

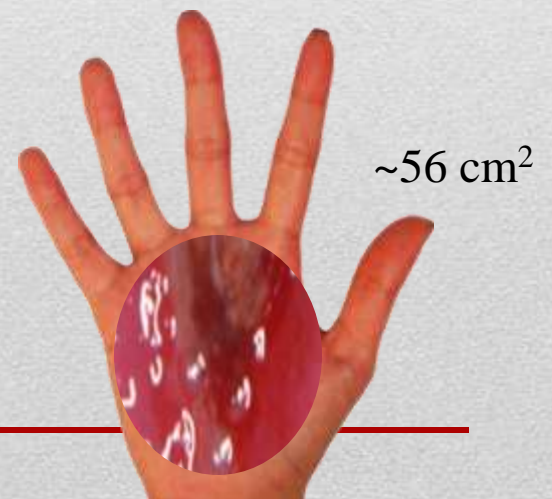
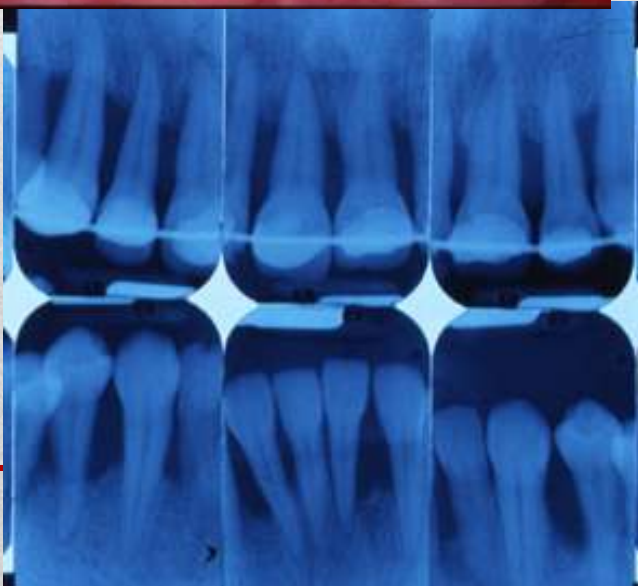
Center for the Biologic Basis of Oral/Systemic Diseases

Jeffrey L. Ebersole, PhD
College of Dentistry, University of Kentucky
NCRR P20 RR020145

"The Problem"

- Nearly $\frac{1}{4}$ of adults 35-44 have destructive periodontal disease; increases with aging
 - Dental disease or visits for Tx result in annual loss:
 - >164 million hours of work among adults;
 - >51 million school hours among children
 - Less than $\frac{2}{3}$ of adults have visited the dentist in the past 12 months
 - The mouth is attached to the rest of the body!!!
-

Periodontal Disease: A Chronic Infection

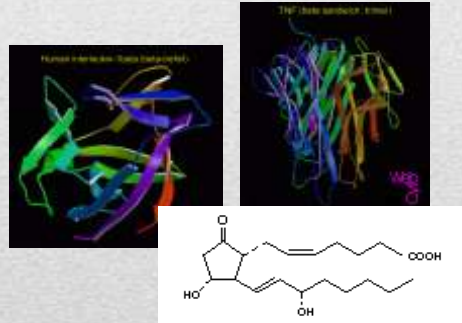
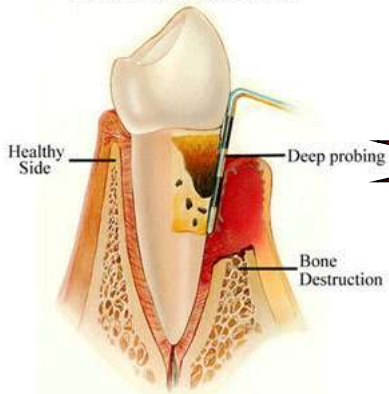


Oral-Systemic Disease

Altered Microbiota
Increased Pathogenicity
Altered Inflammation

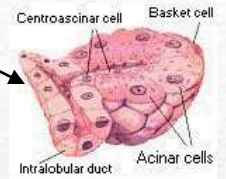
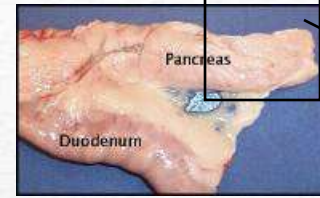
Translocated Infection

