M E M O R A N D U M

Substitute to
Agenda Item 15(C)1

TO: Honorable Chairman Oliver G. Gilbert, III and Members, Board of County Commissioners

DATE: December 12, 2023

FROM: Honorable Juan Fernandez-Barquin
Clerk of the Court and Comptroller

SUBJECT: Appointment of Daniel Flagler, Ph.D. to the Environmental Quality Control Board (EQCB)

Basia Pruna, Director
Clerk of the Board Division

This substitute differs from the original item in that it deletes all references to Dr. M. Reza Savabi because he is no longer being considered for appointment to the Environmental Quality Control Board.

It is recommended that the Board consider the appointment of Dr. Daniel Flagler, Ph.D., to serve as a member of the Environmental Quality Control Board (EQCB).

The EQCB is a quasi-judicial board created by Ordinance No. 69-30. The membership of the EQCB was recently amended by Ordinance No. 21-125, increasing the number of members from five to seven. Dr. Flagler's appointment will fill a vacancy created by this ordinance.

Dr. Flagler has a Ph.D. in Biomedical Engineering, and he meets the required qualifications for members of the Environmental Quality Control Board, as outlined in the attached memorandum.

Mayor Levine Cava's memorandum, and the resume of Dr. Flagler is attached for your review.

BP/nj
Attachment

Memorandum

MIAMI-DADE COUNTY

Date:

To: Juan Fernandez-Barquin
Clerk of the Courts and Comptroller

From: Daniella Levine Cava
Mayor

Subject: Appointment to the Environmental Quality Control Board by the Board of County Commissioners

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Please find attached the resume of Mr. Daniel Flagler, Ph.D. for consideration by the Board of County Commissioners (Board) for appointment to the Miami-Dade County Environmental Quality Control Board (EQCB). Members of the EQCB are appointed by the Board pursuant to Sec. 24-8 of the Code of Miami-Dade County (Code).

The EQCB is a quasi-judicial board created by Ordinance No. 69-30 that convenes monthly to hear cases for variances from, or time extensions to comply with, the requirements of the Environmental Protection Ordinance (Chapter 24 of the Code of Miami-Dade County) and appeals from decisions of the Director of the Division of Environmental Resources Management in the Department of Regulatory and Economic Resources. The membership, terms of office, organization, duties and powers, and procedures which govern the EQCB are set forth in Chapter 24 of the Code.

The membership of the EQCB was recently amended by Ordinance No. 21-125, increasing the number of members of EQCB from five to seven. Dr. Flagler's appointment will fill a vacancy created by this ordinance.

The EQCB is composed of seven members appointed by the Board. Members serve staggered three-year terms. Quorum requires a majority of members duly appointed to the EQCB, and four votes are required for certain types of cases within specific wellfield protection areas. Due to the highly scientific and technical nature of the matters that the EQCB reviews, the members of the EQCB are required to have advanced scientific or engineering qualifications as follows:

a) Two members shall be scientists possessing a master's or Ph.D. degree in biology or marine biology.
b) One member shall be a scientist possessing a master's or Ph.D. degree in biochemistry or chemistry.
c) Two members shall be licensed professional engineers in the field of chemical, civil, or environmental engineering or in lieu of one licensed professional engineer, one member may have a Ph.D. degree in chemical, civil or environmental engineering or one member may be a licensed professional geologist with certain qualifications, including a Ph.D. degree.
d) Two members shall qualify as one of the following: a scientist possessing a master's or Ph.D. degree in biology, marine biology, biochemistry, or chemistry; or a licensed professional engineer in the field of chemical, civil, or environmental engineering.

Of the five current members, the EQCB has two members with a Ph.D. in biology, one member with a Ph.D. in biochemistry, one member is a Professional Engineer with a valid license issued by the Professional Board of Engineers in the State of Florida, and one member has a Ph.D. in civil engineering.

Dr. Flagler has a Ph.D. in biomedical engineering with extensive experience in microbiology, industrial chemistry, and biological applications, meets the qualifications to serve on the EQCB and is recommended for appointment. Due to the high volume of cases heard by the EQCB, the appointment of Mr. Flagler is necessary to avoid possible delays.

