CITY COUNCIL

#209-23

CITY OF NEWTON

DOCKET REQUEST FORM

RECEIVED
2023 MAY 19 PM 12:04
CITY CLERK

DEADLINE NOTICE: Council Rules require items to be docketed with the Clerk of the Council NO LATER THAN 7:45 P.M. ON THE MONDAY PRIOR TO A FULL COUNCIL MEETING.

To: Clerk of the City Council **Date: 05/19/2023**

From (Docketer): Council President Susan Albright

Address:

Phone: **E-mail:**

Additional sponsors:

1. **Please docket the following item (it will be edited for length if necessary):**

PRESIDENT ALBRIGHT appointing James Thompson, 11 Byrd Ave, Newton as a member of the Biosafety Committee for a term of office to expire on June 5, 2026.

2. **The purpose and intended outcome of this item is:**

- ☐ Fact-finding & discussion
- ☐ Appropriation, transfer,
- ☐ Expenditure, or bond authorization
- ☐ Special permit, site plan approval,
- ☐ Zone change (public hearing required)
- ☐ Ordinance change
- ☐ Resolution
- ☐ License or renewal
- ☒ Appointment confirmation
- ☐ Other:

3. **I recommend that this item be assigned to the following committees:**

- ☒ Programs & Services
- ☐ Zoning & Planning
- ☐ Public Facilities
- ☐ Finance
- ☐ Public Safety
- ☐ Land Use
- ☐ Real Property
- ☐ Special Committee
- ☐ No Opinion

4. **This item should be taken up in committee:**

- ☐ Immediately (Emergency only, please). Please state nature of emergency:
- ☐ As soon as possible, preferably within a month
- ☐ In due course, at discretion of Committee Chair
- ☐ When certain materials are made available, as noted in 7 & 8 on reverse
- ☐ Following public hearing

PLEASE FILL OUT BOTH SIDES

#209-23.

5. **I estimate that consideration of this item will require approximately:**

☐ One half hour or less
☐ More than one hour
☐ More than one meeting
☐ Up to one hour
☐ An entire meeting
☐ Extended deliberation by subcommittee

6. **The following people should be notified and asked to attend deliberations on this item. (Please check those with whom you have already discussed the issue, *especially relevant Department Heads*):**

City personnel	Citizens (include telephone numbers/*email please*)
☐ _____	☐ _____
☐ _____	☐ _____
☐ _____	☐ _____
☐ _____	☐ _____
☐ _____	☐ _____

7. **The following background materials and/or drafts should be obtained or prepared by the Clerk's office prior to scheduling this item for discussion:**

8. **I ☐ have or ☐ intend to provide additional materials and/or undertake the following research independently prior to scheduling the item for discussion. ***

(*Note to docketer: Please provide any additional materials beyond the foregoing to the Clerk's office by 2 p.m. on Friday before the upcoming Committee meeting when the item is scheduled to be discussed so that Councilors have a chance to review all relevant materials before a scheduled discussion.)

Please check the following:

9. ☐ **I would like to discuss this item with the Chairman before any decision is made on how and when to proceed.**

10. ☐ **I would like the Clerk's office to contact me to confirm that this item has been docketed. My daytime phone number is:**

11. ☐ **I would like the Clerk's office to notify me when the Chairman has scheduled the item for discussion.**

Thank you.

/s/Susan Albright
Signature of person docketing the item

[Please retain a copy for your own records]

Newton, MA Boards & Commissions

Submit Date: Apr 30, 2023

Application Form

Profile

James
First Name

Middle Initial

Thompson
Last Name

jedthompson99@gmail.com
Email Address

11 Byrd Ave
Home Address

Suite or Apt

Newton
City

MA
State

02465
Postal Code

What Ward do you live in?

☑ Ward 3

Home: (617) 981-2460
Primary Phone

Alternate Phone

Photys Therapeutics
Employer

Associate Director - Biochemistry
Job Title

Which Boards would you like to apply for?

Biosafety Committee: Submitted

Interests & Experiences

Please tell us about yourself and why you want to serve.

Why are you interested in serving on a board or commission?

I have been fortunate to make a living pursuing new therapeutics for 25 years. The local growth of life science companies offers benefits regionally and globally. If I can assist in that growth through the biosafety committee I would be pleased to do so.

