MEMORANDUM

To: Board of Regents

From: Board Office

Subject: New Center: Craniofacial Anomalies Research Center

Date: February 12, 2001

Recommended Action:

Refer the University of Iowa's request to establish a Craniofacial Anomalies Research Center (CARC) to the Interinstitutional Committee on Educational Coordination (ICEC) and the Board Office for review and recommendations.

Executive Summary:

The University of Iowa has received funding from the National Institutes of Health (NIH) for over 35 years. Current research efforts span activities from identification of the causes of common disorders such as caries to developing an understanding of the genetics and developmental biology of complex conditions that result in craniofacial anomalies such as cleft lip and palate.

The Center will bring together like-minded and complementary investigators from many departments in the College of Medicine and the College of Dentistry, as well as additional faculty from the Colleges of Public Health, Nursing and Liberal Arts. The director of the Center will report to the Vice President for Research and the Deans of the Colleges of Medicine and Dentistry. The Center will facilitate the recruitment of faculty, provide a more direct opportunity to encourage clinical trials and the delivery of clinical care, and provide teaching opportunities for undergraduate and graduate students.

While UNI has a strong speech pathology program and ISU has strong programs in genetics and molecular biology, none of these are focused on the area of craniofacial anomalies. The CARC will be funded from a combination of College of Medicine sources, endowment funds and grants and contracts. The Center expects to be highly competitive for the attraction of additional funds from training grants and clinical trials.

Attached is the University's response to the Board of Regents questions for establishing new centers.

Robert J. Barak

Approved: Frank J. Stork

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1. Title: Craniofacial Anomalies Research Center (CARC)

Introduction

The University of Iowa has one of the most distinguished records of any U.S. institution in the area of craniofacial anomalies clinical care and research. Beginning over 35 years ago, the NIH has funded programs investigating cleft lip and palate and related facial anomalies at the University of Iowa. A long string of distinguished investigators such as D.C. Spriestersbach, Hughlett Morris, Michael Solursh, Charles Kremenak, Lynn Richman, Duane Vandemark, Janusz Bardach and others have established a reputation for the University of Iowa as one of the premiere institutions of its kind in the country. A number of these individuals also served long tenure as heads of study sections, presidents of craniofacial and speech societies and leadership roles on NIH planning and institute committees. Over the last decade, we have been privileged to serve as the site for a P50 Craniofacial Anomalies Research Center and more recently, a P60 Dental Center of Excellence grant. Related to this project have been additional R01's, training grants and clinical trials programs funded out of the dental and medical colleges that have further demonstrated the scope and interest of this work here on campus.

Current research efforts span activities from identification of the causes of common disorders such as caries to developing an understanding of the genetics and developmental biology of complex conditions that result in craniofacial anomalies, such as cleft lip and palate. Training of undergraduates, graduate students, and clinicians in dentistry, speech and hearing, medicine and basic sciences have benefited from these opportunities. These activities have made use of the extraordinary power of the Iowa referral base and population for clinical studies and have enabled a wide range of basic science studies to be built upon them. As we move into the first years of the 21st century, it is evident that advances in molecular and genetic technology, computer informatics and clinical care provide extraordinary new opportunities for the development of these educational, clinical and research goals. Current studies based around the strong programs that have come out of our Colleges of Public Health, Dentistry and Medicine provide the infrastructure for the proposed center. These studies range from high-tech transgenic animal mouse model work through clinical intervention trials looking at aspects of vitamin and micronutrient supplements in preventing craniofacial anomalies. Similarly, the university has a track record of attracting and providing a long-term nurturing environment for such investigators with many investigators beginning their careers here as junior faculty and continuing on through to emeritus status. To take advantage of current activities, interests and the expanded role of the NIH National Institute for Craniofacial and Dental Research we propose the establishment of this Craniofacial Anomalies Research and Clinical Center to carry out this mission.