Attachment

DANIEL FLAGLER, PhD, MBA

7226 SW 112 Place Circle
Miami, FL 33173

(305) 951-4855
flaglerdan@gmail.com

SCIENTIST / BIOMEDICAL ENGINEER

Microbiology and Cell Science... Biomedical Engineering... Program and Technical Management

- OBJECTIVE: To help the community as an Environmental Quality Control Board volunteer member
    - Ph. D. (and master's degree) in biomedical engineering with extensive experience in industrial chemistry and biological applications
    - Bachelor's degree and master's credits (18 graduate hours) in Microbiology and Cell Science
    - M.B.A. business leader with wide-ranging history of managing complex research and development projects in the medical In Vitro Diagnostic industry.
    - Extensive college and graduate level teaching experience in Environmental Science, General Biology and Biomedical Engineering courses.

PROFESSIONAL EXPERIENCE:

Beckman Coulter / Danaher- Miami, FL

- Beckman Coulter is a manufacturer of biomedical testing instrument systems with a top 5 market share in blood testing, blood clotting, immunoassay, chemistry testing, and lab automation markets. It is the world's largest company devoted solely to biomedical testing, and has a wide variety of customers including hospitals, physician's offices, and reference labs.

Lead Systems Engineer- Life Sciences Flow Cytometry - Miami Site (2013 - present)

Systems integration lead in research and development of FDA submitted In Vitro Diagnostic flow cytometry systems. Key contributions include:

- Manages System Integration / Verification group for all system-level (hardware, software, and chemistry applications) design requirements and test programs for new clinical devices.
- Leads system environmental compliance and design reliability efforts for new product platforms.
- Leads system engineering and product risk management efforts for new product platforms.
- Develops system architecture for major flow cytometry platforms addressing performance, environmental impact, and reliability along with inputs from major internal stakeholders such as regulatory, field service, clinical evaluations, and manufacturing.

Systems Engineering Manager- Life Sciences - Miami Site (2007-2013)

Project manager leading multiple engineering teams in research and development of FDA approved In Vitro Diagnostic flow cytometry systems and particle characterization instrumentation. Key contributions include:

- Managed System Engineering functional group that is responsible for all system-level (hardware, software, and chemistry application) design and development activities for new instruments including Navios / Gallios flow cytometers, Multisizer and LS product lines.
- Performed system change impact analyses and risk assessments leading into regression testing planning and execution.
- Developed statistical system integration and verification test plans and procedures in conjunction with design engineers and application specialists.
- Managed project CAPA system to ensure closed-loop resolution of product complaints including change order requests and system action reports.

Staff Development Scientist (1999-2006)

Project manager leading team research and development of FDA approved In Vitro Diagnostic reagents for blood cell analysis by flow cytometry.

- Development of new assay controls for cytometry applications including Immuno-Trol Low Cells Kit, a second level whole blood process control for flow cytometry and LeukoSure White Blood Cell Enumeration Kit and associated RBC and PLT Controls
- Verified and validated product performance, manufacturing processes and chemical stability claims. Developed novel ELISA assays for soluble and cellular analytes.
- Provided technical sections of U.S. FDA/CBER 510(k), patent applications, French AFFSAPS and other international regulatory submissions

Scientist (1997-1999)

Project leader involved in process optimization and developing novel chemical production procedures for the achievement of stable cell controls with natural antigen levels used in flow cytometry.

Associate Scientist (1995-1997)

Project leader involved in the development of new Research Use Only reagents for flow cytometry which include fluorochrome-labeled monoclonal antibodies Cytokeratin-FITC, CD28-RD1, CD28-FITC, and Glycophorin A-RD1.

Research Associate (1994-1995)

Involved in production and process scale-up of purification procedures for biopharmaceuticals, namely, Coulter Pharmaceutical's B1 antibody (Bexxar), for use in human clinical trials.

Biotech Manufacturing Specialist II (1993-1994)

Responsible for the research and development of purification and fluorochrome conjugation for monoclonal antibodies from ascites fluid and conditioned media. Developed and performed final product and in-process assays such as SDS PAGE and liquid chromatography.

