



State of California
 California Environmental Protection Agency
 Office of Environmental Health Hazard Assessment

DUTY STATEMENT

CURRENT PROPOSED

RPA Number: RCHAB-007 FY 23-24	Classification Title: Research Scientist IV (Epidemiology/Biostatistics)	Position Number: 811-140-5609-xxx
Incumbent Name:	Working Title: Cancer Biostatistician	Effective Date:
Tenure: Permanent	Time Base: Full-Time	Intermittent Hours Per Month: N/A
Division/Office: Division of Scientific Programs	Section/Unit: Cancer Toxicology and Epidemiology Section	Reporting Location:
Supervisor's Name: Meng Sun	Supervisor's Classification: Senior Toxicologist	CBID: R010
Confidential Designation: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Designated Position for Conflict of Interest: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Position Telework Eligible: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Supervision Exercised: <input checked="" type="checkbox"/> None <input type="checkbox"/> Lead <input type="checkbox"/> Managerial <input type="checkbox"/> Supervisory		

Human Resources Use Only:	
HR Analyst Approval:	Date:

General Statement

This position requires the incumbent to maintain consistent and regular attendance; communicate effectively (orally and in writing if both appropriate) in dealing with the public and/or other employees; develop and maintain knowledge and skill related to specific tasks, methodologies, materials, tools and equipment; complete assignments in a timely and efficient manner; and adhere to department policies and procedures regarding attendance, leave, and conduct.

Position Description

The Cancer Toxicology and Epidemiology Section (CTES) within the Reproductive and Cancer Hazard



Assessment Branch (RCHAB) provides technical support for the implementation of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). The Section identifies chemicals for listing as causing cancer under Proposition 65; conducts dose response and exposure assessments, and develops carcinogen risk assessment guidance and methodology. CTES provides technical assistance to other programs in the Office of Environmental Health Hazard Assessment (OEHHA), the Attorney General's Office, and other California governmental entities.

Under administrative direction of the Senior Toxicologist, Chief of CTES, the Research Scientist IV (Epidemiology/Biostatistics) (RS IV [E/B]) will plan, organize and direct major biostatistical research studies that have significant public health impact. This will include designing and carrying out highly complex biostatistical analyses of epidemiological datasets and cancer bioassay datasets that have statewide sensitivity and policy impact; evaluating highly complex modeling approaches; designing biostatistical approaches for evaluating large datasets with exposure data; and developing reports and publications summarizing the analyses. The RS IV (E/B) will provide evaluations and scientific recommendations to departmental management and scientific advisory boards such as the Proposition 65 Carcinogen Identification Committee (CIC) as a scientific expert. The RS IV (E/B) will also serve as a scientific expert on advanced biostatistical techniques, evaluate critical considerations for selecting the most appropriate approach applicable to a particular data analysis problem, and address complex biostatistical questions. The RS IV (E/B) will direct training in CTES and in other programs on dose-response modeling and statistical testing of cancer bioassay data. The RS IV (E/B) will perform all the following duties and other related work:

Essential Functions (Including percentage of time):

35% Biostatistical Research. Serve as a scientific expert on biostatistical techniques and data modeling to evaluate critical considerations for selecting the most appropriate approach applicable to a particular data analysis problem. Research, plan and conduct major research projects with highly complex biostatistical analyses, including: analysis of cancer incidence data from epidemiology and toxicology studies, such as statistical distributions of dose-response data that are of extreme difficulty and complexity; analysis of data related to chemical exposures; analysis of data related to inter-individual variability; development of novel assessment methods and application of methods to distinguish dose-response relationships between different populations; sample size and power calculations; evaluation of adequacy of statistical analyses in published literature used to support prioritization decisions and hazard identification of carcinogens and reproductive toxicants; benchmark dose analyses and Monte Carlo analyses for cancer potency development; exposure assessments that support Safe Use Determinations under Proposition 65; and analyses conducted to respond to questions from the Attorney General's office related to chemical exposures under Proposition 65. Provide expert advice on other mathematical/biostatistical issues including sampling and analysis approaches for use in exposure assessment.