2. Administrative Relationships

The CARC will be administered through the sponsorship of the Vice President for Research, the College of Dentistry and College of Medicine. Within those colleges

there will likely be faculty drawn from many departments but in the initial phases the Departments of Pediatrics, Otolaryngology, Epidemiology, and Pediatric Dentistry would be particularly prominent. We will have additional faculty from the Colleges of Public Health, Nursing and Liberal Arts. As shown in the attached administrative structure diagram an advisory committee drawn from members of each of these departments and colleges will provide administrative oversight through the director and co-directors.

Faculty

Name	Rank	Position	Department
Jeff Murray, MD	Professor	Director	Pediatrics
John Keller, PhD	Professor	Co-Director	Graduate College
John Canady, MD	Associate Professor	Co-Director	Otolaryngology
Richard Burton, DDS	Asst Professor	Member	Oral & Maxillofacial Surgery
Keith Carter, MD	Assoc Professor	Member	Ophthalmology
Mike Karnell, PhD	Assoc Professor	Member	Otolaryngology
Ron Keech, MD	Professor	Member	Opthalmology
Arnold Menezes, MD	Professor	Member	Surgery
Jerry Moon, PhD	Professor	Member	Speech Path & Audiol
Lynn Richman, PhD	Professor	Member	Pediatrics
Paul Romitti, PhD	Assistant Professor	Member	Epidemiology
Andy Russo, PhD	Associate Professor	Member	Physiology
Brian Schutte, PhD	Assistant Professor	Member	Pediatrics
Chris Squier, PhD, DSc	Professor	Member	Dentistry
Mike Vannier, MD	Professor	Member	Radiology
Baoli Yang, MD, PhD	Assistant Professor	Member	Obstetrics & Gynecology

3. Reporting Unit

The director of the center will report to the Vice President of Research and the Dean of the College of Medicine and the Dean of the College of Dentistry. An executive committee will provide advice and guidance to the center. In addition, the director will report to the chairpersons of their primary and secondary departments.

4. Purposes and Objectives

A) To contribute to and maintain the strong clinical infrastructure that establishes premiere and first-rate patient care in an academic research and teaching environment.

B) To provide opportunities for recruitment of new faculty off campus and the incorporation of existing faculty on campus currently working outside the area of craniofacial anomalies into broad, comprehensive research programs that will provide opportunities for basic science research through clinical trials.

C) To establish and maintain a cohesive training environment that will provide opportunities for clinical and research training or for investigators such as surgeons, pediatricians, geneticists, speech pathologists, psychologists, dentists and oral surgeons along with predoctoral and postdoctoral students

and fellows to foster further exploration of the causes, treatment and prevention of craniofacial anomalies.

D) To serve as a resource for the state of Iowa in public health aspects related to craniofacial anomalies.

5. Relationship to General Mission/Teaching Program

With respect to research activities the center will provide an opportunity to bring together like-minded and complementary investigators into a single common unit investigating the problems related to craniofacial anomalies. However, many of these investigators already collaborate through clinical care and formally through the existing P60 and RO1 activities. The center itself, by providing a formal mechanism and structure for such interactions, will particularly facilitate the recruitment of junior faculty and faculty whose primary interest may not already lie in the area of craniofacial anomalies. With respect to clinical care the center will provide a more direct opportunity to encourage clinical trials and delivery of clinical care that can make use of the most recent advances stemming from craniofacial research in a way that is not currently possible. Finally, the center provides teaching opportunities for undergraduate and graduate students in a way not currently available on campus. The track record of the proposed director and co-directors is very strong in this area in particular and will provide opportunities for bringing young students and faculty into this important area using the center as a common source for training mechanisms and seminars that will greatly enhance opportunities available on campus.

6. Similar Units in Iowa

We are not aware of any similar units at public or private colleges or universities within Iowa. Although the University of Northern Iowa has a strong speech pathology program and Iowa State University has strong programs in genetics and molecular biology none of these are focused specifically on the area of craniofacial anomalies and this center would provide unique opportunities not available elsewhere.

