements	ISO 15098-1:1999	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental elevators -- Part 6: Flohr elevators	ISO 15087-6:2000	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental tweezers -- Part 2: Meriam types	ISO 15098-2:2000	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental tweezers -- Part 3: College types	ISO 15098-3:2000	BSI /T Newson	SC4/WG8 Dental hand instruments
Dentistry - Reprocessing instructions for resterilizable dental devices	ISO 21532.2	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental elevators -- Part 3: Cryer elevators	ISO 15087-3:2000	BSI /T Newson	SC4/WG8 Dental hand instruments
Dentistry - Periodontal probes	ISO 21672:xxx	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental hand instruments --	ISO 9873:1998/Cor	BSI /T Newson	SC4/WG8 Dental hand

TC106 Standards

Title	Standard	convenor	Workgroup
Reusable mirrors and handles	1:2000		instruments
Dental elevators -- Part 4: Coupland elevators	ISO 15087-4:2000	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental elevators -- Part 5: Bein elevators	ISO 15087-5:2000	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental explorers	ISO 7492:1997	BSI /T Newson	SC4/WG8 Dental hand instruments
Dentistry - Extraction forceps - - Part 1: General requirements	ISO 9173-1:1991	BSI /T Newson	SC4/WG8 Dental hand instruments
Periodontal curettes, dental scalars and excavators -- Part 1: General requirements	ISO 13397-1:1995	BSI /T Newson	SC4/WG8 Dental hand instruments
Dentistry - Periodontal curettes, dental scalars and excavators -- Part 2: Gr-type periodontal curettes	ISO 13397-2.2:2005	BSI /T Newson	SC4/WG8 Dental hand instruments
Periodontal curettes, dental scalars and excavators -- Part 3: Dental scalars -- H-type	ISO 13397-3:1996	BSI /T Newson	SC4/WG8 Dental hand instruments
Periodontal curettes, dental scalars and excavators -- Part 4: Dental excavators -- Discoid-type	ISO 13397-4:1997	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental elevators -- Part 1: General requirements	ISO 15087-1:1999	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental elevators -- Part 2: Warwick James elevators	ISO 15087-2:2000	BSI /T Newson	SC4/WG8 Dental hand instruments
Dental root-canal instruments -- Part 1: Files, reamers, barbed broaches, rasps, paste carriers, explorers and cotton broaches	ISO 3630-1:1992	ANSI /F Lentine	SC4/WG9 Root-canal instruments
Dental root-canal instruments -- Part 2: Enlargers	ISO 3630-2:2000	ANSI /F Lentine	SC4/WG9 Root-canal instruments
Dental root-canal instruments -- Part 3: Condensers, pluggers and spreaders	ISO 3630-3:1994	ANSI /F Lentine	SC4/WG9 Root-canal instruments
Dental root-canal instruments -- Part 4: Auxiliary instruments	ISO 3630-4:xxx	ANSI /F Lentine	SC4/WG9 Root-canal instruments
Dental root-canal instruments -- Part 1: General requirements	ISO 3630-1.2:xxx	ANSI /F Lentine	SC4/WG9 Root-canal instruments
Dental equipment -- Items of dental equipment at the working place -- Identification system	ISO 4073:1980		SC6/
Dental operating light	ISO 9680:1993/Cor 1:1995	DIN /H Hamann	SC6/WG1 Dental operating light

TC106 Standards

Title	Standard	convenor	Workgroup
Dental equipment -- Connections for supply and waste lines	ISO 11144:1995	DIN /F Messing	SC6/WG2 Dental patient chair and dental unit
Dentistry -- Materials used for dental equipment surfaces -- Determination of resistance to chemical disinfectants	ISO 21530:2004	DIN /F Messing	SC6/WG2 Dental patient chair and dental unit
Dentistry -- Dental units -- Part 2: Water and air supply	ISO 7494-2:2003	DIN /F Messing	SC6/WG2 Dental patient chair and dental unit
Dental equipment -- Amalgam separators	ISO 11143:1998/Cor 1:2002 [Withdrawn Oct2003]	DIN /F Messing	SC6/WG2 Dental patient chair and dental unit
Dentistry -- Dental units -- Part 1: General requirements and test methods	ISO 7494-1:2004	DIN /F Messing	SC6/WG2 Dental patient chair and dental unit
Dental patient chair	ISO 6875:1995	DIN /F Messing	SC6/WG2 Dental patient chair and dental unit
Dental operator's stool	ISO 7493:1997/Cor 1:1999	ANSI /J Zawada	SC6/WG3 Dental operator's stool
Dentistry -- Amalgam capsules	ISO 13897:2003/Cor 1:2003	ANSI /F Lentine	SC6/WG5 Amalgamators, dispensers and capsules
Dental amalgamators	ISO 7488:1991	ANSI /F Lentine	SC6/WG5 Amalgamators, dispensers and capsules
Dental equipment -- Mercury and alloy mixers and dispensers	ISO 8282:1999	ANSI /F Lentine	SC6/WG5 Amalgamators, dispensers and capsules
Dentistry -- Powered polymerization activators -- Part 2: Light emitting diodes lamps	ISO 10650-2:xxx	ANSI /PL Fan	SC6/WG7 Powered polymerization activators
Dentistry -- Powered polymerization activators -- Part 1: Quartz tungsten halogen lamps	ISO 10650-1:2004	ANSI /PL Fan	SC6/WG7 Powered polymerization activators
Dentistry - Plant area equipment - Part 1. Suction	ISO 22595-1:xxx	UNI /S Bondi	SC6/WG8 Suction equipment
Dentistry - Plant area equipment - Part 2: Compressors	ISO 22595-2:xxx	UNI /S Bondi	SC6/WG8 Suction equipment
Dental equipment -- High- and medium-volume suction systems	ISO 10637:1999	UNI /S Bondi	SC6/WG8 Suction equipment
Dentistry -- Stiffness of the tufted area of tooth-brushes	ISO 8627:1987 [Withdrawn when 22254 completed]	JISC	SC7/WG1 Manual tooth brushes
Dentistry - Manual toothbrushes-Resistance of the tufted portion to deflection-Test method	ISO 22254:xxx	JISC	SC7/WG1 Manual tooth brushes

TC106 Standards

Title	Standard	convenor	Workgroup
Dentistry - Manual toothbrushes-General requirements	ISO 20126:xxx	ANSI / George K. Stookey	SC7/WG1 Manual tooth brushes
Dentistry - Powered toothbrushes -- General requirements and test methods	ISO 20127:2005	ANSI / George K. Stookey	SC7/WG2 Powered oral hygiene devices
Manual interdental brushes	ISO 16409:xxx	DIN	SC7/WG3 Auxiliary oral hygiene products
Dentistry - Oral hygiene products -- Oral rinses	ISO 16408:2004	DIN	SC7/WG3 Auxiliary oral hygiene products
Dentistry - Toothpastes -- Requirements, test methods and marking	ISO 11609:1995	ANSI / George K Stookey	SC7/WG4 Toothpastes
Dental implants -- Guidelines for developing dental implants	ISO/TR 11175:1993	AFNOR /JP Davidas	SC8/WG1 Implantable materials?
Dentistry - Implantable materials for bone > reconstruction in oral and maxillofacial surgery - Content of a technical file.	ISO 22794:xxx	AFNOR /JP Davidas	SC8/WG1 Implantable materials?
Dentistry -- Membrane materials for guided tissue regeneration in oral and maxillofacial surgery -- Contents of a technical file	ISO 22803:2004	ANSI /Schumacher	SC8/WG2 Preclinical biological evaluation and testing
Dentistry - Preclinical evaluation of dental implant systems - Animal test methods	ISO 22911.2:xxx	ANSI /Schumacher	SC8/WG2 Preclinical biological evaluation and testing
Dental implants - Prefabricated parts connecting suprastructures to dental implants - Contents of technical file	ISO 14727:2003 [Withdrawn 2005]	DIN	SC8/WG3 Content of technical files
Dental implant systems -- Contents of technical file	ISO 10451:2002	DIN	SC8/WG3 Content of technical files
Dentistry -- Fatigue test for endosseous dental implants	ISO 14801:2003	ANSI /Schumacher	SC8/WG4 Mechanical testing
Dentistry -- Preclinical evaluation of biocompatibility of medical devices used in dentistry -- Test methods for dental materials	ISO 7405:1997	DIN	WG10

North America – Dental trade & manufacturers

(compiled 22.12 by A Jokstad)

A. Titan Instrument
97 Main Street
Hamburg, NY 14075

Phone: (716) 648-9272
Alt. Phone: (877) 284-8261
Fax: (716) 648-9296

Web site: www.atitan.com

Abrasive Technology, Inc.
8400 Green Meadows Drive
P.O. Box 545
Lewis Center, OH 43035-6127

Phone: (740) 548-4100
Fax: (740) 548-7617

Products: **Two Striper® (FG & HP) Rotary Dental Diamond Instruments; Compo-Strip® Diamond Finishing Strips; Compo-Disc® Diamond Finishing Discs; MFS® Micron Finishing Diamonds; E.C.® Diamonds (Esthetic Control); G.C.P.™ Diamonds; Thin-Flex® Diamond Discs; Clean-A-Diamond® Cleaning Stone; Sintered (HP) Diamond Laboratory Instrument; Dental Burs; Luminescence™**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group**

Web site: www.abrasive-tech.com
E-Mail: custservice@abrasive-tech.com

Accurate Set, Inc.
1199 Broad Street
Newark, NJ 07114-1834

Phone: (973) 824-0810
Alt. Phone: (800) 462-2789
Fax: (973) 565-0087

Products: **Acrylic Resins/Self Cure-Heat Cure. Impression Materials: Polyvinyl-siloxane, Polysil Putty, Alginate;**

**Lustreshine Polish: Acrylics & Monomers,
Orthodontic Materials; Silver & Copper Plating
Solutions; Gypsum Dental & Impression Plasters,
Dental Stones, Gray Set, F.S., Resins, Waxes, Spacers,
Cleaners, Cements, and other materials used by the
dentist and dental labs.**

**Distribution: Mail Order, Distributor, Dental Chain, Independent
Dealer, Direct to Laboratories, Dentists, Government,
Dental and Trade Schools**

Web site: www.nadl.org/pages/accurateset.html

E-Mail: accurateset@verizon.net

**Accutron, Inc.
1733 W. Parkside Lane
Phoenix, AZ 85027**

Phone: (623) 780-2020

Alt. Phone: (800) 531-2221

Fax: (623) 780-0444

Web site: www.accutron-inc.com

**ACE Surgical Supply Co.
1034 Pearl Street
P.O. Box 1710
Brockton, MA 02301**

Phone: (508) 588-3100

Alt. Phone: (800) 441-3100

Fax: (508) 583-3140

**Products: Dental Implant System and Related Prosthetic
Components, Instrument Kits, Anesthesia Extension
Tubes, Disposable Irrigation Syringes, Suction
Tubing, Surgical Blades, Sutures, ACE Autografter,
Autoclavable Retractors, Mouth Props.**

Distribution: Mail Order Distribution, Dealers, Private Label

Web site: www.acesurgical.com

E-Mail: info@acesurgical.com

**Ada Products Company, Inc.
527 Industrial Way West
Eatontown, NJ 07724**

Phone: (732) 544-4914

Fax: (732) 544-8439

Web site: www.adaproducts.net

AdDent, Inc.