James_E__Jed__Thompson_CV.pdf
Upload a Resume

James E. "Jed" Thompson, Ph.D.
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(617) 981-2460
https://www.linkedin.com/in/jed-thompson-b3896810/

SUMMARY

Biochemist with extensive experience in preclinical pharmaceutical research supporting small molecule, therapeutic protein, and antibody modalities. Skilled at leading -highly productive project teams to data driven conclusions while managing and developing direct reports.

- Director: Managed laboratories of up to six scientists while personally generating high impact data in the laboratory. Led and mentored direct reports to promotions and multiple publications. Work from team laboratory was incorporated into approved IND applications for DGAT1 inhibitors, one of which reached Phase III clinical testing.
- Project team leader: Proposed three and led seven projects though assay development, high throughput screening and medicinal chemistry optimization. Three projects generated the predicted *in vivo* pharmacology.
- Experimental scientist: Notable accomplishments include a successful platform build, new projects and publications, one of which has been cited over 80 times.

PROFESSIONAL EXPERIENCE

Cyteir Therapeutics, Lexington MA **2021-2023**
Associate Director, Biochemistry

Directed Cyteir biochemistry, biophysics and structural biology initiatives. Supervised team of one Senior Scientist, two Associate Scientists and CROs.

- Evaluated HTS hits as starting points for three medicinal chemistry programs; activity data supported lead nomination and patent filings by project team.
- Designed CRO based studies that proved direct binding of Phase II clinical candidate CYT0851 to its membrane spanning target MCT-1.
- Developed methods to identify novel binding sites for test compounds using click chemistry and proteomic analysis.
- Led research team in new target scouting and experimental validation.

LifeMine Therapeutics, Cambridge MA **2018-2021**
Principal Scientist, Biochemistry and Biophysics

Laboratory Leader: Designed biochemical assays paired with bespoke controls capable of reporting on active molecules in complex natural product mixtures.

- Biochemical data led to discovery of a novel natural product and first proof of success of the discovery platform.
- Target classes included enzymes and nucleotide binding proteins – 15 assays developed and deployed.
- Established rapid kinetics platform to characterize molecules with novel binding mode. Identified both assay technology and specialized instrumentation to work on a millisecond timescale.
- Supervised a Research Associate and Scientist new to industrial research.

Project Coordinator: Ensured cross-functional communication and addressed resource bottlenecks to meet project timelines.

- Reported results to CEO with recommended action plan.

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New Target Scouting:_ Evaluated human drug targets suggested by genomic search of fungal biosynthetic gene clusters.

- Triaged more than 150 targets based on project feasibility and clinical potential. Presented finalists to CEO for endorsement of two new projects.

Mitobridge Inc., Cambridge MA **2015-2018**
Principal Scientist, *In Vitro* Pharmacology

Project team leader – Hit to lead optimization: Led combined team of contracted researchers in India, Mitobridge scientists and consultants to arrive at the most potent and selective ubiquitin specific peptidase 30 inhibitors reported to date.

- Led team to new decision criteria.
- Set cellular assay development priorities and criteria.
- Developed novel activity-based probe assays to report on target engagement in complex samples.
- Proposed a novel target and developed the high throughput screen which identified high potency chemical matter.

Laboratory Leader: Directed experimentation by Ph.D. and M.S. level scientists.

Novartis Institutes for Biomedical Research, Cambridge MA **2006-2015**
Investigator III, Department of Cardiovascular and Metabolic Diseases

Laboratory Leader – Bioanalysis (2013-2015): Managed interactions of project teams and a group of six to generate new assays measuring exposure and efficacy of therapeutic proteins, antibodies and pharmacodynamics of low molecular weight compounds.

- Designed an ELISA to measure a recombinant murine protein in mouse plasma. Identified antibody combination that eliminated background from endogenous protein. Assay provided all *in vivo* exposure measurements for an obesity project.
- Identified misleading data for murine hormones from commercial assay kits. Recommended an alternative method that yielded accurate data and eliminated a project team's safety concern.

Laboratory Leader – Biochemistry (2006 to 2013): Pursued low molecular weight compounds as medicines for atherosclerosis, obesity and diabetes.