7. Funding Sources

The Craniofacial Anomalies Research and Clinical Center would be funded from a combination of College of Medicine resources, endowment funds, and grants and contracts whose targeted aim is the investigation of craniofacial anomalies. It is expected that as time passes, additional support in the form of training grants, clinical trials and other funds will become increasingly available. The University currently receives in excess of $3 million per year in direct costs from the public health system for studies related to craniofacial anomalies, and with the expansion of the mission of the National Institute of Dental Research to the National Institute of Craniofacial and Dental Research, we expect to be in a highly competitive position for the attraction of additional funds.

Annual Core Budget

Budgetary Item	Source	Currently funded via P60/R01 Amount	New College of Medicine Support Amount
Director	P60/RO1 Grants	$15,000	
Co-Directors	P60 Grant	$45,000	
Program Associate	P60 Grant	$20,000	11,000
Accounting	P60 Grant	$5,000	
Clinical Nurse Specialist	P60 Grant	$25,000	$25,000
Research Studies Coordinator	P60/R01 Grants	$20,000	$25,000
Administrative Assistant	P60 Grant	$20,000	$10,000
Seminar Series Costs (6)	University Funds		
-Travel			$4,800
-Hotel			$1,200
-Honorarium			$3,000
Faculty Recruitment			$30,000
Postdoctoral Associate (1)			$50,000
Predoctoral Students (2)			$40,000
Undergraduate/Precollege Training (5-10)			$10,000
Totals:		$150,000	$210,000

a) Administrative Structure

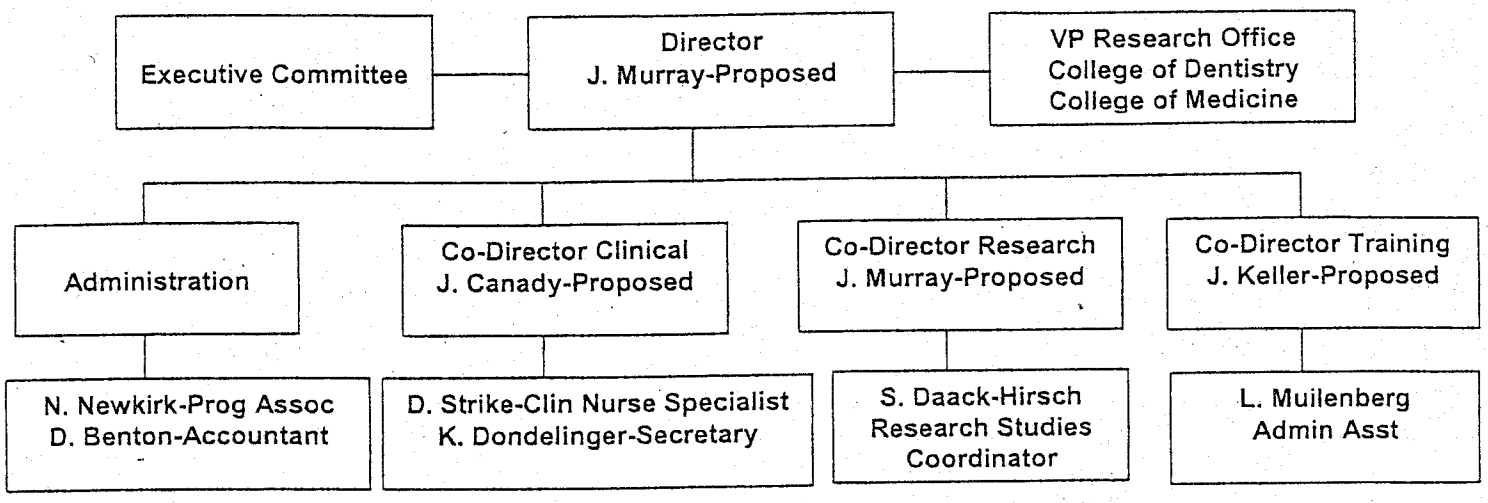
The center would consist of a director, proposed to be Dr. Jeff Murray, a clinical core directed by Dr. John Canady, a research core directed by Dr. Murray and a training core directed by John Keller; the administrative staff would include a Program Associate, secretarial support and financial support to have designated space in both research wings and the outpatient/inpatient clinical wings of the hospital and college. The director, co-director and staff would be overseen and guided by an executive committee to be comprised of the deans of the Colleges of Medicine, Dentistry, Public Health, Nursing and Liberal Arts and the Vice President for Research or their designated representatives who might, for example, include Associate Deans for Research or similarly held positions. The executive committee would meet in formal session twice a year to evaluate ongoing programs, review plans for the future and make suggestions for additional venues and efforts.