**43 Miry Brook Road
Danbury, CT 06810**

Phone: (203) 778-0200

Fax: (203) 792-2275

Products: **Trimax Composite Instrument: Microlux
Transilluminator; Calset Thermal Assisted Light
Polymerization.**

Distribution: **Manufacturer - Dental Dealer**

Web site: www.addent.com

A-dec, Inc.

**2601 Crestview Drive
PO Box 111 (97132-0111)
Newberg, OR 97132-9257**

Phone: (503) 538-9471

Alt. Phone: (800) 547-1883

Fax: (503) 537-2760

Web site: www.a-dec.com

Advanstar Communications Inc.

**Two Northfield Plaza
Suite 300
Northfield, IL 60093**

Phone: (847) 441-3700

Alt. Phone: (800) 323-3337

Fax: (847) 441-3795

Web site: www.dentalproducts.net

Air Techniques, Inc.

**70 Cantiague Rock Road
Hicksville, NY 11801**

Phone: (516) 433-7676

Fax: (516) 433-3831

Products: A/T ScanX digital imaging system, Provecta 70™
Intraoral x-ray, A/T 2000XR and Peri-Pro automatic
x-ray processors; VistaCam Omni™II ic 4 intraoral
camera, A/T SLC™ digital video camera system,
AirStar™ and VacStar™ air and vacuum systems;
STS dry vacuum system; GUARDIAN™ Amalgam
Collector, AirDent II™ and AirDent II CS™ air
abrasion systems; ARC Light® IIM rapid curing and
bleaching system; Processor chemistry and cleaning
materials, including CleanStream evacuation system
cleaner

Distribution: **Dental Dealers**

Web site: www.airtechniques.com

E-Mail: info@airtechniques.com

ALL DENTAL PRODX, LLC.
28 Crest Road
P.O. Box 657
Cape May Court House, NJ 08210

Phone: (877) 64-PRODX

Fax: (877) 408-0114

Products: **Manufacture Temp Tabs, Bite and Tray Buddy,
QuikGlaze, CompositRepair, Safety Wipes, Absorbites,
BreathTaker, QuikGlaze-TempWhite, CR-MMAFres**

Distribution: **Dental Dealers**

Web site: www.alldentalprodx.com

E-Mail: info@alldentalprodx.com

All-Star Orthodontics
4920 North Warren Drive
Columbus, IN 47203

Phone: (812) 314-0804

Fax: (812) 314-0805

Products: **Brackets, bands, tubes, elastic, elastomeric lig ties and
chain, SS arch wire, niti arch wire. Complete line of
orthodontic products.**

Distribution: **Manufacturer - Dental Dealer, Manufacturer - Direct to Dentist, Manufacturer - Direct to Labs.**

Web site: www.allstarorthodontics.com

**American Dental Supply (ADS Inc.)
2600 William Penn Highway
Easton, PA 18042**

Phone: **(610) 252-1464**
Alt. Phone: **(800) 558-5925**
Fax: **(610) 252-2822**

Products: **Specialty chemicals and refractory materials including: Abrasives; Etching Gels; Porcelain Liquids; Sagger Trays and Liners; Die Prep Materials; Ultrasonic Solutions; Solvents; Cyanoacrylates; Denture Lab Chemicals; Safety Products; Devesting and Polishing; General Chemicals.**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group, Export, Private Label**

Web site: www.americandentalinc.com
E-Mail: ContactADS@aol.com

**American Tooth Industries
1200 Stellar Drive
Oxnard, CA 93033-2404**

Phone: **(805) 487-9868**
Alt. Phone: **(800) 235-4639**
Fax: **(805) 483-8482**

Web site: www.americantooth.com

**ARdent International, Inc.
400 Executive Boulevard
Ossining, NY 10562**

Phone: **(914) 923-1216**
Fax: **(914) 923-3559**

Web site: www.ardentinternational.com

Aseptico Inc.
P.O. Box 1548
8333-216th Southeast
Woodinville, WA 98072

Phone: (425) 487-3157

Fax: (360) 668-8722

Products: **Laboratory Motors, implants, endodontic**

Distribution: **Dental Dealer, Direct**

Web site: www.aseptico.com

E-Mail: info@aseptico.com

Astron Dental Corporation
815 Oakwood Road Unit G
Lake Zurich, IL 60047

Phone: (847) 726-8787

Alt. Phone: (800) 323-4144

Fax: (847) 726-8793

Products: **Durasoft; Durasplint TMJ; Apollo Acrylics; Dent-Cap Kit; Astron Separator; Crown & Bridge Resin; Injection Equipment; Heat Curing Unit; Astron 1180; Astron LC Hard Reline; LC Soft Reline; LC Crown & Bridge; XL Light Curing Unit; LC Repair Gel; LC Splint; Duraflex; LC Duraflex**

Distribution: **Mail Order, Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Laboratories and through Dealers, Direct to Dentists, Government, Universities, Dental and Trade Schools**

Web site: www.astrondental.com

E-Mail: astroncorp@aol.com

Athena Champion
2621 Corrinado Court
Fort Wayne, IN 46808

Phone: (260) 373-1917

Alt. Phone: (800) 253-1771

Fax: (260) 373-0395

Products: **High Speed Handpieces, Low Speed Handpieces, Handpiece Repairs and Service Parts.**

Distribution: **Dental Dealers, Schools, Government and Export.**

Aurum Ceramic Dental Laboratories, Ltd.
115-17 Avenue, SW
Calgary, AB T2S 0A1 Canada

Phone: **(403) 228-5120**
Alt. Phone: **(800) 661-1169**
Fax: **(403) 228-8600**

Web site: www.aurumgroup.com
E-Mail: cerum@aurumgroup.com

Axis Dental Corporation
3008 W. Story Road
Irving, TX 75038

Phone: **(972) 536-6000**
Alt. Phone: **(800) 355-5063**
Fax: **(972) 257-3647**

Web site: www.axisdental.com

The Argen Corporation
5855 Oberlin Drive
San Diego, CA 92121

Phone: **(858) 455-7900**
Fax: **(858) 626-8686**

Products: **Precious and Semi Precious Dental Alloys**

Distribution: **Dental Dealer; Direct; Private Label Distribution**
Sell to laboratories through dealers and direct.

Web site: www.argen.com
E-Mail: info@argen.com

Banta Healthcare Group, Ltd
570 Enterprise Drive
P.O. Box 806
Neenah, WI 54957-0806

Phone: **(920) 751-4401**
Fax: **(920) 751-4319**

Products: **Dental Sponges; Gauze Sponges; Cotton Rolls; Patient Towels (Bibs); Tray Covers; Headrest Covers; Cups; Saliva Ejectors; Kay Pee Towels; Autoclave Bags; Fluoride Trays; Protective Apparel.**

Distribution: **Dental Chains, Independent Dealer, Dealer Buying Group, Mail Order Distributor, Dental and Trade Schools, Export, (Private Label Available)**

Web site: www.bantahealthcare.com

**Bausch Articulating Papers, Inc.
One Chestnut Street
Nashua, NH 03060**

Phone: **(603) 883-2155**
Alt. Phone: **(888) 6-BAUSCH**
Fax: **(603) 595-9988**

Products: **Articulating Papers, Articulating Foils & Mylars, Instruments for Articulation**

Distribution: **Dental Dealer**

Web site: www.BauschDental.com

**Becker-Parkin Dental
1 Fulton Avenue
PO Box 9004
Hempstead, NY 11551-9004**

Phone: **(800) 735-5333**
Fax: **(516) 565-5740**

Products: **Alginate, Articulating paper, Autoclave pouches, Burs, Diamonds, Impression trays, Gauze, Cotton rolls, Gloves, Mirrors, Fluoride trays, Prophylaxis angles**

Distribution: **Dental Dealers, Direct**

Web site: www.beckerparkin.com

**Benco Dental Company, Distribution Center Headquarters
11 Bear Creek Blvd.
Wilkes-Barre, PA 18702**

Phone: (570) 825-7781
Alt. Phone: (800) 462-3626
Fax: (570) 823-9947

Web site: www.benco.com

Beutlich L.P.
1541 Shields Drive
Waukegan, IL 60085

Phone: (847) 473-1100
Alt. Phone: (800) 238-8542
Fax: (847) 473-1122

Products: **Hurricane Topical Anesthetics: Hurricane Spray-20% Benzocaine, Hurricane Gel-20% Benzocaine, Hurricane Liquid-20% Benzocaine, Double 'D' Needles for Endodontic and Periodontic procedures, Peridin-C dietary supplement, HurriSeal dentin desensitizer**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Government, Dental and Trade Schools**

Web site: www.beutlich.com
E-Mail: beutlich@beutlich.com

Bien Air USA, Inc.
17880 Skypark Circle
Suite 140
Irvine, CA 92614-6425

Phone: (949) 477-6050
Alt. Phone: (800) 433-2436
Fax: (949) 477-6051

Web site: www.bienair.com

Biotrol International, Inc.
650 South Taylor Avenue, Suite 20
Louisville, CO 80027

Phone: (303) 673-0341
Alt. Phone: (800) 822-8550
Fax: (303) 673-0346

Products: **Infection Control and Preventive Dental Products**

Distribution: **Dental Dealers, Schools, Government & Export**

Web site: www.biotrol.com

Bonart Medical Technology Inc.
398 South Lemon Creek Drive, Suite L
Walnut, CA 91789

Phone: (909) 594-8066

Fax: (909) 594-7266

Products: **Magnetostrictive Ultrasonic Scalers; Piezo Electric Scalers; Curing Light Unit; Scalers/Polisher Combo Unit; Electrosurgery Unit; Polisher; Cavitron Insert Tips**

Distribution: **Private Label, Dealers, Independent Dealers, Domestic and Nationwide Distributors, Mail Order Dealers and Distributors, Dealer Buying Group.**

Web site: www.bonartmed.com

E-Mail: sales@bonartmed.com

Brasseler USA, LP
800 King George Boulevard
Savannah, GA 31419

Phone: (912) 925-8525

Fax: (912) 927-8671

Products: **Dental Rotary Instruments; Hand Instruments; Endodontic Instruments**

Distribution: **Direct to Dentists**

Web site: www.brasselerusa.com

Buffalo Dental Mfg. Co., Inc.
129 Lafayette Drive
P.O. Box 678
Syosset, NY 11791

Phone: (516) 496-7200

Fax: (516) 496-7751

Products: Amalgam Car.; Brush (AB.ROB.); Vibrators; Casting Mac.; Engines; Handpieces; Air Turbine Hpcs.; Die Stone Hard (Sta-Lite); Model Trim; Dust Col.; Buffalo Knives & Spatulas; Vac. Formers and Materials; Carbide Burs; Buffs; Sand Blaster; Waxing Unit; General Lab Supplies and Hand Tools

Distribution: Mail Order Distribution, Dental Chain, Independent Dealer, Dealer Buying Group, Export

Web site: www.buffalodental.com

E-Mail: tech.support@bdm1.com

**Caliber Dental Technology, Inc.
1815 West 1st Avenue
Suite #134-135
Mesa, AZ 85202**

Phone: (480) 655-0333

Fax: (480) 655-0390

Products: Pre-formed wax sprue system, dental waxes, casting rings and formers, base molds, porcelain margin material, and disposable articulator system (New product)