RESEARCH EXPERIENCE:

University of Miami School of Medicine.....1985 - 1993

E.M. Papper Laboratory of Clinical Immunology - FDA trial of immunotherapeutic infusion of autologous ex vivo activated and expanded lymphocytes in AIDS patients with Kaposi's sarcoma.

Diabetes Research Institute - Clinical transplantation studies of pancreatic islets of Langerhans as a cell-based therapy for control of insulin-dependent diabetes.

Department of Neurological Surgery (Miami Project to Cure Paralysis) - Study of spinal cord injury and the development of molecular neurobiological models that evaluate restoration of function.

Department of Microbiology and Immunology - Investigation of cell-based mechanisms of mRNA modification and splicing.

Department of Anatomy and Cell Biology - Laboratory characterization of cytoskeleton-associated glycoproteins in ascites tumor cells.

Additional Experience:

University of Miami
LECTURER -. *2011 - Present*
Department of Biomedical Engineering
Courses include: Introduction to Biomedical Engineering, Biomedical Systems Engineering and Cellular Analysis and Instrumentation

Miami-Dade College
ADJUNCT PROFESSOR -. *2007 - 2013*
Department of Biology, Health and Wellness
Courses include: General Biology and Environmental Science

Memberships - INCOSE (International Council of Systems Engineering); RAPS (Regulatory Affairs Professional Society); ASQ (American Society for Quality) - Certified Reliability Engineer

EDUCATION

Master of Science Program in Microbiology and Cell Science (2021) -University of Florida

- Completed 18 graduate credits
    - Environmental Microbiology
    - Prokaryotic Diversity
    - Virology
    - Microbiology of Human Pathogens

Master of Business Administration (2011) - Colorado State University, School of Business

Ph. D. in Biomedical Engineering (2007)- University of Miami, College of Engineering

Master of Science in Biomedical Engineering (1994) - University of Miami, College of Engineering

Bachelor of Science in Microbiology and Cell Science (1985) -University of Florida, College of Liberal Arts and Sciences

Associate of Arts (1982) - Miami-Dade College

Abstracts, Posters and Presentations:

1986 American Society for Bone and Mineral Research: A Factor Chemotactic for Endothelial Cells in Hypertrophic Cell Zone (HCZ) Growth Cartilage; M.R. Carreno, O.E. Muniz, D.D. Dean, D. Flagler, U. Ryan and D.S. Howell

1996 Clinical Applications of Cytometry Annual Meeting, Charleston, SC: CD34+ cell controls for use in the enumeration of CD34+ stem cells; Maples, J., Hall, J., Flagler, D., Baker, J., Munoz-Antoni, I., Timmons, R. and R. Mills.

1997 Clinical Applications of Cytometry Annual Meeting, Charleston, SC: Absolute count values for CD34+ cells in normal peripheral whole blood specimens; Chinners, J.E., Maples, J., Flagler, D., Munoz-Antoni, I., Timmons, R. and R.A. Mills.

1998 International Society for Applied Cytometry, Annual Meeting, Colorado Springs, CO: Evaluation of a biological standard for the identification and enumeration of CD34+ hematopoietic stem cells; Daley, J.F., Lazo-Kallanian, S., Mills, R., Maples, J., Baker, J., Chinners, J., Flagler, D., Munoz-Antoni, I., Timmons, R. and I.J. Webb.

1998 meeting of the Clinical Cytometry Society in Charleston, SC: Immuno-Trol: Whole Blood Process Control; D. Flagler, J. Baker, I. Munoz-Antoni and R.A. Mills

2000 meeting of the Clinical Cytometry Society in Austin, TX: Performance of an Immunoplatelet Count Method; LA Charie, D. Flagler, C.U. Smith, J.R. Cobb and R.H. Raynor

2001 meeting of the Clinical Cytometry Society in Orlando, FL: Whole Blood Process Control for Low Level CD4 Cell Enumeration; D. Flagler, J. Baker and I. Munoz-Antoni

2002 meeting of the Orthopedic Research Society in Dallas, TX: Effect of Hydration on Conductivity of Normal and Trypsin Treated Annulus Fibrosus; M. Justiz, H. Yao, D. Flagler, WY Gu

2002 meeting of the Orthopedic Research Society in Dallas, TX: The Dynamic Mechanical Behavior of Normal and Trypsin Treated Annulus Fibrosus in Compression; H. Yao, M. Justiz, D. Flagler, WY Gu

2003 meeting of the Clinical Cytometry Society in Washington D.C. to discuss Fluorescence Quantitation Standardization. Presented information on Beckman Coulter reagents and control cells to be used as part of a study for establishing an independent consensus process.