An external advisory committee to be comprised of three individuals drawn from the areas of dentistry, speech, surgery, genetics, embryology or other fields with a strong vested interest in craniofacial anomalies would also be convened once a year to provide external advice to the committee. While the center itself would not have primary faculty appointments, it would encourage secondary faculty appointments from any individuals on campus in either clinical or tenure-track positions who demonstrate an ongoing commitment to investigations of clinical care of patients with craniofacial anomalies.

The center itself, as is similar for other centers on campus, would provide yearly reports of its activities and finances that would be reviewed by the Office of the Vice President for Research, as well as each of the participating departmental heads. Expected activities would include attraction of grant support in the form of both basic science and clinical research, clinical trials research, studies of epidemiology and etiology, training grants related to predoctoral or postdoctoral training, the facilitation of outside investigators, both national and international to come to campus for training purposes and ongoing recruitment, and technology transfer to the private sector.

8. New Financial Obligations

The financial obligations attendant to the creation of this center would include committed College of Medicine funds to provide support to the program assistant, clinical nurse specialist, a research studies coordinator, and secretarial positions all of which are partially funded out of the P60 Center Grant. In addition, requests are made for support for a seminar series that would invite six outside speakers per year to the university in the area of craniofacial research for a total of nine thousand dollars. Faculty recruitment costs with an anticipated three new faculty recruited to the center over the first five years at an approximate cost of thirty thousand dollars per year are requested. It is expected that additional recruitment funds will come through existing mechanisms such as collegiate and departmental funds and programs (HHMI, Carver or Biosciences as appropriate). One post-doctoral associate and two pre-doctoral positions to be funded under the umbrella of the center at any given time and which would serve as a resource for recruiting such individuals at an early stage of their training into craniofacial anomalies research is also sought. Finally, ten thousand dollars is requested to provide training stipends for between five and ten undergraduate or pre-college students drawn from undergraduate and high school students currently enrolled at Iowa schools. This program will provide opportunities either during the regular semester or in the summer for students at a very early stage of their education to come into direct contact with faculty already working in the area of craniofacial anomalies research. Similar programs have already been quite successful as administered by both Drs. Keller and Murray in the Colleges of Dentistry and Medicine and the goal of this component of the project is to encourage through the strong system of mentoring and co-mentoring the attraction of students to the broad aspects of craniofacial anomalies research which can include clinical care research and teaching. In the attached appendix is also a listing of the current funding available to center (P60) contracts (CDC/U Grants) and RO1 grants that would provide already ongoing support for research and care to this program.


Executive Committee
Director
J. Murray-Proposed
VP Research Office
College of Dentistry
College of Medicine
Administration
Co-Director Clinical
J. Canady-Proposed
Co-Director Research
J. Murray-Proposed
Co-Director Training
J. Keller-Proposed
N. Newkirk-Prog Assoc
D. Benton-Accountant
D. Strike-Clin Nurse Specialist
K. Dondelinger-Secretary
S. Daack-Hirsch
Research Studies
Coordinator
L. Muilenberg
Admin Asst