Distribution: Dental Dealers, Direct to Labs

E-Mail: caldentec@aol.com

**Captek, A Div. of Precious Chemicals, Ltd.
250 Altamonte Commerce Blvd.
Altamonte Springs, FL 32714**

Phone: (407) 889-8891

Alt. Phone: (800) 921-2227

Fax: (407) 889-8893

Web site: www.captek.com

**Centrix Inc.
770 River Road
Shelton, CT 06484-5458**

Phone: (203) 929-5582

Alt. Phone: (800) 235-5862

Fax: (203) 929-6804

Products: **Composite Syringes; Tubes & Plugs; Polishers;
Brushes; Interproximal Disc; Encore Core Paste;
Etchant**

Distribution: **Dentist Direct, Dealers, Mail Order, Government,
Dental Schools, Export, Private Label**

Web site: www.centrixdental.com

**Ceragroup Industries Inc.
1395 Northwest 17th Avenue
Suite 101
Delray Beach, FL 33445**

Phone: (561) 278-8808

Fax: (561) 278-8809

Products: **Porcelain**

Distribution: **Dental Dealers**

Web site: www.c-mix.com

E-Mail: info@c-mix.com

**Chapman-Huffman
320 Southeast Bridgeford Boulevard
Suite 1
Bend, OR 97702**

Phone: (541) 382-7869

Alt. Phone: (800) 225-4621

Fax: (541) 382-4999

Products: **Components, Replacement Parts**

Distribution: **Dental Chain, Independent Dealer, Export, Dental &
Trade Schools**

**Clinician's Choice Dental Products Inc.
PO Box 1706
New Milford, CT 06776**

Phone: (800) 265-3444

Fax: (800) 719-3292

Web site: www.clinicianschoice.com

Colgate Oral Pharmaceuticals
1 Colgate Way
Canton, MA 02021

Phone: (781) 821-2880

Coltene/Whaledent Inc.
235 Ascot Parkway
Cuyahoga Falls, OH 44223-3701

Phone: (330) 916-8800
Alt. Phone: (800) 221-3046

Web site: www.coltenewhaledent.com

Common Sense Dental Products, Inc.
12261-D Cleveland Avenue
Nunica, MI 49448

Phone: (616) 837-1231
Alt. Phone: (888) 853-5773
Fax: (616) 837-4921

Products: **Flexi-wedge, Logi Block**

Distribution: **Dental Dealers (domestically/internationally) and
Direct to Dentists (domestically).**

Web site: www.commonensedental.com

Confi-Dental Products Company
416 South Taylor Avenue
Colorado Tech Center
Louisville, CO 80027

Phone: (303) 665-7535
Fax: (303) 666-4320

Products: **Composites; Bonding Agents; Etchants; Cements;
Resin Cements; Orthodontic Adhesives; Impression
Materials; Impression Trays; Chairside Reline
Materials; Fluoride Products; Whitening Gels; Pit &
Fissure Sealants; Liners; Bases; Varnishes; Cleaners;
Alginate Flavorings, and Plastic Accessories under our
brand name (C-Dent), neutral or under private label**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental Schools, Export**

Web site: www.confidental.com

**Confirm Monitoring Systems, Inc.
14550 East Easter Avenue, Suite 600
Englewood, CO 80112**

Phone: (303) 699-3356

Fax: (303) 699-8255

Products: **Biological Monitoring Services**

Distribution: **Dental Dealers**

Web site: www.confirmmonitoring.com

**Cooley & Cooley, Ltd.
8550 Westland West Boulevard
Houston, TX 77041**

Phone: (281) 897-0009

Alt. Phone: (800) 215-4487

Fax: (281) 897-8040

Products: **COPALITE® Varnish and Solvent; DOC'S BEST™ COPPER Product Line; SnapBond®; OEM Paint-On Tooth Bleaching System; Temporary Ceramic Crowns; ELFIT™ Mouthtrays; PLAT.PLUS Light Cure Cavity Liner with fluoride; FORMATILL™; Bib Clips; Tooth Angel Bear**

Distribution: **Dental Chain, Independent Dealer, Direct to Dentists, Government, Dental and Trade Schools, Export**

Web site: www.copalite.com

**Crosstex International
10 Ranick Road
Hauppauge, NY 11788**

Phone: (631) 582-6777

Alt. Phone: (888) CROSSTEX (276-7783)

Fax: (631) 582-1726

Products: Towels/Bibs/Liners; Plastic/Paper Cups; Cotton Rolls; Cotton Filled/All Gauze Sponges; Non-Woven Sponges; Exam Gloves - Latex/Vinyl/Nitrile - Powder and Powderfree; Face Masks/Shields; Gowns; Bracket Tray Covers; Sterilization Pouches; CSR Wraps; Saliva Ejector; Evacuation Tips; Fluoride Gel Trays; Headrest Covers; Bite Wing Tabs; Articulating Paper; Patient Aprons; Antimicrobial Soap; Hand Lotion; Barrier Cream Protectant; Surface Disinfectants-Liquid & Wipes; Heat Sealer; Sterilization Tubing/Rolls; Lab Transport Bags; Autoclave Bags; Sterilization Tape; IC Eyewear; Braided Cotton Rolls; BD Dental Needles; Bard Parker Scalpel Blades and Handles; BD Sharps Containers; Waterless Gel; Ultrasonic Cleaners

**Distribution: Dealers Only -
Domestic and International
Private Label**

**Distribution Centers:
USA: Long Island, NY; Atlanta, GA; Los Angeles, CA
International: Rotterdam, The Netherlands; Osaka,
Japan; Buenos Aires, Argentina**

Web site: www.crosstex.com
E-Mail: crosstex@crosstex.com

**Cutting Edge Instruments, Inc.
312 River Road
P.O. Box 147
Bridgewater Corners, VT 05035**

Phone: (802) 672-1133
Fax: (802) 672-3472

Products: Solid carbide operative, trimming and finishing, and metal cutting burs.

Distribution: Manufacturer - Dental Dealer, Manufacturer - Direct to Dentist, Manufacturer - Other

Web site: www.ceiburs.com
E-Mail: sales@ceiburs.com

**Danville Materials
3420 Fostoria Way**

**Suite A-200
San Ramon, CA 94583**

Phone: (925) 973-0710
Alt. Phone: (800) 827-7940
Fax: (925) 973-0764

Products: **Microetchers; Microprophy; Microtin, Microcab; DC-1; DC-2; Macrocab; Star Vps Impression Material; Turbo Temp Temporary Material; Starflow-Composite Material; Microprime; Caries Finder; Liquid Lens; PrepStart; Contact matrix; Aria Composite**

Distribution: **Dealer, Direct**

Web site: www.daneng.com

**Darby Dental Supply Co./Island Dental Co.
865 Merrick Avenue
Westbury, NY 11590**

Phone: (800) 645-2310
Fax: (516) 812-5705

Products: **Dental products or prosthetic appliances manufactured, distributed and/or fabricated by the applicant.**

Distribution: **Dealer to Dentist, Dealer to Lab**

Web site: www.darbyspencermead.com

**DCI International
305 N. Springbrook Road
Newberg, OR 97132**

Phone: (503) 538-8343
Alt. Phone: (800) 624-2793
Fax: (503) 538-9302

Web site: www.dciinternational.com

**Dedeco International, Inc.
Route 97
Long Eddy, NY 12760**

Phone: (845) 887-4840

Alt. Phone: **888-4-DEDECO**

Fax: **(845) 887-5281**

Products: **Abrasives, Polishers.**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental and Trade Schools, Export, Private Label**

Web site: www.dedeco.com

E-Mail: service@dedeco.com

Den-Mat Corporation
P. O. Box 1729
Santa Maria, CA 93456

Phone: **(805) 922-8491**

Alt. Phone: **(800) 433-6628**

Fax: **(805) 922-6933**

Products: **Visible Light Systems; Restorative Mat.; Infinite Cure Composites; Cements; Solvents; Opaquing Materials; Porcelain Repair; Provisional Materials; Comp. Placement Instruments; Rembrandt Oral Hygiene Products; Vital Bleaching; Dentin Bonding System**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Laboratories, Direct to Dentists, Government, Dental and Trade Schools**

Web site: www.denmat.com

Denovo Dental Phone Sales, Inc.
P.O. Box 548
5130 Commerce Drive
Baldwin Park, CA 91706

Phone: **(626) 939-5000**

Fax: **(626) 939-5020**

Products: **Retainerless Matrix bands, General Purpose Pediatric Molar Bands, Chairside Space Maintainers**

Distribution: **Direct**

Web site: www.denovodental.com

Dental Health Products, Inc.
2614 North Sugar Bush Road
PO Box 176
New Franken, WI 54229

Phone: (920) 866-9001

Fax: (920) 866-1865

Web site: www.dhpi.net

Dental Technologies, Inc.
6901 North Hamlin Avenue
Lincolnwood, IL 60712

Phone: (847) 677-5500

Alt. Phone: (800) 835-0885

Fax: (847) 677-5502

Products: **Products include Composites, Core Build-Up Materials, Bonding Adhesives, Prophy Pastes, Etchants, Desensitizers, Impression Materials, Alginate Flavorings, Sealants, Cements, Temporary Crown & Bridge Materials, Fluoride Products, Orthodontic Adhesives, Toothpaste, Hand Creams. Brand Names include Alpha-Dent, Alpha-Flow, Alpha-Etch37, Alpha-Seal, Alpha II AP, Alpha-Core, Alpha-Crown, Alpha-Bond, Alpha-Ease, Anti-Terge.**

Distribution: **Dental Dealers, Direct to Dentists, Mail Order, Government, Dental Schools, Export, Private Label**

Web site: www.dentaltechno.com

E-Mail: sales@dentaltechno.com

DentaleZ Group
101 Lindenwood Drive
Suite 225
Malvern, PA 19355-1755

Phone: (610) 725-9898

Alt. Phone: (800) 293-5206

Fax: (610) 725-9895

Web site: www.dentalez.com

DentaPure
2450 College Way
Fergus Fall, MN 56537

Phone: (218) 739-2222
Alt. Phone: (800) 972-3543
Fax: (218) 736-3241

Products: **DentaPure dental unit water purification cartridges,**
Models DP1, DP40, DP 90 and DP365

Distribution: **Dental Dealers**

Web site: www.dentapure.com
E-Mail: staff@dentapure.com

Dentech Corporation
1835 Liberty Street
Lynden, WA 98264

Phone: (360) 354-3978
Alt. Phone: (800) 826-5004
Fax: (360) 318-1630

Web site: www.dentechcorp.com

DENTORIUM
18 West 21st Street
New York, NY 10010

Phone: (212) 691-6464
Fax: (212) 242-6931

Products: **Dental laboratory materials: abrasives, acrylics,**
acrylic teeth, alloy for partial dentures, caps, waxes,
polishers.