Severe Periodontitis



Systemic Inflammatory Mediators

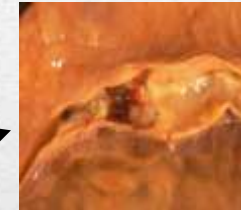
Diabetes



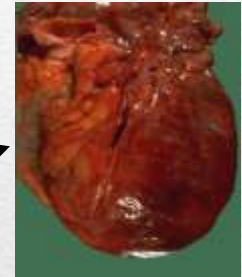
CVD



Endothelium & altered vascular responses



Atherosclerotic changes



Coronary Artery Disease (MI)

PTB/IUGR



Alzheimer's Disease



- Administrative/Educational Core
- Biostatistics/Bioinformatics Core
- Clinical and Laboratory Research Core
- ~5 full projects
- Multiple pilot projects (2 yrs)

CBBO/SD Program & Cores

- A/EC – Administrative Core
 - Project development and annual reporting
 - Budget development and management
 - Organization of group meetings/seminar series speakers
 - Formative/summative evaluation of progress of JPIs
- B/BC - Biostatistics
 - Biostatistics
 - Director – Chair of Biostatistics (CPH)
 - 3 Assistant /Associate Professor biostatisticians (training)
 - Multiple RA (grad student), MS support staff
 - Bioinformatics (Chair of Statistics, CAS)
 - Multiple RA support

CBBO/SD Cores

- Delta Dental of Kentucky Clinical Research Center
 - NIH GCRC and CCTS component
 - 6 operatories
 - 2 offices housing 6 certified clinical research coordinators
 - Record storage, sample processing and storage
- Core Translational Diagnostics Laboratory (CTDL)
 - Assess range of host responses (saliva, serum, CSF, GCF, CVF, cell culture)
 - 2 Luminex; 2 ELISA/fluorimeter/luminometer
 - 2 LightCycler 2.0 qPCR, LightCycler 480, Magnapure
 - Bacterial growth (aerobic/anaerobic)

CBBO/SD Cores

- Microarray Core Facility
- Human Genomics Core Lab
- Confocal Imaging Facility
- Flow Cytometry Facility
- Center for Biomedical Engineering (μ CT)
- BSL3 Facility

CBBO/SD Cores

CBBO/SD FY01-05

Project	R03	R21	R01	Other Grants	Comments
HIV reactivation (mφ, DCs)		<input checked="" type="checkbox"/>	2P	R41, NSF. R42P	PhD trainee PI in COBRE 06-10 PI – COD; M - COD
Prostanoids: CVD and PD			2 <input checked="" type="checkbox"/>		PI- COM, COP; M –COM, COD, COP
Polybacterial oral infections			<input checked="" type="checkbox"/>		PI moved to UFL PI – CO; M – COD, CAS
Gestational Diabetes and PD					ARRA supplement intervention (UPR) PI – COD; M – COD, COM, UMICH
PUFA and PD therapy					PI – COD; M – COD, CHS
Genetics of smoking and PD					PI – COD; M – COD, UofL
Polymicrobial oral infections and PD		<input checked="" type="checkbox"/>			Co-I moved to PI in COBRE 06-10 PI – COD; M – COD, COM
PILOTS					
IBD and PD	<input checked="" type="checkbox"/>				R01 in COBRE 06-10 PI – COD; M – COD
Edentulism		P			PI – COD; M - COD
Polybacterial oral infections		<input checked="" type="checkbox"/>			PI – COD; M - COD

CBBO/SD FY06-10

Project	R03	R21	R01	Other Grants	Comments
Inflammatory responses during gestation				K12 BIRCWH	PI – CON; M – COD, CON, UVA
Ontogeny of oral innate immunity					PI – COD, M – COD, CPRC, UPR
HSV and orofacial pain				Co-I industry	PI- COD; M – COD, CAS, COM
IBD and periodontitis					PI – COM; M – COD, COM
Chronic inflammation, CVD and oral health					PI – CON; M – COD, CON
PILOTS					
Fibromyalgia/RA				K23 recipient	PI – COD; M - COM



THANKS

Questions?????