25% Cancer Risk Assessment. Design and conduct complex dose-response analyses for the



purpose of developing cancer potencies and no significant risk levels (NSRLs) for specific carcinogens under Proposition 65, including analyses of epidemiologic data. Develop and evaluate complex and advanced mathematical and statistical models to improve estimation of risk from exposure to carcinogens. Critically evaluate each of the available datasets/methods/models using sources within and outside the department for scientific rigor and applicability by, for example, performing sensitivity analysis and evaluating the existence of healthy worker effect in occupational epidemiology studies. Select, modify as needed, and apply appropriate dose-response modeling software. Conduct complex research on biostatistical issues of specialized cases, such as time-dependent dose-response analyses. Conduct simulations to evaluate new approaches to data analysis. Lead the development of technical reports summarizing results from the dose-response analysis. Evaluate the mathematical aspects of pharmacokinetic (PK) extrapolations and PK and pharmacodynamic inter-species adjustments in cancer dose-response assessment.

- 15% **Cancer Hazard Identification.** Serve as the CTES lead in the biostatistical analysis of epidemiologic and toxicologic data relevant to the evidence of carcinogenicity for chemicals under consideration for listing or delisting as causing cancer under Proposition 65 or otherwise under evaluation by RCHAB. Document the analyses, describing the extent and nature of the epidemiologic and other evidence, and include in the hazard identification materials. Make presentations on these issues to the CIC for Proposition 65 and other expert bodies. Review public comments, prepare responses, and revise documents as appropriate. Serve as a biostatistical and data analysis expert to review and respond to technical stakeholder comments and make recommendations to departmental management.
- 15% **Training/Consultation/Participation within the Department.** Train and build capacity of CTES and other program staff in data management and data analysis, in particular cancer dose-response assessment and use of data modeling software. Review data analyses conducted by CTES to ensure they meet the highest scientific standards of statistical techniques and methodology. Provide expert consultation to programs in other OEHHA Sections and Branches on highly complex biostatistical questions in the development of public health policy. This will include providing guidance on the most appropriate biostatistical tests to apply and modeling approaches to take in various types of data analyses, and assisting in carrying out such analyses and interpreting the results. Consult with other programs and review data analyses performed by those programs to ensure that the statistical approaches applied are of the highest scientific quality.

Marginal Functions (Including percentage of time):

- 5% Attend continuing education courses to maintain and further develop technical skills and expertise. Prepares articles for publication in scientific journals, organizes and participates in technical workshops of interest to the program, and presents at and participates in scientific meetings and conferences at the local and national level.



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5% **Racial Equity and Environmental Justice (REEJ).** Attend REEJ-related trainings and activities. Trainings include building skills to enhance OEHHA's outreach through improving science communication with both written material and oral presentations. Participate in workgroups to support REEJ practices. Work with REEJ manager to support the process of including REEJ in all OEHHA programs.

Typical Physical Conditions/Demands:

The job requires extensive use of a personal computer and the ability to sit/stand at a desk, utilize a phone, and type on a keyboard for extended periods of time. Ability to lift 15 pounds, bend and reach above shoulders to retrieve files and/or documents.

Typical Working Conditions:

OEHHA has a hybrid work environment that includes work in an office setting in a high-rise building and telework at home. Office arranged in cubicles, not all of which have direct natural illumination. Time critical assignments are part of the workload. Prolonged sitting while reviewing scientific articles, reports and generating scientific documents and reports is required. Repetitive motion in using office equipment occurs. Travel to off-site meetings may be required as necessary. Participation in teleconferences and webinars is required. May be required to travel to other OEHHA locations for

Special Requirements of Position (Check all that apply):

- Duties performed may require pre-employment and/ or routine screenings (background/criminal/fingerprint clearance, drug testing, fingerprinting, physical, etc.).
- Duties require participation in the DMV Pull Notice Program.
- Performs other duties requiring high physical demand. (Explain below)
- Requires repetitive movement of heavy objects and/or operation of heavy machinery or motorized vehicles.
- Other (Explain below)

Explanation:



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Supervisor Statement

I certify this duty statement represents an accurate description of the essential functions of this position. I have discussed the duties of this position with the employee and provided the employee a copy of this duty statement.

Supervisor Name

Supervisor Signature

Date

Employee Statement

I have discussed these duties with my supervisor and have been provided a copy of this duty statement. I certify I have read, understand, and can perform the duties of this position either with or without reasonable accommodation*.

**A Reasonable accommodation is any modification or adjustment made to a job, work environment, or employment practice or process that enables an individual with a disability or medical condition to perform the essential functions of his or her job or to enjoy an equal employment opportunity. (If you believe reasonable accommodation is necessary, check yes. If unsure of a need for reasonable accommodation, inform the hiring supervisor, who will discuss your concerns with the Reasonable Accommodation Coordinator.)*

Do you need a reasonable accommodation to perform the essential functions of this position?