Distribution: **Dental Dealers, Direct to Labs, Export**

Web site: www.dentorium.com
E-Mail: mail@dentorium.com

DENTSPLY International World Headquarters
Susquehanna Commerce Center
221 West Philadelphia Street
York, PA 17405-0872

Phone: (717) 845-7511

Fax: (717) 849-4762

Web site: www.dentsply.com

Dent-X Corporation
250 Clearbrook Road
Elmsford, NY 10523

Phone: (914) 592-6665

Alt. Phone: (800) 225-1702

Fax: (914) 592-1506

Products: **Dent-X 9000 with Dent-X 810 Basic; Auto Replenisher; Dent-X; Image-X70 Intraoral X-Ray; Dent-X Excel Chemistry; Dent-X Easy Clean Powder; IFP Processing Chemicals; and Accessories; Sens-A-Ray 2000, a digital x-ray CCD imaging sensor system; Prolmage 98, a digital imaging management software; Sens-A-View, an Intraoral video camera system for either Analog or Digital Imaging; Film Processor**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group, Government, Export**

Web site: www.dent-x.com

Diversified Chemical Products, Inc.
60 Germay Drive
Germay Industrial Park
Wilmington, DE 19804

Phone: (800) 320-0084

Alt. Phone: (302) 656-5293, Ext. 2557

Fax: (302) 656-1533

Products: **Services: Private Label Programs; Formulation and Development Assistance; Contract Packaging; Toll Blending; Specializing in Powders, Liquids and Pastes. Products: Enzymatic Cleaning Solutions; Ultrasonic Solutions; Full Line of Operatory Cleaning Products; Denture Cleansers; Polishing Compounds; Cement Removers (Permanent/Temporary); Die Lubricants; Release agents; Hand Piece Cleaners/Degreasers; Metal Cleaners/Brighteners (Stainless, Aluminum, Carbide); Autoclave Cleaners; Investment Removers; Alginate Removers.**

Distribution: **Private Label For: Manufacturers, Dealers, Dental Chains.**
Contract Packaging/Toll Blending For: All Major Dental/Medical Concerns.

Web site: www.diversifiedchemical.com

DSI/AMCO
2 Union Hill Road
West Conshohocken, PA 19428

Phone: (610) 825-2630
Alt. Phone: (800) 523-0740
Fax: (610) 825-1958

Products: **New SupC L/C; SupT; SupC Ortho; New SupC Self-Cure; Resin Luting Cement; Repairit Prima/Bond; Repair kit Porcelain Etchant; Repair kit HSC**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Laboratories, Direct to Dentist, Government, Dental & Trade Schools, Export, Private Label**

DTI Dental Technologies Inc.
225 West 8th, Suite 300
Vancouver, BC V5Y1K3 CANADA

Phone: (604) 873-2884
Fax: (604) 873-1671

Products: **Acquires and Operates Dental Laboratories in Canada and the U.S.**

Distribution: **Dentists and Dental Labs**

Web site: www.dtidental.com

DUX Sales
600 E. Hueneme Road
Oxnard, CA 93033-8600

Phone: (805) 488-1122
Alt. Phone: (800) 833-8267
Fax: (805) 488-2266

Web site: www.duxdental.com

E.C. Moore Company
13325 Leonard Street
P.O. Box 353
Dearborn, MI 48126

Phone: (313) 581-7878
Alt. Phone: (800) 331-3548
Fax: (313) 581-8348

Web site: www.ecmoore.com

Eastman Kodak Company
3003 Summit Blvd.
Suite 1100
Atlanta, GA 30319-1468

Phone: (770) 522-2701
Alt. Phone: (800) 933-8031
Fax: (770) 522-2739

Web site: www.kodak.com/go/dental

Ellman International Inc.
3333 Royal Avenue
Oceanside, NY 11572-3625

Phone: (516) 569-1482
Alt. Phone: (800) 835-5355
Fax: (516) 569-0054

Products: **Radiosurgical device, DentoSurg 90 FFP; Apex locator, Exact-A-Pex; Assorted Crown and Bridge Materials**

Distribution: **Dental Dealers; Direct**

Web site: www.ellman.com
E-Mail: ellman@ellman.com

EMS-Electro Medical Systems
12092 Forestgate Drive
Dallas, TX 75243

Phone: (972) 690-8382

Alt. Phone: (800) 367-0367

Fax: (972) 690-8981

Products: **Piezon Master 400; Mini Piezon; Perio and Propy Accessories**

Distribution: **Dental Chains, Independent Dealers, Dealer Buying Group, Dental and Trade Schools**

Web site: www.emsdent.com

E-Mail: emsusa@emsdent.com

**Essential Dental Systems, Inc.
89 Leuning Street
South Hackensack, NJ 07606**

Phone: (201) 487-9090

Alt. Phone: (800) 223-5394

Fax: (201) 487-5120

Products: **Post Systems, Active: Flexi-Post, Flexi-Flange, Passive: EDS' AccessPost; Overdenture Attachment Systems; Active: Flexi-Overdenture, Passive: EDS' AccessPost Overdenture Implant: EZ-Change Implant Overdenture Abutment Attachment; Cast Post Systems: ExactaCast; Cements, Titanium Reinforced: Flexi-Flow, Lanthanide Reinforced: Flexi-Flow Natural; Core Build Up Materials, Titanium Reinforced: Ti-Core, Lanthanide Reinforced: Ti-Core Natural; Dual Cured Acrylic: AccuSet; Organizers: Sterilization Boxes; Endodontic Reamers and Drills: Essential Gate Glidden Drills; Endodontic Obturation System: EZ-Fill Bi-Directional Spiral & Epoxy Root Canal Cement; Ultra Hydrophilic Alginate: Tare-Free ALG; Hand Cream: Glove'n Care; EZ-Fill SafeSider Endodontic Instruments.**

Distribution: **Dental Chain, Independent Dealer, Mail Order Distributor, Government, Dental and Trade Schools, Export**

Web site: www.edsdental.com

E-Mail: info@edsdental.com

**Flow X-Ray Corporation
420 Hempstead Turnpike
West Hempstead, NY 11552**

Phone: (516) 485-7000
Alt. Phone: (800) 356-9729
Fax: (516) 485-7012

Products: **X-Ray Film; X-Ray Mounts; X-Ray Accessories**

Distribution: **Manufacturer through Dealer**

Web site: www.flowxray.com

Forest Medical Products, Inc.
P. O. Box 989
Hillsboro, OR 97123

Phone: (503) 640-3012
Fax: (503) 640-4008

Products: **Dental Chairs; Stools; Lights; Equipment and
Accessories**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying
Group, Government, Dental and Trade Schools,
Export and Private Label**

Web site: www.forestmed.com

G. Hartzell & Son
2372 Stanwell Circle
P.O. Box 5988
Concord, CA 94520

Phone: (925) 798-2206
Fax: (925) 798-2053

Products: **Dental Instruments; Surgical Instruments;
Sharpening Stones**

Distribution: **Mail Order Distributor, Dental Chain, Independent
Dealer, Dealer Buying Group**

Web site: www.ghartzellandson.com

GC America, Inc.
3737 West 127th Street
Alsip, IL 60803

Phone: (708) 597-0900
Alt. Phone: (800) 323-3386
Fax: (708) 371-5148

Web site: www.gcamerica.com

GE Health Care
300 W. Edgerton Avenue
Milwaukee, WI 53207-6025

Phone: (414) 747-1030
Alt. Phone: (800) 558-6120
Fax: (414) 481-8665

Web site: www.gehealthcare.com

George Taub Products, Inc.
277 New York Avenue
Jersey City, NJ 07307-1501

Phone: (201) 798-5353
Alt. Phone: (800) TAUB MFG
Fax: (201) 659-7186

Products: **Cavity Liners; Restorative Resin Staining Kit; Die Spacers; Porcelain Repair; Stone Hardener; Porcelain & Microfill Diamond Polishing Pastes; Silicon Dappen Dishes; Articulating Liquids; Stereo Microscopes; Other Dental & Lab Sundries; Perfectone Molds for Wax Pontics, Provisional Resins, Jewelry & Arts & Craft**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental and Trade Schools, Private Label, Export**

Gingi-Pak
4825 Calle Alto/P. O. Box 240
Camarillo, CA 93011-0240

Phone: (805) 484-1051
Alt. Phone: (800) 437-1514
Fax: (805) 484-5076

Products: **Retraction Cords; Hemostatic and Hemostyptic Solutions; Topical Anesthetics; Packing Instruments; Evacuation System Cleaner; Hydrocolloid**

Materials/Accessories; Dry Heat Conditioner

Distribution: **Mail Order Distribution, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental & Trade Schools, Export, Private Label**

Web site: www.gingi-pak.com

**Handler Manufacturing Company, Inc.
612 North Avenue East
Westfield, NJ 07090**

Phone: (908) 233-7796

Fax: (908) 233-7340

Products: **Red Wing Lathes; Automatic Chucks; Standard Chucks; Splshoods; Syncro Torque Elec. Handpc.; Dust Collectors-Single, Central, Turbine; Lab. Benches & Cab.; Polishing Machines; Denture Flasks; Presses & Compresses; Model Trimmers - Wet & Dry; Vibrator; Heavy Duty Vibrator; Model Trimmer; Full line of dental laboratory products**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group**

Web site: www.handlermfg.com

E-Mail: handent@aol.com

**Harry J. Bosworth Company
7227 North Hamlin Avenue
Skokie, IL 60076**

Phone: (847) 679-3400

Fax: (847) 679-2080

Products: **Denture Reline & Repair, Anesthetics; Asepsis, Accessories, Burs, Cements, Crown & Bridge, Impression Materials, Impression Trays, Orthodontics, Protective Eyewear, Restorative.**

Distribution: **Dental Dealers**

Web site: www.bosworth.com

E-Mail: HJBinfo@bosworth.com

Henry Schein Inc.
135 Duryea Road
Melville, NY 11747

Phone: (631) 843-5500

Fax: (631) 843-5665

Products: **Dental Supplies, Equipment and Practice
Management Tools**

Distribution: **Dentists, Labs**

Web site: www.henryschein.com

Heraeus Kulzer, Inc.
99 Business Park Drive
Armonk, NY 10504

Phone: (914) 273-8600

Alt. Phone: (800) 431-1785

Fax: (914) 273-5211

Web site: www.heraeus-kulzer-us.com

Hu-Friedy Mfg Co., Inc.
3232 North Rockwell Street
Chicago, IL 60618

Phone: (773) 975-3975

Alt. Phone: (800) 483-7433

Fax: (800) 729-1299

Web site: www.hu-friedy.com

ITL Dental
18103 Skypark Circle, Suite A
Irvine, CA 92614

Phone: (949) 223-8950

Alt. Phone: (800) 277-0073

Fax: (949) 223-8960

Products: **Implant Products; Low and High Speed Handpieces;
Crownless Bridge; Anchor Systems; Electric Motor
Systems for Implantology, General Dentistry,
Endodontics and Laboratories; Mechanical Faucet
Control System; Injection Syringe Analgesic**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group, Dental Schools, Export, Private Label, Direct**

Web site: www.itldental.com

E-Mail: sales@itldental.com

Ivoclar Vivadent, Inc.
175 Pineview Drive
Amherst, NY 14228-2231

Phone: (716) 691-0010
Alt. Phone: (800) 533-6825
Fax: (716) 691-2285

Web site: www.ivoclarvivadent.us.com

J & J Instruments, Inc.
737 East Elizabeth Avenue
Linden, NJ 07036

Phone: (908) 486-3800
Alt. Phone: (800) 355-4678
Fax: (908) 486-3803

Products: **Dental and Surgical Instruments**

Distribution: **Wholesaler**

J. Morita USA, Inc.
9 Mason
Irvine, CA 92618-2707

Phone: (949) 581-9600
Alt. Phone: (800) 831-3222
Fax: (949) 465-1095

Web site: www.jmoritausa.com

KaVo America Corporation
340 East Main Street
Lake Zurich, IL 60047-2587

Phone: (847) 550-6800
Alt. Phone: (800) 323-8029

Fax: (847) 550-6825

Web site: www.kavousa.com

Kerr Corporation (A Sybron Company)
1717 West Collins Avenue
Orange, CA 92867

Phone: (714) 516-7601, Ext. 7600
Alt. Phone: (800) 537-7824
Fax: (714) 516-7648
E-Mail: semmelms@sybrondental.com

