Pfenex Announces Appointment of New Board Member, Lorianne Masuoka, M.D.

SAN DIEGO, August 8, 2019 —Pfenex Inc. (NYSE American: PFNX), a clinical-stage development and licensing biotechnology company focused on leveraging its Pfēnex Expression Technology® to improve protein therapies for unmet patient needs, today announced the appointment of Lorianne Masuoka, MD to its Board of Directors, effective immediately. Dr. Masuoka was also appointed to serve as a member of the compensation committee.

"We are pleased to welcome Dr. Masuoka to the Pfenex Board of Directors. Her appointment further aligns the Board with the Company's strategy to build a new R&D capability. We believe Dr. Masuoka's extensive experience successfully expanding the development pipelines of several biotech companies makes her a valuable counselor to the Pfenex executive team as the Company further leverages the Pfēnex Expression Technology platform to build out its development pipeline," said Jason Grenfell-Gardner, Chairman of Pfenex.

"I am honored to join the Pfenex Board and have an opportunity to work with my fellow board members and the management team at this ever-important point in the Company's history," stated Dr. Masuoka. "I look forward to lending my broad R&D and operational experience, including prioritizing programs and establishing research pipelines, as I support the Pfenex team in their mission to develop exciting new opportunities that further leverage the Pfēnex Expression Technology platform and drive long-term shareholder value."

Dr. Masuoka has more than 20 years of experience building and expanding high value pipelines in the biopharmaceutical industry that have resulted in drug approvals and strategic alliances. She is a board-certified neurologist that has successfully created and overseen high performing teams to lead the clinical development of new medicines, with a focus in neurology, CNS, and pain. Dr. Masuoka served as chief medical officer of InVivo Therapeutics, Cubist Pharmaceuticals (now Merck), and Nektar Therapeutics where, as a member of executive management, she oversaw and managed teams in the areas of clinical research, drug safety, biostatistics and data management, regulatory affairs, reimbursement and clinical operations. Previously, she held various roles of increasing responsibility at FivePrime Therapeutics and Chiron.

Dr. Masuoka received her medical degree from the University of California, Davis, where she also completed her residency in neurology. She completed her epilepsy fellowship at Yale University and is board certified by the American Board of Psychiatry and Neurology.

About Pfenex Inc.

Pfenex is a clinical-stage development and licensing biotechnology company focused on leveraging its *Pf*ēnex Expression Technology® to develop and improve protein therapies for unmet patient needs. Using the patented *Pf*ēnex Expression Technology platform, the Company has created an advanced pipeline of potential therapeutic equivalents, novel biologics, vaccine and vaccine components, and biosimilars. The Company's lead product candidate is PF708, a therapeutic equivalent candidate to Forteo® (teriparatide) for the treatment of osteoporosis. In addition, in collaboration with Jazz

Pharmaceuticals Ireland Limited (Jazz) the Company is developing hematologic oncology products including PF743, a recombinant crisantaspase, and PF745, a recombinant crisantaspase with half-life extension. Both PF743 and PF745 are being developed for the treatment of Acute Lymphoblastic Leukemia (ALL). We also use our Pfēnex Expression Technology platform to produce CRM197, a diphtheria toxoid carrier protein used in prophylactic and therapeutic vaccine candidates under development by third parties.

Cautionary Note Regarding Forward-Looking Statement –

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements generally relate to future events or Pfenex's future financial or operating performance. In some cases, you can identify forward-looking statements because they contain words such as "may," "will," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these words or other similar terms or expressions that concern Pfenex's future expectations, strategy, plans or intentions. Forward-looking statements in this press release include, but are not limited to, statements regarding the future potential of Pfenex's product candidates and the company in general, including future plans to advance, develop, manufacture and commercialize its product candidates; expand its development pipeline; and to drive shareholder value. Pfenex's expectations and beliefs regarding these matters may not materialize, and actual results in future periods are subject to risks and uncertainties that could cause actual results to differ materially from those projected. Actual results may differ materially from those indicated by these forward-looking statements as a result of the uncertainties inherent in the clinical drug development process, including, without limitation, Pfenex's ability to successfully demonstrate the efficacy and safety of its product candidates; the pre-clinical and clinical results for its product candidates, which may not support further development of product candidates or may require Pfenex to conduct additional clinical trials or modify ongoing clinical trials or regulatory pathways; challenges related to commencement, patient enrollment, completion, and analysis of clinical trials; difficulties in obtaining a therapeutic equivalent designation; Pfenex's ability to manage operating expenses; Pfenex's ability to obtain additional funding to support its business activities and establish and maintain strategic business alliances and new business initiatives; Pfenex's dependence on third parties for development, manufacture, marketing, sales and distribution of products; unexpected expenditures; litigation and other proceedings regarding intellectual property rights; and difficulties in obtaining and maintaining intellectual property protection for its product candidates. Information on these and additional risks, uncertainties, and other information affecting Pfenex's business and operating results is contained in Pfenex's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 to be filed with the Securities and Exchange Commission and in its other filings with the Securities and Exchange Commission. The forward-looking statements in this press release are based on information available to Pfenex as of the date hereof, and Pfenex disclaims any obligation to update any forward-looking statements, except as required by law.

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