- Proposed novel approach to an industry consensus atherosclerosis target. The proposal required the endorsement of department vice president and the president of NIBR. Led the project through high throughput screening and medicinal chemistry.
- Led acyltransferase inhibitor discovery project teams (MGAT2 and DGAT2) including direct generation of mass spectrometry-based enzyme assay data which tracked compound potency and led to medicinal chemistry optimization. Pharmacologically active compounds were discovered for both projects.
- Addressed safety concern regarding the metabolic fate of DGAT2 substrates using metabolic tracing by mass spectrometry. Proved that proximal effects of DGAT2 inhibition are benign.
- Contributed data to DGAT1 inhibitor INDs. DGAT1 inhibitor reached phase III.

Merck Research Laboratories, Rahway NJ **1997-2006**
Research Fellow, Department of Immunology and Rheumatology 2001-2005
Senior Research Biochemist, Department of Immunology and Rheumatology 1997-2001

Pursued immunomodulatory protein kinase inhibitors both as a lab leader and project team leader. Developed biochemical assays leading to three medicinal chemistry efforts after high throughput screening. Supervised up to three research associates.

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- Developed an enzyme cascade assay that reported on three protein kinases acting on their physiological substrates. Characterized high throughput screening hits leading to an inhibitor selective for one substrate of a protein kinase thought to act on many proteins.
- Discovered an unanticipated chemical transformation leading to an inhibitor of JAK3 protein kinase. The inhibitor was subsequently found to have *in vivo* activity and chemical optimization was initiated. The manuscript describing the inhibitor has been cited over 80 times.

DuPont Stine-Haskell Research Laboratories, Newark DE **1995-1997**
Visiting Scientist – sponsor: Douglas B. Jordan

Characterized the interactions of trihydroxynaphthalene reductase of a fungal crop pathogen and a commercial fungicide tricyclazole. Tricyclazole had been reported to bind allosterically to its target.

- Completely revised the mechanism of tricyclazole using steady state and pre-steady state kinetic characterization combined with affinity measurements. The revised mechanism was corroborated by the X-ray diffraction structure of the inhibitor enzyme complex.

EDUCATION

University of Wisconsin at Madison
Ph. D. Biochemistry, advisor Ronald T. Raines (currently Firmenich Professor of Chemistry, MIT) - 1995

University of Michigan – Ann Arbor
B.Sc. Chemistry – 1989

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PATENTS

New benzo(h)imidazo(4,5-f)isoquinoline and imidazo(4,5-f)(2,9)phenanthroline derivatives are Janus protein tyrosine kinase inhibitors used for treating e.g. allergies and autoimmune diseases. Cubbon R, Cummings, RT, Goulet JL, Hong X., Sinclair PJ, **Thompson JE**. Patent Number WO200311285 (**2003**), US Patent #6852727 (**2005**).

PUBLICATIONS AS CORRESPONDING AUTHOR

Time-resolved Forster resonance energy transfer assays for the binding of nucleotide and protein substrates to p38alpha protein kinase. Zhang WX, Wang R, Wisniewski D, Marcy AI, LoGrasso P, Lisnock JM, Cummings RT, **Thompson JE**. *Anal. Biochem.* (2005) 343(1):76-83.

JAK protein kinase inhibitors. **Thompson JE**, *Drug News Perspect.* (2005) 18(5):305-10. Review.

Mechanism of Janus kinase 3-catalyzed phosphorylation of a Janus kinase 1 activation loop peptide. Wang R, Griffin PR, Small EC, **Thompson JE**. *Arch. Biochem. Biophys.* (2003) 410(1):7-15.

Photochemical preparation of a pyridone containing tetracycle: a Jak protein kinase inhibitor. **Thompson JE**, Cubbon RM, Cummings RT, Wicker LS, Frankshun R, Cunningham BR, Cameron PM, Meinke PT, Liverton N, Weng Y, DeMartino JA. *Bioorg. Med. Chem. Lett.* (2002) 12(8):1219-23.

Detection of ATP competitive protein kinase inhibition by Western blotting. Wang R, **Thompson JE.** *Anal. Biochem.* (2001) 299(1):110-2.