Keystone Industries
616 Hollywood Avenue
Cherry Hill, NJ 08002

Phone: (856) 663-4700
Alt. Phone: (800) 333-3131
Fax: (856) 663-0381

Products: **Laboratory Supplies**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Export, Private Label**

Web site: www.keystoneind.com

Kimberly-Clark Health Care
1400 Holcomb Bridge Road
Bldg 200
Roswell, GA 30076

Phone: (770) 587-8000
Fax: (770) 587-7748

Products: **Latex Gloves**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group**

Web site: www.kimberly-clark.com

Kuraray America, Inc.
101 East 52nd Street

**26th Floor
New York, NY 10022**

Phone: (212) 986-2230
Alt. Phone: (800) 879-1676
Fax: (888) 700-5700

Web site: www.kurarayamerica.com

**L & R Manufacturing Company
577 Elm Street
Kearny, NJ 07032**

Phone: (201) 991-5330, ext. 248
Fax: (201) 991-5870

Products: **Ultrasonic Cleaning Machines; Ultrasonic Cleaning Solutions; Welding Machines; Dryers; Sterilizers (Dry Heat)**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental and Trade Schools, Export**

Web site: www.lrultrasonics.com
E-Mail: info@lrultrasonics.com

**L.S.M. Dental Equipment Co.
9995 SW Avery Street
Tualatin, OR 97062-8545**

Phone: (503) 692-6532
Alt. Phone: (800) 824-8265
Fax: (503) 692-9226

Web site: www.lsm dental.com

**Lang Dental Manufacturing Company, Inc.
175 Messner Drive
PO Box 969
Wheeling, IL 60090**

Phone: (847) 215-6622
Alt. Phone: (800) 222-LANG
Fax: (847) 215-6678

Web site: www.langdental.com

Lares Research
295 Lockheed Avenue
Chico, CA 95973

Phone: (530) 345-1767
Alt. Phone: (800) 347-3289
Fax: (530) 345-1870

Products: **Highspeed Handpieces & Fiber Optic Systems;**
Lowspeed Handpieces; Air Abrasion Cavity
Preparation Systems; Nd:YAG Soft Tissue Lasers

Distribution: **Direct to Dentists, Government, Dental Schools,**
Export, Private Label

Web site: www.laresdental.com
E-Mail: lares@laresdental.com

Matech, Inc.
13000 San Fernando Road
Sylmar, CA 91342

Phone: (818) 367-2472
Fax: (818) 367-7059

Products: **Alginate Impression Materials; Non-Precious Ceramic**
Alloy; Dental Investments, etc.

Distribution: **Dental Dealers**

Web site: www.matechinc.com
E-Mail: matechinc@verizon.net

Matrx
145 Mid County Drive
Orchard Park, NY 14127

Phone: (716) 662-6650
Alt. Phone: (800) 847-1000
Fax: (716) 662-8440

Web site: www.matrxmedical.com

McDonough Medical Products Corp.
4 Parkway N. Blvd.
Suite 110
Deerfield, IL 60015

Phone: (847) 940-9178

Fax: (847) 940-9360

Web site: www.mcdonoughmedical.com

MDC Dental
17800 South Main Street, Unit 114
Gardena, CA 90248

Phone: (310) 352-6980

Fax: (310) 352-6982

Products: **Artificial Teeth; Rubber Dam; Acrylics; etc.**

Distribution: **Manufacturer - Dental Dealer; Manufacturer - Direct to Dentists; Manufacturer - Direct to Labs.**

Web site: www.mdcdental.com

E-Mail: mdcdental@sbcglobal.net

Medental International Inc.
3008 Palm Hill Drive
Vista, CA 92084

Phone: (760) 727-5889

Fax: (760) 727-3706

Products: **Dental Cements, Ortho Adhesive and Restorative Products**

Distribution: **Dental Dealers, Private Label**

Medicom, Inc.
1200, 55th Avenue
Lachine, Quebec H8T 3J8 Canada

Phone: (514) 636-6262

Alt. Phone: (800) 616-4266 (fax)

Fax: (514) 636-6266

Products: **Non-Woven Gauze Sponges; Dental Bibs; Saliva Ejectors; Tray Covers; Cups; Cotton Rolls;**

**Sterilization Pouches; Dental Sponges; Exam Gloves;
Face Masks & Shields; Headrest Covers; Evacuator
Tips; Sterilization Rolls; Cotton Tip Applicators;
Sterile Scalpel Blades; Safety Glasses; Preventive
Products include Denti-Care Brand Fluorides: In-
office and Home Care; Fluoride Varnish: DuraFlox
Brand; Prophy Paste: Denti-Care Brand**

Distribution: **Dental Dealers**

Web site: www.medicom.ca

**Meta Dental Corp.
82-06 Grand Avenue
Elmhurst, NY 11373**

Phone: (718) 639-7460

Fax: (718) 639-7408

Products: **Gutta Percha Points and Paper Points**

Distribution: **Dental Dealers**

Web site: www.metadentalco.com

**Mexpo International Inc.
2671 McCone Avenue
Hayward, CA 94545**

Phone: (510) 293-6800

Fax: (510) 293-9056

Products: **Powdered & Powder Free Latex & Non Latex Exam
Gloves**

Distribution: **Dental Dealers**

Web site: www.mexpo-glove.com

**Micro Motors, Inc.
151 East Columbine Avenue
Santa Ana, CA 92707**

Phone: (714) 546-4045

Alt. Phone: (800) 562-6204

Fax: (714) 546-1109

Products: **Air, Electric and Battery Powered Handpiece Attachments and Motor Controllers for use in all Clinical Applications, including Restorative, Aesthetics, Endodontics, Oral Surgery and Implantology. Specializes in Low Speed Dental Handpieces, both Air and Electric Driven.**

Distribution: **Dental Chain; Independent Dealer; Dealer Buying Group; Government; Dental Schools; Export; Private Label**

Web site: www.micromotorsinc.com

Microbrush Corporation
1376 Cheyenne Avenue
Grafton, WI 53024

Phone: **(262) 375-4011**

Fax: **(262) 375-2777**

Products: **Saliva Ejector; Evacuator Tips; Microbrush**

Distribution: **Mail Order Distributor, Independent Dealer, Dealer Buying Group, Government, Dental and Trade Schools, Export, Private Label**

Web site: www.microbrush.com

E-Mail: microbrush@microbrush.com

Microcopy
3120 Moon Station Road
Kennesaw, GA 30144

Phone: **(770) 425-5715**

Alt. Phone: **(800) 235-1863**

Fax: **(770) 423-4996**

Products: **Insta-Neg/Insta-Fix Rapid X-Ray Solutions; Insta-Veloper Portable Darkroom; Neo Diamonds, Dry Tips**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Dentists, Government, Dental and Trade Schools, Export**

Micro-Scientific Industries, Inc.
1225 Carnegie Street
Rolling Meadows, IL 60008

Phone: (847) 454-0835

Fax: (847) 454-0837

Products: **Opti-Cide-3 Disinfectant; Opti-Scrub Healthcare hand/skin scrub; Opti-cide NR No Rinse hand sanitizer; Micro-cide-28 Sterilizing Solution; Micro-Zyme enzyme Instrument Cleaner**

Distribution: **Manufacturer - Dental Dealer**

Web site: www.opticide.com

E-Mail: msi@opticide.com

Microtech

**3633 West MacArthur Boulevard, #410
Santa Ana, CA 92704**

Phone: (714) 966-1645

Fax: (714) 966-1653

Products: **High Speed Handpieces; Turbines; Canisters; Back Caps; Miscellaneous Repair Parts.**

Distribution: **Dental Dealers and Direct to Dentists.**

Midmark Corporation

60 Vista Drive

PO Box 286

Versailles, OH 45380

Phone: (937) 526-3662

Alt. Phone: (800) 643-6275

Fax: (937) 526-8384

Web site: www.midmark.com

Miltex, Inc.

589 Davies Drive

York, PA 17402

Phone: (717) 840-9335

Alt. Phone: (800) 221-1344

Fax: (717) 840-9347

Web site: www.miltex.com

Modular and Custom Cabinets Ltd./T.G. Group
10721 Kiek Street North
Maple, Ontario L6A 1S5 Canada

Alt. Phone: (800) 388-6236

Products: **Dental Cabinetry and distributes dental intraoral x-rays.**

Distribution: **Dental Dealers**

Web site: www.mccdental.com

Molnlycke Health Care, Inc.
826 Newtown-Yardley Road
Suite 300
Newtown, PA 18940

Alt. Phone: (800) 882-4582, Ext. 2084
Fax: (267) 685-2010

Mydent International
80 Suffolk Court
Hauppauge, NY 11788

Phone: (631) 434-7760
Fax: (631) 434-7750

Products: **Face Masks: Fluid Resistant, 3 Ply Cone, Form-Fit, Pleated with Ear Loops; Gloves: Hypoallergenic, Powder Free, Vinyl, Textured; Sterilization Pouches and Nylon Sterilization Tubing; Heat Sealers; Micro-Torches and Butane Refills; Impression Materials; Mirrorlite Illuminated Mouth Mirror.**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group, Private Label**

Web site: www.defend.com

The Motloid Company
300 North Elizabeth Street
Chicago, IL 60607

Phone: (312) 226-2454
Alt. Phone: (800) 662-5021
Fax: (312) 226-2480

Products: **Acrylics-Tooth; Acrylics-Denture; Buffing & Burnishing Agents; Laboratory Supplies; Waxes and Wax Accessories; Coldpac; Plastikarvers; Moldent; Chrometal; Cement; Lathe Accessories; Electric Soldering Equip.; Diamond Porcelain Polishing Paste; Gold Plating Equipment; Burs; Light-Cure Materials & Equipment; Composites; Tin PLating Equipment; Burs; Drills; Solvents; Pin-Pals; Polishing Pastes**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Laboratories and through Dealers, Direct to Dentists, Government, Dental and Trade Schools, Export, Private Label**

Web site: www.yates-motloid.com

E-Mail: info@yates-motloid.com

Nashville Dental, Inc.
916 Myatt Industrial Drive
PO Box 1449 (37116-1449)
Madison, TN 37115

Phone: **(615) 868-3911**
Alt. Phone: **(800) 251-2196**
Fax: **(615) 868-0719**

Web site: www.nashvilledental.com

National Dentex Corporation
526 Boston Post Road
Suite 207
Wayland, MA 01778

Phone: **(508) 358-4422**
Alt. Phone: **(800) 678-4140**
Fax: **(508) 358-6199**

Web site: www.nationaldentex.com

Neo Dental International Inc.
2505 South 320 Street, Suite 250
Federal Way, WA 98003

