Finding a Gap – Analysis of an NIDCR portfolio

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ABSTRACT

An important aspect of portfolio analysis is starting with the right question. Sometimes this can be a simple question, for example – Are there any scientific gaps in a grant portfolio? This poster illustrates the data and techniques used in the compilation and analysis of the Salivary Biology and Immunology Program at NIDCR. Grants were individually hand-coded in Excel to facilitate tabulation and visualization. The result of the coding was an ordered categorization of major topics such as prevalent diseases or scientific areas supported within the portfolio. This type of comprehensive analysis allows the ability to highlighted gaps and opportunities with in a portfolio.

INTRODUCTION

The mission of NIDCR is to improve the nation's oral health through the understanding of normal and abnormal processes underlying oral, dental, and craniofacial diseases and disorders. To this end, we aimed to see the landscape of one of NIDCR's programs. The Salivary Biology and Immunology Program was analyzed to examine if major gaps in science exist. The resulting pictorial representations of the groupings are displayed below.

Methods

All grant information and abstracts were obtained through the use of QVR. Each grant within a portfolio was graded manually by reading through the abstract and/or application sections to assign the particular categories to the grant. Categories were predefined by the PO. Individual databases or spreadsheets were created containing category information (e.g., disease/topic/condition, tools, processes, basic versus translational) and pie charts or graphs generated through functions in excel.

SALIVARY BIOLOGY AND IMMUNOLOGY PROGRAM ANALYSIS

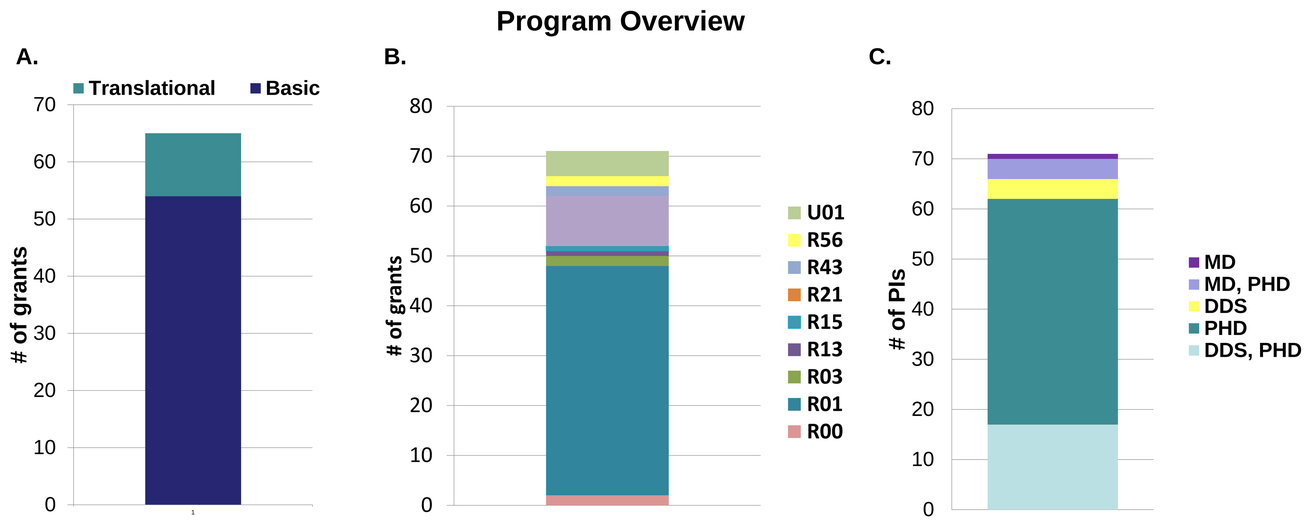


Figure 1. The NIDCR's Salivary Gland and Immunology Program supports basic and translational science research oral and dental biology. To gain an understanding of the distribution of grants across various scientific areas, each grant under the PCC:T2B was categorized into (A) basic versus translational, (B) research mechanism and (C) the degrees of the contact PIs.