YES

NO

Employee Name

Employee Signature

Date



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Incumbent:
 Classification: Research Scientist III (Epidemiology/Biostatistics)
 Position Number: 811-140-5594-002

DUTY STATEMENT

CURRENT PROPOSED

RPA Number: RCHAB-007 FY 23-24	Classification Title: Research Scientist III (Epidemiology/Biostatistics)	Position Number: 811-140-5594-002
Incumbent Name:	Working Title: Cancer Biostatistician	Effective Date:
Tenure: Permanent	Time Base: Full-Time	Intermittent Hours Per Month: N/A
Division/Office: Division of Scientific Programs	Section/Unit: Cancer Toxicology and Epidemiology Section	Reporting Location:
Supervisor's Name: Meng Sun	Supervisor's Classification: Senior Toxicologist	CBID: R010
Confidential Designation: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Designated Position for Conflict of Interest: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Position Telework Eligible: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Supervision Exercised: <input checked="" type="checkbox"/> None <input type="checkbox"/> Lead <input type="checkbox"/> Managerial <input type="checkbox"/> Supervisory		

Human Resources Use Only:	
HR Analyst Approval:	Date:

General Statement

This position requires the incumbent to maintain consistent and regular attendance; communicate effectively (orally and in writing if both appropriate) in dealing with the public and/or other employees; develop and maintain knowledge and skill related to specific tasks, methodologies, materials, tools and equipment; complete assignments in a timely and efficient manner; and adhere to department policies and procedures regarding attendance, leave, and conduct.

Position Description

The Cancer Toxicology and Epidemiology Section (CTES) within the Reproductive and Cancer Hazard Assessment Branch (RCHAB) provides technical support for the implementation of the Safe Drinking



Water and Toxic Enforcement Act of 1986 (Proposition 65). The Section identifies chemicals for listing as causing cancer under Proposition 65; conducts dose response and exposure assessments, and develops carcinogen risk assessment guidance and methodology. CTES provides technical assistance to other programs in the Office of Environmental Health Hazard Assessment (OEHHA), the Attorney General's Office, and other California governmental entities.

Under general direction of the Senior Toxicologist, Chief of CTES, the Research Scientist III (Epidemiology/Biostatistics) (RS III [E/B]) will plan, organize and direct highly specialized biostatistical research. This will include designing and carrying out highly complex biostatistical analyses of epidemiological datasets and cancer bioassay datasets; designing biostatistical approaches for evaluating large datasets with exposure data, and developing reports and publications summarizing the analyses. The RS III (E/B) will also serve as a technically authoritative consultant on advanced biostatistical techniques, evaluate critical considerations for selecting the most appropriate approach applicable to a particular data analysis problem, and address complex biostatistical questions. The RS III (E/B) will direct training in CTES and in other programs on dose-response modeling and statistical testing of cancer bioassay data. The RS III (E/B) will perform all the following duties and other related work:

Essential Functions (Including percentage of time):

- 35% **Biostatistical Research.** Serve as a technically authoritative expert on biostatistical techniques and data modeling to evaluate critical considerations for selecting the most appropriate approach applicable to a particular data analysis problem. Research and conduct complex biostatistical analyses, including: analysis of cancer incidence data from epidemiology and toxicology studies, such as statistical distributions of dose-response data; analysis of data related to chemical exposures; analysis of data related to inter-individual variability; development and application of methods to distinguish dose-response relationships between different populations; sample size and power calculations; evaluation of adequacy of statistical analyses in published literature used to support prioritization decisions and hazard identification of carcinogens and reproductive toxicants; benchmark dose analyses and Monte Carlo analyses for cancer potency development; exposure assessments that support Safe Use Determinations under Proposition 65; and analyses conducted to respond to questions from the Attorney General's office related to chemical exposures under Proposition 65. Train and build capacity of CTES and other program staff in data management and data analysis, in particular cancer dose-response assessment and use of data modeling software. Review data analyses conducted by CTES to ensure they meet the highest scientific standards of statistical techniques and methodology.
- 30% **Cancer Risk Assessment.** Design and conduct complex dose-response analyses for the purpose of developing cancer potencies and no significant risk levels (NSRLs) for specific carcinogens under Proposition 65, including analyses of epidemiologic data. Develop and evaluate advanced mathematical and statistical models to improve estimation of risk from exposure to carcinogens. Select, modify as needed, and apply appropriate dose-response modeling software. Conduct complex research on biostatistical issues of specialized cases,



such as time-dependent dose-response analyses. Conduct simulations to evaluate new approaches to data analysis. Lead the development of technical reports summarizing results from the dose-response analysis.