Phone: **(253) 946-0814**
Fax: **(253) 946-0885**

Products: **Vitapex Calcium hydroxide + Iodoform paste; Dentalis**

**Calcium hydroxide + Iodofom root canal sealer;
Multiflex Autoclavable plastic irrigation syringe.**

Distribution: **Manufacturer - Dental Dealer.**

Web site: www.neodental-intl.com

E-Mail: ndi@neodental-intl.com

**Nevin Laboratories, Inc.
5000 South Halsted Street
Chicago, IL 60609**

Phone: (773) 624-4330
Alt. Phone: (800) 544-5337
Fax: (773) 624-7337

Products: **Laboratory Furniture and Processing Equipment;
Decident Disposable Disinfectant Sleeve**

Distribution: **Mail Order Distributor, Dental Chain, Independent
Dealer, Dealer Buying Group, Government, Dental
and Trade Schools**

Web site: www.nevinlabs.com

**Nordent Manufacturing, Inc.
1374 Jarvis Avenue
Elk Grove Village, IL 60007**

Phone: (847) 437-4780
Alt. Phone: (800) 966-7336
Fax: (847) 437-4786

Web site: www.nordent.com

**Noritake Co., Inc.
15-22 Fair Lawn Avenue
Fair Lawn, NJ 07014**

Phone: (201) 796-2222
Fax: (201) 796-9155

Products: **Dental Porcelain**

Distribution: **Dental Dealers**

**Novocol Pharmaceutical of Canada, Inc.
P. O. Box 68
Cambridge, Ontario NIR 5S9 Canada**

Phone: (519) 623-0502

Fax: (519) 623-4290

Products: **Dental Anesthetic Products and Accessories**

Distribution: **Dental Chain, Independent Dealer, Export**

**Oral-B, a division of Gillette CONA
Prudential Tower Building PRU 36
Boston, MA 02199**

Phone: (617) 421-7000

Alt. Phone: (800) 544-0047

Fax: (617) 421-7722

Web site: www.oral-b.com

**Ortho Organizers, Inc.
1619 South Rancho Santa Fe Drive
San Marcos, CA 92069**

Phone: (760) 471-0206

Alt. Phone: (800) 547-2000

Fax: (760) 471-9549

Web site: www.orthoorganizers.com

**Ortho Technology
17401 Commerce Park Boulevard
Tampa, FL 33647**

Phone: (813) 991-5896

Alt. Phone: (800) 999-3161

Fax: (813) 991-5986

Products: **Orthodontic Appliances and Supplies**

Distribution: **Sales Representatives, Independent Contractors,
Direct Mail, Telemarketing, Wholesale through
Distributors**

Web site: www.OrthoTechnology.com

Ortho-Tain, Inc.
950 Green Bay Road, Suite 205
Winnetka, IL 60093

Phone: (847) 446-7600

Fax: (847) 446-7606

Products: **Nite-Guide, Occlus-o-Guide, Interim "G", Ortho-Tain, Ortho-T, Snore Cure, Softee.**

Distribution: **Dental Dealers (Overseas)**
Direct to Dentists (U.S. & Canada)

Web site: www.ortho-tain.com

Outsource Management International, Inc.
PO Box 1320
Newport, WA 99156

Phone: (509) 447-2666

Fax: (425) 462-7203

Products: **All dental products including Orthodontics and Implants.**

Distribution: **Dental Dealers; Direct to Dentists.**

Web site: www.omi2.net

Palmero Health Care
120 Goodwin Place
Stratford, CT 06615

Phone: (203) 377-6424

Alt. Phone: (800) 344-6424

Fax: (203) 377-8988

Web site: www.palmerohealth.com

Parkell Inc.
155 Schmitt Boulevard, Box 376
Farmingdale, NY 11735

Phone: (631) 249-1134

Alt. Phone: (800) 243-7446

Fax: (631) 249-1242

Products: **Electronics; Impression Materials; Adhesives;
Cements; Composite**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying
Group, Direct to Dentists, Mail Order Distributor,
Export, Government, Dental and Trade Schools**

Web site: www.parkell.com

E-Mail: info@parkell.com

**Patterson Dental Company
1031 Mendota Heights Road
St. Paul, MN 55120-1419**

Phone: (651) 686-1600

Alt. Phone: (800) 328-5536

Fax: (651) 686-9331

Web site: www.pattersondental.com

**Peebles Prosthetics, Inc.
7555 West 10th Avenue
Lakewood, CO 80215**

Phone: 303-462-3744

Fax: 303-462-3737

Products: **Complete Dentures, Orthodontic Appliances, Implant
Bars**

Distribution: **Dentists and Labs**

**Pemaco Inc
2030 So. 3rd Street
St. Louis, MO 63104**

Phone: (314) 231-3399

Fax: (314) 231-4484

Products: **Dental Plaster; Stones; Die Stones; Utility & Boxing
Wax; Base Plate & Casting Waxes; Bite Block Rods;
Orthodontic Waxes; Patient Relief Wax in Compacts;
Pumice; Ultrasonic Cleaning Solutions; Duplicating
Material-Tin Foil Substitute Separating Material &
Stone Separator**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental and Trade Schools, Export, Private Label**

E-Mail: pemaco@pemaco.us

Pentron Corporation
53 North Plain Industrial Road
P.O. Box 724
Wallingford, CT 06492

Phone: (203) 265-7397
Alt. Phone: (800) 243-3969
Fax: (203) 284-0240

Products: **Alloys; Solders; Optec™ HSP, VP, Synspar® and Pencraft™ Porcelains; Amalgams; Composites; Partial Denture Alloy; Impression Materials; Bonding Systems and Dental Cements**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Laboratories, Direct to Dentists, Government, Dental and Trade Schools, Export, Private Label**

Web site: www.pentron.com

Porter Instrument Company, Inc.
245 Township Line Road
PO Box 907
Hatfield, PA 19440-0907

Phone: (215) 723-4000
Alt. Phone: (800) 457-2001
Fax: (215) 723-2199

Web site: www.porterinstrument.com

Precise Dental Products, Ltd.
21361 Deering Court
Canoga Park, CA 91304

Phone: (818) 992-5333
Fax: (818) 992-1955

Products: **Gutta Percha; Absorbent Paper Points**

Distribution: **Dental Dealers, Private Label**

Precision Dental International, Inc.
21361 Deering Court
Canoga Park, CA 91304

Phone: **(818) 992-1888**

Fax: **(818) 992-5999**

Products: **Rubber & Silicone Mouth Props; Germicide Trays; Cabinet Trays; Cotton Roll Disp; Sponge Dispensers; Stainless Steel Mirrors; Magnetic Bur Blocs; Film Holders; Instrument Mats; Silicone Code Rings; Endodontic Instru. Stops; Prefab Post Syst.; Amalgam Wells**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Export, Private Label**

Premier Dental Products Company
1710 Romano Drive/P.O. Box 4500
Plymouth Meeting, PA 19462-4500

Phone: **(610) 239-6000**

Alt. Phone: **(888) PREMUSA**

Fax: **(610) 239-6172**

Products: **DENTAL PRODUCTS: Endo: Instruments, Posts, RC Prep; Laboratory: Diamondback Trimming Wheel, Thin-Flex Diamond Discs, Two Striper Instruments; Instruments: Premier Brand; Perio-Hygiene: Glitter Prophy Paste, PerioWise; Prosthetic: Triple Trays, Hemodent Hemostatic Agent; Restorative: CompCore, Cure-Thru Matrices & Wedges, IntegraBond, IntegraCem, IntegraPost, Luminescence Diamond Polishing System, Perfecta Tooth Whitening, Topicale, Two Striper Diamonds. MEDICAL PRODUCTS: Dermatology, ENT, Gynecology, Podiatry, Tracheostomy & Laryngectomy Tubes.**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental and Trade Schools, Export**

Web site: www.premusa.com

Preventive Technologies, Inc.
1150 Crews Road

**Suite H
Matthews, NC 28105**

Phone: (704) 849-2416
Alt. Phone: (800) 474-8681
Fax: (704) 849-2417

Web site: www.preventech.com

**Procter & Gamble Distributing Co.
2 Procter & Gamble Plaza, TN-14 G.O.
Cincinnati, OH 45152**

Phone: (513) 983-6410
Fax: (513) 983-6612

Web site: www.pg.com

**ProTech Professional Products, Inc.
2900 Northwest Commerce Park Drive, #10
Boynton Beach, FL 33426**

Phone: (561) 493-9818
Alt. Phone: (800) 872-8898
Fax: (561) 493-9825

Products: Acrylic Polishing & Hi Shine Bars; Acrylic to Acrylic
Super Bonding Agents; Denture Base; Soft Reline;
Composite Bonding Kits; Prosthetic Cleaner; 4-Meta
Cements; Permaflex[®] Silicone Soft Reline; Stone &
Plaster Remover; Separating Medium; Permafix[®]
Silicone Soft Reline; Emery Powder[®]

Distribution: Mail Order Distributor, Dental Chain, Independent
Dealer, Dealer Buying Group, Direct to Dentists,
Export, Direct to Laboratories, Private Label

Web site: www.protechdental.com
E-Mail: protechdental@bellsouth.net

**Pulpdent Corporation
80 Oakland Street, P. O. 780
Watertown, MA 02272-0780**

Phone: (617) 926-6666
Alt. Phone: (800) 343-4342
Fax: (617) 926-6262

Products: **Calcium Hydroxide Products; Articulating Papers; Pit and Fissure Sealant Etching Gels; Amalgam Carriers; Periodontal Products; Endodontic Points and Instruments; Bead Sterilizer; Extracting Forceps; Scissors; Hemostats; Saliva Ejectors; Glass Ionomers; Diamond Polishing Paste; Amalgam Bonding Kit; Dentstic All Purpose Adhesive; Resin Cement**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Government, Dental and Trade Schools, Export**

Web site: www.pulpdent.com

E-Mail: pulpdent@pulpdent.com

Raintree Essix, Inc.
4001 Division Street
Metairie, LA 70002

Phone: **(504) 488-0080**

Fax: **(504) 488-2429**

Products: **Interproximal Reduction supplies; ARS (Air-Rotor Stripping) Supplies; Essix Thermoforming Plastics; Hilliard Thermoforming Pliers; Essix Mouthguards and Marketing Products; Tooth Whitening Kits and Supplies; Orthobox Storage Systems; RetainerBrite Applicance Cleaner; ToothArt Products; Oral Hygiene and Patient Care Supplies; Prosthetic Devices: Orthodontics.**

Distribution: **Manufacturer - Dental Dealer, Manufacturer - Direct to Dentist; Manufacturer - Direct to Labs; Manufacturer - Other.**

Web site: www.essix.com

Reliance Dental
5805 West 117th Place, P.O. Box 38
Worth, IL 60482

Phone: **(708) 597-6694**

Fax: **(708) 597-7560**

Products: **Dental Acrylics**

Distribution: **Mail Order Distributor, Dental Chain, Independent**

**Dealer, Dealer Buying Group, Government, Dental
and Trade Schools, Export**

Renfert USA Inc.
3718 Illinois Avenue
St. Charles, IL 60174

Phone: (630) 762-1803
Alt. Phone: (800) 336-7422
Fax: (630) 762-9787

Web site: www.renfert.com

Richmond Dental
P. O. Box 34276
Charlotte, NC 28234

Phone: (704) 376-0380
Alt. Phone: (800) 277-0377
Fax: (704) 342-1892

Products: **Cotton Pellets; Braided Cotton Rolls; Gauze and Non-
Woven Sponges; Infection Control Roll Dispenser;
Reflective Shields™; FaceMask; Sponge Dispensers**