2004 meeting of the International Society for Analytical Cytology in Montpellier, France: Quantitative CD20 Assay Development for Monoclonal Therapy Monitoring and Evaluation in Treatment of Non-Hodgkin's Lymphoma; Norman Purvis, Keith Shults, Daniel Flagler and Jorge Quintana.

2005 American Association for Clinical Chemistry in Orlando, FL: CD20 ImmunoPlex: Simultaneous Immunophenotyping and Immunoassay; R.A. Mills, D. Flagler, I. Munoz-Antoni, J. Knapp, E. Musibay, R. Timmons, Paul Scibelli and J. Baker

Invited speaker at 2005 Third International Meeting on the Diagnostic and Biotech Applications of Magnetic Microspheres in San Diego CA: Use of Para-Magnetic Microspheres in Manufacturing of In Vitro Diagnostic (IVD) Cell-Based Quality Control Products

2007 Meeting of the Orthopedic Research Society in San Diego, CA: A New Approach for Monitoring Phenotypic Change in Cultured Intervertebral Disc Cells: Intracellular Collagen Detection by Flow Cytometry; Flagler, DJ; Huang CY; Yuan, T; Li, X; Laquian, L; Cheung, HS; Gu, WY

2009 Meeting of the Orthopedic Research Society in Las Vegas, NV: Levels of Extracellular Matrix Components in Flow Cytometric Measurement of Cultured Porcine Intervertebral Disc Cells; Flagler, DJ;

Huang CY; Yuan, T; Li, X; Laquian, L; Cheung, HS; Gu, WY

2010, University of Miami, Biomedical Engineering Graduation, Keynote Speaker

2016, BioFlorida Saturday Exchange, Keynote Speaker

2017, International Society for Applied Cytology, abstract: AQUIOS Designer Software for Flow Cytometry

Scientific Papers:

Annals of Biomedical Engineering 2003: Effects of Swelling Pressure and Hydraulic Permeability on Dynamic Compressive Behavior of Lumbar Annulus Fibrosus; Hai Yao, Marc-Antoine Justiz, Daniel Flagler, and Wei Yong Gu

Annals of Biomedical Engineering 2004: Diffusion of ions in Agarose gels and Intervertebral disc: effect of porosity; Gu WY, Yao H, Vega AL and Flagler D.

2004 Journal of Clinical Laboratory Analysis: Determining Shelf Life by Comparing Degradations at Elevated Temperatures; Magari RT, Munoz-Antoni I, Baker J, Flagler DJ.

Cytometry: Part B - Clinical Cytometry 2007: Quantifying CD4 Expression on T Lymphocytes Using Fluorescein Conjugates in Comparison with Unimolar CD4-Phycoerithrin Conjugates; Lili Wang, Fatima Abbasi, Adolfas Gaigalas, Robert Hoffman, Dan Flagler and Gerald Marti.

Cellular and Molecular Bioengineering (2009): Intracellular Flow Cytometric Measurement of Extracellular Matrix Components in Porcine Intervertebral Disc Cells; Daniel J. Flagler, Chun-Yuh Huang, Tai-Yi Yuan, Zhongmin Lu, Herman S. Cheung, and Wei Yong Gu.

Patents:

United States Patent 6,913,932 granted July 5, 2005 “Formaldehyde-Ammonium Salt Complexes for the Stabilization of Blood Cells"

United States Patent Application, July 2005: "Quantitative stabilized cell reference control products and methods"

United States Patent Application, April 2013: "Calibration Kit for Flow Cytometry"

United States Patent Application, July 2020: “Cellular Analysis Instrument with Onboard, Automated Sample Preparation System”