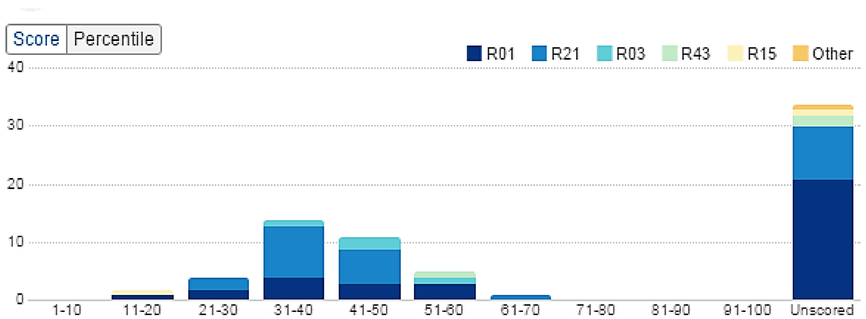
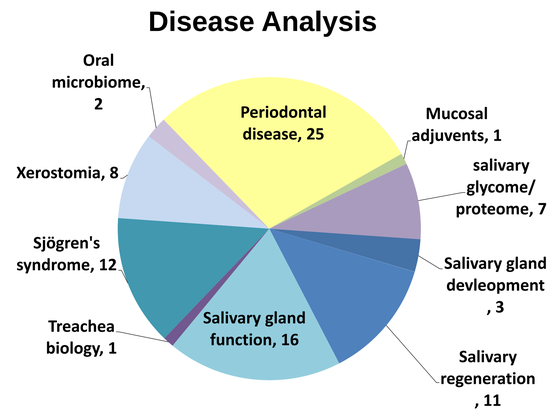
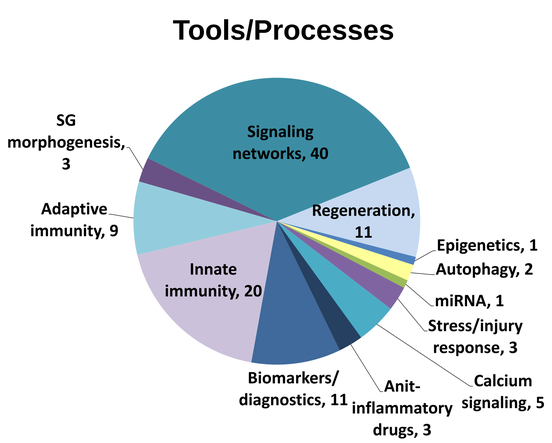
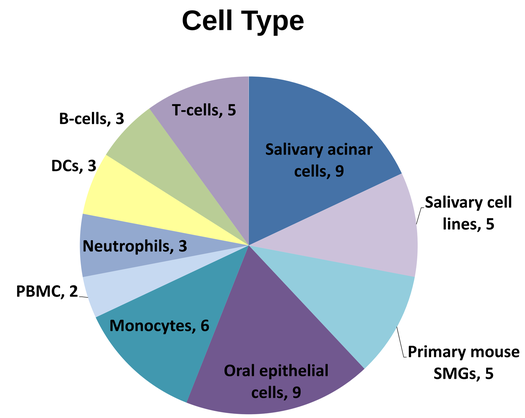


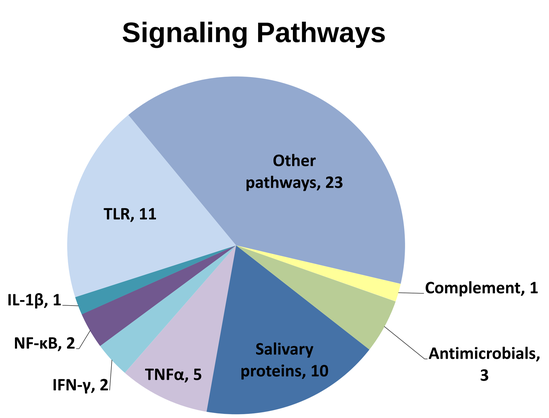
Figure 2. Use of the new QVR tool, iRePORT, allows for easy tracking of portfolios. This figure illustrates the range of scores for grant applications in PCC:T2B. In addition, tracking includes publication tracking, upcoming reviews, news releases, etc. https://iRePORT.nih.gov

PROGRAM LEVEL ANALYSIS









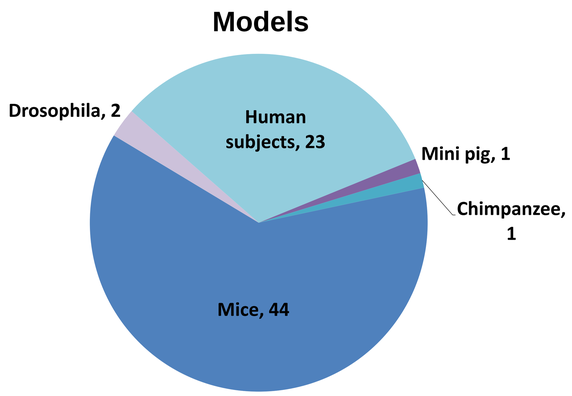


Figure 3. To gain an understanding of the distribution of grants across various scientific areas, categories were predefined by the PO and grants abstracts and specific aims were reviewed in detailed. A spreadsheets was created containing category information (e.g., disease/topic/condition, tools/processes, cell type, signaling pathways and models) and pie charts were generated in excel.

CONCLUSIONS

This analysis is a work in progress, however, there are a few clear gaps which have appeared in the portfolio following review. Theses gaps include -

- functional aspects of saliva
- incorporation of women's health in salivary dysfunction
- focus on the role of the innate/adaptive immune system in oral disease

This type of analysis is utilized to direct future research interest for the program and NIDCR. Currently, two FOAs have been released which requests applications to fill the gap in "Immune System Plasticity in the Pathogenesis and Treatment of Complex Dental, Oral, and Craniofacial Diseases".