Distribution: **Independent Dealer, Mail Order Distributor, Dental
Chain**

Web site: www.barnhardt.net

Rihani International, Inc.
1647 Cranston Street
Cranston, RI 02920

Phone: (401) 942-0670
Fax: (401) 942-1360

Products: **Mouth Mirrors; Prophylaxis Products; Composites;
Retainers and Matrix Bands; Endodontic Products;
Stainless Steel Crowns; Aluminum Crowns; Infection
Control Products; Orthodontic Products; Impression
Trays**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying
Group, Government, Dental and Trade Schools,
Export, Private Label**

Web site: www.rihani.com
E-Mail: rihani@rihani.com

Rite-Dent Manufacturing Corporation
3750 East 10th Court
Hialeah, FL 33013

Phone: (305) 693-8626
Fax: (305) 693-8630

Products: **Alginate; Vinyl Polysiloxane Impression Material;**
Silicone; Zoe Impression Material; Paper Points;
Gutta Percha; Copal; Duplicating Material; Cements;
Composites

Distribution: **Dealer, Export, Private Label**

Web site: www.rite-dent.com
E-Mail: sadec@rite-dent.com

Rocky Mountains Orthodontics, Inc.
650 W. Colfax Avenue
Denver, CO 80204

Phone: (303) 592-8200
Alt. Phone: (800) 525-6044
Fax: (303) 592-8257

Web site: www.rmortho.com

Ronvig Dental Products
12931 Brandywine Court
Saratoga, CA 95070

Phone: (408) 867-0759
Fax: (408) 366-6353

Products: **Dental Injection Syringes, Ceramic Tissue Cutter,**
Instrument Cassette System, Particle Microblaster,
Dust Cabinet, Sterile Irrigation System

Distribution: **Dental Dealer**

Web site: www.ronvig.com

Roydent Dental Products, Inc.
13472 Bryson Court
Fenton, MI 48430

Phone: (810) 629-3924

Fax: (810) 629-3926

Products: Endodontic Instruments: K-Files, Hedstrom Files, Reamers, C-Files, Flexicut Files, Gutta Percha, Paper points, Gates Glidden & Peeso Reamer Drills, along with a number of other endodontic products. Posts: Boston Post, Titanium, SVP and Gold Anchor. Kettenbach Polyvinyl Siloxane Impression Material: Putty, Wash, Monopren, Plug & Press System, Futar & Futar D Bite Registration Material; Scurette Hand Instrument; Temporary Crown & Bridge Material; To Dye For caries detection dye; Canal Lubricant; Mucopren Soft Reline Material.

Distribution: Dealers, Government, Universities

Web site: www.roydent.com

E-Mail: mary@roydent.com

SATELEC INC.
130 Gaither Drive, Suite 100
Mt. Laurel, NJ 08054

Phone: (856) 222-9988

Alt. Phone: (800) 289-6367

Fax: (856) 222-4726

Products: NEOSONO Apex Locator; Suprasson P5 Piezo Ultrasonic Scaler; Neosonic Ultrasonic Endodontic System; Servotome Electrosurgery Unit; Steril - Irrigation - Systems; Curing Light; Portable Dental Units; Blood Pressure Monitors; Prophy Max air polisher/scaler systems, Sopro intraoral cameras.

Distribution: Mail Order Distributors, Dental Chain, Independent Dealer, Direct to Dentists, Export (world), Dental and Trade Schools, Government, Dealer Buying Group

Web site: www.satelec.com

E-Mail: marketing@satelecusa.com

Schick Technologies, Inc.
30-00 47 Avenue
Long Island City, NY 11101

Phone: (718) 482-2130
Alt. Phone: (888) 472-4425
Fax: (718) 482-2026

Web site: www.schicktech.com

SciCan, Div.of Lux & Zwingenberger, Ltd.
1440 Don Mills Road
Toronto, ON M3B 3P9 Canada

Phone: (416) 445-1600
Alt. Phone: (800) 667-7733
Fax: (416) 445-2727

Web site: www.scican.com

Select Dental Manufacturing
88 Allen Boulevard
Farmingdale, NY 11735

Phone: (631) 694-3199
Fax: (631) 694-5060

Products: **Orthodontic Products**

Distribution: **Dental Dealers & Direct**

Septodont, Inc.
245 C Quigley Blvd.
PO Box 11926 (19720)
New Castle, DE 19720

Phone: (302) 328-1102
Alt. Phone: (800) 872-8305
Fax: (302) 324-5699

Web site: www.septodont.com

Sirona Dental Systems LLC
4835 Sirona Drive
Suite 100
Charlotte, NC 28273

Phone: (704) 587-0453
Alt. Phone: (800) 659-5977
Fax: (704) 587-9394

Web site: www.sirona.com

Slaycris Products
1029 Southwest Washington Street
Portland, OR 97205

Phone: (503) 227-3583
Fax: (503) 227-6968

Products: **Crown & Bridge Waxes; Die Lubricant**

Distribution: **Dental Dealers**

Web site: www.slaycris.com

Spectrum Dental, Inc.
8554 Hayden Place
Culver City, CA 90232

Phone: (310) 845-3160
Alt. Phone: (800) 556-7606
Fax: (310) 845-1512

Products: **Dental Bleach and Accessory Lab Products**

Distribution: **Dealer Network**

Web site: www.specdent.com

SS White Burs Inc.
1145 Towbin Avenue
Lakewood, NJ 08701

Phone: (732) 905-1100
Fax: (732) 905-0987

Products: **Carbide Burs; Diamonds; Bur Blocks; Latex Gloves;
Rubber Dam**

Distribution: **Mode of Distribution: Dental Chain, Independent
Dealer, Government, Dental and Trade Schools,
Export**

Web site: www.sswwhiteburs.com
E-Mail: staff@sswhiteburs.com

Sultan Chemists, Inc
85 W. Forest Avenue
Englewood, NJ 07631

Phone: (201) 871-1232
Alt. Phone: (800) 637-8582
Fax: (201) 871-0321

Web site: www.sultanchemists.com

Sunstar Butler
4635 W. Foster Avenue
Chicago, IL 60630

Phone: (773) 481-6880
Alt. Phone: (800) 228-4890
Fax: (773) 427-4049

Web site: www.jbutler.com

Sybron Dental Specialties, Inc.
1717 W. Collins Ave.
Orange, CA 92867-5422

Phone: (714) 516-7400
Alt. Phone: (800) 537-7824
Fax: (714) 516-7477

Web site: www.sybrondental.com

Temrex Corporation
112 Albany Avenue, P. O. Box 182
Freeport, NY 11520

Phone: (516) 868-6221
Alt. Phone: (800) 645-1226
Fax: (516) 868-5700

Products: **Temrex Cement; Bite Relators & Rite Bite Trays;**
Film Mounts; Aidaco Bite Sticks; Gel Etch; Polishing
Paste; Diamond Paste; Light Cured Cavity Liner;

**Interstate Temp. Cement; Pre-mixed Temporary
Filling Material**

Distribution: **Mail Order Distributor, Dental Chain, Independent
Dealer, Dealer Buying Group, Government, Dental
and Trade Schools, Export, Private Label**

Web site: www.temrex.com

TEREC North America Inc. (President's Contact Info)
c/o Dental Prosthetics Services, Inc.
1150 Old Marion Road NE
Cedar Rapids, IA 52402

Phone: **(319) 393-1990**
Alt. Phone: **(800) 332-3341**
Fax: **(319) 393-8455**

Products: **Full Service Laboratory.**

Distribution: **Direct to Dentists - Dental Schools.**

Web site: www.tereclabs.com

The Argen Corporation
5855 Oberlin Drive
San Diego, CA 92121

Phone: **(858) 455-7900**
Fax: **(858) 626-8686**

Products: **Precious and Semi Precious Dental Alloys**

Distribution: **Dental Dealer; Direct; Private Label Distribution**
Sell to laboratories through dealers and direct.

Web site: www.argen.com
E-Mail: info@argen.com

The Motloid Company
300 North Elizabeth Street
Chicago, IL 60607

Phone: **(312) 226-2454**
Alt. Phone: **(800) 662-5021**
Fax: **(312) 226-2480**

Products: **Acrylics-Tooth; Acrylics-Denture; Buffing & Burnishing Agents; Laboratory Supplies; Waxes and Wax Accessories; Coldpac; Plastikarvers; Moldent; Chrometal; Cement; Lathe Accessories; Electric Soldering Equip.; Diamond Porcelain Polishing Paste; Gold Plating Equipment; Burs; Light-Cure Materials & Equipment; Composites; Tin PLating Equipment; Burs; Drills; Solvents; Pin-Pals; Polishing Pastes**

Distribution: **Mail Order Distributor, Dental Chain, Independent Dealer, Dealer Buying Group, Direct to Laboratories and through Dealers, Direct to Dentists, Government, Dental and Trade Schools, Export, Private Label**

Web site: www.yates-motloid.com

E-Mail: info@yates-motloid.com

Tornado Plastics, Inc.
4805 Bourg
St. Laurent Quebec, H4T 1N9 CANADA

Phone: (514) 744-0100

Fax: (514) 748-0808

Products: **Film mounts**

Distribution: **Dental Dealers**

Transcoject America LP
457 West Allen Avenue
Suite 106
San Dimas, CA 91773

Phone: (909) 592-4862

Fax: (909) 592-6326

Products: **No Catalog. Custom Manufacturer of dispensing devices for composites, etching, bleach bonding agents and other resins.**

Distribution: **OEM**

Tri Hawk Corporation
150 Highland Road
Massena, NY 13662

Phone: (315) 764-7664

Fax: (315) 764-8128

Products: **FG Carbide Burs; HP Laboratory Carbide Burs; FG Diamond Points; HP Diamond Points and Discs**

Distribution: **Direct to Dentists, Laboratories - Direct and through Dealers, Government, Dental & Trade Schools, Dealers, Export**

Web site: www.trihawk.com

**Trophy Dental, Inc.
1765 The Exchange
Atlanta, GA 30339**

Phone: (770) 857-1426
Alt. Phone: (800) 262-8144, ext. 1426
Fax: (770) 857-1317

Products: **X-Ray Units, Intraoral Camera, Digital Sensors, Software and Hardware for Digital Radio Visio-Graphy**

Distribution: **Dental Dealers**

Web site: www.trophy-imaging.com

**Tuttnauer USA Company
25 Power Drive
Hauppauge, NY 11788**

Phone: (631) 737-4850
Alt. Phone: (800) 624-5836
Fax: (631) 737-0720

Products: **Tabletop Autoclaves 7"x 12"; 9" x 18"; 10" x 18"; 15" x 20"; 15" x 27"; Distiller-Water Table Top; Ultrasonic Units - 1 gallon and 3 gallon; Clean and Simple Ultrasonic/Enzymatic Solution Tablets; Enviropak - 200 use Sterilization Pouches**