PUBLICATIONS AS FIRST AUTHOR

The second naphthol reductase of fungal melanin biosynthesis in Magnaporthe grisea: tetrahydroxynaphthalene reductase. **Thompson JE**, Fahnestock S, Farrall L, Liao DI, Valent B, Jordan DB. *J Biol Chem.* (2000) 275(45):34867-72.

Partition analysis of an enzyme acting concurrently upon two substrates in a continuous multiwavelength assay. **Thompson JE**, Jordan DB. *Anal Biochem.* (1998) 256(1):7-13.

2,3-Dihydro-2,5-dihydroxy-4H-benzopyran-4-one: a nonphysiological substrate for fungal melanin biosynthetic enzymes. **Thompson JE**, Basarab GS, Pierce J, Hodge CN, Jordan DB. *Anal Biochem.* (1998) 256(1):1-6. Trihydroxynaphthalene reductase from Magnaporthe grisea: realization of an active center inhibitor and elucidation of the kinetic mechanism. **Thompson JE**, Basarab GS, Andersson A, Lindqvist Y, Jordan DB. *Biochemistry* (1997) 36(7):1852-60.

Limits to catalysis by Ribonuclease A. **Thompson JE**, Kutateladze TG, Schuster MC, Venegas FD, Messmore JM, Raines RT. *Bioorg. Chem.* (1995) 23(4):471-481.

Energetics of catalysis by ribonucleases: fate of the 2',3'-cyclic phosphodiester intermediate. **Thompson JE**, Venegas FD, Raines RT. *Biochemistry* (1994) 33(23):7408-14.

Value of general Acid-base catalysis to ribonuclease A. **Thompson JE**, Raines RT. *J. Am. Chem. Soc.* (1994) 116(12):5467-8.

PUBLICATIONS AS SECONDARY AUTHOR

#209-23 .

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Novel and highly selective inhibitors of ubiquitin specific protease inhibitors of ubiquitin specific protease 30 (USP30) accelerate mitophagy. Kluge A, Lagu B, Maiti P, Jaleel M, Webb M, Mallat A, Malhotra J, Srinivas A, **Thompson JE** *Bioorg. Med. Chem. Lett.* (2018) 28(15): 2655-2659.

Discovery of an orally bioavailable benzimidazole diacylglycerol acyltransferase 1 (DGAT1) inhibitor that suppresses body weight gain in diet-induced obese dogs and postprandrial triglycerides in humans. Nakajima K, Chatelain R, Clairmont KB, Commerford R, Coppola GM, Daniels T, Forster CJ, Gilmore TA, Gong Y, Jain M, Kanter A, Kwak Y, Li J, Meyers CD, Neubert AD, Szlennik P, Tedesco V, **Thompson J**, Truong D, Yang Q, Hubbard BK, Serrrano-Wu MH. *J. Med. Chem.* (2017) 60(11): 4657-4664.

Discovery of diamide compounds as diacylglycerol acyltransferase 1 (DGAT1) inhibitors. Nakajima K, April M, Brewer JT, Daniels T, Forster CJ, Gilmore TA, Jain M, Kanter A, Kwak Y, Li J, McQuire L, Serrano-Wu MH, Streeper R, Szklennik P, **Thompson J**, Wang B. *Bioorg Med Chem Lett.* (2016) 26(4): 1245-8.

Synthetic phospholipids as specific substrates for plasma endothelial lipase. Papillon JP, Pan M, Brousseau ME, Gilchrist MA, Lou C, Singh AK, Stawicki T, **Thompson JE**. *Bioorg Med Chem Lett.* (2016) 26(15): 3514-7.

Synthesis and biological activity of pyridopyridazin-6-one p38α MAP kinase inhibitors. Part 2 Tynebor RM, Chen MH, Natarajan SR, O'Neill EA, **Thompson JE**, Fitzgerald CE, O'Keefe SJ, Doherty JB. *Bioorg Med Chem Lett.* (2012) 22(18):5979-83.

Synthesis and biological activity of pyridopyridazin-6-one p38 MAP kinase inhibitors. Part 1 Tynebor RM, Chen MH, Natarajan SR, O'Neill EA, **Thompson JE**, Fitzgerald CE, O'Keefe SJ, Doherty JB. *Bioorg Med Chem Lett.* (2011) 21(1):411-6.