15% **Cancer Hazard Identification.** Analyze and evaluate epidemiologic data relevant to the evidence of carcinogenicity for chemicals under consideration for listing or delisting as causing cancer under Proposition 65 or otherwise under evaluation by RCHAB. Document the analyses, describing the extent and nature of the epidemiologic and other evidence, and include in the hazard identification materials. Make presentations on these issues to the Carcinogen Identification Committee (CIC) for Proposition 65 and other expert bodies. Review public comments, prepare responses, and revise documents as appropriate. Serve as a technically authoritative biostatistical and data analysis expert to review and respond to technical stakeholder comments.

10% **Cross-Sectional and Cross-Branch Consultation/Participation.** Provide consultation to programs in other OEHHA Sections and Branches on complex biostatistical questions. This will include providing guidance on the most appropriate biostatistical tests to apply and modeling approaches to take in various types of data analyses, and assisting in carrying out such analyses and interpreting the results. Consult with other programs and review data analyses performed by those programs to ensure that the statistical approaches applied are of the highest scientific quality.

Marginal Functions (Including percentage of time):

5% Attend continuing education courses to maintain and further develop technical skills and expertise. Prepares articles for publication in scientific journals, organizes and participates in technical workshops of interest to the program, and presents at and participates in scientific meetings and conferences at the local and national level.

5% **Racial Equity and Environmental Justice (REEJ).** Attend REEJ-related trainings and activities. Trainings include building skills to enhance OEHHA's outreach through improving science communication with both written material and oral presentations. Participate in workgroups to support REEJ practices. Work with REEJ manager to support the process of including REEJ in all OEHHA programs

Typical Physical Conditions/Demands:

The job requires extensive use of a personal computer and the ability to sit/stand at a desk, utilize a phone, and type on a keyboard for extended periods of time. Ability to lift 15 pounds, bend and reach above shoulders to retrieve files and/or documents.



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Incumbent:
Classification: Research Scientist III (Epidemiology/Biostatistics)
Position Number: 811-140-5594-002

Typical Working Conditions:

OEHHA has a hybrid work environment that includes work in an office setting in a high-rise building and telework at home. Office arranged in cubicles, not all of which have direct natural illumination. Time critical assignments are part of the workload. Prolonged sitting while reviewing scientific articles, reports and generating scientific documents and reports is required. Repetitive motion in using office equipment occurs. Travel to off-site meetings may be required as necessary. Participation in teleconferences and webinars is required. May be required to travel to other OEHHA locations for business related needs as necessary.

Special Requirements of Position (Check all that apply):

- Duties performed may require pre-employment and/ or routine screenings (background/criminal/fingerprint clearance, drug testing, fingerprinting, physical, etc.).
- Duties require participation in the DMV Pull Notice Program.
- Performs other duties requiring high physical demand. (Explain below)
- Requires repetitive movement of heavy objects and/or operation of heavy machinery or motorized vehicles.
- Other (Explain below)

Explanation:



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Incumbent:
 Classification: Research Scientist III (Epidemiology/Biostatistics)
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Supervisor Statement

I certify this duty statement represents an accurate description of the essential functions of this position. I have discussed the duties of this position with the employee and provided the employee a copy of this duty statement.

Supervisor Name	Supervisor Signature	Date
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Employee Statement

I have discussed these duties with my supervisor and have been provided a copy of this duty statement. I certify I have read, understand, and can perform the duties of this position either with or without reasonable accommodation*.

**A Reasonable accommodation is any modification or adjustment made to a job, work environment, or employment practice or process that enables an individual with a disability or medical condition to perform the essential functions of his or her job or to enjoy an equal employment opportunity. (If you believe reasonable accommodation is necessary, check yes. If unsure of a need for reasonable accommodation, inform the hiring supervisor, who will discuss your concerns with the Reasonable Accommodation Coordinator.)*

Do you need a reasonable accommodation to perform the essential functions of this position?

YES NO

Employee Name	Employee Signature	Date
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