Distribution: **Dental Chain, Independent Dealer, Dealer Buying Group**

Web site: www.tuttnauer.com

Twist2it, Inc.
39-23 62nd Street
Woodside, NY 11377

Phone: (718) 672-4234
Alt. Phone: (877) 776-7497
Fax: (718)396-4500

Products: **Disposable Reciprocating Prophy Angles**

Distribution: **Dental Dealers & Direct**

Web site: www.twist2it.com
E-Mail: twist@twist2it.com

Vaniman Manufacturing Co.
140 North Brandon Road
P.O. Box 74
Fallbrook, CA 92088

Phone: (760) 723-1498
Alt. Phone: (800) 826-4626
Fax: (760) 723-6990

Products: **Dust Collectors and Accessories; Sand Blaster;
Electronic Waxer; Rings and Formers**

Distribution: **Dental Dealers, Export**

W.I.C.
P.O. Box 383
Williamston, MI 48895

Phone: (517) 655-7735
Alt. Phone: (888) NEO-TRAY
Fax: (517) 655-7790

Products: **The NeoTray Impression Trays**

Distribution: **Dental Dealers**

Web site: www.neotray.com

WaterPik Technologies, Inc.
1730 East Prospect Road
Fort Collins, CO 80553-0001

Phone: (970) 484-1352
Alt. Phone: (800) 525-1964
Fax: (970) 221-8715

**Products: Oral Irrigators; Automatic Flossers; Automatic
Toothbrushes; Prophylaxis Products; Impression
Materials; Matrix Materials; Post & Core Systems;
Hanau and Denar Articulators and Accessories; Lab
Products**

**Distribution: Mail Order Distributor, Dental Chain, Independent
Dealer, Dealer Group, Government, Dental Hygiene
Schools and Trade Schools**

Web site: www.waterpik.com

Westar Medical Products, Inc.
6600 Merrill Creek Parkway, #206
Everett, WA 98203

Phone: (800) 499-3945
Fax: (425) 356-2961

**Products: Manufacture of Delivery Units, Oral Surgery &
Orthochairs, General Dentistry Chairs, Dr. &
Assistant Stools, Lights.**

Distribution: Dental Dealers

Web site: www.westarmedicalproducts.com

Whip Mix Corporation
361 Farmington Avenue/P.O. Box 17183
Louisville, KY 40217

Phone: (502) 637-1451
Alt. Phone: (800) 626-5651
Fax: (502) 634-4512

**Products: Investments; Gypsums; Articulators; Vacuum Power
Mixers; Model Trimmers; Vibrators; Alloy Grinders;
Waxes and Laboratory Supplies**

Distribution: Dealers, Government, Dental and Trade Schools,

Export

Web site: www.whipmix.com

Wieland Dental Systems, Inc.
282 A Quarry Road
Milford, CT 06460

Phone: (203) 877-8688
Alt. Phone: (866) 876-0885
Fax: (203) 877-8661

Products: **Distributes the AGC electroforming system for laboratories (crown and bridge only).**

Distribution: **Dental Dealers, Direct to Dentists and Direct to Labs.**

Web site: www.wieland-dental.com

Young Dental
13705 Shoreline Court East
Earth City, MO 63045

Phone: (314) 344-0010
Alt. Phone: (800) 325-1881
Fax: (314) 344-0021

Products: **Disposable Prophy Angles, Autoclavable Prophy Angles, Prophy Cups, Brushes, Nyclave Sterilization Tubing, Disclosing Agents, Matrix Bands, Prophy Paste, Surg-O-Vac, Vent-O-Vac.**

Distribution: **Dental Dealers, Schools, Government and Export.**

Web site: www.youngdental.com
E-Mail: info@youngdental.com

Zahn Dental Company, Inc.
43 Crest Road
Framingham, MA 01702

Phone: 508-875-5840
Fax: 508-879-6392

Products: **Abrasives; Acrylics; Chemicals**

Distribution: **Direct to Laboratories and through Dealers, Dentists, Government, Dental and Trade Schools, and Independent Dealers**

Web site: www.zahndental.com

Zenith/Foremost
242 South Dean Street
Englewood, NJ 07631

Phone: (201) 894-5500

Fax: (201) 894-0213

Products: **Crown & bridge materials: LUXATEMP; Bonding agents/liners: MICROSPAND; Sealants: Pit & Fissure ECUSEAL; Endodontic instruments: ZEKRYA; Cements; Amalgam alloys; Amalgamators**

Distribution: **Dental Distributors**

Web site: www.zenithdmg.com

Zirc Company
3918 Highway 55 Southeast
Buffalo, MN 55313

Phone: (763) 682-6636

Alt. Phone: (800) 328-3899

Fax: (763) 682-6604

Products: **Setup Trays with Covers; Mouth Mirror; Sterilizing Cassettes; Bur Blocks; Instrument Mat; Procedure Tubs with Covers; Color Code Rings & Tape; Lab Pans; "O" Rings; Disp. Vacuum Screens; Disposable Alginate Mixing Bowls; Germacide Trays; 2 x 2 and 4 x 4 Dispensers; Alginate and Composite Mixing Spatulas; Racks; Storage Organizers with Racks; Cabinet Trays; Cotton Roll Dispensers; Denture & Retainer Boxes; Needle Recapper; Handi-Hopper; Solids Collectors; Saliva Ejector & HVE Valve, Rubber Dam, Endo Management**

Distribution: **Dental Chain, Independent Dealer, Buying Group, Government, Dental Schools, Export, Private Label**

Web site: www.zirc.com

E-Mail: zirc@zirc.com

MORE n.a. COMPANIES – ADDRESS UNKNOWN

3M ESPE DENTAL	1-800-634-2249
ADENNA	1-888-323-3662
ALMORE	1-800-547-1511
ALUWAX	1-616-895-4385
AMERICAN EAGLE	1-800-551-5172
AMMEX	1-800-274-7354
ANSELL HEALTHCARE	1-800-321-9752
AXIS(NTI)	1-800-355-5063
BOSWORTH	1-800-323-4352
BULBWORKS	1-800-334-2852
CERTOL	1-800-843-3343
DASH MEDICAL	1-800-523-2055
DENTAL DISPOSABLES	1-800-825-5727
DENTAL RESOURCES	1-800-328-1276
DENTAMERICA	1-626-912-1388
DENTATUS	1-800-323-3136
DENTICATOR	1-800-227-3321
DENTSPLY CAULK	1-800-532-2855
DENTSPLY MAILLEFER	1-800-924-7393
DENTSPLY PHARMACEUTICAL	1-800-225-2787
DENTSPLY PROFESSIONAL (MIDWEST)	1-800-800-2888
DENTSPLY RINN (CRESCENT)	1-800-323-0970
DENTSPLY TRUBYTE	1-800-786-0085
DUX DENTAL SALES (CADCO,CLIVE CRAIG,VAN R)	1-800-833-8267
ETHICON	1-513-786-7000
GENDEX	1-800-800-2888
GREAT PLAINS	1-800-962-7612
KROMOPAN USA	1-800-841-7398
MICROFLEX	1-800-876-6866
MILTEX MOYCO	1-800-221-1344
MIZZY/NATIONAL KEYSTONE	1-800-333-3131
PASCAL	1-800-426-8051
PREVENTECH	1-800-474-8681
RAND (J.R. RAND)	1-800-526-7111
SAFE-WAVE (PINNACLE)	1-800-878-3902
SHOFU	1-800-82-SHOFU
SOUTHERN DENTAL INDUSTRIES	1-800-228-5166
STERI-SHIELD	1-800-699-7220
SULTAN DENTAL	1-800-238-6739
TOTAL CARE / KERR	1-800-878-3902
VISTA DENTAL	1-414-636-9755
WHIP MIX CORPORATION	1-800-626-5651

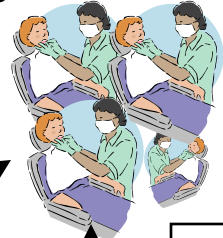
<u>3M ESPE</u>	<u>Eastman Kodak</u>	<u>Pinnacle</u>
<u>ADC Financial</u>	<u>Electro Medical Systems</u>	<u>Planmeca</u>
<u>A-dec</u>	<u>Essential Dental Systems</u>	<u>Polaroid</u>
<u>Air Techniques, Inc.</u>	<u>GC America, Inc.</u>	<u>Porter Instrument Co. Inc.</u>
<u>American Dental Supply</u>	<u>Gendex Dentsply</u>	<u>Premier Dental Products</u>
<u>Ammex</u>	<u>Gore</u>	<u>Preventech</u>
<u>Ansell Perry</u>	<u>Heraeus Kulzer</u>	<u>Pulpdent</u>
<u>Ardent</u>	<u>Hu-Friedy</u>	<u>Quala</u>
<u>Banta Healthcare Group</u>	<u>KaVo</u>	<u>Ramvac</u>
<u>Bioplant HTR</u>	<u>Kendall/Sherwood/Tyco</u>	<u>Richmond</u>
<u>Biotrol International</u>	<u>Kerr</u>	<u>Rinn Dentsply</u>
<u>Bosworth Company</u>	<u>Kimberly</u>	<u>Roydent</u>
<u>Brewer Company</u>	<u>Clark/Tecnol/Safeskin</u>	<u>SciCan</u>
<u>Buffalo Dental</u>	<u>Kuraray</u>	<u>Sempermed</u>
<u>Manufacturing</u>	<u>L&R Manufacturing</u>	<u>Septodont</u>
<u>Butler Company</u>	<u>Lang Dental</u>	<u>Shofu</u>
<u>Cadco Dental</u>	<u>Macan Engineering</u>	<u>Southern Dental Industries</u>
<u>Caulk Dentsply</u>	<u>Maillefer Dentsply</u>	<u>SS White Burs</u>
<u>Clive Craig</u>	<u>MDS Matrx</u>	<u>Star Dental</u>
<u>Coltene/Whaledent</u>	<u>Metrex</u>	<u>Sultan Chemists</u>
<u>Crosstex International</u>	<u>Microbrush</u>	<u>Sultan Dental</u>
<u>Dedeco</u>	<u>Microflex</u>	<u>Surgical Specialties (Look)</u>
<u>Dental Disposables</u>	<u>Midmark Corporation</u>	<u>Thornton International</u>
<u>Dental Resources</u>	<u>Midwest Dentsply</u>	<u>Tuttner</u>
<u>Den-Tal-Ez</u>	<u>Miltex Instrument</u>	<u>Van R Dental</u>
<u>Dentatus</u>	<u>Nordent</u>	<u>Vivadent</u>
<u>Denticator</u>	<u>Palmero Health Care</u>	<u>Warner Lambert/Pfizer</u>
<u>Dentsply Pharmaceutical</u>	<u>Pascal</u>	<u>Waterpik</u>
<u>(Astra)</u>	<u>Pinnacle</u>	<u>WhipMix</u>
<u>Dentsply Professional</u>		<u>Young Dental</u>
<u>Dentsply Trubyte</u>		<u>Zenith Dental Products</u>
<u>Dent-X</u>		

Research Institute Clinic

Patient Flow & advertisement for patient recruitment

Undergrad & Grad Students

Clinical departments



External advertisement

Faculty diagnostics

Internal advertisement

Internal advertisement



GPs

Professional media advertisement

1. Information
2. Screening
3. Consenting
4. Data

Clinical unit 1

Clinical unit 2

Clinical unit 3

Clinical unit etc..

Competencies:
Study design
Study execution
Study analysis
Study presentation
Study interpretation
Study content omission

Patients not fulfilling trial inclusion criteria / non-consenting

?