Synthesis and biological activity of 2H-quinolizin-2-one based p38alpha MAP kinase inhibitors. Tynebor RM, Chen MH, Natarajan SR, O'Neill EA, **Thompson JE**, Fitzgerald CE, O'Keefe SJ, Doherty JB. *Bioorg Med Chem Lett.* (2010) 20(9):2765-9.

Novel 1-(2-aminopyrazin-3-yl)methyl-2-thioureas as potent inhibitors of mitogen-activated protein kinase-activated protein kinase 2 (MK-2). Lin S, Lombardo M, Malkani S, Hale JJ, Mills SG, Chapman K, **Thompson JE**, Zhang WX, Wang R, Cubbon RM, O'Neill EA, Luell S, Carballo-Jane E, Yang L. *Bioorg Med Chem Lett.* (2009) 19(12):3238-42.

p38 MAP kinase inhibitors. Part 5: discovery of an orally bio-available and highly efficacious compound based on the 7-amino-naphthyridone scaffold. Natarajan SR, Liu L, Levorse M, **Thompson JE**, O'Neill EA, O'Keefe SJ, Vora KA, Cvetovich R, Chung JY, Carballo-Jane E, Visco DM. *Bioorg Med Chem Lett.* 2006 16(20):5468-71.

p38 MAP kinase inhibitors. Part 6: 2-arylpyridazin-3-ones as templates for inhibitor design. Natarajan SR, Heller ST, Nam K, Singh SB, Scapin G, Patel S, **Thompson JE**, Fitzgerald CE, O'Keefe SJ. *Bioorg Med Chem Lett.* (2006) 16(22):5809-13.

p38 MAP kinase inhibitors. Part 3: SAR on 3,4-dihydropyrimido[4,5-d]pyrimidin-2-ones and 3,4-dihydropyrido[4,3-d]pyrimidin-2-ones. Natarajan SR, Wisnoski DD, **Thompson JE**, O'Neill EA, O'Keefe SJ. *Bioorg Med Chem Lett.* (2006) 16(16):4400-4.

p38 MAP kinase inhibitors: metabolically stabilized piperidine-substituted quinolinones and naphthyridinones. Bao J, Hunt JA, Miao S, Rupprecht KM, Stelmach JE, Liu L, Ruzek RD, Sinclair PJ, Pivnichny JV, Hop CE, Kumar S, Zaller DM, Shoop WL, O'neill EA, O'keefe SJ, Thompson CM, Cubbon RM, Wang R, Zhang WX, **Thompson JE**, Doherty JB. *Bioorg. Med. Chem. Lett.* (2006) 16(1):64-8.

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p38 Inhibitors: piperidine- and 4-aminopiperidine-substituted naphthyridinones, quinolinones, and dihydroquinazolinones. Hunt JA, Kallashi F, Ruzek RD, Sinclair PJ, Ita I, McCormick SX, Pivnichny JV, Hop CE, Kumar S, Wang Z, O'Keefe SJ, O'Neill EA, Porter G, **Thompson JE**, Woods A, Zaller DM, Doherty JB. *Bioorg. Med. Chem. Lett.* (2003) 13(3):467-70.

Hybrid-designed inhibitors of p38 MAP kinase utilizing N-arylpyridazinones. Colletti SL, Frie JL, Dixon EC, Singh SB, Choi BK, Scapin G, Fitzgerald CE, Kumar S, Nichols EA, O'Keefe SJ, O'Neill EA, Porter G, Samuel K, Schmatz DM, Schwartz CD, Shoop WL, Thompson CM, **Thompson JE**, Wang R, Woods A, Zaller DM, Doherty JB. *J. Med. Chem.* (2003) 46(3):349-52.

A structural account of substrate and inhibitor specificity differences between two naphthol reductases. Liao D-I, **Thompson JE**, Fahnestock S, Valent B, Jordan DB. *Biochemistry* (2001) 40(30), 8696-8704.

His···Asp Catalytic Dyad of Ribonuclease A: Conformational Stability of the Wild-Type, D121N, D121A, and H119A Enzymes. Quirk DJ, Park C, **Thompson JE**, Raines RT. *Biochemistry* (1998) 37 (51), 17958-17964.